

**Water Supply Reserve Fund – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**September 18-19, 2019**  
**Agenda Item 9(e)**

**Applicant & Grantee:** Colorado Master Irrigator

**Water Activity Name:** Colorado Master Irrigator Program - Northern High Plains

**Water Activity Purpose:** Multipurpose/Study (Ag/M&I/Needs Assessment)

**County:** Cheyenne, Kit Carson, Yuma, Washington, Sedgwick, Logan, Philips, Lincoln

**Drainage Basin:** South Platte

**Water Source:** Northern High Plains Aquifer

**Amount Requested:** \$59,655 South Platte Basin Account

**Matching Funds:** Applicant & 3<sup>rd</sup> Party Match (cash & in-kind) = \$18,180

- Exceeds 25% match requirement for the Basin Account request

<b>Staff Recommendation:</b>
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Staff recommends approval of up to \$59,655 from the South Platte Basin Account to help fund the project titled: Colorado Master Irrigator Program – Northern High Plains.
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**Water Activity Summary:** WSRF grant funds, if approved, will support the development and outreach-related activities related to a new, four-day intensive educational course on science-backed management methods and tools necessary to sustain profitable agriculture, improve water- and energy-use efficiency, and increase water conservation. This program's goal is to encourage Northern High Plains farmers, farm managers, and crop consultants to make shifts in practice and mindset necessary to address significant Ogallala aquifer water quantity and quality declines, sustain irrigated agriculture in the region, and satisfy compact-related obligations. A project advisory committee that includes members of the Northern High Plains Designated Basin's eight Ground Water Management Districts, area producers, CSU Extension, and others will support the program's coordinator with curriculum development, program outreach, work to establish private and publicly supported incentives to encourage management shifts, and help secure funding for the program and sponsorship opportunities for its participants. Each class cohort will have 25 participants, which may also influence management more widely across the Basin's 584,522 irrigated acres through program-related outreach and because of peer-to-peer exchange among producers that participate in or serve as educators for the program.

**Discussion:** This project supports the goal of recognizing the importance of Colorado's future well-being, and support continued success and develop new voluntary measures to sustain irrigated agriculture as indicated in section 1.9.1 Agriculture in the South Platte Basin Implementation Plan, while also assisting the state maintain agricultural viability, and support agricultural conservation and efficiency as stated in Chapter 10 of Colorado's Water Plan.

**Issues/Additional Needs:** The applicant must submit two additional letters verifying matching commitments prior to entering into a contract with the state, otherwise no issues or additional needs have been identified

**Eligibility Requirements:** The application meets requirements of all eligibility components: General Eligibility, Entity Eligibility, Water Activity Eligibility, and Eligibility Based on Match Requirements.

**Evaluation Criteria:** This activity has undergone review and evaluation and staff has determined that it satisfies the Evaluation Criteria. Please refer to Basin Roundtable Chair's Recommendation Letter and the WSRF Grant Application for applicant's detailed response.

**Funding Summary/Matching Funds:**

<b><u>Funding Sources</u></b>	<b><u>Cash</u></b>	<b><u>In-kind</u></b>	<b><u>Total</u></b>	<b><u>Status</u></b>
Plains Ground Water Management District	\$0	\$9,500	\$9,500	Pending
Republican River Water Conservation District	\$5,000	\$0	\$5,000	Pending
Water Preservation Partnership	\$2,000	\$0	\$2,000	Secured
Colorado Water Center Education and Outreach Grant	\$4,120	\$0	\$4,120	Secured
Sub-total	\$11,120	\$9,500	\$20,620	
WSRF South Platte Basin Account	\$59,655	\$0	\$59,655	Secured
<b>Total Study Costs</b>	<b>\$70,775</b>	<b>\$9,500</b>	<b>\$80,275</b>	

**CWCB Project Manager:** Alex Funk

South Platte Basin Roundtable  
Garrett Varra,  
Chair  
July 23, 2019

Craig Godbout  
Water Supply Planning Section  
Colorado Water Conservation Board  
1313 Sherman Street, Room 718  
Denver, CO 80203

\*\*Via email to [craig.godbout@state.co.us](mailto:craig.godbout@state.co.us)\*\*

RE: Letter of Support for the "Colorado Master Irrigator" grant application.

Craig,

It is with great pleasure that we submit recommendation for full approval for the Water Supply Reserve Fund grant application submitted by Colorado Master Irrigator in the amount of \$59,655. We believe the program fits well within the Colorado Water Plan and South Platte Basin Implementation Plan in numerous ways. This application was recommended for approval at the July meeting of the SPBRT. A quorum was present and all members voted in support of the application. It is our hope that this program will become a model for further efforts across the state.

Helping farmers determine how to sustain profits while integrating tools and strategies that can help them improve water and energy-use efficiency and increase water conservation on their operations is the main goal of Colorado Master Irrigator, a 4-day, 32-hour educational course to be offered annually to farmers and crop consultants starting in early 2020. The curriculum will provide in-depth exposure to a wide range of science- and practice-backed topics representative of proven management tools and practices that have been successfully implemented in the region, along with information on regional hydrology and relevant local, state, and Federal programs. The focus on topics such as increasing the use of irrigation scheduling and deficit irrigation, upgrading irrigation systems, planting less water-demanding crops, and improving soil health directly aligns with our goals (CWP 6.5.2; SPBRT BIP 5.3.2). The use of these teachings will then help address the gap between "future water needs and available water provisions" in the Basin, helping to maintain Colorado's agricultural economy, limit permanent dry-up of irrigated acres, benefit municipal and industrial users that rely on the Ogallala aquifer and help support Colorado's interstate water compact compliance efforts (CWP 6.2, 6.4, 6.5.1, 6.5.2; SPRT BIP 1.9.1 measurable outcomes 1-4, 4.6.2, 5.5.3, 5.4.1 5.4.4, S5.9).

The South Platte Basin Roundtable is in full support of Colorado Master Irrigator and see the potential this program has to offer both our basin and, eventually, the entire state of Colorado. We recommend approval of their application.

Sincerely,

  
Garrett Varra

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<b>Colorado Water Conservation Board</b>
<b>Water Supply Reserve Fund Grant Application</b>

Instructions		
<p>All WSRF grant applications shall conform to the current <a href="#">2016 WSRF Criteria and Guidelines</a>.</p> <p>To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) <b>AND</b> the Colorado Water Conservation Board (CWCBC). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCBC meets bimonthly according to the schedule on page 2 of this application.</p> <p>If you have questions, please contact the current CWCBC staff Roundtable liaison:</p>		
<p><b>Arkansas</b></p> <p>Ben Wade  <a href="mailto:ben.wade@state.co.us">ben.wade@state.co.us</a>            303-866-3441 x3238</p>	<p><b>Gunnison   North Platte   South Platte   Yampa/White</b></p> <p>Craig Godbout  <a href="mailto:craig.godbout@state.co.us">craig.godbout@state.co.us</a>            303-866-3441 x3210</p>	<p><b>Colorado   Metro   Rio Grande   Southwest</b></p> <p>Megan Holcomb  <a href="mailto:megan.holcomb@state.co.us">megan.holcomb@state.co.us</a>            303-866-3441 x3222</p>

