



Colorado Water Conservation Board

Water Supply Reserve Fund - Statewide & Basin

Water Project Summary

Name of Applicant	Highland Ditch Company	
Name of Water Project		
Basin Account Request Subtotal		\$28,000.00
Statewide Request Amount		\$149,000.00
Statewide Project Category		Aging Infrastructure
Applicant Cash Match		\$100,000.00
Applicant In-Kind Match		\$0.00
Basin Requests		
Sources of Funding		

Grant Details

Statewide Project Category Justification

This project will unlock sustainable access to 3,700 acre-feet of storage water that is not accessible today due to the loss of exchange potentials, thereby providing more water for crops, increasing crop production and benefiting the state's economy.

Applicant & Grantee Information

Name of Grantee: Highland Ditch Company
Mailing Address: PO Box 649 Mead CO 80542
FEIN: 840,226,700

Organization Contact: Scott Lewis
Position/Title: Consultant
Phone: 303-919-7097
Email: scoma95@comcast.net

Organization Contact - Alternate: Wade Gonzales
Position/Title: Ditch Superintendent
Phone: 3035170151
Email: wwgonzales1967@gmail.com

Grant Management Contact: Scott Lewis
Position/Title: Consultant
Phone: 303-919-7097
Email: scoma95@comcast.net

Grant Management Contact - Alternate: Wade Gonzales
Position/Title: Ditch Superintendent
Phone: 3035170151
Email: wwgonzales1967@gmail.com

Description of Grantee/Applicant

The Highland Ditch Company (Highland) is the largest mutual ditch company that diverts off of St. Vrain Creek. Incorporated in 1872, approximately 35,000 acres are irrigated under Highland.

Location of Water Project

Latitude 0.000000
Longitude 0.000000
Lat Long Flag
Water Source
Basins
Counties
Districts

Water Project Overview

Major Water Use Type
Type of Water Project
Scheduled Start Date - Design 4/30/2024
Scheduled Start Date - Construction 4/30/2024
Description

Measurable Results

0 New Storage Created (acre-feet)
0 New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
0 Existing Storage Preserved or Enhanced (acre-feet)
0 New Storage Created (acre-feet)
0 Length of Stream Restored or Protected (linear feet)
0.00 Length of Pipe, Canal Built or Improved (linear feet)
\$0 Efficiency Savings (dollars/year)
0 Efficiency Savings (acre-feet/year)
0 Area of Restored or Preserved Habitat (acres)
0 Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
0 Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
0 Number of Coloradans Impacted by Engagement Activity
Other
No additional measurable results provided

Exhibit A – Statement of Work

(Template updated November 2023)

Statement Of Work	
Prepared Date:	April 19, 2024
Name of Grantee:	Highland Ditch Company
Name of Water Project:	Foothills Reservoir Firming Project
Water Project Overview: Please provide brief description of the proposed water activity (no more than 200 words). Please define all acronyms.	
<p>The Highland Ditch Company (Highland) is the largest mutual ditch company that diverts off the St. Vrain Creek. Incorporated in 1872, approximately 35,000 acres are irrigated under Highland. Highland operates several reservoirs including the Foothills Reservoir. We can store approximately 3,700 usable acre-feet in Foothills. Historically, Highland releases water from Foothills to the mainstem of the St. Vrain allowing us to divert a like amount of water upstream at our headgate near Lyons, CO. Due to decreased exchange options, much of Foothills’ storage capacity has become undeliverable. Studies indicate that exchange options will continue to decrease in the future. Collaborating with multiple stakeholders, Highland has developed a resilient plan to be able to consistently access this underutilized storage capacity and improve flows in the St Vrain Creek during low-flow conditions. By installing a pump station near McIntosh Reservoir inlet, coupled with a conveyance system to deliver water to the Highland Ditch we will be able to ensure consistent access to this important storage for future generations irrespective of future development and climate change. This grant request would assist Highland in completing the engineering and design phase. The current opinion of the probable cost for the entire construction project is \$6M.</p>	
Project Objectives:	
<p>This project has multiple objectives benefiting various stakeholders. The primary objective is to ensure consistent access to the entire Foothills Reservoir storage capacity for future generations of northern Colorado farmers irrespective of future development, climate change or the additional loss of exchange alternatives. A secondary objective is to provide the ditch company and its shareholders with more clarity as to their anticipated water supply earlier in the season when it is crucial for determining which crops to plant. An additional benefit of this project to the St Vrain community is the increased stream flows in the St. Vrain Creek between Lyons and Longmont during low-flow conditions. Historically, this is when Highland would be diverting flows in Lyons while operating the exchange out of Foothills. Once this project has been completed, there will be an additional 25 cfs flowing down St Vrain Creek in late summer providing additional fish habitat and reducing the potential dry-up spots that have historically occurred below the Highland diversion.</p>	

Tasks
Task 1
Description of Task:
Project feasibility and easement investigation.

