



Colorado Water Conservation Board

Water Supply Reserve Fund - Statewide & Basin

Water Project Summary

Name of Applicant	Farmers Independent Ditch Company	
Name of Water Project		
Basin Account Request Subtotal		\$12,337.50
Statewide Request Amount		\$24,675.00
Statewide Project Category		Aging Infrastructure
Applicant Cash Match		\$9,250.00
Applicant In-Kind Match		\$3,087.50
Basin Requests		
Sources of Funding		

Grant Details

Statewide Project Category Justification

The Farmers Independent Ditch lining project will help the Farmers Independent Ditch Company reduce conveyance losses and manage water supply risks associated with climate change, in particular drought frequency and severity,

Applicant & Grantee Information

Name of Grantee: Farmers Independent Ditch Company
 Mailing Address: 3005 West 29th Street, Suite G-1 Greeley CO 80631
 FEIN: 840,200,745

Organization Contact: Terry Wiedeman
 Position/Title: Email: krepswiedeman1@aol.com
 Phone:

Organization Contact - Alternate: Ed Armbruster, P.E.
 Position/Title: Ditch Company Engineer Email: ed.armbruster@whitesandswater.com
 Phone: 303-570-3117

Grant Management Contact: Terry Wiedeman
 Position/Title: Email: krepswiedeman1@aol.com
 Phone:

Grant Management Contact - Alternate: Ed Armbruster, P.E.
 Position/Title: Ditch Company Engineer Email: ed.armbruster@whitesandswater.com
 Phone: 303-570-3117

Description of Grantee/Applicant

No description provided

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



Last Update: January 10, 2022

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<u>Colorado Water Conservation Board</u>	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	March 20, 2024
Water Activity Name:	Farmers Independent Ditch Lining Project Feasibility Study
Grant Recipient:	Farmers Independent Ditch Company
Funding Source:	WSRF (State and Basin) and Matching Funds
Water Activity Overview:	
<p>The Farmers Independent Ditch Company (FIDCo) owns and operates the Farmers Independent Ditch. The Farmers Independent Ditch diverts water from the South Platte River near the Town of Platteville in Weld County, Colorado to deliver water to approximately 50 shareholders for irrigation of approximately 7,000 acres of farmland. The principal crops grown under the Ditch include corn, alfalfa, sugar beets and vegetables. The amount of water available to FIDCo under their senior water rights is insufficient to fully meet crop water demands of its shareholders.</p> <p>The earthen Farmers Independent Ditch is approximately fourteen miles in length. The first three miles below the measurement flume that is used to administer FIDCo’s water rights experiences excessive seepage losses because of underlying sand and gravel deposits (10 percent or greater). FIDCo is interested in installing a ditch liner in these first three miles of the Ditch to reduce seepage losses. The liner may include synthetic geomembrane, concrete or other materials. Lining the Ditch will result in more water available for FIDCo’s agricultural produces.</p> <p>This grant request is to help FIDCo with costs associated with a <u>feasibility study</u> to examine different options and costs for the lining project.</p>	
Objectives: Investigate Options to Reduce Ditch Seepage Loss	
<p>The objective of the Farmers Independent Ditch Lining Feasibility Study is to investigate options (methods, materials and costs) to reduce seepage losses from the Farmers Independent Ditch. Preliminary estimates of seepage losses in the first three miles of the Ditch are roughly 10 percent. On an average annual basis, the Ditch diverts approximately 18,200 af per year. If losses in this section of the Ditch can be eliminated, it represents water savings for FIDCo averaging approximately 1,800 af per year. This savings is critical for FIDCo because it is a “water short” system, i.e., the amount of water available to deliver to shareholders is insufficient to meet demands.</p> <p>The Project supports goals outlined in the Colorado Water Plan and the South Platte Basin Implementation Plan:</p> <ol style="list-style-type: none"> 1. Wise Water Use (conveyance efficiency improvements that increase water delivery and predictability). 2. Meeting Future Water Needs (rehabilitation and modernization of farming and ranching infrastructure to help agriculture be more efficient and protect our existing agricultural economy and irrigated acres). 3. Maximize Development of Native South Platte Supplies. 4. Maintain and Improve Irrigated Agriculture. 	



