COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Last Updated: July 2019

Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as "project") funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Water Storage Projects	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Ben.Wade@state.co.us
Agricultural Projects	Alexander.Funk@state.co.us
Environmental & Recreation Projects	Chris.Sturm@state.co.us

FINAL SUBMISSION: Submit all application materials in one email to *waterplan.grants@state.co.us*
in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents. In the subject line, please include the funding category and name of the project.

Water Project Summary

Name of Applicant	Colorado Corn Administrative Committee 127 22nd Street Greeley CO 80631
Name of Water Project	Irrigated Agriculture and Salinity in the South Platte Basin
CWP Grant Request Amount	$253,750
Other Funding Sources Severance Tax Fund	$ TBD
Other Funding Sources South Platte Roundtable	$ TBD
Other Funding Sources Metro Basin Roundtable	$ TBD
Applicant Funding Contribution	$56,250
Total Project Cost	$310,000

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Applicant & Grantee Information
Name of Grantee(s): Colorado Corn Administrative Committee
Mailing Address: 127 22nd Street, Greeley CO 80631
FEIN: 84-1074476
Organization Contact: Nicholas Colglazier
Position/Title: Executive Director
Email: ncolglazier@coloradocorn.com
Phone: (970) 380-1604
Grant Management Contact: same
Position/Title
Email
Phone
Name of Applicant (if different than grantee): same
Mailing Address
Position/Title
Email
Phone

Description of Grantee/Applicant
Provide a brief description of the grantee's organization (100 words or less).
The Colorado Corn Administrative Committee (CCAC) was established by the 1987 Corn Marketing Order (a legislative action that provided the framework) to manage a one-penny-per-bushel assessment collected from corn producers by first handlers from sales of field corn for grain in Colorado. Those funds are allowed to be used specifically for market development, promotion, research and, education on behalf of corn producers in this state.

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Type of Eligible Entity (check one)	
	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.
✓	**Non-governmental organizations (NGO):** Organization that is not part of the government and is non-profit in nature.
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes.

Type of Water Project (check all that apply)	
✓	Study
	Construction
	Identified Projects and Processes (IPP)
	Other

Category of Water Project (check the primary category that applies and include relevant tasks)		
	Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap. *Applicable Exhibit A Task(s):*	
	Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. *Applicable Exhibit A Task(s):*	
	Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. *Applicable Exhibit A Task(s):*	
✓	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. *Applicable Exhibit A Task(s): Tasks 1-4.*	
✓	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s): Tasks 2 and 4 – especially water-quality sampling in wells and tributaries*	
	Other	Explain:

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Location of Water Project

Please provide the general county and coordinates of the proposed project below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.

County/Counties	South Platte Basin, Northeastern Colorado
Latitude	
Longitude	

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.
The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

This study includes four (4) complimentary components: 1) Salinity Impact on Crop Yields; 2) Irrigated Agriculture's Salinity Contribution; 3) Lower Basin Reservoir Salinity; and 4) Geologic Salinity Contributions. The overall purpose is to better understand the salinity contributions to the South Platte River from irrigated agriculture and natural, geologic sources. It is assumed that irrigated agriculture is increasing salinity, but the effect has not been investigated. Salinity increases in the lower basin may be predominately due to agricultural return flows, but irrigation water storage and conveyance may also play a role.

The lower basin's salinity trends have been shown to follow trends in the Front Range tributaries. The elevated salinity in these tributaries may be influenced by natural geologic sources, in addition to the municipal wastewater contributions. The study objective is to clarify the importance of these salinity sources and processes. This will provide focus to management and mitigation measures.

Measurable Results

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To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:		
	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Quantity of Water Shared through Alternative Transfer Mechanisms	
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning	
3.5 million (Basin Population)	Number of Coloradans Impacted by Engagement Activity	
	Other	Explain: Provide information on salinity contributions from irrigated agriculture and geology to guide management efforts.