WSRF Submittal Checklist (Required)	
X	I acknowledge this request was recommended for CWCBC approval by the sponsoring roundtable.
X	I acknowledge I have read and understand the <a href="#">2016 WSRF Criteria and Guidelines</a> .
X	I acknowledge the Grantee will be able to contract with CWCBC using the <a href="#">Standard Contract</a> . <sup>(1)</sup>
<b>Application Documents</b>	
X	Exhibit A: Statement of Work <sup>(2)</sup> ( <i>Word – see Template</i> )
X	Exhibit B: Budget & Schedule <sup>(2)</sup> ( <i>Excel Spreadsheet – see Template</i> )
X	Letters of Matching and/or Pending 3 <sup>rd</sup> Party Commitments <sup>(2)</sup>
X	Map <sup>(2)</sup>
	Photos/Drawings/Reports
X	Letters of Support
<b>Contracting Documents<sup>(3)</sup></b>	
	Detailed/Itemized Budget <sup>(3)</sup> ( <i>Excel Spreadsheet – see Template</i> )
	Certificate of Insurance <sup>(4)</sup> ( <i>General, Auto, &amp; Workers' Comp.</i> )
	Certificate of Good Standing <sup>(4)</sup>
	W-9 Form <sup>(4)</sup>
	Independent Contractor Form <sup>(4)</sup> ( <i>If applicant is individual, not company/organization</i> )

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	Electronic Funds Transfer (ETF) Form <sup>(4)</sup>
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(1) Click “Grant Agreements”. For reference only/do not fill out or submit/required for contracting

(2) Required with application if applicable.

(3) Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

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

Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
July	June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	July
Desired Notice to Proceed Date:	September

Water Activity Summary		
Name of Applicant	Colorado Master Irrigator	
Name of Water Activity	<b>Colorado Master Irrigator Program- Northern High Plains</b>	
Approving Roundtable(s)	Basin Account Request(s) <sup>(1)</sup>	
South Platte Basin Roundtable	\$59,655	

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Basin Account Request Subtotal	\$59,655
Statewide Account Request <sup>(1)</sup>	\$0
Total WSRF Funds Requested (Basin & Statewide)	\$59,655
Total Project Costs	\$80,275

(1) Please indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information	
Name of Grantee(s)	Colorado Master Irrigator
Mailing Address	PO Box 188, Burlington, CO 80807
FEIN	
Grantee's Organization Contact <sup>(1)</sup>	Brandi Baquera
Position/Title	Program Coordinator
Email	pgwmd@centurytel.net
Phone	(719)346-8487
Grant Management Contact <sup>(2)</sup>	Brandi Baquera
Position/Title	Program Coordinator
Email	pgwmd@centurytel.net
Phone	(719)346-8487
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

(1) Person with signatory authority

(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee
Provide a brief description of the grantee's organization (100 words or less).

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Colorado Master Irrigator is a non-profit organization whose goal is to help equip producers in the Northern High Plains Designated Basin with information they can use to save water, conserve energy, build soil health, and enhance farm profitability through their participation in a 4-day intensive educational program.

The Colorado Master Irrigator Board of Directors was recruited from the larger program advisory committee (PAC) to lend their expertise (accounting, fundraising, farming, agricultural industries, etc.) to the program. The Colorado Master Irrigator program coordinator will provide fiscal and progress updates and support the work of Board sub-committees as needed.

Type of Eligible Entity (check one)	
	<b>Public (Government):</b> 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.
	<b>Public (Districts):</b> authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
	<b>Private Incorporated:</b> mutual ditch companies, homeowners associations, corporations
	<b>Private Individuals, Partnerships, and Sole Proprietors:</b> are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
X	<b>Non-governmental organizations:</b> broadly, any organization that is not part of the government
	<b>Covered Entity:</b> as defined in <a href="#">Section 37-60-126 Colorado Revised Statutes</a>

Type of Water Activity (check one)	
	Study
X	Implementation

Category of Water Activity (check all that apply)		
	Nonconsumptive (Environmental)	
	Nonconsumptive (Recreational)	
X	Agricultural	
	Needs Assessment	
X	Education & Outreach	
x	Other	Municipal/Industrial & Environmental. Explain: Programs that support reductions in agricultural consumptive use of groundwater/keep more of the Ogallala/High Plains aquifer resource stored in the ground will provide



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		critical support for drought resilience for the region’s human communities (and their municipal/industrial activities) and ecological communities, including populations of several native and uncommon species reptiles, fish, and amphibians dependent on groundwater fed streamflow.
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### Location of Water Activity

Please provide the general county and coordinates of the proposed activity below in **decimal degrees**.

The Applicant shall also provide, in Exhibit C, a site map if applicable.

County/Countries	Cheyenne, Kit Carson, Yuma, Washington, Sedgwick, Logan, Philips, and Lincoln
Latitude	
Longitude	

### Water Activity Overview

Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. 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, area of habitat improvements. 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, and Schedule.



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WSRF funding will support development and outreach activities related to a new, four-day intensive educational course on science-backed management methods and tools necessary to sustain profitable agriculture, improve water- and energy-use efficiency, and increase water conservation. This program's goal is to encourage Northern High Plains (NHP) farmers, farm managers, and crop consultants to make shifts in practice and mindset necessary to address significant Ogallala aquifer water quantity and quality declines, sustain irrigated agriculture in the region, and satisfy compact-related obligations.

A project advisory committee (PAC) that includes members of the NHP Designated Basin's eight Ground Water Management Districts, area producers, CSU Extension, and others will support the program's coordinator with curriculum development, program outreach, work to establish private- and publicly supported incentives to encourage management shifts, and help secure funding for the program and sponsorship opportunities for its participants.

Each class cohort will have 25 participants, impacting ~25,000 irrigated acres per class (125 acres x 8 circles/participant x 25 participants). This program may also influence management more widely across the Basin's 584,522 irrigated acres through program-related outreach (in person and digital) and as a result of peer-to-peer exchange among producers that participate in or serve as educators for the program.

Measurable Results		
To catalog measurable results achieved with WSRF funds please provide any of the following values.		
	New Storage Created (acre-feet)	
Need to estimate	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
(See below)	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
Need to estimate	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved	
Various metrics to be tracked	Other	<p>Explain: Each class cohort will have 25 participants, representing an estimated 25,000 irrigated acres (about 1/20th of the Basin's total irrigated acres). Through peer-to-peer exchange, network building, and outreach efforts, the program is expected to reach hundreds of people each year within and beyond the NHP Basin, potentially influencing many more irrigated acres.</p> <p>In addition, each class of Master Irrigator participants will be asked to share some key water-use data for their operations, including on their crop production reported in bushels produced/acre-in of water applied. At the end of the</p>

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		<p>course, each class member will be asked to define a target goal (or goals, e.g. increasing water use efficiency, learning to use irrigation scheduling or interpret soil moisture probe data, etc.) that will demonstrate their use of knowledge gained or refined as a result of participating in this program. Master Irrigator program staff will track the progress these individuals make related to these goals on an annual basis for the next three growing seasons. This activity will generate a wide variety of quantitative and qualitative data on producers' management and mindset shifts, the adoption of strategies and tools, water use efficiency, reductions in overall water consumption, and/or profitability per acre-inch of applied water.</p>
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### Water Activity Justification

Provide a description of how this water activity supports the goals of [Colorado's Water Plan](#), the most recent [Statewide Water Supply Initiative](#), and the respective [Roundtable Basin Implementation Plan and Education Action Plan](#) <sup>(1)</sup>. 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).

