

Southwest Climate Adaptation Science Center Natural Resources Workforce Development Fellowship

What is the fellowship?

The Southwest Climate Adaptation Science Center (SW CASC)¹ Natural Resources Workforce Development (NRWD) Fellowship was developed to provide graduate students with opportunities for training and practice in developing use-inspired and actionable science to inform natural resource management decisions. The SW CASC NRWD Fellowship is funded by the SW CASC and the University of Arizona Graduate College.

The fellowship is open to currently enrolled graduate students in research-based thesis or dissertation-granting programs at the seven SW CASC consortium institutions (see map below). One applicant from each institution will be selected to take part in the 2019-2020 fellowship cohort. The fellowship will begin in September 2019 and extend through September 2020. Funding for successful applicants includes a stipend of \$5,000 (disbursed 50% at beginning and 50% at completion), with an additional travel allowance of \$1000 for each Fellows cohort meeting that occurs away from their home campus.

For Academic Year 2019-2020, the fellowship science theme is ***improved understanding of the linkages between the management of headwater ecosystems and downstream water resources***. The fellowship provides funding to students with active research interests in this area in order to (a) take part in training on methods to foster collaborations and the development of science that informs resource management decisions, (b) join a cohort that will collaboratively research an issue aligned with the SW CASC and its current research foci and develop a use-inspired research product that benefits the SW CASC, (c) gain experience in interacting and collaborating with natural resource management decision-makers, and (d) gain experience in effective communication of research results to enable use of that research.



¹ The SW CASC provides objective scientific information, tools, and techniques that land, water, wildlife, and cultural resource managers and other interested parties can apply to anticipate, monitor, and adapt to climate change impacts in the southwestern United States. The SW CASC is a collaborative partnership between USGS and a consortium of seven academic institutions from across the region (see map).

*For more information on SW CASC - <https://www.swcasc.arizona.edu/>

Qualifications

- Applicants must:
 - Be currently enrolled in a Master's or Ph.D. degree-granting program at one of the SW CASC consortium institutions (see map above).
 - Be a student in good standing and progressing toward completion of their degree.
 - Be able to attend two in-person multi-day cohort meetings (Fall 2019 [start of the fellowship] and Fall 2020 [to report results of cohort projects]), and monthly cohort teleconferences.
 - Demonstrate the relevance of their research to the 2019-2020 SW CASC NRWD Fellowship Science Theme.

2019-2020 SW CASC NRWD Fellowship Science Theme

The science theme for the 2019-2020 SW CASC NRWD Fellowship is ***improved understanding of the linkages between the management of headwater ecosystems and downstream water resources***. We seek applicants with active research interests in this area. We interpret relevant research interests broadly, to include questions and issues such as (but not limited to):

- How will changes in snowpack affect water quantity, quality, and/or aquatic species and habitats?
- How do large terrestrial disturbances affect snowpack, and what are the related impacts to streamflow, water quality, affected species, and habitats?
- How does changing climate interact with factors such as sport fishing, wildfire, invasive species, and species range changes to disrupt aquatic ecosystems and how might such dynamics be moderated?
- How does changing climate interact with wildfire and post-fire erosion and sediment transport, to disrupt downstream management of water resources, quality, or floodplains, and how might such dynamics be moderated?
- What are the most effective adaptations for downstream managers?
- What are the key legal, economic, or social constraints in implementing adaptation actions?

Applying for the 2019-2020 SW CASC NRWD Fellowship

- **Application Checklist:**
 - In no more than 600 words, provide:
 - A concise description of your research interests and relevance to the fellowship science theme
 - A concise description of how a SW CASC NWRD Fellowship will strengthen your research and/or overall career goals
 - A concise description of your interest in a collaborative experience as part of a cohort
 - A description of a desired and feasible connection with a natural resource management decision-maker. Natural resource management decision-makers may include personnel in federal, tribal, state or city agencies, non-governmental organizations, private landowners
 - An up-to-date curriculum vitae. Please include a brief synopsis of any prior work with decision-makers.

- One letter of support from your graduate advisor, that endorses your application and demonstrates the advisor's support of your aim to garner training and develop experience in producing use-inspired or actionable science and outreach, related to natural resource management issues articulated in the fellowship science theme.
- **Mechanics of the Application, Evaluation Criteria and Deadlines:**
 - Applications are due no later than **March 22, 2019**. Submit all documents in one pdf.
 - Applications must be submitted via email, to agovert@email.arizona.edu.
 - Questions: Anita Govert, agovert@email.arizona.edu, or 520-626-8524.
 - A SW CASC panel will evaluate the applications, based on:
 - Match between your research area and the fellowship science theme
 - Your articulation of how the fellowship, and collaborative cohort experience will strengthen your research and/or career goals
 - The letter of support
 - Your articulation of potential connections with natural resource management decision-makers
 - Applicants will be informed no later than **May 1, 2019**.

Fellowship Requirements

- Attend monthly Fellowship cohort teleconferences, to receive training, develop and discuss cohort research related to the Fellowship science theme, and report research progress.
 - Cohort research will employ a team-science model of interaction, which will be introduced during the initial cohort meeting. Research teams will co-develop a scope of work for cohort research, related to the SW CASC NRWD Fellowship theme, the participants' experience and research interests, and the needs of decision-makers in the U.S. Southwest.
 - Members of the cohort will represent multiple disciplines, so, for example, research may take the form of syntheses and assessments of research needs and gaps, examinations of the state of knowledge regarding the Fellowship theme, a research plan or proposal to address a Fellowship theme-related issue or wicked problem.
 - We anticipate that Fellows will spend about 1-2 days each month on research and cohort coordination, in addition to the 1-hour monthly teleconference.
- Attend two in-person meetings: an inaugural Fellowship cohort meeting and translational ecology training (Fall 2019), and a Fellowship cohort meeting to report cohort research results (Fall 2020). (Tentative location for Fall 2019: Utah State University, Logan, UT).
- Submit a news item for the SW CASC website, related to one of the following (a) the training, (b) the cohort experience, (c) cohort research, (d) engagement with natural resource management decision-makers.
- Submit a written report of results and findings. This will include a group synopsis of the cohort research, and an individual synopsis of how the program has impacted your graduate work or research directions.