Water Project Justification

Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

This project addresses specific goals set forth in the South Platte Basin Implementation Plan (SP-BIP). For example, Water Quality goals (Page 1-27. Section 1.9.5):

Goal: Maintain, enhance and proactively manage water quality for all use classifications.
MO#1 – Maintain or improve the delivery of safe water supplies throughout the basin.
E&R MO#1 – Monitor, protect and improve watershed water quality and identify and document progress and improvements.
E&R MO#2 – Improve areas where water quality may be limiting the suitability of focus areas identified by BRTs through environmental and recreational mapping efforts.
There are Water Quality Management (Page 3-7. 3.1.11) issues and water quality concerns (Page 4-12. 4.2.3) that are addressed including:

- Wastewater treatment and reuse are important facets of the Basin's water supplies. Innovative systems are being developed in the Basin to increase water availability for various beneficial uses.
- There are salinity concerns related to wastewater treatment plant discharges and salted roads. These salinity issues can impact both surface water and groundwater supplies.

This project addresses themes in the Colorado Water Plan. Water Quality and Quantity Connections (Page 7-18) states: "Managing water quantity may cause a change in water quality. When entities divert water to farms or cities, store it for future use or flood control, or

manage it as return-flows to address downstream water rights, water quality can change." Page 7-19: "One option for addressing future municipal water supply needs is the use of alternative agricultural transfers, such as rotational fallowing and interruptible supply options. High concentration of salts and other pollutants from this source water, however, may require advanced water-treatment technologies, such as reverse osmosis, to make the water usable for communities." Page 7-20: "Cause-and-effect connections related to water quality and quantity are integral to the State's ability to make sound water management decisions. The State considers these connections during decision-making processes that are dependent on statutory, regulatory and management relationships related to water quality and quantity."

State Water Supply Initiative, Executive Summary, page ES-7 and Section 11.2 Major findings of SWSI, page 11-1. Salinity and the role of irrigated agriculture directly impact the following findings:

"2) Projects and water management planning processes that local M&I providers are implementing or planning to implement have the ability to meet about 80 percent of Colorado's M&I water needs through 2030." *Salinity impacts water usability and availability to meet needs.*

"5) Increased reliance on nonrenewable, nontributary groundwater for permanent water supply brings serious reliability and sustainability concerns in some areas, particularly along the Front Range." *Salinity increases due to irrigated agriculture negatively impacts the usability and sustainability of groundwater.*

"7) Water conservation (beyond Level 1) will be relied upon as a major tool for meeting future M&I demands, but conservation alone cannot meet all of Colorado's future M&I needs. Significant water conservation has already occurred in many areas." *Water conservation efforts can exacerbate salinity issues by reducing or eliminating flushing flows that remove salts from soils.*

Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs.

WSRF Grant contract PO 2019-2856 funded the study and report titled "South Platte River Salinity - Sources, Trends, and Concerns 1995-2018". The proposed work builds on and addresses issues identified this study.

Previous CWCB Grants, Loans or Other Funding

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List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project.

1) Colorado Corn Administrative Committee
2) Historical Analysis of South Platte River Salinity to Identify Severity, Trends, and Potential Sources
3) South Platte Basin and Metro Basin
4) March 21, 2019
5) PO 2019-2856
6) Zero funds from other CWCB programs

Taxpayer Bill of Rights

The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.

None

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Submittal Checklist	
✓	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
✓	Statement of Work(1)
✓	Budget & Schedule(1)
✓	Engineer's statement of probable cost (projects over $100,000)
✓	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
	Map (if applicable)(1)
	Photos/Drawings/Reports
	Letters of Support (Optional)
	Certificate of Insurance (General, Auto, & Workers' Comp.) (2)
	Certificate of Good Standing with Colorado Secretary of State(2)
	W-9(2)
	Independent Contractor Form(2) (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
	Engagement & Innovation Supplemental Application(1)

(1) Required with application.
(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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ENGAGEMENT & INNOVATION GRANT FUND SUPPLEMENTAL APPLICATION

Introduction & Purpose

Colorado's Water Plan calls for an outreach, education, public engagement, and innovation grant fund in Chapter 9.5.

