

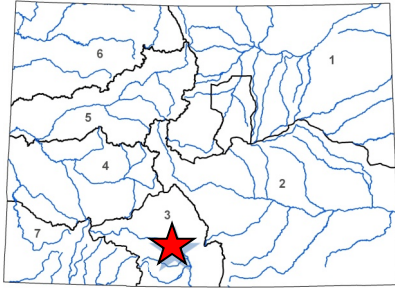


Farmers Union Canal Diversion and Headgate Improvement Project

Water Plan Grant Application

Colorado Rio Grande Restoration Foundation

September 2022 Board Meeting



D E T A I L S	
Total Project Cost:	\$1,941,110
Water Plan Grant Request:	\$600,000
Other CWCB Funding:	\$0
Other Funding Amount:	\$0
Applicant Match:	\$1,341,110
Project Type(s):	Construction
Project Category(Categories):	Agricultural
Measurable Result:	improved delivery of irrigation water to 42,980 acres of farmland, creation of fish and boat passage.

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

Colorado Water Plan grant funding will be used to improve a diversion structure and adjacent headgate that delivers water to the Farmers Union Canal which support 42,980 irrigated acres. This construction project will increase the ability to divert water into the Canal during low streamflow conditions and reduce labor for the canal company and water users. Creating safe boat passage is a major objective of this project due to the location which is downstream of a river section that is heavily utilized by the local community for recreation. The improved infrastructure will also allow for fish passage and the project includes actions to restore or improve aquatic and riparian habitat in the area of the project.

The project demonstrates strong multi-benefit objectives and collaboration with multiple state agencies and local water management groups to review and provide feedback on project as it proceeds. Success of the project will 1) create a more drought resilient irrigation infrastructure that supports continued agricultural production, 2) increased river connectivity that benefits aquatic and riparian habitat, and 3) heightened river safety and accessibility for the local community.



Funding Recommendation:

Staff recommends Board approval of \$600,000 to the Colorado Rio Grande Restoration Foundation for the Farmers Union Canal Diversion and Headgate Improvement Project.

Last Updated: May 2021

Colorado Water Conservation Board
Water Plan Grant – Statement of Work – Exhibit A

Statement Of Work	
Date:	July 1, 2022
Name of Grantee:	Colorado Rio Grande Restoration Foundation
Name of Water Project:	Farmers Union Canal Diversion and Headgate Improvement Project
Funding Source:	Colorado Water Plan Grant
Water Project Overview:	
<p>The Farmers Union Canal Diversion and Headgate Improvement Project (Project) is a multi-purpose project to improve irrigation infrastructure on the Rio Grande while also providing fish and boat passage and enhancing river health. The project will result in the improvement of the diversion structure and adjacent headgate that delivers water to the Farmers Union Canal (FUC) and nine additional irrigation ditches, which, combined, irrigate 42,980 acres of land. The FUC relies upon aging and inefficient diversion infrastructure that is incapable of diverting the FUC’s water rights during low streamflow conditions, requires frequent instream maintenance by water users, creates a barrier to fish passage, and is unsafe for recreational users. Additionally, regular diversion dam maintenance adversely affects aquatic habitat and stream condition.</p> <p>This Colorado Water Plan Grant request will address these issues by funding substantial improvements to the FUC’s diversion structure and headgate as well as aquatic and riparian restoration at and downstream of the structure, thereby providing multiple benefits to the Rio Grande and its water users.</p> <p>Grant funds will support the following project activities:</p> <ol style="list-style-type: none"> 1. Replacement of the diversion structure servicing the FUC with a structure that improves diversion efficiency, reduces maintenance, and includes fish and boat passage; 2. Replace and automate the headgates servicing the FUC, which will also benefit nine other irrigation ditches on the North Channel Rio Grande, including the Weiss, Brey, Rio Grande #2, Kane Callan, Anna Raber, Off, Raber, Hall-Voss and Cochran Pioneer ditches; 3. Enhancement of aquatic habitat through channel shaping and the installation of habitat features; 4. Stabilization of 660 linear feet of streambank and restoration of 0.3 acres of riparian habitat. <p>Project activities will increase agricultural water use efficiency, restore and connect aquatic and riparian habitats, and improve public safety along an important reach of the Rio Grande. By replacing aging diversion dams and headgates, the project will directly benefit the FUC’s 140 shareholders, as well as the water users utilizing the nine other ditches on the North Channel Rio Grande. The project will also increase aquatic habitat connectivity by removing a fish barrier, enhance water quality by reducing sediment input, and improve riparian habitats at and nearby the FUC. When complete, the project will build upon past and current projects, which, collectively, ensure the Rio Grande continues to support diverse human, agricultural, and ecological communities.</p>	

