

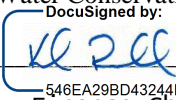
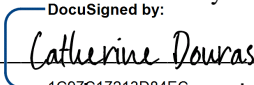

# STATE OF COLORADO INTERAGENCY AGREEMENT

## COVER PAGE

<b>Paying State Agency</b> Department of Natural Resources Colorado Water Conservation Board (CWCB) 1313 Sherman St, Room 718 Denver, CO 80203	<b>Agreement Numbers</b> CMS 172503 CTGG1 2022-2563
<b>Performing State Agency</b> Colorado State University	<b>Agreement Performance Beginning Date</b> The later of the Effective Date (the date the State Controller or an authorized delegate signs this Grant Agreement) OR 1/24/2022
<b>Agreement Maximum Amount</b> \$588,246.00	<b>Agreement Expiration Date</b> 1/24/2027
<b>Local Match</b> \$588,433.00	<b>Agreement Authority</b> House Bill HB21-1260, Funding for the Colorado Water Plan and the Water Supply Reserve Fund.
<b>Agreement Purpose</b> The purpose of this grant application is to improve the irrigation infrastructure at CSU-ARDEC for conducting applied irrigation research and IIC outreach activities.	
<b>Exhibits and Order of Precedence</b> The following Exhibit(s) and attachment(s) are included with this Agreement: <ol style="list-style-type: none"> <li>1. Exhibit A – Statement of Work.</li> <li>2. Exhibit B – Budget and Schedule</li> </ol> In the event of a conflict or inconsistency between this Agreement and any Exhibit or attachment, such conflict or inconsistency shall be resolved by reference to the documents in the following order of priority: <ol style="list-style-type: none"> <li>1. The provisions of the main body of this Agreement.</li> <li>2. Exhibit A, Statement of Work.</li> <li>3. Exhibit B – Budget and Schedule</li> </ol>	
<b>Principal Representatives</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           For the Paying State Agency:            Cole Bedford            Colorado Water Conservation Board            1313 Sherman St. Room 718            Denver, CO 80203            303-866-3441 x3234            cole.bedford@state.co.us         </div> <div style="width: 45%;">           For the Performing State Agency:            Catherine Douras            Colorado State University, Office of Sponsored Programs            2002 Campus Delivery            Fort Collins, CO 80523-2002            970-491-2375            Catherine.douras@colostate.edu         </div> </div>	

**SIGNATURE PAGE****THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT**

Each person signing this Agreement represents and warrants that the signer is duly authorized to execute this Agreement and to bind the Party authorizing such signature.

<b>STATE OF COLORADO</b> Jared S. Polis, Governor	
Department of Natural Resources Colorado Water Conservation Board <small>DocuSigned by:</small>  By: _____ <small>546EA29BD43244E...</small> Title: <b>Finance Chief</b> Date: <u>January 17, 2022   2:53 PM MST</u>	Colorado State University <small>DocuSigned by:</small>  By: _____ <small>1C97C17213B84EC</small> Title: <b>Senior Research Administrator</b> Date: <u>January 13, 2022   4:14 PM MST</u>
<p>In accordance with §24-30-202, C.R.S., this Agreement is not valid until signed and dated below by the State Controller or an authorized delegate.</p> <p style="text-align: center;"><b>STATE CONTROLLER</b>  <b>Robert Jaros, CPA, MBA, JD</b></p> <p style="text-align: center;"><small>DocuSigned by:</small>            By: _____  <small>70E3DF1B09EE4E8...</small></p> <p style="text-align: center;">Effective Date: <u>January 18, 2022   10:15 AM MST</u></p>	

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### 1. PARTIES

This Interagency Agreement (this “Agreement”) is entered into by and between the Paying Agency, (the “Paying Agency”), and the Performing Agency, (the “Performing Agency”) who are named on the Cover Page of this Agreement. The Paying Agency and the Performing Agency may each individually be referred to as a “Party” and collectively as the “Parties.” Each Party is an agency of the STATE OF COLORADO, hereinafter called the “State.”

