

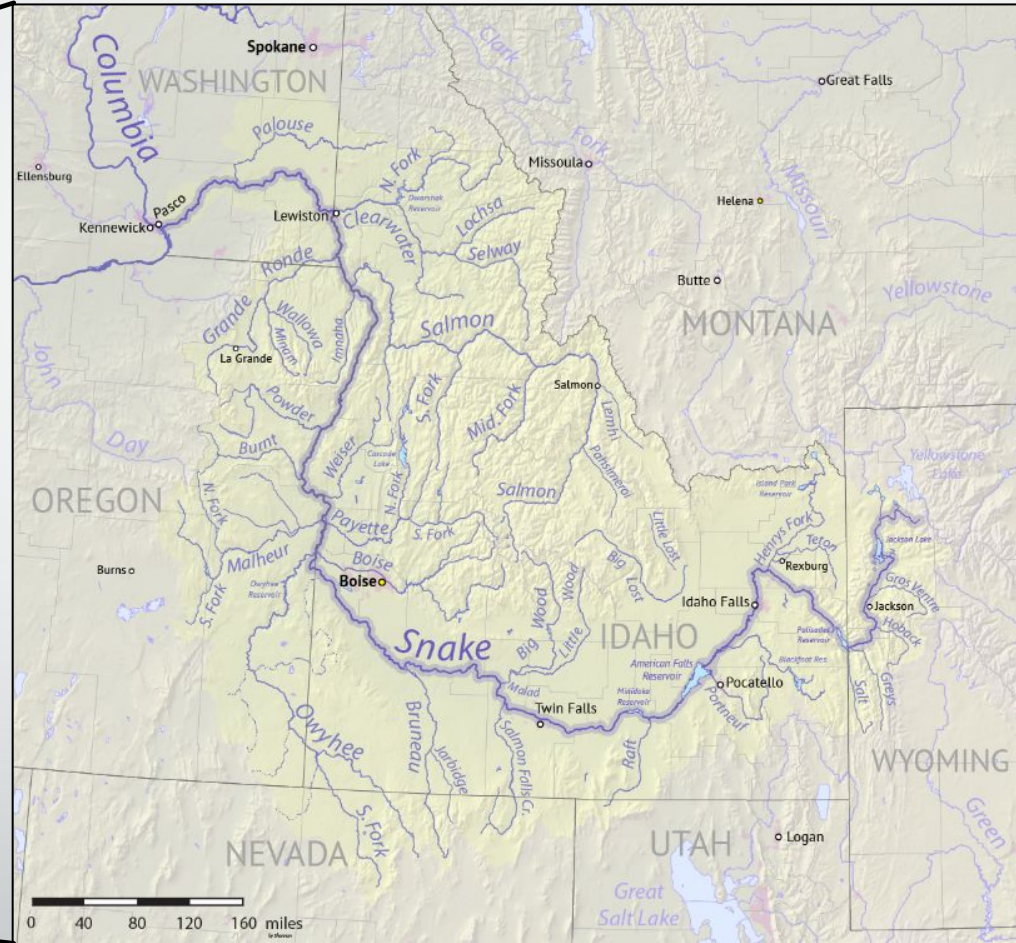
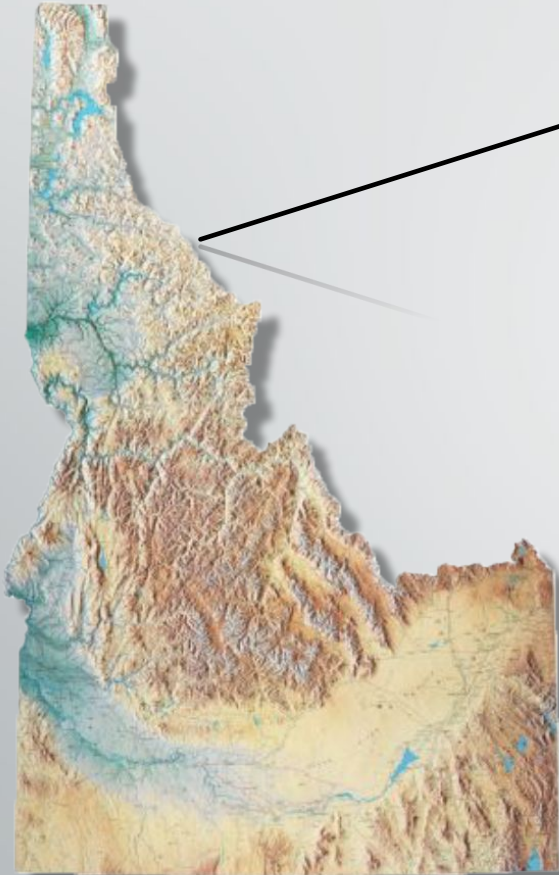
Idaho Community Engaged Resilience for Energy Water systems “I-CREWS”



Address the impact of climate, population, and technological change on energy-water (E-W) systems.