For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in [2016 WSRF Criteria and Guidelines](#)).

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The Northern High Plains (NHP) Designated Basin has limited surface water and therefore depends on the Ogallala (High Plains) aquifer. Agriculture, and irrigated agriculture in particular, is the Basin’s primary economic driver, supporting extensive crop and livestock production (mainly corn, sorghum, wheat, potatoes, sunflowers, soybeans, alfalfa, and cattle) and many agriculture-related businesses. Crop and livestock commodity sales for the counties spanned by this Basin--whose production value is considerably increased as a result of irrigation--totaled more than \$6.2 billion in 2017 (NASS 2017 Ag Census Data). Farmers in this part of the state are under pressure to find ways to reduce pumping and slow water table decline in order to extend viable use of the Ogallala resource longer into the future and help meet interstate obligations of the Republican River Compact.

The Colorado Master Irrigator program is an in-person, 4-day (32-hour) conservation-oriented course that will be taught annually beginning in early 2020 by highly knowledgeable and effective teachers and farmers. This program will provide in-depth training on a wide range of advanced conservation and irrigation management tools and practices. The program will also provide up-to-date information on regional hydrology and available well retirement opportunities. This program is closely modeled on the example of a highly successful Master Irrigator program offered since 2016 in the Texas Panhandle by the North Plains Groundwater Conservation District:

[\(http://northplainsgcd.org/conservationprograms/communityedu/master-irrigator/\)](http://northplainsgcd.org/conservationprograms/communityedu/master-irrigator/). The course developers, teachers and class members involved in Colorado Master Irrigator represent “principal targeted audiences” including agricultural, academic, and Roundtable stakeholders identified in the South Platte Basin Roundtable (SPBR)/Metro 2019 Education Action Plan (EAP).

The Colorado Master Irrigator Program format is designed expressly to encourage profitable agricultural water management, such as increasing use of irrigation scheduling and deficit irrigation, upgrading irrigation systems, planting less water-demanding crops, and improving soil health (CWP 6.5.2; SPBR BIP 5.3.2). Such shifts can translate into significant savings of acre-feet of aquifer water left in the ground for future use, thus helping to maintain Colorado’s agricultural economy, limit permanent dry-up of irrigated acres, and address the gap between “future water needs and available water provisions” identified for this Basin while complying with interstate water compact requirements (CWP 6.2, 6.4, 6.5.1, 6.5.2; SPBR BIP 1.9.1 measurable outcomes 1-4, 4.6.2, 5.5.3, 5.4.4, SPBR 5.4). As such, this activity will have potential multi-benefit impacts for the NHP Designated Basin’s municipal and industrial users who also rely on the Ogallala aquifer, and on wildlife populations dependent groundwater-fed streams.

A program advisory committee (PAC) representing Basin stakeholders (producers, crop consultants, ag-related industries, groundwater management districts, state and Federal agency staff, and others) will guide the development of this program. Their input and collaboration with the Master Irrigator Program coordinator to develop a high-quality learning experience and to encourage “buy-in” to this innovative program will ultimately serve to build local expertise and increase community support for conservation that is necessary to sustain irrigated farmland (CO WP 6.2, SPBR BIP S5.9). Overall, this program’s outreach efforts (in-person, print, and digital/website and social media) and messaging will also help encourage greater public awareness and social acceptance of conservation required to address the NHP

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Designated Basin's water-related challenges, potentially reaching diverse audiences across the state and beyond (CWP 6.3, 9.5; SPBR 5.5.9; SPBR/Metro 2019 EAP).

Regional expertise will be leveraged to form each cohort of course instructors, who will include producers, university academic and Extension staff, representatives from different ag industries, crop consultants, and others. Curriculum topics taught as part of this program will expressly include practical and economic aspects related to maintaining or increasing market advantage and profitability even if/as applied water use is reduced. This course will also include an overview of regional hydrology (past, present, and future) and state- and Federal programs active in the NHP related to water- and energy-use efficiency and conservation. Each day of the course will foster peer-to-peer exchange among producers involved in the program as participants or as panelists who will share insights gained from implementing different strategies aimed at increasing water-use efficiency and conservation on their farms (CWP 6.4).

Some management shifts that aim to increase water use efficiency and/or conservation can significantly benefit producers' bottom lines. As an illustrative example, an operation with eight crop circles that typically applies 15 acre-inches of water per year per pivot spends several hundred dollars just in energy costs for each acre-inch applied, to turn the pivot and run the irrigation pump engine. If overall productivity goals can be met while water use is decreased by 15% (2.25 fewer acre-inches; achievable through a variety of means, e.g. using irrigation scheduling to better target/time water applications, shifting crops planted, lowering seed populations, etc.) this water use reduction could result in several thousand dollars in energy-related cost savings while also significantly reducing irrigation equipment wear and tear.

For the first three years of the program, the Colorado Master Irrigator program will be offered once per year. The class size will be limited to 25 participants to maximize effective in-depth engagement and exchange. Once established, this program might be offered more than once within the NHP per year if/as demanded; the program might also serve as an example that could be adapted and delivered in other Basins.

Master Irrigator Program participants are expected to complete all 32 hours of the course. They will be asked to come prepared to share information that relates water use to target yield goals for the operations for which they work. At the conclusion of the program, participants will identify a conservation-oriented commitment for the coming growing season that can be tracked for the following three years by the Master Irrigator Program staff. This information will yield insights that can be used to improve the program curriculum year-over-year, and to help inform and improve technical support required to encourage greater water use efficiency and water conservation across the Basin (CWP 6.3, SPBR/Metro 2019 EAP).

This flexible approach to setting and meeting ag water management goals "meets producers where they are at" in a way allows for differences among operations, spatial variation in the aquifer's saturated thickness, soil types, etc. This program will help arm producers with the information they need and a knowledgeable social network they can rely on as they identify which ag water management improvements are doable, affordable, and specifically relevant to their production goals. With several years of the program under its belt, the data collected on

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producers’ commitments may also help inform decision-making processes in a way that “reduces uncertainty for water managers and supports the development of basin-specific models” applicable to compact-related obligations (CWP 6.4, 5.2; SPBR BIP 5.3.2).

Some of the program’s participants may be already leading, conservation-oriented producers who already strictly limit how much water they apply each year relative to typical crop evapotranspiration needs (i.e., ~9-10 acres-inches or less of applied water/year). Their production-related goals upon completion of the program may involve trying out new crop rotations, testing new drought-tolerant varieties or different seeding rates, upgrading and testing out new irrigation hardware or software, etc. Other producers may elect to try to effectively integrate other strategies and/or tools relevant to their water use decision-making-- using the free WISE irrigation scheduling tool available through CSU Extension, for example, or learning to interpret and trust data from soil moisture probes-- such that they find, similar to many other producers in the Ogallala region, that they can considerably reduce consumptive use of water without impacting yields. Crop consultant participants might define a goal of helping their clients better understand the financial and water savings potential of certain tools and strategies covered by this program.