### 2. TERM AND EFFECTIVE DATE

#### A. Effective Date

This Agreement shall not be valid or enforceable until the Effective Date.

#### B. Term

The Parties’ respective performances under this Agreement shall commence on the Agreement Performance Beginning Date shown on the Cover Page for this Agreement and shall terminate on the Agreement Expiration Date shown on the Cover Page for this Agreement unless sooner terminated or further extended in accordance with the terms of this Agreement.

#### C. Termination for Convenience

Either Party may terminate this Agreement for convenience by giving the other Party 90 days prior written notice setting forth the date of termination.

### 3. STATEMENT OF WORK AND BUDGET

#### A. Work

The Performing Agency shall complete the Work as described in this Agreement and in accordance with the provisions of Exhibit A. The Paying Agency shall have no liability to

compensate the Performing Agency for the delivery of any goods or the performance of any services that are not specifically set forth in this Agreement.

**B. Goods and Services**

The Performing Agency shall procure goods and services necessary to complete its obligations using Agreement funds and shall not increase the maximum amount payable hereunder by the Paying Agency.

**4. PAYMENTS TO THE PERFORMING AGENCY**

**A. Maximum Amount**

Payments to the Performing Agency are limited to the unpaid, obligated balance of the Agreement funds. The Paying Agency shall not pay the Performing Agency any amount under this Agreement that exceeds the Agreement Maximum Amount for that State Fiscal Year shown on the Cover Page for this Agreement.

**B. Payment Procedures**

- i. The Performing Agency shall initiate payment requests by invoice to the Paying Agency, in a form and manner approved by the Paying Agency. To facilitate Fiscal Year End closing, final invoices for each Fiscal Year should be submitted to the Paying Agency by July 15<sup>th</sup> of the following Fiscal Year.
- ii. The Paying Agency shall pay each invoice within 30 days following the Paying Agency's receipt of that invoice, so long as the amount invoiced correctly represents work completed by the Performing Agency and previously accepted by the Paying Agency during the term that the invoice covers.
- iii. In accordance with the Fiscal Procedures Manual, each Agency shall report the outstanding balance of this Agreement on Exhibit AR\_AP at Fiscal Year end.

**5. RECORDS, MAINTENANCE AND INSPECTION**

**A. Maintenance**

During the term of this Agreement and for a period terminating upon the later of (i) the six year anniversary of the final payment under this Agreement or (ii) the resolution of any pending Agreement matters (the "Record Retention Period"), each Party shall maintain, and allow inspection and monitoring by the other Party, and any other duly authorized agent of a governmental agency, of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the work or the delivery of services or goods hereunder.

**B. Inspection**

The Paying Agency shall have the right to inspect the Performing Agency's performance at all reasonable times and places during the term of this Agreement. The Performing Agency shall permit the Paying Agency, and any other duly authorized agent of a governmental agency having jurisdiction to monitor all activities conducted pursuant to this Agreement, to audit, inspect, examine, excerpt, copy and/or transcribe the Performing Agency's records related to this Agreement during the Record Retention Period to assure compliance with the terms hereof or to evaluate performance hereunder. Monitoring activities controlled by the

Paying Agency shall not unduly interfere with the Performing Agency's performance hereunder.

## **6. CONFIDENTIAL INFORMATION**

Each Party shall treat the confidential information of the other Party with the same degree of care and protection it affords to its own confidential information, unless a different standard is set forth in this Agreement. Each Party shall notify the other Party immediately if it receives a request or demand from a third party for records or information of the other Party.

## **7. DISPUTE RESOLUTION**

The failure of a Party to perform its respective obligations in accordance with the provisions of this Agreement is a breach of this Agreement. In the event of disputes concerning performance hereunder or otherwise related to this Agreement, the Parties shall attempt to resolve them at the divisional level. If this fails, disputes shall be referred to senior departmental management staff designated by each Party. If this fails, the executive director of each Party shall meet and attempt resolution. If this fails, the matter shall be submitted in writing by both Parties to the State Controller, whose decision shall be final.

