

FY 2024 Request for Proposals Colorado Water Conservation Board Seed Research Program

CLOSING DATE: March 21, 2023

Proposals are invited for the Colorado Water Conservation Board (CWCB) Seed Research Program, administered by the Colorado Water Center (CoWC) at Colorado State University.

The CWCB Seed Research Program was established in 2012 to support the development of water resources research, outreach, and education programs that aid the CWCB in fulfilling its mission. The Seed Research program is open to Faculty, Extension personnel, and Researchers at any institution of higher education in Colorado that has the capacity to support research, information dissemination, and graduate training programs that can address Colorado's most pressing water resource challenges.

Priority Research Topics:

For the FY 2024 Seed Program, the CWCB has identified the highest priority needs for knowledge development, as well as processes to ensure that this knowledge leads to actionable science and implementable solutions. In general terms, these priorities should focus on Supporting the Implementation of the Colorado Water Plan and Improving Water Management and Operations, with specific high priority topics described below.

Supporting the Implementation of the Colorado Water Plan

- Development of methodologies or indicators to assess the short and long-term impacts of implementation of the Colorado Water Plan on all water use sectors (Municipal, Industrial, Agricultural, Ecosystems). High priority areas of interest are:
 - Methodologies to estimate changes in vegetation type and function across Colorado's municipalities (including functional and non-functional turf);
 - Methodologies to value damages to individual and regional agricultural operations caused by drought;
 - Methodologies to estimate the value of changes in agricultural practices that provide benefits to ecosystem services in wildland, agricultural, and urban environments.
- Improving the resilience of water utility financial systems, especially during droughts where methods are needed to offset revenue losses due to reduced water use.

- Improving the understanding of the impacts that climate change has on the quality and quantity of headwater supplies. This includes:
 - Better understanding forest species transition/regime change over time driven by climate change;
 - Understanding the impacts of wildfires/vegetative transitions on the quantity and quality of water used to support to agricultural operations.
- Development of Best Practices for the transition of irrigated agricultural land to municipal management under no- or limited-irrigation practices. Priority topics to address are:
 - Profitability of agricultural operations during and after transition;
 - Logistics and transitioning of land from irrigated to dryland farming;
 - Minimization of invasive species (weeds) establishment.
- Development of best practices for engaging diverse communities to create more inclusive water planning processes at the local and regional scale.

Improving Water Operations and Management:

- Approaches to assess the effectiveness of existing snowpack evolution and streamflow forecast methodologies in improving the operation of federal projects and increase the reliability of meeting Interstate flow requirements. These forecasting methodologies include:
 - Streamflow forecasting with ASO data incorporation;
 - Conventional forecasting approaches (CBRFC and WGRFC Snow17/SAC-SMA and NRCS);
 - Snow development forecasts (CBRFC Snow 17/SAC-SMA, WRF-Hydro, and private entity forecasts).
- Improvement in the monitoring and assessment of water quality and quantity in Colorado's major aquifers.
- Improvement in the monitoring and assessment of headwater snowpack conditions that can directly benefit irrigated agricultural decision making.
- Increased understanding of the relationship between irrigation management practices, crop selection, and soil management practices on nearby surface and groundwater quality, especially salinity, and the effect on sustainability of the agricultural operations.

Funds Available:

The FY2024 CWCB Request for Proposals is supported by the use of Severance Tax revenues, and it is anticipated that approximate \$350,000 in funds will be available for this year's funding cycle. The CWCB research funds are awarded through a process using peer review of both the scientific credibility and water management relevancy of the proposals. Proposals that contain matching funds from Colorado water and water-related organizations are strongly encouraged.

Proposal Review Process:

All proposals are due to the Colorado Water Center Director by 5:00 PM (MDT) March 21, 2023. The scientific merit of each proposal will be evaluated through a peer review process, overseen by the Colorado Water Center Faculty Advisory Committee. The proposals receiving the highest scientific merit will then be reviewed by a committee formed by the Colorado Water Center and the Colorado Water Conservation Board to determine the projects that will be funded based on the relevancy of each project to practically address Colorado's top water management challenges. The general criteria used for proposal evaluation includes: (1) justification of proposed research and/or outreach program; (2) technical merit; (3) responsiveness to RFP priority areas; (4) qualifications of investigators; and (5) extent to which Colorado water managers and users are engaged with project activities.

Eligibility:

The competition is open to regular, full-time faculty, researchers, and extension personnel at Colorado's universities.

Project Budget Amount and Duration:

The total life of the project cannot exceed 12 months in duration, with the project start date being on or after July 1, 2023. The total budget request must not exceed \$50,000. Projects of shorter duration and/or budgets less than \$50,000 will be equally considered.

Proposal Submission:

Proposals, in electronic copy (pdf or Word), are to be submitted no later than 5:00pm MDT, March 21, 2023.