The Colorado Master Irrigator Program PAC will work to establish a variety of incentives that can reward participants’ engagement and support their water-use efficiency/conservation-oriented commitments. These incentives may include:

- additional professional development/training opportunities available through regional partners
- local discounts on inputs, tools, and irrigation system upgrades
- more favorable terms with ag lenders
- a rebate on Republican River Water Conservation District irrigated acreage fees
- improved eligibility for state and Federal grants, loans, and cost-share programs
- the ability to enter into conservation-oriented easements or perpetual agricultural agreements with the state that eliminate (perceived or real) “use it or lose it” risks tied to water use permits.

Should Master Irrigator Program tracked commitments to increasing water-use efficiency and conservation lead to greater, demonstrable water savings achieved by the Basin over time, it is the hope of this program’s advisory committee that the number of well retirements anticipated --affecting at least 25,000 acres by 2029 at current depletion rates-- might be able to be reduced (SWSI 2010).

(1) Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Matching Requirements: Basin Account Requests	
<b>Basin (only) Account</b> grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3 <sup>rd</sup> party and shall be accompanied by a <b>letter of commitment</b> as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity’s letterhead). Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
Plains Ground Water Management District	\$9500 in-kind

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Republican River Water Conservation District	\$5000 cash
Water Preservation Partnership	\$2000 cash
Colorado Water Center Education and Outreach Grant	\$4120 cash
Total Match	\$20,620
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
<p><b>Statewide Account</b> grant requests require a 50% match as described in the 2016 WSRF Criteria and Guidelines. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3<sup>rd</sup> party) and shall be accompanied by a <b>letter of commitment</b>. Attach additional sheet if necessary.</p>	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
NA	
Total Match	\$0
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

Related Studies
Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.



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1. 2014-2017; "Economic Analysis and Design of Policies to Reduce Groundwater Use in the Northern High Plains Ground Water Basin." **Colorado Water Conservation Board** grant, \$159,882. Related research article: RA Hrozencik, DT Manning, JF Suter, C Goemans, and RT Bailey (2017). The Heterogeneous Impacts of Groundwater Management Policies in the Republican River Basin of Colorado. *Water Resources Research* (53) 12: pp 10757-10778.
2. 2015-2016; Water Irrigation Scheduler for Efficient Application (WISE) online tool promotion and improvement in Colorado. **Coca-Cola Company**, \$25,000.
3. 2013-2016; Decision Support Tools, Drought Tolerance, and Innovative Soil and Water Management Strategies to Adapt Semi-arid Irrigated Cropping Systems to Drought; PI Dr. Neil Hansen and 6 other co-PIs; **USDA-NRCS Conservation Innovation Grant**, \$882,924, including \$58,000 for an interdisciplinary engagement/demonstration project to monitor the field water balance under different irrigation strategies, and demonstrate irrigation scheduling techniques and precision irrigation)
4. 2013-2015; Implementation of Deficit Irrigation Regimes: Demonstration and Outreach; PI Dr. José L. Chávez; **Colorado Water Conservation Board**, Alternative Agricultural Water Transfer Methods Competitive Grant Program.
5. 2011-2015; Mobile Irrigation Water Management System Using eRAMS Cloud Computing Infrastructure; co-PI Dr. Mazdak Arabi; **USDA-National Institute of Food and Agriculture**, \$365,000. (Interdisciplinary research and engagement project; Project director coordinating web-based and mobile app irrigation management software development and extension activities for irrigating producers)
6. 2012-2014; Agricultural weather data delivery improvements to Uncompahgre Valley irrigators; PI Denis A. Reich; co-PIs Troy A. Bauder and Nolan J. Doesken; Colorado Water Conservation Board, \$112,000. (Interdisciplinary engagement project that included work on providing irrigation scheduling and water balance algorithms for an online irrigation scheduling tool.
7. 2013; Demonstration and Validation of an Online Irrigation Scheduling Tool for use in Sugarbeet Production in Northern Colorado. PI Erik Wardle; co-PI's Troy Bauder and Joel Schneekloth; **Western Sugar Cooperative**, \$9,752. (Field validation of an online irrigation scheduler on 4 sugar beet fields in north east Colorado)
8. 2009-2012; Using the ASCE Standardized Reference Evapotranspiration Equation and Appropriate Crop Coefficients for Irrigation Management in Colorado; co-PIs Dr. José L. Chávez and Troy Bauder; **USDA-NRCS Conservation Innovation Grant**, \$74,617. (Interdisciplinary engagement/demonstration project; Project director supervising field and lab activities to estimate crop ET and irrigation requirements)
9. NL Klocke, JP Schneekloth, SR Melvin, RT Clark, JP Payero (2004). Field scale limited irrigation scenarios for water policy strategies. *Applied Engineering in Agriculture* 20 (5): 623-631. Study partially funded by the **U.S. Department of the Interior, Bureau of Reclamation**.
10. 2016-2020; "Sustaining agriculture through adaptive management to preserve the Ogallala aquifer under a changing climate." **USDA-National Institute of Food and Agriculture Award # 2016-68007-25066**. \$10,000,000. Co-PIs Meagan Schipanski and



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Reagan Waskom, hosted at Colorado State University; involves 40 collaborating faculty members based at 9 institutions in 6 Ogallala states.

### Previous CWCB Grants

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

None

### Tax Payer Bill of Rights

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

None



Last Update: January 9, 2018

<b>Colorado Water Conservation Board</b>	
<b>Water Supply Reserve Fund</b>	
<b><u>Exhibit A - Statement of Work</u></b>	
<b>Date:</b>	May 1, 2019
<b>Water Activity Name:</b>	<b>Colorado Master Irrigator Program- Northern High Plains</b>
<b>Grant Recipient:</b>	Colorado Master Irrigator
<b>Funding Source:</b>	South Platte Basin Roundtable
<p><b>Water Activity Overview:</b> (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for.</p> <p>WSRF funding will support development and outreach-related activities related to a new, four-day intensive educational course on science-backed management methods and tools necessary to sustain profitable agriculture, improve water- and energy-use efficiency, and increase water conservation. This program's goal is to encourage Northern High Plains (NHP) farmers, farm managers, and crop consultants to make shifts in practice and mindset necessary to address significant Ogallala aquifer water quantity and quality declines, sustain irrigated agriculture in the region, and satisfy compact-related obligations.</p> <p>A project advisory committee (PAC) that includes members of the NHP Designated Basin's eight Ground Water Management Districts, area producers, CSU Extension, and others will support the program's coordinator with curriculum development, program outreach, work to establish private- and publicly supported incentives to encourage management shifts, and help secure funding for the program and sponsorship opportunities for its participants.</p> <p>Each class cohort will have 25 participants, impacting ~25,000 irrigated acres per class (125 acres x 8 circles/participant x 25 participants). This program may also influence management more widely across the Basin's 584,522 irrigated acres through program-related outreach (in person and digital) and as a result of peer-to-peer exchange among producers that participate in or serve as educators for the program.</p>	
<p><b>Objectives:</b> (List the objectives of the project)</p>	