Last Update: January 10, 2022

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Tasks
<u>Task 1 - Engineering Analyses</u>
Description of Task: Project coordination to investigate ditch channel geometry and geological characteristics, investigate lining options and costs, and prepare feasibility study report.
This task involves researching, evaluating and coordinating information related to providing an opinion of the collected data and its respective analyses with the primary intention of identifying potential methods, materials and costs to reduce seepage losses. It also involves development of a preliminary feasibility study report and presentation to the Farmers Independent Ditch Company Board of Directors. In addition, a final feasibility study report will be provided to CWCB.
Method/Procedure: Applicable and appropriate and coordination of technical investigations.
The extent of the feasibility study will be limited to the first three miles of the Farmers Independent Ditch beginning at its measurement flume approximately one mile below the river headgate (Figures 1 and 2). Up to four sites within the study area will be identified to conduct surveying of ditch cross sections and geotechnical investigations.
Grantee Deliverable:
Technical data concerning ditch channel characteristics, options for constructing lining of ditch, coordination of investigations, and preparation of feasibility study report.
CWCB Deliverable:
A final feasibility study report documenting findings of the feasibility study will be provided to CWCB.

Tasks
<u>Task 2 - Surveying</u>
Description of Task: Survey of ditch cross sections to establish channel geometry.
Coordination of obtaining ditch cross sections of up to four (4) locations between the ditch measurement flume and Weld County Road 36.
Method/Procedure: Applicable and acceptable surveying techniques.
All cross sections will be surveyed on the same day, ideally during periods when the ditch is not flowing. Efforts will include mobilization, coordination, field work and CAD processing time. The field work will include establishment of a local control point for future use, and grade breaks and permanent features to establish cross sectional profiles.
Grantee Deliverable:
Cross sectional profiles at four locations on the Farmers Independent Ditch within study reach.
CWCB Deliverable:
A final feasibility study report documenting findings of the feasibility study will be provided to CWCB.



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Tasks
<u>Task 3 – Geotechnical Investigations</u>
Description of Task: Obtain Ditch subsurface exploration data.
Conduct borings at four (4) locations between the ditch measurement flume and Weld County Road 36 to investigate underlying geologic material.
Method/Procedure: Applicable and acceptable geotechnical investigation techniques.
All exploration borings will be performed while the ditch is dry and in the non-irrigation season. The field work will include mobilization, field time, site reconnaissance, lab testing including index tests, and summary of findings.
Grantee Deliverable:
Summary of soil and geologic conditions below the Farmers Independent Ditch within study reach.
CWCB Deliverable:
A final feasibility study report documenting findings of the feasibility study will be provided to CWCB.

Tasks
<u>Task 4 – Ditch Flow Measurements</u>
Description of Task: Measurement of flows in Farmers Independent Ditch to confirm seepage rates.
Flow measurements will be taken at four locations within the study reach. Measurements will occur by establishing cross sections at predetermined locations and measuring velocities using appropriate equipment. Up to six measurements will occur at each of the four locations at varying diversion rates through the ditch.
Method/Procedure: Applicable and acceptable flow monitoring techniques.
Measurements will utilize standard techniques by establishing cross sections and measuring current at numerous locations across each cross section. Measurements will account for any farm headgate deliveries occurring within the study reach.
Grantee Deliverable:
Summary of measured and calculated flow conditions at each of the measurement sites and for each measurement event.
CWCB Deliverable:
A final feasibility study report documenting findings of the feasibility study will be provided to CWCB.



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Budget and Schedule

Exhibit B - 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. A separate excel formatted Budget is required for engineering costs to include rate and unit costs.

Reporting Requirements

Progress Reports: The grantee 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. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

Final Report: At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee'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.

Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. 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.