NSF-ESPCOR Track 1
Aug 1, 2023 – July 30, 2028

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Wiki commons based on USGS



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Sockeye Salmon courtesy Shoshone-Bannock Tribes



Ansel Adams Tetons and Snake River



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Working Vision and Mission Statements

Our **vision** is to grow and sustain academic research and training capacity in E-W resilience, positioning Idaho to be a national leader.

The **mission** of I-CREWS is to build the capacity and competitiveness of Idaho's institutions to identify resilient E-W production, transmission, and use, and develop an inclusive, community-engaged workforce well-positioned to lead a transformative research agenda, reflective of local knowledge, governance dynamics, and advanced modeling.

The **goal** is to understand the complex interface of E-W systems in rapidly changing environments.



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- Principal questions are:
 - What role do trade-offs and changes in E-W systems, including storage, efficiency/conservation, local knowledge, and governance dynamics, play in determining resilience strategies or options to climate-driven, population, and technological change?
 - How does incorporating diverse ways of knowing, community engagement, and advanced modeling improve the parameterization of pathways associated with more equitable and resilient E-W futures?

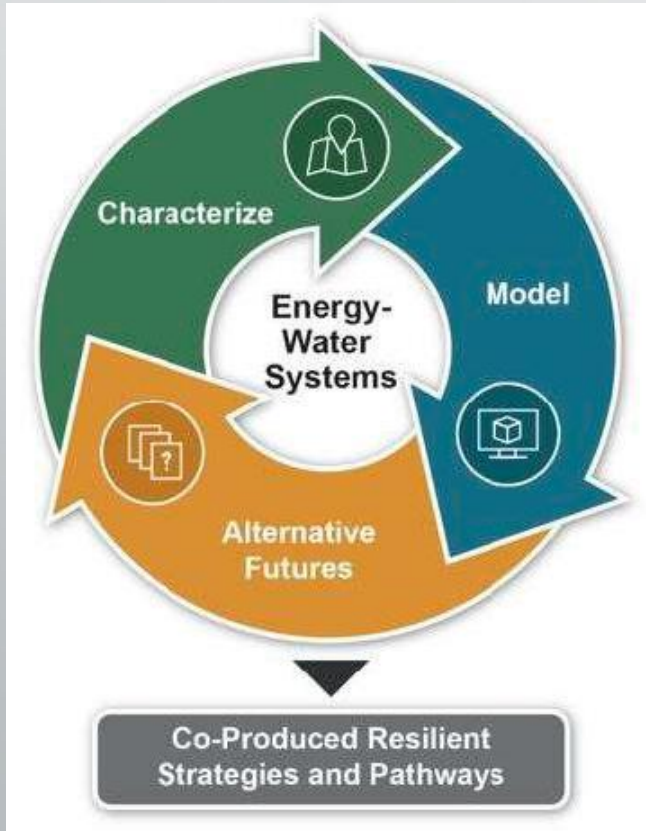


Idaho Community Engaged Resilience for Energy Water systems “I-CREWS” Who?