The overall goal of the Engagement & Innovation Grant Fund is to enhance Colorado's water communication, outreach, education, and public engagement efforts; advance Colorado's water supply planning process; and support a statewide water innovation ecosystem.

The grant fund aims to engage the public to promote well-informed community discourse regarding balanced water solutions statewide. The grant fund aims to support water innovation in Colorado. The grant fund prioritizes measuring and evaluating the success of programs, projects, and initiatives. The grant fund prioritizes efforts designed using research, data, and best practices. The grant fund prioritizes a commitment to collaboration and community engagement. The grant fund will support local and statewide efforts.

The grant fund is divided into two tracks: engagement and innovation. The Engagement Track supports education, outreach, communication, and public participation efforts related to water. The Innovation Track supports efforts that advance the water innovation ecosystem in Colorado.

Application Questions

*The grant fund request is referred to as "project" in this application.

Overview (answer for both tracks)
In a few sentences, what is the overall goal of this project? How does it achieve the stated purpose of this grant fund (above)?
Who is/are the target audience(s)? How will you reach them? How will you involve the community?
Describe how the project is collaborative or engages a diverse group of stakeholders. Who are the partners in the project? Do you have other funding partners or sources?
Describe how you plan to measure and evaluate the success and impact of the project?

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Overview (answer for both tracks)
What research, evidence, and data support your project?
Describe potential short- and long-term challenges with this project.

Please fill out the applicable questions for either the Engagement Track or Innovation Track, unless your project contains elements in both tracks. If a question does not relate to your project, just leave it blank. Please answer each question that relates to your project. Please reference the relevant documents and use chapters and page numbers (Colorado's Water Plan, Basin Implementation Plan, PEPO Education Action Plan, etc.).

Engagement Track
Describe how the project achieves the education, outreach, and public engagement measurable objective set forth in Colorado's Water Plan to "significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys."
Describe how the project achieves the other measurable objectives and critical goals and actions laid out in Colorado's Water Plan around the supply and demand gap; conservation; land use; agriculture; storage; watershed health, environment, and recreation; funding; and additional.
Describe how the project achieves the education, outreach, and public engagement goals set forth in the applicable Basin Implementation Plan(s).

Describe how the project achieves the basin roundtable's PEPO Education Action Plans.

Innovation Track
Describe how the project enhances water innovation efforts and supports a water innovation ecosystem in Colorado.
Describe how the project engages/leverages Colorado's innovation community to help solve our state's water challenges.
Describe how the project helps advance or develop a solution to a water need identified through TAP-IN and other water innovation challenges. What is the problem/need/challenge?
Describe how this project impacts current or emerging trends; technologies; clusters, sectors, or groups in water innovation.

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Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work	
Date:	**January 31, 2020**
Name of Grantee:	**Colorado Corn Administrative Committee**
Name of Water Project:	**Irrigated Agriculture and Salinity in the South Platte Basin**
Funding Source:	**Colorado Water Plan grant**

Water Project Overview:

This study investigates four (4) inter-related components of salinity and irrigated agriculture in the South Platte Basin: 1) Salinity Impact on Crop Yields; 2) Irrigated Agriculture's Salinity Contribution; 3) Lower Basin Reservoir Salinity; 4) Geologic Salinity Contributions. The overall purpose is to better understand the salinity contributions to the South Platte River from irrigated agriculture and natural, geologic sources. It is assumed that irrigated agriculture is increasing salinity, but the effect has not been investigated. Salinity increases in the lower basin may be predominately due to agriculture driven groundwater return flows, but water storage and conveyance may also play a role. However, the lower basin salinity has also been shown to follow trends in the Front Range tributaries. The elevated salinity in these tributaries may be influenced by natural geologic sources.