The CWCB will pay the last 10% of the entire water activity 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 water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Performance Requirements

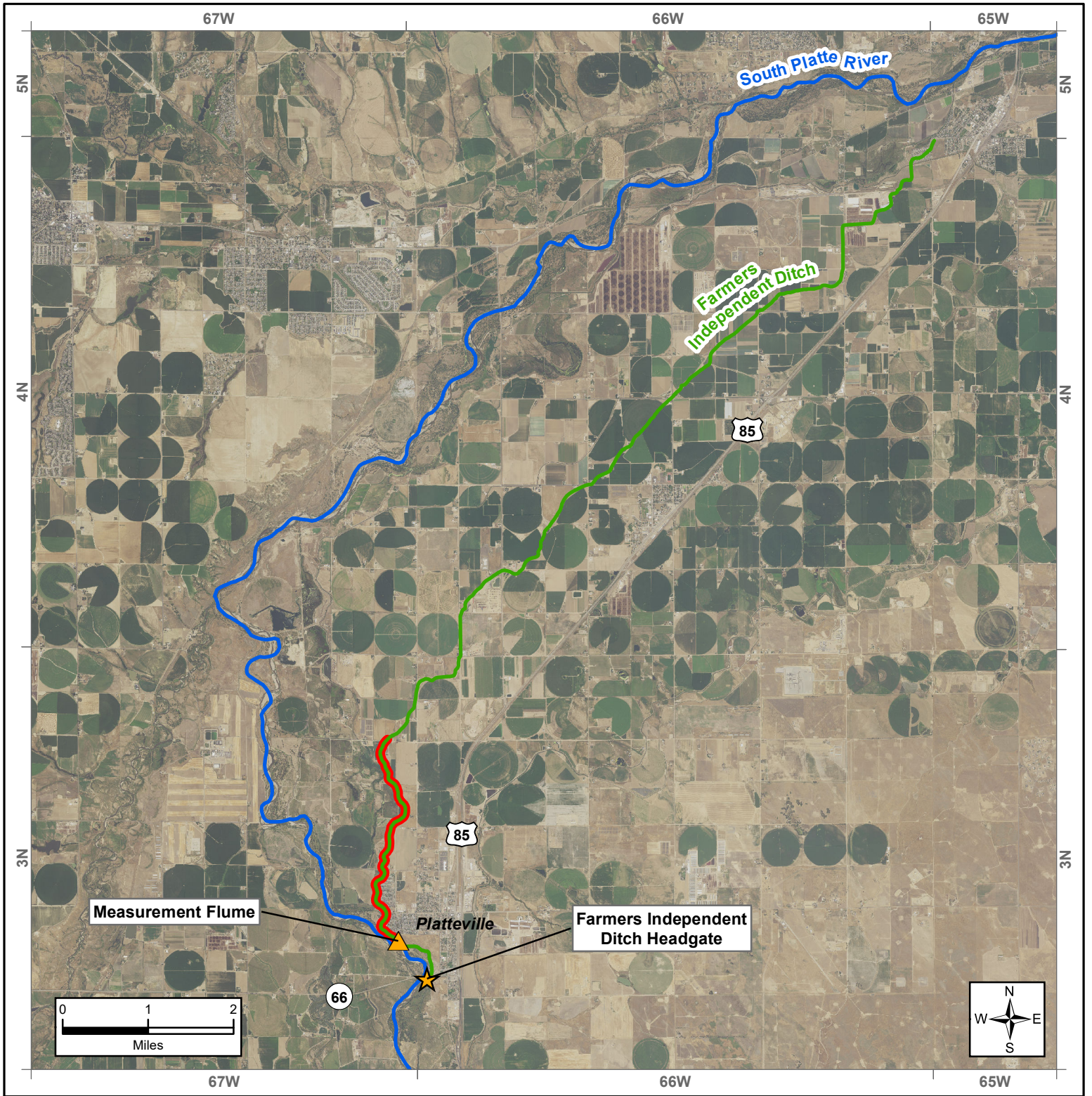
Performance measures for this contract shall include the following:

(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 B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

(b) Accountability: Per the 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 the 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.