Last Update: January 9, 2018

1. Develop a high-quality curriculum specifically designed to help NHP producers slow well depletions and prioritize profitable water-use efficiency and conservation, making it possible to extend irrigated production dependent on the Ogallala/High Plains Aquifer.
2. Facilitate effective peer-to-peer exchange using producer panels to share insights and help solidify learning of concepts (economic, technical, practical, psychological) covered by this program's curriculum topics.
3. Strengthen conservation-oriented social networks in the NHP Basin that will potentially influence water-management related conversations beyond the classroom through the Master Irrigator Program's outreach-related activities, including in-person exchange and development and dissemination of print and digital communications.
4. Improve understanding of land- and water-use decision making the NHP Basin by collecting water/land-use related data from Master Irrigator Program participants at the start of the course and on ag water management tools and strategies and goals that they implement as a result of information learned through the program.
5. Encourage faster and wider adoption of advanced management practices and technological tools with proven potential for helping producers farm using with less water while sustaining farm productivity and profitability.
6. Offer a wide variety of private- and publicly supported incentive options (cost-share and/or discounts on tools, inputs and technological hardware and software, rebates and more) to reward participants who successfully complete the program and encourage them to achieve their water-use efficiency and conservation-oriented goals.
7. Build a successful track record starting with the first class cohort to spark interest and start building a solid, long-term foundation that can support this program beyond its initial, three-year "start-up" period.
8. Through their commitments to water conservation, and/or water- and energy-use efficiency, program participants will ideally improve the resiliency of their operations and serve as examples that help to positively influence the state of Colorado's water-related discussions with neighboring states.

### Tasks

Provide a detailed description of each task using the following format:

#### **Task 1 - Curriculum and general program development**

Description of Task:

Last Update: January 9, 2018

The Project Advisory Committee (PAC) will work together with the program coordinator to:

1. Identify and prioritize practical, science-backed topics focused on conservation and increasing water- and energy use efficiency to be covered each year of the 4-day Master Irrigator course in a manner that addresses area producers' key concerns and needs.
2. Identify and line up excellent teachers and farmer panelists that can effectively deliver this curriculum. Teachers and panelists will be provided contextual information on the program's format, participants, and goals in advance to assist their development and effective delivery of information on different curriculum topics covered by the program.
3. Help identify and establish a wide range of privately and publicly supported incentives that will be available encourage and reward participants who successfully complete the program.
4. Provide input on private/public funding and sponsorship opportunities and proposals written to help secure funding to pay for program costs over the short- and long term.
5. Develop a process and related forms that will be used to gather data from participants on land and water use and track progress on post-program water-use related commitments.

Method/Procedure:

In consultation with/incorporating information from the PAC, the program coordinator will serve as logistical lead for all activities required to develop the Master irrigator course each year. The program coordinator will convene the PAC for 4 hours each month either in-person or via teleconference. The program coordinator will be responsible for facilitating each PAC discussion and gathering/integrating their input in a timely way to complete tasks described above in time for the program's launch in early 2020. In subsequent years, the PAC will continue to meet regularly but less frequently, to review the success of the previous year's program and to revise and improve the program curriculum and line up teachers for the next year.

In advance of/as preparation for each PAC meeting, the program coordinator will:

1. Maintain communications with PAC members by email and text.
2. Develop and distribute an agenda with clearly noted objectives prior to/at each meeting.
3. Distribute a written, summarized digest of each meeting with clearly defined action items.
4. Assign reasonable (in terms of time obligations), necessary homework for the PAC to work on in between meetings to keep program development on time/on track and condense this input to share at subsequent PAC meetings.
5. Alert the PAC to newly uploaded files in the program's shared Google Drive.
6. Develop and provide iterative, draft copies of the curriculum with placeholders for different topics and teachers.
7. Support the PAC in reaching out to and engaging people identified as prospective, excellent educators for different curriculum topics.



Last Update: January 9, 2018

8. Support the PAC in reaching out to and engaging people, organizations, and businesses identified as prospective providers of incentives and/or scholarship funding that could be offered through the program.
9. Consult with people outside the PAC to assist with answering questions and to address action items raised or identified in discussion with the PAC.
10. Develop and provide iterative, draft copies of form format and documentation of the process that will be used to collect data from Master Irrigator Program participants related to water use efficiency and conservation goals and to track progress for 3 years on water-use related commitments they will make at the end of the course.
11. Rent space and organize refreshments for all meetings related to program development.

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

The main deliverable from this task will be a high-quality program curriculum that: a) is developed on time and reflects program goals; b) is ready to be offered for the first time in early 2020; c) has succeeded in securing funding necessary to cover three start-up years of costs related to program development (phase 1) and program delivery (phase 2); and d) will be able to offer some private and publicly supported sponsorships to attract program participants and incentives to reward and support their water use efficiency conservation-oriented efforts and commitments following their graduation from the course.

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

1. A business plan that shows target dates used to track progress on the development of specific program components (e.g. curriculum development; identifying and training teachers/panelists; developing and launching the website; developing and distributing program brochures; arranging for incentives and other sources of funding, etc.)
2. A defined list (names/affiliation/contact info) of all PAC members
3. Agendas and notes summaries from each PAC meeting with defined action items
4. A list/schedule updated twice yearly of grant deadlines and other identified potential funding sources and sponsorship opportunities
5. A spreadsheet updated once yearly of prioritized curriculum topics and teachers/farmer panelists
6. A detailed curriculum (once yearly) that provides dates, time blocks, and bios for teachers and farmer panels for each day of the 4-day course
7. Example draft materials to be used and/or distributed during the course, including the form used to collect data from Master Irrigator Program class members related to their land and water use and to track their progress for 3 years after their participation on water-use related commitments made by program participants
8. Documentation for the program's fiduciary framework that identifies who is responsible for managing any funds
9. Memoranda of understanding or other documentation that describes relationships developed with any program partners