## **8. NOTICES AND REPRESENTATIVES**

Each individual identified as a Principal Representative on the Cover Page for this Agreement shall be the Principal Representative of the designating Party. All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered (A) by hand with receipt required, (B) by certified or registered mail to such Party's Principal Representative at the address set forth on the Cover Page or (C) as an email with read receipt requested to the Principal Representative at the email address, if any, set forth on the Cover Page for this Agreement. Either Party may change its Principal Representative by notice submitted in accordance with this section without a formal amendment to this Agreement. Unless otherwise provided in this Agreement, notices shall be effective upon delivery of the written notice.

## **9. GENERAL PROVISIONS**

### **A. Assignment**

The Performing Agency's rights and obligations under this Agreement are personal and may not be transferred or assigned without the prior, written consent of the Paying Agency. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of the Performing Agency's rights and obligations approved by the Paying Agency shall be subject to the provisions of this Agreement.

### **B. Counterparts**

This Agreement may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

### **C. Digital Signatures**

If any signatory signs this Agreement using a digital signature in accordance with the Colorado State Controller Contract, Grant and Purchase Order Policies regarding the use of digital signatures issued under the State Fiscal Rules, then any agreement or consent to use

digital signatures within the electronic system through which that signatory signed shall be incorporated into this Agreement by reference.

D. Third Party Beneficiaries

Except for the Parties' respective successors and assigns, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to this Agreement, and do not create any rights for such third parties.

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## Colorado Water Conservation Board

### Water Plan Grant - Exhibit A

#### Statement Of Work

<b>Date:</b>	December 1, 2021
<b>Name of Grantee:</b>	Colorado State University
<b>Name of Water Project:</b>	Developing irrigation infrastructure at CSU-ARDEC to support innovative research in irrigation efficiency, water use, and re-use
<b>Funding Source:</b>	CO Water Plan Grant and Colorado State University Funds

#### Water Project Overview:

The Irrigation Innovation Consortium (IIC) began in 2018 as a collaboration of five land grant universities, led by CSU, and has since added multiple industry partners as part of becoming a center of excellence promoting water and energy efficiency in irrigation. The IIC mission fosters resiliency in our irrigated food and landscape systems by accelerating development and adoption of water and energy efficient irrigation technologies and practices through public-private partnerships. The IIC governance structure can be found online at <https://irrigationinnovation.org/about/governance-structure/>. The IIC is midway through a 5-year, \$5M grant from the Foundation for Food and Agriculture Research (FFAR) with another \$5M match in cash, services and equipment from partner organizations.

The IIC is becoming self-sustaining via additional partnerships, research projects and other donations and collaborations. The IIC at CSU is partnering with CSU's Agricultural Research, Development, and Education Center (ARDEC) to improve irrigation research capacity at the research farm located in Northeast Fort Collins by upgrading and developing the hydraulic infrastructure at CSU-ARDEC. The IIC will use the improved hydraulic infrastructure for research and demonstration of irrigation technologies. The IIC will leverage the improved irrigation research capacity at ARDEC to foster private-public partnerships for furthering advancements in irrigation research, education, and extension in CO, the U.S., and across the globe. CWP Grant funding will support the improvement of irrigation research capacity at ARDEC.