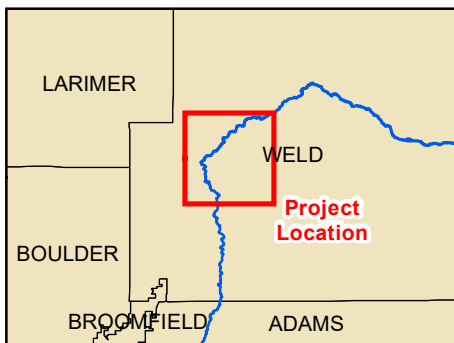
(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(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.



March 2024

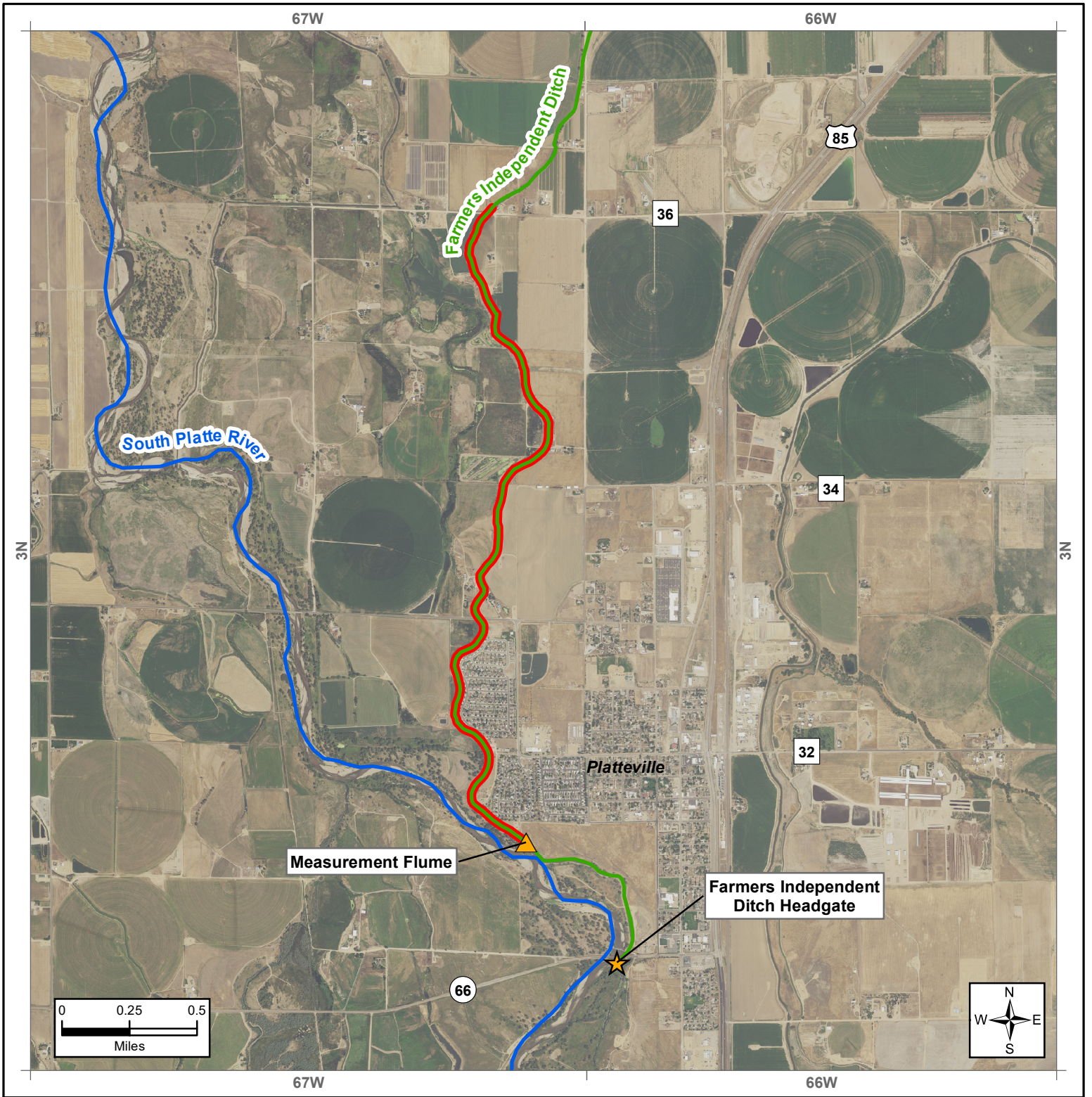
FIGURE 1



- ★ Ditch Headgate
- ▲ Measurement Flume
- Ditch Lining Project

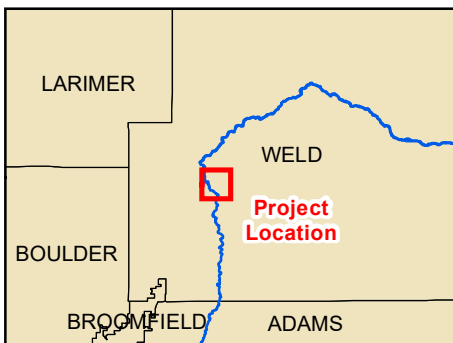


The mapping contained within this document is intended to be used for reference purposes only and is not suitable for construction and/or surveying purposes.



March 2024

FIGURE 2



- ★ Ditch Headgate
- ▲ Measurement Flume
- Ditch Lining Project



white sands water engineers, inc

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COLORADO

Colorado Water Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Supply Reserve Fund

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

Date: March 20, 2024

Water Activity Name: Farmers Independent Ditch Lining Project Feasibility Study

Grantee Name: Farmers Independent 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	Engineering Analyses / Report Preparation	1-Nov-24	31-Oct-25	\$6,000.00	\$18,000.00	\$24,000.00
2	Surveying	1-Nov-24	31-Oct-25	\$750.00	\$2,250.00	\$3,000.00
3	Geotechnical	1-Nov-24	31-Oct-25	\$2,500.00	\$7,500.00	\$10,000.00
4	Ditch Flow Measurements	15-Mar-25	31-Oct-25	\$3,087.50	\$9,262.50	\$12,350.00
Total				\$12,337.50	\$37,012.50	\$49,350.00

(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

- 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.

Detailed Budget Estimate

Date: March 20, 2024

Water Activity Name: Farmers Independent Ditch Lining Project Feasibility Study

Grantee Name: Farmers Independent Ditch Company

