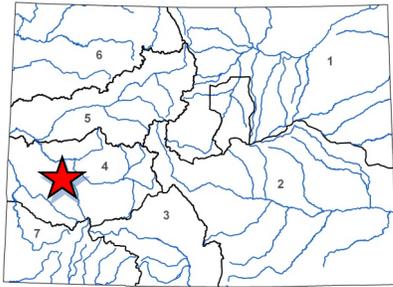


# Upper West Lateral Pipeline and Water Optimization Crawford Clipper Ditch Company

September 2022 Board Meeting

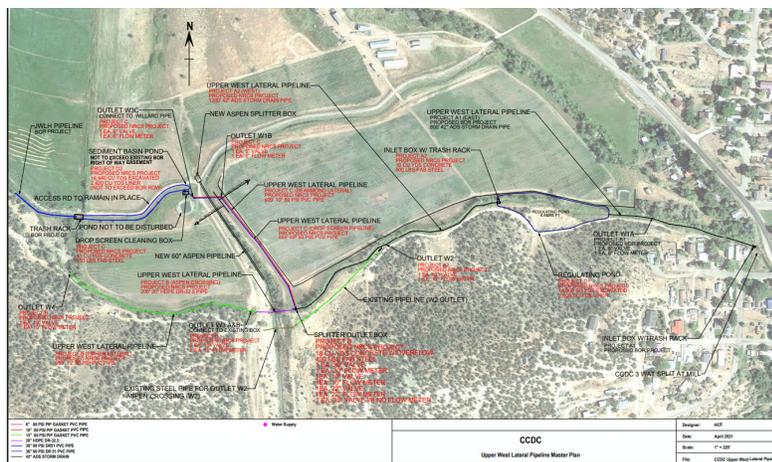
## Water Plan Grant Application



D E T A I L S	
Total Project Cost:	\$1,213,102
Water Plan Grant Request:	\$242,620
Other CWCB Funding:	\$0
Other Funding Amount:	\$0
Applicant Match:	\$970,482
Project Type(s):	Construction
Project Category(Categories):	Agricultural
Measurable Result:	Install 4,900 feet of pipe to reduce 256 tons of salt seepage per year.

L O C A T I O N	
County/Countries:	Delta
Drainage Basin:	Gunnison

Colorado Water Plan grant funding will be used to install 4,900 feet of pipe which will reduce seepage and erosion on the Upper West Lateral of the Crawford Clipper Ditch. Funding will also be used to create a 6 acre-foot irrigation regulating pond which will allow for improved water management flexibility and utilization of ditch company shares. Piping of this relatively flat channel will increase pressure which creates the potential for future efficiency investments and improvements by the ditch company and water users. The project will also install Supervisory Control and Data Acquisition (SCADA) devices to allow for remote monitoring and management of the Upper West Lateral. Success of the project will result in improved irrigation water management which may increase system resilience to climate change and on-going drought in the Lower Gunnison Basin and decrease Selenium seepage which will benefit water quality of Cottonwood Creek.



Last Updated: May 2021

<b>Colorado Water Conservation Board</b>
<b>Water Plan Grant – Statement of Work – Exhibit A</b>

Statement Of Work	
<b>Date:</b>	June 6, 2022
<b>Name of Grantee:</b>	Crawford Clipper Ditch Company
<b>Name of Water Project:</b>	CCDC Upper West Lateral Pipeline and Water Optimization Project
<b>Funding Source:</b>	Colorado Water Plan Grant
<b>Water Project Overview:</b>	
<p>This project will improve water quality in the Lower Gunnison watershed. Seepage from unlined leaking irrigation ditches in the region is a significant source of ground water which mobilizes naturally-occurring salts in the Mancos Shale-derived soils and underlying shale formations. Construction of the Proposed Action will provide a buried pipe delivery system to replace an existing unlined ditch, which will eliminate seepage and reduce salinity in the Colorado River basin by an estimated 256 tons of salt per year. By installing 4900' of primarily 42" pipe with some 30", 20" and 15" from the existing open earth channel it will reduce soil erosion and therefore improve water clarity. Creating a 6 ac-ft irrigation regulating pond and expanding the existing sediment basin will provide better water management flexibility and utilization for the ditch company and 3,200 agricultural water shares. The creation of the reservoir will enable the ditch company to capture the spring run-off and seasonal storm events more effectively, and distribute water to the 3,480 irrigated acres later in the season as needed. This portion of the ditch is very flat in elevation and by enclosing the channel into pipe there is a potential for more efficient on-farm irrigation systems in the future by increasing the pressure.</p> <p>This project also seeks funding to implement Supervisory Control and Data Acquisition (SCADA) real-time water monitoring, remote water measurement devices and automated flow gates with remote data collection on the Upper West Lateral.</p> <p>This project will connect to the BOR funded Salinity project and upon completion will enclose the entire length of the Clipper Upper West Lateral in pipe.</p>	
<b>Project Objectives:</b>	
<p>Mitigate the impact of climate change and on-going drought in the Lower Gunnison Basin by utilizing existing resources efficiently and making available additional water previously lost to seepage.</p> <p>The Upper West lateral piping implementation of 4900' will reduce 256 tons annually of salt from entering the Lower Gunnison and Colorado River Watershed's in support of Salinity Control. This project will eliminate ditch seepage and reduce Selenium from entering Cottonwood Creek as it</p>	