The expectation is that this study will assist in clarifying the importance of these salinity sources and processes. This will provide focus to management and mitigation measures. There are other salinity components that are poorly understood, but efforts should be made to encourage other organizations to report on their contributions.

Project Objectives:

The collective objective is to better understand the irrigated agriculture, geologic, and tributary components of the salinity cycle in the basin. This will assist in prioritizing salinity management efforts.

1) Test correlation between South Platte River salinity and crop yields to see if salinity has a discernible impact on irrigated agriculture production and economics;

2) Quantify salinity changes as water moves from diversion points, canals, and wells to fields and then return flows to estimate irrigated agriculture's salinity contribution;

3) Quantify salinity changes as water is diverted to fill lower basin reservoirs, conveyed by canals, applied to fields, and returns to the South Platte River;

4) Investigate whether the Pierre Shale is contributing significant salinity to the Front Range tributaries and ultimately to the lower basin.

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Tasks
Task 1 – Salinity Impact on Crop Yields
Description of Task:
Analyze correlation between select crop yields and salinity, by county, using data from the USDA's National Agricultural Statistics Service, Colorado Field Office. Colorado's largest crops that include corn grain, hay, corn silage, potatoes, sugar beets, wheat, and barley grain will be analyzed as data availability allows. Task 1 – Compile annual crop yields by county Task 2 – Re-analyze salinity data to better represent irrigation water diversion salinity and loading for each county Task 3 – Statistical correlation analysis Task 4 – Report
Method/Procedure:
• Obtain and compile county-level crop-yield data from USDA on-line databases. • Contact USDA Colorado Field Office for availability of detailed source data • Identify major diversions and water sources for each county • Obtain and compile ditch flow data as needed • Re-analyze salinity data to estimate seasonal and annual salinity for each county • Statistical analysis
Deliverable:
A report will be prepared to document methods, data, and results.

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Tasks
Task 2 – Irrigated Agriculture's Salinity Contribution
Description of Task:
Irrigated agriculture can increase salinity, but we don't know how much, where most of it is occurring, or trends. Changes in salinity from water delivery to the field and to return flows will be investigated. Depending on data availability, differences between surface-water diversions and groundwater sources will be explored. This may also lead to insights on the effects of flood and sprinkler irrigation methods on salinity. Task 1 – Characterize diversion and return flow salinity Task 2 – Characterize groundwater salinity along flow paths defined by the SPDSS model Task 3 – Field water-quality sampling in ditches and wells for salinity and Ag parameters Task 4 – Data analysis – Water types, SAR, Ag parameters, isotope signatures, salt loading, trends Task 5 – Report
Method/Procedure:
• Obtain and compile ditch flow data • Obtain and compile existing salinity data for ditches and wells • Evaluate SPDSS alluvial groundwater model for flow paths and travel times • Identify water-quality sampling locations (wells and ditches) that will show salinity changes due to irrigated agriculture fields and return flows • Collect water-quality samples and obtain laboratory analyses • Analyze salinity trends along groundwater flow paths and in ditches
Deliverable:
A report will be prepared to document methods, data, and results.