Last Update: January 9, 2018

Tasks
<b><u>Task 2 - Program Outreach</u></b>
Description of Task:
Information about the Colorado Master Irrigator Program will be shared using a variety of strategies including a) small group and one-on-one conversations; b) program-related presentations; c) distribution of print resources; d) social media; and e) a website developed specifically to showcase the program.
Method/Procedure:
<p>With the PAC, the program coordinator will:</p> <ol style="list-style-type: none"> <li>1. Identify target individuals, organizations, and other groups that may participate in, contribute to, and/or help build awareness of the Master Irrigator Program across the NHP Basin.</li> <li>2. Collect photos, stories, and testimonials for use in outreach activities and materials.</li> <li>3. Develop and deliver a PowerPoint presentation that describes the program and the process used to design the course to target audiences (e.g., groundwater management districts, conservation districts and organizations, local NRCS offices, and others).</li> <li>4. Develop and distribute printed flyers/brochures and other project-related documents and arrange for timely advertisements to encourage engagement.</li> <li>5. Maintain the Master Irrigator Program's social media presence by sharing compelling, unique information and stories related to the program.</li> <li>6. Engage skilled website design support staff who will develop a high-quality promotional website for the program.</li> <li>7. Provide content (text, photos, videos) for the website designer to use in building the website.</li> <li>8. Be responsible for long-term maintenance of the website with support from other program staff and PAC members.</li> <li>9. Foster relationships and partnerships with local, regional, State, and Federal sponsors and incentive providers that will help to sustain and further develop the program.</li> </ol>
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<ol style="list-style-type: none"> <li>1. Generating and building awareness across the NHP of the value and goals of the Master Irrigator program in advance of its launch in early 2020 and during the rest of the program's three-year start-up period.</li> <li>2. Print and digital resources that clearly communicate the program's vision and farm- and Basin-level goals</li> <li>3. The development of an engaged network of area sponsors and incentive providers</li> <li>4. Have a recognizable community presence in the form of posters and field signs that promote the Colorado Master Irrigator program and its graduates</li> <li>5. Filling all 25 seats during annual program registration starting with the first class cohort in early 2020.</li> <li>6. Launching the program website and social media feeds during the winter of 2019-2020.</li> </ol>
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)



Last Update: January 9, 2018

1. A list (annually) of individuals and organizations with which the Master Irrigator program has interacted that describes the information that has been shared with them in order to advertise and increase awareness of the program.
2. Samples of print resources, registration announcements, and advertisements used to encourage participation in and increase awareness of the program and a description of how these materials have been disseminated throughout the Basin.
3. Memoranda of understanding or letters of commitment from sponsors and incentives providers.
4. Links to the program's social media feeds and website.

### 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



Last Update: January 9, 2018

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.





**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: May 1, 2019

Water Activity Name: Colorado Master Irrigator Program - Northern High Plains

Grantee Name: Colorado Master Irrigator

<u>Task No.</u> <sup>(1)</sup>	<u>Description</u>	<u>Start Date</u> <sup>(2)</sup>	<u>End Date</u>	<u>Matching Funds</u> (cash & in-kind) <sup>(3)</sup>	<u>WSRF Funds</u> (Basin & Statewide combined) <sup>(3)</sup>	<u>Total</u>
1	Curriculum and General Program Development	September 1, 2019	September 30, 2022			\$0
	- Consultant Fees			\$5,400	\$10,225	\$15,625
	- Program Coordinator			\$9,500	\$36,900	\$46,400
	- Facility Rental and Meeting Materials/Refreshments			\$2,600	\$2,800	\$5,400
	- Program Binders and PAC Meeting Support Information			\$2,000	\$850	\$2,850
2	Program Outreach	September 1, 2019	September 30, 2022			\$0
	- Website/Social Media Development and Maintenance			\$1,120	\$8,880	\$10,000
						\$0
						\$0
						\$0
						\$0
						\$0
<b>Total</b>				<b>\$20,620</b>	<b>\$59,655</b>	<b>\$80,275</b>

(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 \$100K - 45 Days from Board Approval; Start Date for funding over \$100K - 90 Days from Board Approval.

(3) Round values up to the nearest hundred dollars.

• Additional documentation providing a Detailed/Itemized Budget may be required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

• Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

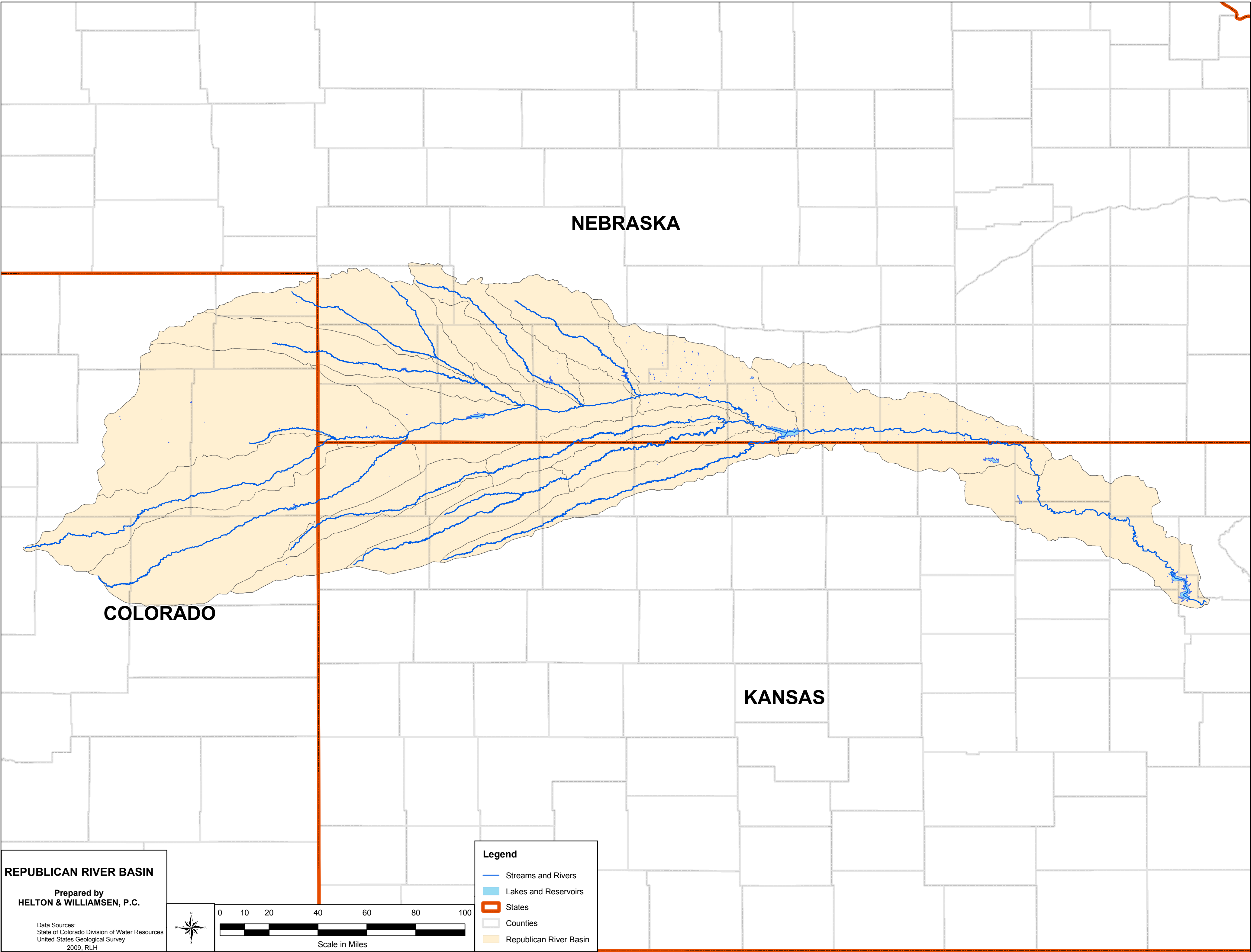
• NTP will not be accepted as a start date. Project activities may commence as soon as the grantee enters contract and receives formal signed State Agreement.

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.







