Overview

The Montana Water Center invites pre-proposals for the annual Montana Water Center Faculty Seed Grants. The goal of this program is to help address water resource problems of significance to Montana and the region by stimulating cutting edge, water-related research among faculty and students across the Montana University System. For a description of past awardees, see: http://www.montanawatercenter.org/facultyresearch/.

Disciplinary and/or single PI proposals should not exceed $15,000; interdisciplinary teams may apply for up to $30,000, but these requests will need strong justification for the cross-disciplinary nature of the research team and questions. Priority will be given to clearly articulated proposals that (a) have high intellectual merit and the potential to advance knowledge, (b) clearly identify the applied relevance of the research to MT water stakeholders; (c) foster student training and involvement; and (d) demonstrate a compelling and realistic plan for how the seed funding will be leveraged to seek additional external funding. Competitive proposals from early-career faculty members will also be given priority.

Areas of interest include (but are not limited to):

- Climate change: effects on snowpack, drought, floods, water supply (seasonal and annual)
- Interactions between ground water and surface water
- Impacts of irrigated agriculture on ground water and surface water quality and supply
- Biodiversity/ecosystem processes, links to physical processes
- Social-ecological systems and water resources
- Economic valuation of water resources
- Management and restoration of water resources
- The nexus of water, energy, and food systems
- Integrating assessment and management of water quality and water quantity
- Water policy
- Emerging tools and technologies in water sciences
One of the goals of the Montana Water Center is to encourage collaboration between university faculty and students and state and federal agencies, and to connect university research to key information needs of entities across the state with significant focus on water resources. In addition to the key areas of uncertainty outlined in the Montana State Water Plan (http://dnrc.mt.gov/divisions/water/management/state-water-plan), a specific list of research interests identified by several state and federal entities are posted at www.montanawatercenter.org/2020externalresearchneeds.

Applicant Eligibility and Conflicts of Interest
Eligible applicants must have academic or research faculty appointments at one of the Montana Institutions of Higher Education. An applicant may not permit a federal employee to use his or her position for a purpose that is, or gives the appearance of being, in conflict of interest, either by giving the applicant an unfair advantage or by a desire for private financial gain.

Timeline
The planned start date for these projects is June 1, 2020, pending the timing of the Congressional budget approval process for federal fiscal year 2020. The end date for spending on all awards will be May 31, 2021.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>2019</td>
<td>Sept. 5</td>
<td>Request for pre-proposals</td>
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<tr>
<td></td>
<td>October 21th</td>
<td>Pre-proposals due electronically to the Montana Water Center by 5 pm.</td>
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<td>Week of Oct. 28th</td>
<td>Pre-proposals reviewed and ranked; successful candidates notified to submit full proposal</td>
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<td>December 3</td>
<td>Full proposals due</td>
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<tr>
<td>2020</td>
<td>January 13</td>
<td>Deadline for notification of awards</td>
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<td>June 1</td>
<td>One-year subcontracts issued by MSU Office of Sponsored Programs</td>
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<tr>
<td>2021</td>
<td>May 31</td>
<td>Final date for grant spending</td>
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<tr>
<td>2021</td>
<td>August 1</td>
<td>Final report due to the Water Center</td>
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Pre-Proposal Format
Pre-proposals should adhere closely to the following format (with an 11-point font and 0.5-inch margin minimum):

Pages 1 and 2:
- Project Title
- Duration of the Project
- Funds Requested and Non-Federal Match Funds (must be a 2:1 match [$2 match to $1 federal funding request])
- Principal and Co-Principal Investigators (include affiliations, phone, fax, and email addresses)
- Project Description consisting of these sections: (1) background and problem statement, (2) research questions or hypotheses, (3) research approach, methods, and timeline, (4) predicted outcomes, benefit, plan for leveraging the seed grant for future funding, (5) brief statement of how students (graduate or undergraduate) will be involved.
Pre-proposal submission
Complete pre-proposals must be sent as email attachments to both Wyatt Cross: wyatt.cross@montana.edu and Whitney Lonsdale: whitney.lonsdale@montana.edu. Pre-proposals must arrive by 5:00 p.m. Oct. 21, 2019.

Non-Federal Match, Indirect Costs, and Award considerations
Applicants must match each federal dollar requested with not less than two non-federal dollars. Successful pre-proposal applicants will need to submit one or more letters of match commitment at the time they submit their full proposals, and those who are issued awards will be required to track and document their match expenditures. No indirect costs may be charged to these grants. The amount of IDC returns foregone on both the federal and match portions of the funding can be considered as part of the match. Water Center personnel will be happy to help applicants craft their budgets, if they aren’t familiar with these requirements and this format.
Selected final proposals will be forwarded to the USGS for review and approval. Awards will be made to the Montana Water Center, and then from the Montana Water Center to grantees.
Grantees and their departments will be responsible for their own budget tracking.

Budget Breakdown
An example format table is provided below. The project budget should comprise the following line items, each containing federal request and non-federal match:

1. Salaries and Wages. Identify the individuals and categories of salaries and wages, estimated hours or percentage of time, and the compensation rate. Tuition remission and other forms of compensation paid as or in lieu of wages to students 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.

2. Fringe Benefits. Calculate rates/amounts in conformity with the university's current standard. Show the basis of the rate computation.

3. Supplies. Indicate estimates for office, laboratory, computing, and field supplies. Provide information on any specific item that represents a significant portion of the proposed amount.

4. Equipment. Identify nonexpendable personal property having a useful life of more than one (1) year and an acquisition cost of more than $5,000 per unit. Anything shorter-lived or less expensive than this should be considered ‘supplies’.

5. Services or consultants. Identify the project tasks for which these services would be used. List the anticipated consultants, the estimated amount of time required, and the quoted rate per day or hour.
6. Travel. Show the number of trips, type of trip (field, scientific meeting, or conference attendance), destinations, number of travelers, per diem and local reimbursement rates allowed by the applicant, and any miscellaneous expenses for each trip.

7. Other direct costs. Itemize the costs not included elsewhere; e.g., shipping, telemetry, computing, equipment-use charges, or other expenses. Provide breakdowns showing how the cost was estimated.

8. Total of the direct costs.

9. Indirect costs. Specify the entire project’s (waived) indirect costs in the non-federal column based on the university’s current federal rate agreement (check with your Office of Sponsored Programs for your most recent rate).

10. Total estimated costs. Total items (1) through (9).

<table>
<thead>
<tr>
<th>Budget Categories</th>
<th>Federal</th>
<th>Non-Federal</th>
<th>Match</th>
<th>Total</th>
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<tbody>
<tr>
<td>1. Salaries and wages</td>
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<tr>
<td>Sue Smith, Asst. Professor</td>
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<td>Joe Brown, MS student</td>
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<tr>
<td>Total Salaries and Wages:</td>
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<td>2. Fringe benefits</td>
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<td>(XX% faculty, YY% students)</td>
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<td>3. Supplies</td>
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<td>4. Equipment</td>
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<td>5. Services, consultants</td>
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<td>6. Travel</td>
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<td>7. Other direct costs</td>
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<td>8. Total direct costs</td>
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<tr>
<td>9. Indirect costs</td>
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<tr>
<td>10. Total estimated cost</td>
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This request is issued under the authority of the Water Resources Act, section 104b, administered by the US Department of Interior through the Water Resources Division of the US Geological Survey. Administering this competitive grant program is the responsibility of the Montana Water Center. All information requests should be directed to:

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