Last Updated: May 2021

<p>Project Objectives:</p> <ol style="list-style-type: none"> 1. Improve diversion efficiency and reduce maintenance by replacing the aging diversion dam and headgates servicing the Farmers Union Canal; 2. Increase community safety by incorporating safe boat passage at the FUC diversion dam; 3. Enhance aquatic habitat by removing a fish barrier and by installing rock and root wad aquatic habitat structures to increase habitat complexity; 4. Reduce bank erosion and improve riparian condition through the construction of a bankfull bench, stabilization of up to 660 feet of streambank, and restoring 0.3 acres of riparian revegetation; 5. Enhance water quality by reducing erosion and sediment inputs.
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Tasks
<p>Task 1 – Project Engineering, Permitting, and Construction Management</p>
<p>Description of Task:</p> <p>Complete designs and permitting for the project elements, which include:</p> <ul style="list-style-type: none"> • New diversion structure and headgates for the FUC and associated bank stabilization; • Streambank stabilization, riparian revegetation, and aquatic habitat enhancement downstream of FUC.
<p>Method/Procedure:</p> <p>The San Luis Valley Irrigation District (SLVID) and Colorado Rio Grande Restoration Foundation (CRGRF) will hire Huitt-Zollars to complete engineering, and final designs for the construction of the new grouted rock diversion structure, headgate improvements and automation, and associated bank stabilization. In addition, the CRGRF will hire Southwest River Engineering to complete engineering and final designs for the restoration of streambank and riparian habitat downstream of the Farmers Union Canal. The CRGRF will work with the project engineers and state and federal regulatory agencies to complete environmental compliance and secure permits required for project construction. Project designs will be reviewed by the Project’s Technical Advisory Team, which is made up of the following agencies: SLVID, CRGRF, Colorado Division of Water Resources, Colorado Parks and Wildlife, Trout Unlimited, San Luis Valley Water Conservancy District, and project landowners.</p> <p>Finally, project engineers will perform construction management and oversight to ensure the project is constructed as designed.</p>
<p>Deliverable:</p> <p>Final designs and required permits.</p>

Tasks
<p>Task 2 – Farmers Union Diversion Replacement</p>
<p>Description of Task:</p>



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Remove and reconstruct FUC diversion structure: <ul style="list-style-type: none"> • Remove existing diversion structure serving the FUC; • Construct new grouted rock diversion structure that allows for fish and boat passage; • Implement bank stabilization and riparian revegetation associated with FUC diversion and headgate infrastructure;
Method/Procedure: The San Luis Valley Irrigation District (SLVID) and Colorado Rio Grande Restoration Foundation (CRGRF) will hire contractor(s) to remove the current diversion dam, clear and shape the river channel, and enact pollution control. Contractor(s) will then complete grade preparation and build the grouted rock diversion including the fish and boat passage. The contractor(s) will implement channel and streambank stabilization measures, which may include, bank shaping, channel reconfiguration, rock or log structure installation, and riparian habitat improvements. Riparian improvements may include, but are not limited to, willow clump plantings and grass and forb seeding. Upland areas disturbed during onsite activities will be reseeded with appropriate species.
Deliverable: Improved water diversion efficiency and reduced maintenance needs associated with FUC diversion infrastructure. Improved aquatic habitat connectivity from fish passage and streambank stabilization structures. Improved recreation and community safety from boat passage.

Tasks
Task 3 – Farmers Union Headgate Rehabilitation
Description of Task: Remove existing and install new FUC headgates, install headgate automation, and install fabricate and install headgate footing scour plate protections.
Method/Procedure: The San Luis Valley Irrigation District (SLVID) and Colorado Rio Grande Restoration Foundation (CRGRF) will hire contractor(s) to remove four of the eight FUC headgates and replace them with new steel slide gates. At the four new headgates, the contractor(s) will install automation using solar power and electric motors. Additionally, the contractor(s) will fabricate and install headgate footing scour plate protections at seven of the eight headgates. Pollution control will be employed during construction to minimize adverse impacts. Upland areas disturbed during onsite activities will be reseeded with appropriate species.
Deliverable: Improved water delivery efficiency and reduced maintenance.

Tasks
Task 4 – Streambank Stabilization and Aquatic Habitat Enhancement
Description of Task:



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Implement streambank stabilization and riparian and aquatic habitat improvements downstream of the FUC.
Method/Procedure: The San Luis Valley Irrigation District (SLVID) and Colorado Rio Grande Restoration Foundation (CRGRF) will hire contractor(s) to implement streambank stabilization and riparian and aquatic habitat improvements on a private property located approximately 0.4 miles downstream of the FUC. Restoration activities may include bank shaping, channel reconfiguration, rock or log structure installation, and riparian habitat improvements. Upland areas disturbed during onsite activities will be reseeded with appropriate species.
Deliverable: Improved riparian and aquatic habitat, increased streambank stability, including increased cover of riparian vegetation and improved water quality resulting due to sediment reduction and increased stream shading.

Tasks
Task 5 – Project Management, Monitoring, and Administration
Description of Task: Complete project oversight, management, and partner coordination. Monitor each project site for three years using the Rio Grande Headwaters Restoration Project’s (RGHRP) Sampling and Analysis Plan (SAP). Complete all necessary contracts, status reports, and internal and external documents. Ensure tasks are completed within the approved costs and timelines.
Method/Procedure: The CRGRF will manage and administer the Farmers Union Canal Diversion and Headgate Improvement Project in partnership with the SLVID. The CRGRF will complete contracts with the Colorado Water Conservation Board (CWCB) and other project funders, project partners, landowners, and contractors; obtain the necessary environmental permits; manage project budgets, and reimbursement requests; and complete semi-annual and final reports. The CRGRF and SLVID will perform project oversight, ensuring project design and implementation are timely and accurate. Additionally, the CRGRF will work closely with the Project Technical Advisory Team to plan and implement all project tasks. Project monitoring will consist of several assessments that include documenting streambank locations with cross sections, photographic documentation, visual stream assessments, and structure assessment. Pre-construction, post-construction, and long-term surveys will map locations and features of the streambanks, diversion, and headgate over time. Photographic documentation will be used to track conditions of the riparian and shoreline plant communities, bank stabilization, and overall visual condition of the Project area.
Deliverable: All appropriate contracts, external and internal reports, and on-site project activities completed within planned period and anticipated costs. Reports which summarize monitoring data and condition of the sites to demonstrate diversion efficiency improvements, relative stability of streambanks, and to evaluate the degree of improvement in the riparian habitat, fish passage, and boater safety.



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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

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 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



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has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

(b) **Accountability:** Per 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 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.