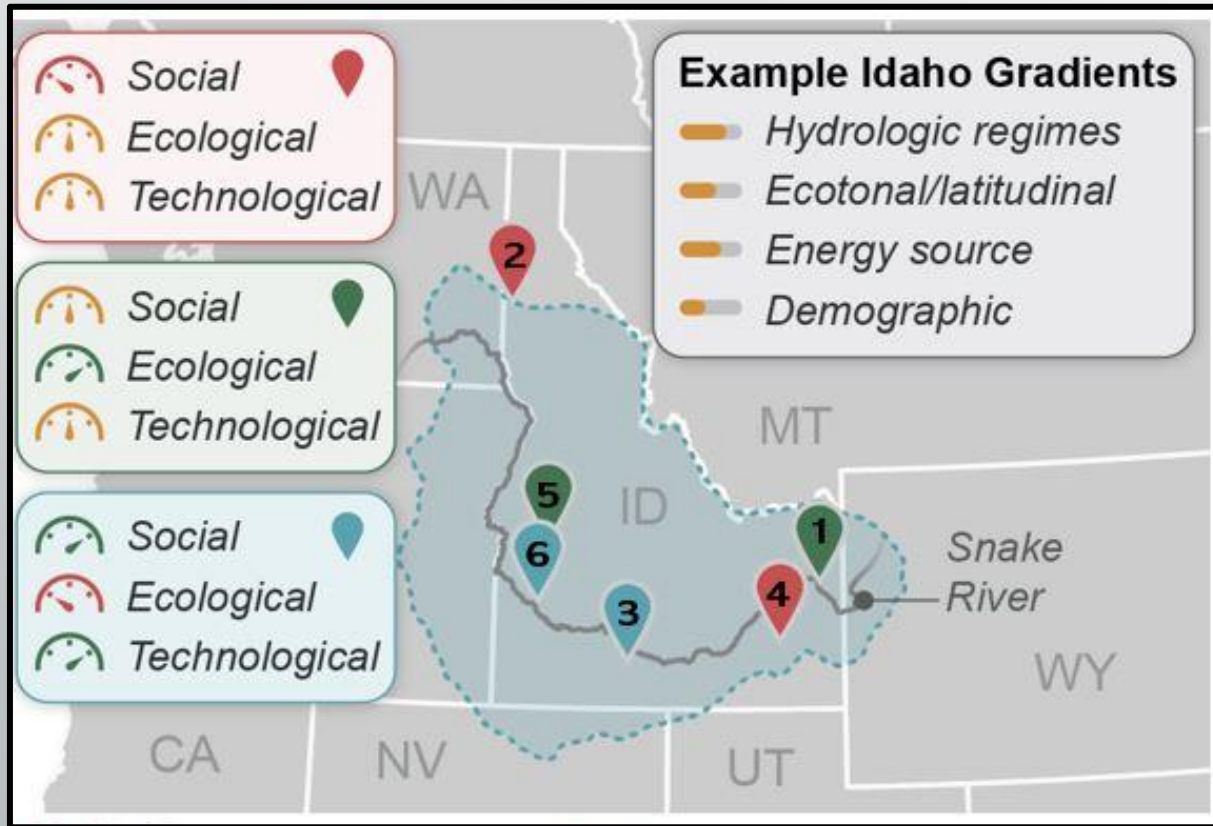
- UI, ISU, BSU
- PUI's
- Tribal Nations (Shoshone-Bannock Tribes, Coeur d'Alene Tribe are sub-awardees)
- Industry, state, and federal partners
- State-wide 8 new early-career hires, 10 postdocs, and 20 graduate students
- Communities through co-production and educational initiatives

Idaho Community Engaged Resilience for Energy Water systems “I-CREWS” How?



- Characterize physical and human elements of E-W systems (i.e. different forms of governance, water use, availability, and storage, electrical transmission, production, and operations) that influence resilience;
- Model E-W systems using input from communities (i.e. input to parameterize the models, model tradeoffs, and help shape the scope of the models) to better understand resilience pathways;
- Alternative Futures team will use the tools developed from the characterization and modeling team to explore and determine how different scenarios could impact future resilience of EWS.

Currently in Strategic Planning Phase



- Refine study site location - where will the community-engaged work take place?
- Refine language and develop long-term approaches to shared understanding.
- Roles of institutions and partners
- Develop a plan to connect elements.
- Community engagement plan and activities.

Building on the foundation of GEM₃: Partnerships, education, workforce development, broadening participation:

- Vertically Integrated Program (VIP) continue and expand program
- Community Integrated Program (CIP) new initiatives
- Seed grants
- (Re)newing reciprocal relations research (learn from and apply this work as well continue research element)
- Tribal Scholars

Observing local adaptation of sagebrush to soil microbes: An undergraduate's opportunity

Kaitlyn Opland
BS Graduate, Boise State University



Building on the foundation of GEM₃: Research, partnerships, education, workforce development, and broadening participation

- Location-specific work helps connect people and research (Castle Rock, Sven's Presentation)
- Understanding scale can help us interweave knowledge and connect research (Chris's presentation)
- Understanding the methods and practice of SES work and engaging with communities to co-produce research can lead to novel ways of understanding complex problems (Morey's presentation)



Stay Tuned!



<https://www.idahoepscor.org/i-crews>