The purpose of this grant application is to improve infrastructure and to establish the new research, training and outreach efforts of the IIC at CSU-ARDEC. Some defined outcomes of the IIC include:

- **Technology Development Focus:** As an incubator of ideas for new and improved irrigation hardware, software, remote sensing applications and decision support systems where private companies work collaboratively with researchers in a precompetitive environment.
- **Fill Research Gaps:** Close university partnership with industry and government agencies has the greatest potential to propel irrigation science and technology forward into practical and fundamental applications.
- **Pre-Competitive Space:** The five founding university partners, along with USDA-ARS, provide a broad array of test and demonstration sites at their Experiment Station farms and university laboratories where applied irrigation research is currently underway.
- **Demonstration and Training:** The IIC provides irrigation practitioners with opportunities for hands-on evaluation of new technology before adoption. The IIC has a network of coordinated multi-state sites where irrigators can evaluate and be trained on new irrigation equipment and technology.
- **Investment through Partnership:** The IIC is bringing multiple partners together behind a common goal. Industry partners are key drivers of the Consortium and provide technology transfer for commercialization of new technologies.



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- **Public Benefit, Public Results:** The Land Grant system and public universities develop knowledge for the benefit of all citizens and stakeholders. IIC's outreach emphasis will be represented in programs, as will our distance education offices.

The IIC's prioritized focus areas are: i) Water and Energy efficiency; ii) Remote Sensing and Big Data Applications for Improving Irrigation Water Management; iii) System Integration and Management; iv) Irrigation Technology Acceleration and Technology Transfer.

This project aims to: install new electrical, hydraulic, and network infrastructure at CSU-ARDEC to allow IIC to perform irrigation research, education, training, and outreach by having current irrigation technologies that support:

- a. New research capacity in food-safety and water reuse to be conducted at ARDEC South on irrigated vegetable crops on furrow, sprinkler, and drip irrigation.
- b. Develop and launch a CSU-Testing Ag Performance Solutions (TAPS) program.

#### **Project Objectives:**

1. Develop the hydraulic and electrical infrastructure for improved irrigation research at CSU-ARDEC for the new food safety/water reuse program
  - a. Install a drip irrigation system for food safety and water reuse research
  - b. Install necessary electrical, hydraulic, and networking infrastructure to operate proposed irrigation systems
  - c. Install a side roll irrigation system for specialty crops research
2. Establish a Testing Ag Performance Solutions (TAPS) program led by IIC at CSU-ARDEC
3. Test the improved irrigation infrastructure and TAPS program for compliance with design specifications and prepare the systems for use in irrigation research, education, training, and outreach activities.

Tasks
<b>Task 1 - Irrigation system for food safety research (Objective 1.a.)</b>
Description of Task:
Install a drip irrigation system and filtration unit (\$25,000) to facilitate research on irrigation water reuse and treatment to mitigate pathogen/contaminant contact with irrigated fresh produce. Research will focus on the feasibility of water re-use, and the associated food-safety concerns resulting from using marginally clean waters in production of horticulture/produce crops. Current EPA approved sanitizers are only approved for treatment of irrigation systems, but not for treating irrigation water. This task will enable CSU to develop new and novel irrigation intervention treatments and strategies.
Method/Procedure:
CSU/IIC will hire an irrigation contractor to design and install the drip plot infrastructure and filtration in accordance with research plans from Dr. Eduardo Gutierrez-Rodriguez, Food Safety professor in the Department of Horticulture and Landscape Architecture at CSU. The installed drip plots will cover 1.53 acres of land. Drip infrastructure donated to IIC by Jain USA will be used for this task (previously donated, i.e. will not be used as match for this grant; letter of commitment found in Exhibit C).
Deliverable:
<ul style="list-style-type: none"> <li>• Irrigation system design</li> <li>• Installation of drip irrigation and filtration systems</li> </ul>