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will pipe almost a mile of open earthen canal to a closed conduit system. The USGS in coordination with Colorado Department of Public Health and Environment conducts on-going water sampling of the Smith Fork Creek (USGS 38420010707381401, Smith Fork at 38.5 Rd).  
 A 6 ac-ft irrigation regulating reservoir will be installed and a 2 ac-ft sediment basin will be enlarged to 4ac-ft to assist with storage and sediment removal from the pipeline through settling of particulates. This Upper West Lateral portion of the Clipper Ditch is flatter in elevation and very susceptible to ditch erosion and subsequent soil particulates into the existing earthen canal create water quality issues in the Colorado River Basin and ditch maintenance problems with algae and excessive sedimentation inhibiting flow and substantial yearly maintenance costs. By installing a sediment basin and reservoir it will provide cleaner water flowing into the pipeline for the downstream water users and alleviate inconsistent flow pressures that result in excessive labor to re-set on-farm irrigation systems throughout the day. There is considerable labor savings for the ditch companies as well, yearly clean out of the Upper West Lateral will be eliminated, the Clipper ditch rider's time will be more effective and mileage will be reduced as he will not have to repeatedly re-set canal gates throughout the day and through the implementation of SCADA overflow situations will be detected immediately through remote data alerts.

Tasks
<b>Task 1 – Engineering and Permitting</b>
Description of Task:
Develop design and final engineering plans with detailed cost estimates for the Crawford Clipper Ditch upper west lateral, regulating reservoir and sediment basin.
Method/Procedure:
<ol style="list-style-type: none"> <li>1) Contract Harward Engineering to obtain final design, cost estimate, and standards and specifications</li> <li>2) Contact NRCS to obtain copy of NEPA – CPA52.</li> <li>3) Hire an engineering firm to oversee construction management and preparation of bid packets and construction contract of selected bidder.</li> </ol>
Deliverable:
<ol style="list-style-type: none"> <li>1) Engineered Plans, construction specifications, contract with engineering firm.</li> <li>2) Submittal of engineered plans and construction specifications to NRCS signed and stamped by a licenses and registered Colorado engineer for NRCS approval.</li> <li>3) Copy of NRCS CPA-52, NEPA document</li> <li>4) Engineering firm selection for construction management.</li> <li>5) Engineering and Material Bid Packet acquired.</li> </ol>



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<b>Tasks</b>	
<b>Task 2 – Construction</b>	
Description of Task:	
After review and written approval of the final design by NRCS. The completion of the bid process and the selection of the construction contractor by the board of directors. CCDC may commence construction.	
Method/Procedure:	
1) Procure Materials 2) Construct 4,900 feet of enclosed pipeline and 6 ft regulating reservoir as well as expansion of sediment basin.	
Deliverable:	
1) Contract with construction firm. 2) Construct 4,900' feet of pipeline 3) Construct regulating reservoir and enlarge sediment basin 4) Construct intake and outlet structures	
<b>Task 3 – Remote Monitoring, Supervisory Control and Data Acquisition (SCADA)</b>	
Description of Task:	
Develop final plans, equipment list, and detailed cost estimate for remote monitoring and SCADA.	
Method/Procedure:	
1) Develop final plans, equipment list, and detailed cost estimate for remote monitoring and SCADA. 2) Install remote monitoring and SCADA.	
Deliverable:	
1). SCADA proposal with equipment list and cost estimate.	



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<b>Task 4 – Construction Management</b>
Description of Task: Conduct construction management activities in support of the pipeline and reservoir implementation.
Method/Procedure: <ol style="list-style-type: none"><li>1) Release bid packet. Solicit public bids for contractor to complete construction of the Clipper.</li><li>2) Creation of Contractor Contract.</li><li>3) Obtain any necessary local permits</li><li>4) Manage project, conduct inspections, prepare regular construction progress reports, and review and approve vendor invoices.</li></ol>
Deliverable: <ol style="list-style-type: none"><li>1) Inspection (notes, reports).</li><li>2) As-built drawings.</li><li>3) Copy of Material Invoices.</li><li>4) Photo documentation of completed portions.</li><li>5) Final inspection and close-out documentation.</li></ol>
<b>Task 5 – Contract Administration</b>
Description of Task: Conduct on-going grant administration activities throughout project performance period. Submit monthly invoices for reimbursement, budget summaries, and construction progress reports.
Method/Procedure: <ol style="list-style-type: none"><li>1) Create budget tracking spreadsheet to track project expenditures and in-kind services or cash matching commitments and receipts;</li><li>2) Submit regular invoices for reimbursement to CWCB;</li><li>3) Provide all supporting documentation including vendor invoices, in-kind services or cash match documentation, and identified project deliverables; and</li><li>4) Submit semi-annual progress reports and final project report as required.</li></ol>
Deliverable:



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- 1) Budget tracking spreadsheet (on-going expenditure and match tracking)
- 2) Match tracking supporting documentation
- 3) Regular reimbursement requests to CWCB with brief progress report and supporting documents
- 4) Semi-annual reports and final project report.

### 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:



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- (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 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.