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Tasks
Task 3 – Lower Basin Reservoir Salinity
Description of Task:
The highest salinity concentrations occur in the lower reaches of the South Platte River. Irrigated agriculture in these reaches is, therefore, likely to be the most impacted by high salinity. There are several potential sources and practices that can cause the increasing salinity. Irrigated agriculture and geologic sources are being investigated in complementary Tasks 2 and 4. Reservoirs are a big piece of the water conveyance system in the basin and their importance continues to grow. Many reservoirs are filled during the fall and winter when the South Platte River's salinity is at its highest concentrations. For example, the North Sterling Reservoir, which has a senior water right, is filled first, followed by Prewitt Reservoir. These reservoirs then provide irrigation water through canals to lower basin farmland during the summer. The scope of this project is the North Sterling and Prewitt Reservoirs and their canal networks. This project investigates salinity concentrations in the reservoirs and the effect of irrigation return flows in the canal network. This task is similar to Task 2, but it includes a well-defined reservoir / canal system. There are limited historical data available for analysis and monthly water-quality sampling events during the irrigation season and bi-monthly sampling during reservoir filling are planned. Task 1 – Compile salinity and flow data for points of diversions, reservoirs, and canals Task 2 – Field water-quality sampling in reservoirs and canals Task 3 – Data analysis – Water types, SAR, Ag parameters, salt loading, trends Task 4 – Report
Method/Procedure:
• Obtain and compile ditch flow data • Obtain and compile existing salinity data for reservoirs and ditches • Re-analyze historical salinity data to better represent conditions at diversion points • Identify water-quality sampling locations (reservoirs and ditches) that will show salinity changes and effect of irrigated agriculture fields and return flows • Collect water-quality samples and obtain laboratory analyses • Analyze salinity trends along groundwater flow paths and in ditches
Deliverable:
A report will be prepared to document methods, data, and results.

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Tasks
Task 4 – Geologic Salinity Contribution
Description of Task:
Front Range tributaries appear to have elevated Total Dissolved Solids that influences lower basin salinity. Is this salinity due to geologic sources or other sources (wastewater, Ag, etc.)? Characterizing groundwater and surface water quality will identify similarities and differences between potential salinity sources. Tributaries may include Clear Creek, Big Dry Creek, Boulder Creek, Saint Vrain, Big Thompson, and the Cache la Poudre River. Water quality and salinity changes before and after outcrops of the Pierre Shale, between drainages that have different exposure to shale, and downstream will be evaluated. Task 1 – Compile geologic data to define shale occurrence and characteristics, identify data locations Task 2 – Compile groundwater levels to define flow paths, identify sampling data locations Task 3 – Compile groundwater, tributary, and wastewater effluent salinity, water quality, and discharge data Task 4 – Field water-quality sampling – wells and tributaries Task 5 – Data analysis – Water types, SAR, Ag parameters, isotope signatures, salt loading, trends Task – Report
Method/Procedure:
• Obtain and compile tributary and ditch flow data • Obtain and compile existing salinity data for tributaries, ditches, and wells • Evaluate alluvial groundwater flow paths based on water levels • Define occurrences of the Pierre Shale in each drainage • Identify water-quality sampling locations (wells and tributaries) that will show salinity changes due to the Pierre Shale, major diversions, and water treatment facilities • Collect water-quality samples and obtain laboratory analyses • Analyze salinity trends along groundwater flow paths and in ditches
Deliverable:
A report will be prepared to document methods, data, and results.

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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 CWCB in hard copy and electronic format 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 B. 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.

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Performance Measures
(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.

Administrative Committee
127 22nd Street
Greeley, CO 80631
Phone: (970) 351-8201
FAX: (970) 351-8203
www.coloradocorn.com

January 31, 2020

Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Suite 718
Denver CO 80203

Re: Colorado Water Plan Grant Proposal – Irrigated Agriculture and Salinity in the South Platte Basin

I work on behalf of several thousand farmers who grow corn along with a variety of other crops in this state and have had the opportunity to see the issues impacting their operations over the last many years. This experience has informed me on the issue of salinity buildup which causes me to be particularly concerned about the seriousness of this issue, and therefore, supportive of this project.

The Colorado Corn Administrative Committee funded the initial study recently completed by Mr. O'Brien that serves as the basis for the application to the Colorado Water Conservation Board, because we recognize how incredibly detrimental the buildup of salts can be to crop production, to Colorado's agricultural productivity overall, and therefore our state's citizenry as a whole. Corn is more tolerant than many crops to salinity accumulation in the root zone, but nearly all crops become impaired at various levels of soil degradation due to this problem.