**REPUBLICAN RIVER BASIN**

Prepared by  
**HELTON & WILLIAMSEN, P.C.**

Data Sources:  
State of Colorado Division of Water Resources  
United States Geological Survey  
2009, RLH










0 10 20 40 60 80 100

Scale in Miles

**Legend**

-  Streams and Rivers
-  Lakes and Reservoirs
-  States
-  Counties
-  Republican River Basin



April 29, 2019

Jason Roudebush  
South Platte Basin Roundtable Needs Committee Chair  
Colorado Water Conservation Board  
1313 Sherman St, Room 718  
Denver, CO 80203

Dear Mr. Roudebush,

On behalf of the North Plains Groundwater Conservation District, it is my pleasure to write this letter of support regarding efforts underway to establish a program in northeastern Colorado modeled on our award-winning Master Irrigator program, through which we have offered intensive irrigation management training to growers since 2016. With 91 graduates and over 246,000 irrigated acres influenced, Master Irrigator is a successful model for irrigation conservation education in the northern Texas Panhandle.

The Master Irrigator program is an intensive irrigation management curriculum delivered over four one-day sessions to show producers irrigation techniques and conservation practices that work together to save water, conserve energy, build soil health and enhance farm profitability.

North Plains Groundwater Conservation District welcomes similar, rigorous education program development to share the Master Irrigator name, structure, and success. We are actively engaging with groups in several Ogallala region states interested in replicating our program's format. This past year, we traveled to Colorado on more than one occasion and hosted members of the Colorado Master Irrigator program team at our office in Dumas, Texas to provide in-depth guidance and share key insights that we gained through coordinating Master Irrigator for the past four years.

We understand that the Colorado Master Irrigator program will include the following elements that we think are important for sustaining high expectations now associated with the Master Irrigator brand:

- Focus on agricultural irrigation
- Advisory committee of stakeholders and local experts guiding the program
- At least 24 hours of robust instruction over at least 4 days
- Instruction on the following topics, consistent with best management practices for local growing conditions: agronomics, irrigation scheduling, systems.

Based on our experience, we are confident that the Colorado Master Irrigator program has tremendous potential to benefit farmers and rural communities across northeastern Colorado.

Sincerely,

A handwritten signature in black ink, appearing to read "SD Walthour".

Steven D. Walthour, P.G.  
General Manager



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From:

Dennis Coryell

Agriculturalist

54263 County Rd X

Burlington, CO 80807

*To Whom It May Concern:*

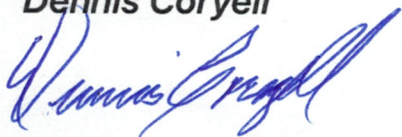
*It is my pleasure to write a letter in support of the Colorado Master Irrigator Program currently under development in our Republican River Basin. I strongly believe this program offers new and unique opportunities for our water users to find ways to conserve water and help sustain our depleting aquifer. Through coordination with local producers, industry representatives, CSU Extension Agents, and many others and by using examples from the original award winning program in Texas, the Colorado Master Irrigator Program promises to bring in-depth, practical irrigation management training to our area to show producers and community members how to effectively reduce water usage without economical sacrifices. This program can be shared across the state of Colorado, as well as over multiple state lines.*

*As a local farmer who has been involved with water issues in the Northern High Plains Basin for close to 30 years I see the need to develop a program to educate and encourage irrigators to wisely use and conserve this precious resource. I want my Son and Grandson's family to be able to use this water during their lifetime.*

*I am in full support of this program and am excited for the opportunities it will bring to our region.*

Sincerely,

Dennis Coryell





# WATER PRESERVATION PARTNERSHIP

## NORTHERN HIGH PLAINS OF COLORADO

April 24, 2019

Jason Roudebush  
South Platte Basin Roundtable Need Committee Chair  
Colorado Water Conservation Board  
1313 Sherman St, Room 718  
Denver, CO 80203

To Whom It May Concern,

During the August 1, 2018, board meeting, the Water Preservation Partnership (WPP) discussed the Master Irrigator program which was created by a partnership agreement between the North Plains Groundwater Conservation District (NPGCD) and USDA's Natural Resources Conservation Services (NRCS). Participants who complete the Master Irrigator course and receive their certification are given priority access to the NPGCD EQIP funding. The program includes classroom training as well as in-field demonstrations on: moisture monitoring, drones, producer panels, agronomics, VRI, crop profitability analyzer, etc.

The WPP voted to pursue starting a similar program in the Northern High Plains Basin and to commit \$2,000.00 to assist with the initial start-up of the Colorado Master Irrigator Program.

The Water Preservation Partnership appreciates the efforts of everyone involved with the design and implementation of this new, innovative program in Colorado, and we look forward to its many successes.

Sincerely,

Steve Kramer, WPP Chairman of the Board



Golden Plains Area

Kit Carson County

April 25, 2019

To: Whom it may concern

From: RF Meyer, Golden Plains Area Agronomist

Re: Letter of support for the Colorado Master Irrigation program

I am writing a support letter for the Colorado Master Irrigation program. This program offers great potential to assist not only Colorado irrigators but will have a High Plains footprint, as well. As a result of our aquifer depletions, new production strategies and education will be essential.

Colorado State University Extension will stand ready to assist this project.

Washington County  
181 Birch Ave  
Courthouse Annex  
Akron, CO 80720  
(970) 345-2287

Kit Carson County  
817 15<sup>th</sup> St.  
Burlington, CO 80807  
(719) 346-5571

Phillips County  
127 E. Denver  
P.O. Box 328  
Holyoke, CO 80734  
(970) 854-3616

Yuma County  
310 Ash, Suite B  
County Courthouse  
Wray, CO 80758  
(970) 332-4151

Sedgwick County  
315 Cedar  
County Courthouse  
Julesburg, CO 80737  
(970) 474-3479

<http://goldenplains.colostate.edu>

Colorado State University, U.S. Department of Agriculture and Kit Carson, Phillips, Sedgwick, Washington, and Yuma Counties cooperating. Extension programs are available to all without discrimination. If you have a disability for which you need an accommodation, please notify the coordinating office three days prior to the event.



April 30, 2019

Jason Roudebush  
South Platte Basin Roundtable Needs Committee Chair  
Colorado Water Conservation Board  
1313 Sherman St, Room 718  
Denver, CO 80203

Dear Mr. Roudebush,

With this letter I would like to express my support for the proposal being submitted to the South Platte Basin Roundtable for funding for the development of the “*Colorado Master Irrigator*” program in the Northern High Plains Basin. This program will provide training and access to research-based information that farmers can put to good use for water conservation practices and ultimately to save water, conserve energy, build soil health and enhance farm profitability. The course content and peer-to-peer exchange offered through this program will provide an excellent opportunity for farmers to get their questions answered about how different agricultural water management strategies and tools might benefit their operations now and into the future.

Along with other CSU Extension colleagues based in eastern Colorado, I am willing to help support this program as an advisor and if needed, as a teacher. I would like to see this program succeed and perhaps serve as a model for other parts of the state where groundwater depletion threatens rural communities and their economies.