EXAMPLE B: Construction/Engineering

	Water Consultants				Subcontracts				Total	CWCB Funds	Other Matching Funds
	Senior Principal Engineer	Senior Water Resources Engineer/Consultant	Water Resources Engineer	Subtotal	Engineering Lump Sum	Geotechnical Lump sum	Surveying Lump Sum	Subtotal			
	\$ 250	\$ 150	\$ 100								
	Estimated Hours										
Task 1 - Engineering Analyses											
Research, evaluate and coordinate information related to opinion of collected data and its respective analysis to identify potential methods, material and costs to reduce seepage losses. Preparation of preliminary and final report to CWCB.			NA		\$24,000	NA	NA	\$24,000	\$24,000	\$18,000	\$6,000
Task 2 - Surveying											
Obtain ditch cross sections at four locations. Includes mobilization, coordination, field work, CAD processing time, grade breaks and permanent features.			NA		NA	NA	\$3,000	\$3,000	\$3,000	\$2,250	\$750
Task 3 - Geotechnical											
Ditch subsurface exploration of up to four (4) locations. Includes mobilization, field time, site reconnaissance, lab testing and summary report.			NA		NA	\$10,000	NA	\$10,000	\$10,000	\$7,500	\$2,500
Task 4 - Ditch Flow Measurements											
Field measurement of flows in Farmers Independent Ditch at four locations. Each location will be measured up to six times during irrigation season at varying rates of flow.	3	48	44	\$12,350	NA	NA	NA	NA	\$12,350	\$9,262.5	\$3,087.5
Subtotal Hours/Costs	3	48	44	\$12,350	NA	NA	NA	NA	\$12,350	\$37,012.5	\$12,337.5
Subcontractor Cost	NA	NA	NA	NA	\$24,000	\$10,000	\$3,000	\$37,000	\$37,000	74.975%	25.025%
TOTAL									\$49,350		