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Tasks
<b>Task 2 – Electrical, pumps, ponds, IoT/Internet connectivity (Objective 1.b.)</b>
Description of Task:
Update and expand irrigation pond and electrical infrastructure to accommodate new hydraulic improvements noted in other tasks.
Method/Procedure:
<ul style="list-style-type: none"> <li>Update the existing pond located at CSU-ARDEC South with a new pond liner, and install a new pump for water distribution</li> <li>Form two, new 30'x30' ponds to match the existing pond with liner and suction pipe to pump station.</li> <li>Install water line and valves to connect ponds to well and master water conveyance system over ARDEC South</li> <li>Install two new pumps, concrete pads, for each new pond</li> <li>Install electrical service with disconnects for the two new pumps</li> </ul> <p>CSU/IIC has already procured a cost estimate (Found in Exhibit C) from CSU Facilities to design, contract, and execute construction for this task. The program manager would ensure that CSU carries out these tasks in a timely manner in accordance with construction designs.</p>
Deliverable:
<ul style="list-style-type: none"> <li>1 renovated irrigation pond with new liner and pump</li> <li>2 new irrigation ponds, with liners, and pumps</li> <li>Completed water conveyance pipeline</li> <li>Completed electrical infrastructure to power two new pumps</li> </ul>

Tasks
<b>Task 3 – Irrigation system for specialty crops research (Objective 1.c.)</b>
Description of Task:
Specialty crops require diverse irrigation systems to accommodate their early germination requirements, differentiating them from agronomic crops such as dent corn. It is common practice in commercial lettuce and carrot operations, for example, to direct seed and irrigate from above with a static or mobile sprinkler system to facilitate even wetting of the top 0.5" of soil to enable germination and emergence of the small seedlings. Once emerged, other irrigation systems such as drip irrigation are paired with the sprinkler to bring the crop to maturity. A mobile, side roll, sprinkler system will enable ARDEC researchers to replicate commercial grower practices for a wide array of projects including onion pathology work, produce safety projects, specialty crop block grant-funded projects, collaborative projects with private industry, etc.
Method/Procedure:
<p>The program manager will coordinate with CSU Faculty, specifically, Troy Bauder, Karl Whitman, William Folsom, and Dr. Mark Uchanski to ensure a side roll system is sourced and installed over existing specialty crop research plots at CSU-ARDEC.</p> <p>A 312-footlong side roll was determined as an appropriate length to cover an existing 8.4-acre plot of land used for specialty crops research.</p>
Deliverable:
<ul style="list-style-type: none"> <li>An installed, 312-footlong side roll irrigation system installed and tested at CSU-ARDEC to support the specialty crops research program</li> </ul>



## Tasks

### Task 4 –TAPS program development and Year 1 Competition (Objectives 2 & 3)

#### Description of Task:

Develop and launch a Testing Ag Performance Solutions (TAPS) program, initially established at University of Lincoln-Nebraska (UNL), and recently replicated at Oklahoma State University (OSU). CSU-TAPS will be an interactive, real-life farm management competition that helps producers, researchers, tech providers, and others identify how to boost agricultural profitability, and increase input use efficiency. The program gives producers and others a hands-on, no-risk, fun and competitive means to learn how to use various water management related technologies to effectively support in-season decisions. Participants also have an opportunity to refine their marketing strategies, compete for bragging rights, and get access to a large data set and an informed “community of practice” of their peers and others that advances agricultural water management factors critical for increasing adoption of tested tools and strategies that can help producers save water, energy, time, and money.

#### Method/Procedure:

##### a. Setting up the CSU-TAPS team and competition

- Create CSU-TAPS work plan including detailed year-round schedule.
- Review physical space layout, equipment, irrigation system upgrade to set scale of TAPS competition with initial # of teams to host in first year(s). Establish a statistically robust plot design for at least 6 teams to compete in the TAPS competition each year.
- Purchase and install preliminary soil and crop monitoring equipment and do initial soil and water testing to offer baseline information and decision support to TAPS competitors.
- Hire, train, and manage support staff activities (business development, communications, farm and student labor/interns).
- Coordinate with UNL-TAPS and OSU-TAPS programs to set up CSU-TAPS team management protocols for scheduling irrigation and fertilization and managing data.

##### b. Establish and support CSU-TAPS community of practice

- Establish CSU-TAPS advisory board, including producers, water district leaders, CSU faculty/Extension, NRCS; Colorado Department of Agriculture (CDA), Division of Water Resources (DWR) to read them in on the program, and obtain their guidance to establish a 3-year vision and set CSU-TAPS program goals (e.g., increasing trust in using tech, featuring deficit irrigation protocols, managing salinity, tracking value of energy use and costs, irrigation scheduling, etc.), using the original programs in NE and OK as examples.
- Identify people (can be board members or other) willing to serve throughout the season/program in different capacities, as participant role models, as marketing experts, etc.
- Engage technology providers to identify who/which companies would be interested in instrumenting the program with their products, be featured, engage with producers during field days, and provide support during the season to helping foster trust re: data interpretation and data-supported decision making.
- Explore/determine the unique aspects CSU can bring to this effort (for example, OK has cotton, UNL has added dryland wheat). Based on tech partners, CWCB interest in food systems, and our connections with Horticulture, explore the potential for a higher value vegetable crop production/input use efficient and marketing TAPS competition.

##### c. Communications

- Scope out what this CSU-based program needs to, develop (website, print, social media) outreach materials, and deliver effective science communications/practical output useful to collaborators and CO producers. Collaborate with UNL-TAPS and OSU-TAPS to fit the CSU piece for communications into broader TAPS/High Plains outreach effort.
- Recruit competitors (as individuals and/or as teams) by reaching out to CO Master Irrigator graduates and others who have already participated in TAPS in other states, among others, and doing more public-facing outreach to recruit (using social media, website, press releases, presence at public-facing events, etc.) participants in the program, which will launch in the 2022 field season.



## Tasks

- Coordinate and host launch event, banquet
- Produce and post stories about the program throughout the year featuring participants, competitors, participants, tech providers, social/practical/technical insights, etc., as well as annual reports (internal-to-CSU and external facing) for each project year.

### **d. Business development**

- Identify and engage program sponsors willing to donate equipment, sponsor field days (held at key points in the season- spring/fall) and/or banquet, cash prizes
- Work to ensure longer term sustainability: (a) multistate program development to enable new beta-level ways for industry to engage in and use the TAPS competition and database to benefit their product development, evaluation, and testing. (b) Seek investment from donors including writing grants for state and federal opportunities to support the TAPS program concept and delivery, partly through grant applications, to support a 3-year+ vision.

### **e. Competition/participant management**

- Work with the UNL-TAPS team to get CSU-TAPS branded into the competitors' online portal and test/ensure that front-end and back-end access is seamless.
- Conduct surveys with competitors and technology providers, analyze and share data and insights with TAPS colleagues and supporting partners.

## Deliverables:

### **a. Setting up the CSU-TAPS team and TAPS competition space**

- Detailed workplan and schedule
- Established, instrumented, statistically robust field plot layout and clear field and data management protocols developed/implemented
- Staff (five) engaged, hired and/or trained to support the project

### **b. Establish and support CSU-TAPS community of practice**

- Board meeting minutes
- Development of 3-year+ vision and goals and program operation manual describing CSU-TAPS program/competition in detail

### **c. Communications**

- CSU-TAPS page on the IIC website; regular social media posts on Twitter, Facebook, Instagram, press releases, annual program report, in-season stories shared on digitally as well as in print for in-person events (like the banquet, at field days, shared with the CO Groundwater Commission, etc.)

### **d. Business development**

- Annual business plan including report on donations, sponsorships, and other contributions/their value and goals/projections for future year
- List of grant opportunities/descriptions used to secure additional program support
- Annual description of multi-state TAPS partner activities and planning efforts

### **e. Competition/participant management**

- Datasets related to input use and timing, survey data related to decision making in-season and post-season.