The initial study indicates serious levels already in the South Platte, particularly the lower reaches of the river.

On behalf of the Colorado Corn Administrative Committee and the Colorado Corn Growers Association, we urge your thoughtful consideration and funding of this worthwhile project.

Sincerely,

Nicholas Colglazier
Colorado Corn
127 22nd Street
Greeley, CO 80631
(970) 351-8201 office
(970) 580-0922 mobile

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Detailed Budget Estimate

Fair and Reasonable Estimate

Prepared Date: 31-Jan-20
Name of Applicant: Colorado Corn Administrative Committee
Name of Water Project: Irrigated Agriculture and Salinity in the South Platte Basin

Sub-tasks	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Task 1 - Salinity Impact on Crop Yields										
Compile annual crop yields	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Re-analyze salinity data	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Statistical correlation analysis	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Report	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Task Total								**$ 40,000**	**$ 30,000**	**$ 10,000**
Task 2 - Irrigated Agriculture's Salinity Contribution										
Characterize diversion salinity	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Characterize groundwater salinity	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Field water-quality sampling	Labor, lab, supplies			$ 50,000				$ 50,000	$ 37,500	$ 12,500
Data analysis	Labor			$ 35,000				$ 35,000	$ 26,250	$ 8,750
Report	Labor			$ 20,000			$ -	$ 20,000	$ 15,000	$ 5,000
Task Total							$ -	**$ 125,000**	**$ 93,750**	**$ 31,250**
Task 3 - Lower Basin Reservoir Salinity										
Compile salinity and flow data	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Field water-quality sampling	Labor, lab, supplies			$ 30,000				$ 30,000	$ 22,500	$ 7,500
Data analysis	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Report	Labor			$ 10,000			$ -	$ 10,000	$ 7,500	$ 2,500
Task Total							$ -	**$ 60,000**	**$ 45,000**	**$ 15,000**
Task 4 - Geologic Salinity Contribution										
Compile geologic data	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Compile groundwater levels	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Compile salinity and flow data	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Field water-quality sampling	Labor, lab, supplies			$ 25,000				$ 25,000	$ 18,750	$ 6,250
Data analysis	Labor			$ 10,000				$ 10,000	$ 7,500	$ 2,500
Report	Labor			$ 20,000			$ -	$ 20,000	$ 15,000	$ 5,000
Task Total							$ -	**$ 85,000**	**$ 63,750**	**$ 21,250**
TOTAL								**$ 310,000**	**$ 232,500**	**$ 77,500**
Other Direct Costs (see below)								**$0**		
OVERALL TOTAL								**$ 310,000**		

Other Direct Costs

Item:	Copies & Printing (Black & White)	Copies & Printing (Color)	Materials and Final Report Production	Lodging and Meals	Travel Expenses (Airfare and Car Rental)	Mileage	Total
Units:	**No.**	**No.**	**Lump Sum**	**Per Diem**	**Lump Sum**	**Miles**	
Unit Cost:	**$0.10**	**$0.50**		**$ 100.00**		**$0.535**	
							$0
							$0
Total Units:							
Total Cost:	$0	$0	$0	$0	$0	$0	**$0**

Administrative Committee
127 22nd Street
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January 31, 2020

Grady O'Brien, Principal
NEIRBO Hydrogeology
231 S. Howes St
Fort Collins, CO 80521

Subject: Irrigated Agriculture and Salinity in the South Platte Basin Project Funding

Dear Mr. O'Brien

The Colorado Corn Administrative Committee Research Action Team authorized funding in the amount of $56,250 for NEIRBO to continue investigating salinity in the South Platte River in conjunction with irrigated agriculture.

Your technical contact for this project is Nicholas Colglazier, Executive Officer of Colorado Corn.

Sincerely,

Nicholas J. Colglazier
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