Sincerely,

Wilma Trujillo, PhD  
CSU Extension Agronomist  
Cropping Systems Specialist for Logan and Morgan counties



**COLORADO STATE UNIVERSITY**  
**EXTENSION**

## **County Extension Offices**

### **Logan County**

508 South 10<sup>th</sup> Avenue  
Sterling, CO 80751  
970-522-3200

### **Morgan County**

914 East Railroad Avenue  
Fort Morgan, CO 80701  
970-542-3540



Jason Roudebush  
South Platte Basin Roundtable Needs Committee Chair  
Colorado Water Conservation Board  
1313 Sherman St, Room 718  
Denver, CO 80203

April 26, 2019

Dear Mr. Roudebush,

As co-Project Directors of the USDA-National Institute for Food and Agriculture funded Ogallala Water Coordinated Agriculture Project, we strongly support the proposal requesting Water Supply Reserve Funding through the South Platte Basin Roundtable that will help establish an innovative, 4-day educational program called Colorado Master Irrigator in northeastern Colorado to provide training to deepen irrigators' knowledge on water saving practices and approaches.

A year ago in Garden City, Kansas, an interactive event that we helped to organize called the Ogallala Summit brought together more than 200 water management leaders from all eight Ogallala states. The original Master Irrigator program, created and run by Texas's North Plains Groundwater Conservation District, was featured at this event. The intensive, high quality, and practical educational experience and peer-to-peer exchange offered through this conservation-oriented program impressed Summit participants, who subsequently identified the replication of this program in other states as an actionable activity with great potential to help sustain irrigated agriculture in the Ogallala region.

The Colorado Master Irrigator program is backed by strong local commitment. To start the ball rolling, the Plains Ground Water Management District board contributed the time of their Manager, Brandi Baquera, who has worked to champion the Colorado Master Irrigator Program concept to make it a reality since participating at the Ogallala Summit. The Water Preservation Partnership, a group of individuals from eight Northern High Plains Ground Water Management Districts who have been working together to find ways to encourage conservation in this part of the state, has also provided early crucial support in the form of input and seed funding.

As an outcome of the Summit, we currently facilitate a multi-state working group with individuals in Colorado, Kansas, Nebraska, New Mexico, Oklahoma, Minnesota, Mississippi, and Texas as they work to sustain, develop, and launch Master Irrigator programs in their states. It has been truly exciting to see how Colorado's progress in moving forward to set up a project advisory committee, commit to work on building a locally adapted curriculum, and engage in outreach efforts is helping to inspire similar efforts in other states.

The Colorado Master Irrigator program will serve as a conduit for research findings to be shared directly with end users: farmers and crop consultants. We are pleased to be able to commit the support of some of our team members and our project network as advisors and teachers for this program. Overall, we believe that this community-led effort will help build the support and knowledge that farmers need in order to remain productive and profitable while reducing aquifer withdrawals, thus positively impacting northeast Colorado's groundwater and agriculture-dependent communities.

Sincerely,

Meagan Schipanski, Co-PD, Ogallala Water CAP  
Assistant Professor, CSU

Reagan Waskom, Co-PD, Ogallala Water CAP  
Director, Colorado Water Center, CSU



Republican River Water Conservation District  
Water Activity Enterprise  
410 Main Street, Ste 8, Wray, Colorado 80758  
Phone 970-332-3552

April 26, 2019

To Whom It May Concern:

The Water Preservation Partnership in the Northern High Plains Basin of Colorado is currently involved in the development of a conservation program which offers water users opportunities to explore new concepts to conserve water and reduce the rate of depletions to the Ogallala Aquifer. The Republican River Water Conservation District recognizes the importance of this program to this area.

Through coordinated efforts with local producers, industry representatives, CSU Extension Agents, and many others, the Colorado Master Irrigator Program promises to bring in-depth, practical irrigation management training to participants. This program will demonstrate how to effectively reduce water usage without causing economical sacrifices. This program is building on a similar award-winning program in the North Plains Groundwater Conservation District, located in the Texas panhandle.

The Colorado Master Irrigator Program is being designed so that it could be shared across additional areas of Colorado, as well as with several states. The RRWCD strongly recommends approval of the requested funding for the Colorado Master Irrigator Program.

Sincerely,

Deb Daniel  
General Manager



## **Gregory W. Larson**

14977 County Road 97

Haxtun, CO 80731

[glarsfarm@gmail.com](mailto:glarsfarm@gmail.com)

To Whom It May Concern:

I am writing this letter in support of the Colorado Master Irrigator Program currently being developed in Colorado's Republican River Basin. Water conservation is increasingly becoming a vital issue in our Basin and I feel this program would be an excellent option that users could use to help sustain our depleting aquifer. Through coordination with local producers, industry representatives, CSU Extension Agents, and many others, using examples from the original award winning program in Texas could make this a very successful program. The Colorado Master Irrigator Program would bring in-depth, practical irrigation management training to our area to educate producers and community members how to effectively reduce water usage without economical sacrifices. This program will benefit the entire Republican River Basin as well as many other areas and water industries across the state of Colorado. My involvement with water as a local producer, being a Commissioner on the Colorado Groundwater Commission, Vice-President of Republican River Water Conservation District Board, and a Colorado Corn Administrative Committee board member keep me close to water issues across Colorado, therefore I feel this is a very important program to fully develop and implement as soon as possible.

Sincerely,

Gregory W. Larson



**Colorado Water Center**  
E102 Engineering | 1033 Campus Delivery  
Fort Collins, CO 80523-1033  
Phone: (970) 491-6308

April 16, 2019

Amy Kremen  
Soil and Crop Sciences  
Colorado State University  
Fort Collins, CO 80523-1170

Dear Amy,

We are pleased to inform you that your project “Development and Launch of a “Master Irrigator” Education and Training Program in Northeastern Colorado” was selected for funding by the Colorado Water Center in the amount of \$7,500.

Thank you for your application; we look forward to hearing about the results of this project in the future.

#### **AWARD TERMS AND REQUIREMENTS**

Projects will begin on July 1, 2019 and end on May 15, 2020

#### **PROJECT BUDGET**

- All expenses must be finalized by the project end date. No extensions will be granted.
- Timely drawdown is expected or funds will be withdrawn from the grantee.
- The PI is expected to work with his or her departmental accountant to ensure the award is spent according to the approved budget. The PI's departmental accountant is responsible for all project accounting and reports. The PI's department is responsible for any spending deficit.

#### **PROJECT DELIVERABLES**

- Awardees will be required to submit the following:
  - Mid-year status report in January 2020
  - Final report with evidence of deliverables by July 15, 2020
  - An article for the *Colorado Water* newsletter by July 15, 2020
- Funded applicants will be required to acknowledge support from the Center in all publications, presentations, and external grant proposals related to the project.
- Funded applicants will be required to inform the Center of any deliverables as a result of funding for three years after the project end date.
- Funded applicants will be asked to present their results and accomplishments at events and in written publications.

**OTHER**

- Funded applicants must comply with applicable university research integrity and compliance regulations and guidelines.

To accept this award, e-mail your confirmation to me at [reagan.waskom@colostate.edu](mailto:reagan.waskom@colostate.edu) no later than **Wednesday, May 1, 2019.**

Sincerely,



Reagan Waskom,  
Director, Colorado Water Center