Method/Procedure:
Highland has explored various alternatives to maximize access to their entire storage rights in the Foothills Reservoir. Highland hired Tessara Water, Inc. (Tessara) to conduct a thorough alternatives analysis. The preferred alternative is a pump station near McIntosh Reservoir inlet in relatively close proximity to the Highland Ditch. Tessara has organized a comprehensive and wide-ranging team of engineering consultants. Together, they will utilize the site survey for pump and pipeline sizing to determine the overall construction costs and future operating costs. This information will be used to establish the feasibility of this project. The ditch company will collaborate with the landowner (Boulder County Parks and Open Space) and the other neighboring property owners on the mutually preferred location of the pump station and the most desirable pipeline alignment. Elements that will be taken into consideration include: native wildlife impact, environmental impact, crop damage, utilities access, maintenance access and serviceability. Discussions will be held with the landowners regarding the necessary widths for the permanent and temporary construction easements, bore pit size and location, necessary size and location for material stockpiles and staging. Discussions will be held with Boulder County Parks and Open Space and the necessary ditch companies for rights of ways and crossing agreements, carriage agreements and their associated costs.
Deliverables:
Feasibility report, final pump station size and location, pipeline size and alignment, and the anticipated easement and right of way acquisition costs.

Tasks
Task 2
Description of Task:
Pump station & pipeline design
Method/Procedure:
Once the pump station location and the pipeline alignment has been finalized, Earth Engineering Consultants will complete a geotechnical report for all the associated structures. Coordination with Longmont Power will take place to ensure the pump station has a resilient and sustainable source of power. Triunity Engineering will provide the subsurface utility engineering for the site. P35 Design and Graf Engineering will be tasked with working in collaboration with Boulder County Parks and Open Space on an aesthetically pleasing architectural design for the pump station building. An appropriately sized forebay will be designed to ensure sustainability of the pumping system. The controls and monitoring system will be designed with a SCADA system to set and monitor the flow rate remotely. Tessara Water and the rest of the engineering team will provide the engineering and design for the pipeline and associated infrastructure. At the termination of the pipeline, an energy dissipation structure will be designed to minimize the impact to the existing ditch system.
Deliverables:
Geotechnical reports for the pump station site and along the pipeline alignment, final detailed drawings and technical specifications of the inlet structure and inlet pipe, the pump station structure, the pump system skid, the control and monitoring system, the pipeline and associated infrastructure including vents, thrust blocks, and the dissipation structure.

Tasks
Task 3
Description of Task:

Permitting and environmental analysis
Method/Procedure:
Highland Ditch has hired Pinyon Environmental, Inc., a leader in the environmental consulting industry, to perform an environmental analysis and cultural analysis in the area impacted by the construction of the pump station and pipeline. As part of the environmental analysis, Pinyon will provide Highland with wildlife and vegetation inventories, delineation of any wetlands in the area, and a survey of any threatened, endangered or sensitive species in the area. The cultural resource report will provide a detailed inventory of any historic and archaeological resources in the area and would ensure that Highland stayed in compliance with Section 106 of the National Historic Preservation Act of 1966. Highland and their engineering team will work with the Colorado Department of Transportation (CDOT), Boulder County, and the City of Longmont to obtain the necessary permits for the project.
Deliverables:
Environmental Impact Report, Cultural Resource Report, CDOT Access Permit, Dewatering Permit, Erosion Control Permit, Boulder County ROW/Grading Permit, Electrical Permit, and other permits as necessary.

Tasks
Task 4
Description of Task:
Method/Procedure:
Deliverables:

Budget and Schedule
This Statement of Work is accompanied by a combined Budget and Schedule that reflects the tasks identified in the Statement of Work.

Reporting Requirements

Progress Reports: The grantee shall provide the CWCB a progress report every six months, beginning from the date of issuance of the grant agreement. 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 grant agreement 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 grant agreement 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 the grant agreement must be provided to the CWCB as part of the project documentation.

Performance Measures

Performance measures for the grant agreement 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. 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 has been accepted, and final payment has been issued, the grant agreement 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.



Colorado Water Conservation Board

Water Supply Reserve Fund

EXHIBIT B - BUDGET AND SCHEDULE - Direct & Indirect (Administrative) Costs

Date: April 19, 2024

Water Activity Name: Foothills Reservoir Firing Project

Grantee Name: Highland Ditch Company

<u>Task No.</u> ⁽¹⁾	<u>Description</u>	<u>Start Date</u> ⁽²⁾	<u>End Date</u>	<u>Matching Funds</u> (cash & in-kind) ⁽³⁾	<u>WSRF</u> <u>Funds</u>	<u>Total</u>
1	Feasibility & easement investigation	12/15/2024	3/15/2025	\$ 7,200	\$ 12,500	\$ 19,700
2	Pump station & pipeline design	12/15/2024	5/25/2025	\$ 79,500	\$ 141,250	\$ 220,750
3	Permitting and environmental analysis	3/15/2025	4/25/2025	\$ 13,300	\$ 23,250	\$ 36,550
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
						\$ -
Total				\$ 100,000	\$ 177,000	\$ 277,000

(1) The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

(2) Start Date for funding under \$50K - ~ 45 Days from Director Approval; Start Date for funding over \$50K - ~90 Days from Board Approval.

- Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)
- **NTP will not be accepted as a start date.** Project activities may commence as soon as the grantee enters contract and receives formal signed State Agreement.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

- Additionally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution
- Standard contracting procedures dictate that the Expiration Date of the contract shall be 5 years from the Effective Date.

NOTE TO APPLICANTS: Below are two "detailed budget" examples. Detailed budgets will vary between all projects, so these examples can be used as a helpful guide



COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board
Detailed Budget Estimate

Date: 4/19/2024
Water Activity Name: Foothills Reservoir Firming Project
Grantee Name: Highland Ditch Company

Engineering & Design

Water Consultants			Subcontracts-Estimated Cost per Task and subcontractor										Total	CWCB Funds (Basin + State-wide)	Applicant Matching Funds
Sub-task	Senior Principal Engineer	Subtotal	Structural Design Lump sum	Geotechnical Analysis Lump Sum	Architectural Design Lump Sum	Structural for pump house building Lump Sum	Subsurface Utility Engineering Lump Sum	Pipeline Engineering and Design	Electrical System Design Lump Sum	Environmental and Cultural Resources Lump Sum	Subtotal				
Task 1 - Project feasibility and easement investigation.	Estimated Hours		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ 19,700	\$ 12,500	\$ 7,200	
Pump Station and Alignment alterna	20	\$ 4,200									\$ -	\$ 4,200	\$ 2,675	\$ 1,525	
Coordination with Boulder County a	20	\$ 4,200									\$ -	\$ 4,200	\$ 2,675	\$ 1,525	
Conceptual Design	30	\$ 6,300									\$ -	\$ 6,300	\$ 4,000	\$ 2,300	
Engineering Locates								\$ 2,000			\$ 2,000	\$ 2,000	\$ 1,250	\$ 750	
Right-of-Way Surveys								\$ 3,000			\$ 3,000	\$ 3,000	\$ 1,900	\$ 1,100	
Task 2 - Pump station & pipeline design			\$ 16,200	\$ 35,000	\$ 40,000	\$ 6,500	\$ 6,750	\$ 48,000	\$ 20,000	\$ -	\$ 113,950	\$ 220,750	\$ 141,250	\$ 79,500	
Project Management and Scheduling	70	\$ 14,700									\$ -	\$ 14,700	\$ 9,400	\$ 5,300	
Oligarchy Ditch Structure Design	80	\$ 16,800									\$ -	\$ 16,800	\$ 10,750	\$ 6,050	
Highland Ditch dissipation Design	80	\$ 16,800									\$ -	\$ 16,800	\$ 10,750	\$ 6,050	
Site visits & team meetings			\$ 2,200								\$ 2,200	\$ 2,200	\$ 1,400	\$ 800	
Design of headwall			\$ 2,000								\$ 2,000	\$ 2,000	\$ 1,275	\$ 725	
Design of pump station slab & wetwell			\$ 8,800								\$ 8,800	\$ 8,800	\$ 5,600	\$ 3,200	
Design of energy dissipation structure			\$ 3,200								\$ 3,200	\$ 3,200	\$ 2,050	\$ 1,150	
Field boring, piezometer installation, sampling analysis				\$ 35,000							\$ 35,000	\$ 35,000	\$ 22,400	\$ 12,600	
Pump station architectural design					\$ 40,000						\$ 40,000	\$ 40,000	\$ 25,600	\$ 14,400	
Structural design for pumphouse building						\$ 6,500					\$ 6,500	\$ 6,500	\$ 4,150	\$ 2,350	
Subsurface utility engineering							\$ 6,750				\$ 6,750	\$ 6,750	\$ 4,400	\$ 2,350	
Topographic mapping								\$ 9,500			\$ 9,500	\$ 9,500	\$ 6,050	\$ 3,450	
Sue QL-B CADD files & QL-A locations								\$ 9,000			\$ 9,000	\$ 9,000	\$ 5,750	\$ 3,250	
Civil construction documents								\$ 29,500			\$ 29,500	\$ 29,500	\$ 18,875	\$ 10,625	
Electrical system design									\$ 20,000		\$ 20,000	\$ 20,000	\$ 12,800	\$ 7,200	
Task 3 - Permitting and environmental analysis			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 25,000	\$ 36,550	\$ 23,250	\$ 13,300	
Permitting Coordination and Applica	55	\$ 11,550									\$ -	\$ 11,550	\$ 7,250	\$ 4,300	
Cultural Resource Study										\$ 10,000	\$ 10,000	\$ 10,000	\$ 6,400	\$ 3,600	
Environmental Impact Study										\$ 15,000	\$ 15,000	\$ 15,000	\$ 9,600	\$ 5,400	
Subtotal Hours	355	355													
Subtotal Labor/ Subcontractor cost	\$74,550	\$74,550	\$ 16,200	\$ 35,000	\$ 40,000	\$ 6,500	\$ 6,750	\$ 53,000	\$ 20,000	\$ 25,000	\$ 202,450	\$ 277,000	\$ 177,000	\$ 100,000	
TOTAL												\$ 277,000	\$ 177,000	\$ 100,000	