

The NSF Established Program to Stimulate Competitive Research (EPSCoR) in Idaho is key to the growth of academic research with State and national significance and recognition. The primary objective of Idaho EPSCoR is to stimulate research in niche areas that can become fully competitive in the disciplinary and multidisciplinary research programs of the National Science Foundation and other relevant agencies. Idaho EPSCoR provides support for sustainable increases in research, education, and workforce development capacity and advances science and engineering capabilities within the state.



RII Track-1: Idaho Community-engaged Resilience  
for Energy-Water Systems (I-CREWS)  
(Award # OIA-2242769)

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## I-CREWS (2023 - 2028)

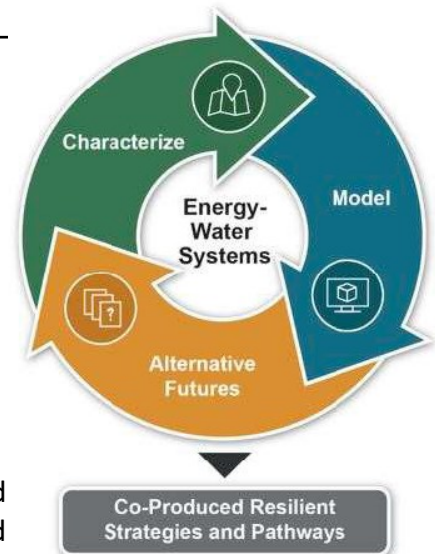


Idaho's \$24 million NSF EPSCoR RII project, I-CREWS, is addressing the impact of meteorological, population, and technological change on energy-water (E-W) systems.

The project is advancing research, education, workforce development initiatives, and partnership capacity in Idaho in two strategic directions. First, it is leveraging existing academic research strengths in various sciences

to build linkages. Second, it is expanding Idaho's research capacity in computational modeling, machine learning, and artificial intelligence.

The goal of the project is to co-develop an understanding of the complex interactions of energy-water systems through characterizing, modeling, and envisioning alternative futures that are responsive to community needs and resilience.



I-CREWS integrates local knowledge, governance dynamics, and advanced modeling. It involves over 35 core university and college faculty, plus 8 new early-career hires, 10 postdocs, 20 graduate students, and 124 undergraduates while supporting 31 Vertically and Community Integrated Projects designed to reach over 500 students and community members. Partnerships outside of academia involve a wide range of entities, from state and federal agencies, public and private utilities, Idaho National Laboratory, to Tribal nations.

I-CREWS is supporting a robust Seed Funding program guided by external peer merit review. This mechanism will provide the ability to invest in emerging research and community-based education opportunities and/or pursue high-risk, high-impact research.

Learn more at: [idahocrewws.org](http://idahocrewws.org)

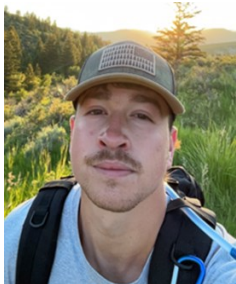


University  
of Idaho



Idaho State  
University

## Student EPSCoR Experience Highlights



**Kent Merrill**, an ISU Summer Authentic Research Experience (SARE) undergraduate student, conducted research at Gibson Jack Watershed near Pocatello, Idaho, where he explored the role of persistent springs in ensuring reliable water flows during dry summers and droughts. Mountain springs create a refugia for organisms throughout Southern Idaho's semi-arid climate and its dry summers. By understanding water sources, we can better predict areas that will contain a larger amount of bio-diversity in both plants and animals. We can also predict how springs will be affected by meteorological changes.



**Kaleb Rounsevel**, a U of I Summer Authentic Research Experience (SARE) undergraduate student, conducted research focused on applying a unique, holistic approach to the challenges of hydrology, specifically concerning water quantity and quality in the face of new environmental challenges. The research addresses the critical need to understand how the Palouse Basin aquifer is recharged by analyzing wells located at the mountain-basin interface. This research helps to create targeted strategies that protect our most vital recharge areas, ensuring the long-term security of the water that sustains our communities.



**Tapiwa Mwila**, a graduate student at BSU, is part of the I-CREWS team breaking new ground in how science, technology, and community knowledge come together to solve some of Idaho's biggest challenges in energy and water management. Focusing on the Treasure Valley Region—specifically, Ada and Canyon counties—Mwila has been studying data related to groundwater flow and resource consumption. Over the past years, the team has made major progress toward a key goal—integrating qualitative insights and quantitative data to better model resilience across the state's energy-water systems.

## Active EPSCoR Awards in Idaho

Agency	Award #	Institution(s)	Award Amount
National Science Foundation (NSF) <i>**includes co-funded awards (\$36,184,774)</i>	50 awards	BSU, ISU, UI & ID Tribes	\$74,438,836
Department of Energy (DOE)	4 awards	BSU & ISU	\$16,192,921
Department of Defense (DOD)	2 awards	BSU	\$2,073,953
National Aeronautics and Space Administration (NASA)	9 awards	BSU, ISU, & UI	\$5,050,000
United States Department of Agriculture (USDA)	31 awards	BSU & UI	\$24,043,508
<b>TOTAL</b>			<b>\$121,799,218</b>
<i>Other: National Institutes of Health (NIH)</i>	<i>6 awards</i>	<i>BSU, ISU, &amp; UI</i>	<i>*See IDeA factsheet</i>