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Tasks	
<b>Task 5 - TAPS Year 2 Competition (Objectives 2&amp;3)</b>	
Description of Task:	
Continuation of the CSU-TAPS program, improving/refining the program as needed based on experience gained though setting up and running the program in its first year.	
Method/Procedure:	
Methods are largely the same as listed in Task 4, with limited time devoted to the physical space set-up and mission development and more time on revising and refining field protocols and implementation, effective communications among participants, sponsors, and other audiences. More emphasis will also be placed on communication of lessons learned as part of a network of TAPS-affiliated or connected researchers, producers, extension specialists, and others based in Colorado, Kansas, Nebraska, and Oklahoma.	
Deliverables:	
<ul style="list-style-type: none"> <li>• Updated, detailed work plan and schedule for CSU-TAPS 2023</li> <li>• CSU-TAPS Board meeting minutes</li> <li>• Updated program operation manual describing CSU-TAPS program/competition in detail</li> <li>• Regular updates of CSU-TAPS webpage on IIC's website; regular social media posts on Twitter, Facebook, Instagram, press releases, annual program report, in-season stories shared on digitally as well as in print for in-person events (like the banquet, at field days, shared with the CO Groundwater Commission, etc.)</li> <li>• Annual business plan including report on donations, sponsorships, and other contributions/their value and goals/projections for future year</li> <li>• List of grant opportunities/descriptions used to secure additional program support</li> <li>• Annual description of multi-state TAPS partner activities and planning efforts</li> <li>• Datasets and survey data generated from the program processed and their content made accessible to program managers, participants, colleagues, funders, and others.</li> </ul>	



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## Tasks

### Task 6 – Project Management

#### Description of Task:

To oversee and coordinate on-site construction, research program establishment, and selecting and hiring of employees to assist in overall project implementation.

#### Method/Procedure:

Project management will require 1 mo. per year for a project manager and 0.5 mo. per year for the PI. The project manager will ensure all aspects of the project are coordinated and managed as per budget and schedule requirements and testing of hydraulic infrastructure. The PI will oversee and assume overall responsibility for execution of project, ensure quality control and management, approve expenditures and compliance with contract requirements, prepare progress reports to CWCB, participate in TAPS events, and serve as CSU's point of contact for CWCB.

#### Deliverables:

- 1-2 student hourly employees selected and hired
- Completed reports submitted to CWCB as per grant contract requirements (listed below)

## 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. The Budget and Schedule are provided as Exhibit B, found in the original submission folder.

## 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.

**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.

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.



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## 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.
- (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.

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Conservation Board

Department of Natural Resources

**Colorado Water Conservation Board****Water Plan Grant - Exhibit B****Budget and Schedule****Prepared Date: December 1, 2021****Name of Applicant: Colorado State University****Name of Water Project: Developing irrigation infrastructure at CSU-ARDEC to support innovative research in irrigation efficiency, water use, and re-use****Project Start Date: 1/24/2022****Project End Date: 1/24/2027**

<b>Task No.</b>	<b>Task Description</b>	<b>Task Start Date</b>	<b>Task End Date</b>	<b>Grant Funding Request</b>	<b>Match Funding</b>	<b>Total</b>
1	Irrigation system for food safety research	1/24/2022	1/24/2027	\$25,000	\$0	\$25,000
2	Electrical, pumps, ponds, IoT/Internet connectivity	1/24/2022	1/24/2027	\$60,000	\$511,681	\$571,681
3	Irrigation system for specialty crops research	1/24/2022	1/24/2027	\$40,000	\$0	\$40,000
4	TAPS program development and Year 1 Competition	1/24/2022	1/24/2027	\$221,579	\$0	\$221,579
5	TAPS Year 2 Competition	1/24/2022	1/24/2027	\$136,616	\$0	\$136,616
6	Project management	1/24/2022	1/24/2027	\$28,323	\$0	\$28,323
	Facilities and Administration (Paid by Match)	1/24/2022	1/24/2027	\$76,728	\$76,752	\$153,480
<b>Total</b>				<b>\$588,246</b>	<b>\$588,433</b>	<b>\$1,176,679</b>