Electronic Submission:

Email: john.tracy@colostate.edu; karen.schlatter@colostate.edu

Cc: Matt.Wills@colostate.edu

Proposal Preparation Guidelines:

The proposal shall not exceed 10 single spaced pages. Format guidelines for the proposal including tables, pictures, graphs, figures, and appendices, are as follows:

- 12 point font size
- Times New Roman font
- 1 inch margins (all sides)

The 10-page limit **does not** include title page, budget pages or CVs (items 12-15). **The proposal must be sent electronically as an Adobe PDF file. Please note the abstract (item 14/Exhibit “D”) is required as a Word .doc file, in addition to including the abstract within the proposal (Adobe PDF file). Proposals exceeding the 10-page limit will not be considered in the competition. Colorado State University PIs must submit an SP-1 and PBS through the Office of Sponsored Programs.** The indirect cost is limited to no more than 15%. See additional itemized requirements below.

Proposals must include the following items:

1. **Title.** Concise but descriptive.
2. **Project duration** (month/year to month/year). Indicate the actual beginning date for the project and the estimated end date for the project.
3. **FY 2024 funds requested.**
4. **Principal Investigator name(s) and university.** Provide name, academic rank, university, email address, phone number, fax number, street address, city, state and zip code of the Principal Investigator, Co-Investigator(s), and/or Collaborator(s).
5. **Abstract.** (Include within the proposal PDF.) Provide a brief (one-page or less) description of the problem, methods, objectives, and expected outcomes in the proposal. Use the format provided in Exhibit “D”.
6. **Keywords.** Provide three keywords, of your choice, descriptive of the work.
7. **Statement of regional or State water problem.** Include an explanation of the need for the project.
8. **Statement of the results or benefits.** Specify the type of information that is to be gained, who will benefit from the information, and how it will be used. Include here any ongoing partnerships you are involved in with relevant water-related groups.
9. **Nature, scope, and objectives of the project,** including a timeline of activities.
10. **Methods, procedures, and facilities.** Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.

11. **Related research.** Show by literature and communication citations the similarities and dissimilarities of the proposed project to completed or on-going work on the same topic.
12. **Budget.** Provide a brief preliminary budget using the formats provided in Exhibits “A” and “B”. Indirect costs must not exceed 15% of total direct costs.
13. **Budget justification.** Breakdown and justify expenses using the format provided. See Exhibit “C”.
14. **Abstract.** Provide a brief (one-page or less) description of the problem, methods, objectives, and expected outcomes in the proposal. The abstract must be submitted as a separate Microsoft Word 2003 (.doc) compatible document. Use the format provided in Exhibit “D”.
15. **Investigators’ qualifications.** Include resume(s) of the Principal Investigator(s), and key personnel. Resumes should not exceed two pages or list more than 15 pertinent publications.

Deliverables:

Funded projects will be required to submit semi-annual reports addressing the description of the problem, research objectives, methodology, principal findings, and significance. In addition, the PI will be required to aid in the development of an article describing the work performed and its impacts on Coloradans if needed. Principal Investigators may also be asked to provide oral briefings to the CoWC Advisory Committee, the Colorado Water Conservation Board, Colorado Legislature, and the Colorado Water Congress.

Questions:

Please contact John Tracy (john.tracy@colostate.edu) or Karen Schlatter (Karen.Schlatter@colostate.edu) if there are questions about this solicitation.

Budget – Category Based

Exhibit “A”

Project Title:

Cost Category	Rate	Amount	Total
1. <u>-Academic Faculty</u>			
<u>-Administrative Professional</u>			
<u>-State Classified</u>			
<u>-Post-Doctorates</u>			
<u>-Non-Student Hourly</u>			
<u>-Student Hourly</u>			
<u>-GRAs</u>			
Total Salaries and Wages			
2. Fringe Benefits-Provide % of effort for each employee category & amount			
3. Supplies			
4. Equipment			
5. Services or Consultants			
6. Travel			
7. Other direct costs			
8. Total direct costs			
9. Indirect costs (limited to no more than 15%)			
10. Total Project Costs			\$

Budget – Activity Based

Exhibit “B”

Project Title:

Activity	Description	Time Period	Cost	Deliverable
Activity 1				
Activity 2				
Activity 3				
Activity 4				
Total				

Budget Justification

Exhibit “C”

Project Title:

Salaries and Wages. Provide estimated hours and the rate of compensation proposed for each individual. (Tuition remission and other forms of compensation paid as or in lieu of wages to students performing necessary work are allowable provided that the tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work.)
Fringe Benefits. Provide the rate (%) and amount for fringe benefits applicable to each category of employee proposed in the project.
Supplies. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies.
Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than \$5,000 per unit. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items.
Services or Consultants. Identify the specific tasks for which these services, consultants, or subcontracts would be used. Estimate amount of time required and the hourly or daily rate.
Travel. Provide purpose and estimated costs for all travel.
Other Direct Costs. Itemize costs not included elsewhere, including publication costs. Costs for services and consultants should be included and justified under “Services or Consultants (above).”
Indirect Costs. Provide negotiated indirect (“Facilities and Administration”) cost rate.

Abstract

Exhibit “D”

Project# (To be completed by the CoWC)

Title:

Project Duration:

FY 2024 Funds Requested:

Principal Investigator Names(s) and University:

Abstract: