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# EcoClimate News Southwest

January 2020

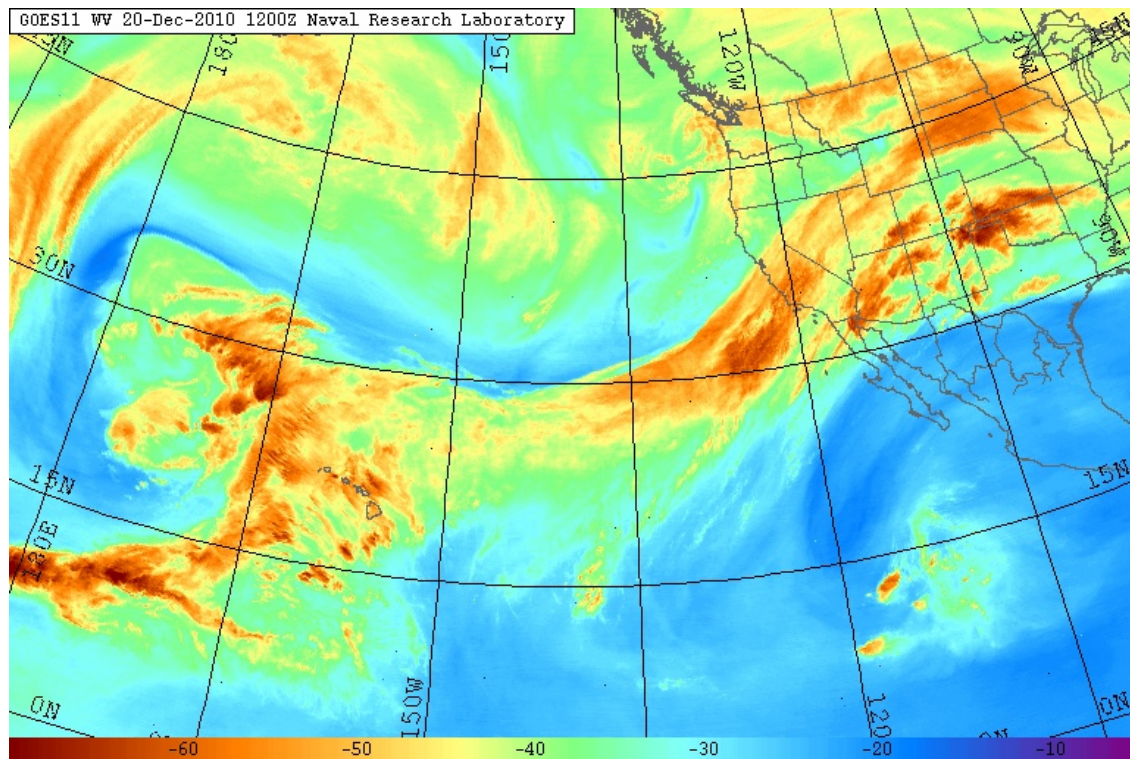


Starting 2020 off on a positive note, the fiscal year (FY) 2020 budget for USGS contains a significant increase from previous years' allocations, and includes a \$13 million increase for the Climate Adaptation Science Center (CASC) program!

The President signed into law the appropriation bills passed by Congress before the end of 2019, ensuring no government shutdown. A portion of the additional funding to the CASC program will be used to create a ninth CASC in the Midwest region, and the remaining funds are anticipated to be spread amongst the existing national and regional CASCs.

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## **Atmospheric Rivers Cause Billions of Dollars in Flood Damage in the Western U.S.**



Atmospheric river over California in December, 2010. Photo credit: United States Naval Research Laboratory.

From 1978-2018, 84% of the flood damage in the western U.S. was associated with atmospheric rivers, costing the region almost \$42.6 billion, according to authors of a new study published in [Science Advances](#) with funding from the SW CASC. Atmospheric rivers (ARs) are long narrow bands of moisture in the air carrying high volumes of water vapor. Read the full article [here](#).

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## SW CASC Partner in the News



Amber Pairis, PhD, has been named KPBS and National Conflict Resolution Center Community Hero for her collaborative, community-centered approach to climate change. Dr. Pairis founded and is the Director of the [Climate Science Alliance](#) (CSA), hosted at SW CASC partner institution Scripps Institute of Oceanography at UC San Diego. The mission of the CSA is to "safeguard natural and human communities in the face of a changing climate." In her position, Dr. Pairis leads several community engagement initiatives including Climate Kids and the role of art and artists in building community engagement on climate change.

Congratulations Amber!  
Read the full announcement [here](#).

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## SW CASC Podcast

The SW CASC will be relaunching our podcast, EcoCast Southwest, this spring! Are you a researcher or resource management practitioner who would like to be considered for a guest spot? What topics would you like for us to discuss? Let us know [here](#)!

## Recently Published Research

### [Typologizing Stakeholder Information Use to Better Understand the Impacts of Collaborative Climate Science](#)

SW CASC investigators examine how stakeholders use science produced from collaborative research projects and suggest that researchers be aware of how stakeholders use project outputs to better design climate information products for land and natural resource managers.

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### [Mapping of Land Cover with Open-Source Software and Ultra-High-Resolution Imagery Acquired with Unmanned Aerial Vehicles](#)

Mapping land cover with unmanned aerial vehicles is growing in popularity resulting in a need for software that can analyze the high resolution images collected. The authors of this article, which include SW CASC Investigator Dr. Erica Fleishman, tested multiple approaches using machine learning to classify the images. They found that accurate classification depends on factors such as contrast and landscape patterns.

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## Fellows' Highlights

### **Science Co-Production and the Cohort Experience: Lessons from an NRWD Fellow**



*Elizabeth “Elly” Fard is a PhD student in the Department of Geography at UCLA. Below are her experiences and insights as a SW CASC Natural Resources Workforce Development (NRWD) Fellow.*

When I first started graduate school at UCLA, I believed that the most important part of an academic career is the science. In academia, it’s very easy to get pigeonholed in your research and focus on publishing large impact papers. However, currently, even great scientific insights aren't having an impact in societal and governmental decisions. But what is the reason? Is it the intimidating jargon found in most scientific articles? Or is it because of a lack of focus on outreach? These questions intrigued me, and I decided to work on finding some answers. *Read the full blog post by SW CASC NRWD Fellow Elly Fard [here](#).*

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## Partner Highlights

### Dust Mitigation Handbook

Steve Smarik, Natural Resources Conservation Service (NRCS) State Resource Conservationist for Arizona and Liaison to the USDA Southern Plains and Southwest Climate Hubs in 2018-2019, advanced science and management of dust hazards on agricultural lands via the development of the [Dust Mitigation Handbook](#). The Handbook represents a vision for conservation management under varying and changing environmental conditions, and is intended for resource managers who are

struggling with dust challenges and working with producers to craft solutions. For a changing future, where uncertain climate and water supply conditions may prompt farmers to fallow increasing acreage of once-actively planted cropland, this Handbook comes as a timely resource. For more information, please see the one-hour [webinar](#) introduction to the Handbook. For more on the scientific underpinnings and research related to dust mitigation, see The Southern U.S. Dust Monitoring and Mitigation [Symposium](#) at the 2018 Soil and Water Conservation Society annual meeting.

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## Partner Events

### California-Nevada Drought Early Warning System (CA-NV DEWS) January 2020 Drought & Climate Outlook Webinar



This webinar is a part of a regular series on drought and climate outlook. Stakeholders and other interested parties in the region can expect timely information on current drought status and impacts, as well as a preview of current and developing climatic events (i.e. El Niño and La Niña) in California and Nevada.

Date: January 27, 2019  
Time: 11 AM PT

[Register Now](#)

### Drought Learning Network Workshop

The USDA Southwest Climate Hub, National Drought Mitigation Center, National Integrated Drought Information System and partners are hosting a workshop to support communities learning from communities in coping with and responding to drought. A small, two-day workshop to envision and develop the network will be held February 11-12, 2020 in Las Cruces, NM. A drought learning network (DLN) is a resource to retain management lessons learned during historic drought events to inform future action. The workshop will encompass a retrospective analysis of management actions and information needs during recent drought events in the Southwest and Southern Plains. Surveys conducted prior to the workshop, along with manager panels, will describe resources needed and utilized during drought. Please contact Helena Deswood ([Helena.deswood@usda.gov](mailto:Helena.deswood@usda.gov)) for more information.

## Job and Funding Opportunities

### Job Opportunities

#### [Udall Foundation's John S. McCain III National Center for Environmental Conflict Resolution \(NCECR\)](#)

The Udall Foundation's Tucson office is searching for a dynamic professional interested in environmental, public policy, and conflict resolution fields to serve as a Program Associate or Senior Program Associate.

*DEADLINE - January 27th, 2020*

#### [CIRES/NC CASC Understanding and Managing Changing Wildfire Risk](#)

The USGS North Central Climate Adaptation Science Center (NC CASC) is hiring a Postdoctoral Scholar in Understanding and Managing Changing Wildfire Risk to lead an effort on generating the fire science needed for resource management decisions in the ecosystems of the North Central region.

*DEADLINE - Position open until filled*

#### [Carbon Cycle and Climate Change Postdoc - Northern Arizona University \(NAU\)](#)

The Gurney lab at NAU is seeking a Postdoctoral Scholar to explore the use of remote sensing to estimate fossil fuel CO<sub>2</sub> in global cities. This is a full time, one year appointment. The position may be extended after the initial year.

*DEADLINE - Position open until filled*

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### Student Funding Opportunities

#### [National CASC 2020 Science to Action Fellowship](#)

This one-year fellowship is aimed at providing graduate students at Climate Adaptation Science Centers Consortium Institutions with financial support to produce a policy-relevant product. This product should relate to the impacts of climate change on fish, wildlife, their habitats, and users.

*DEADLINE - January 31st, 2020*

#### [Institute for Tribal Environmental Professionals 2020 Student Summer Internship](#)

An 8-week program for Native American/Alaskan Native students to work with tribal organizations to address tribal environmental issues. Both undergraduates and graduate students enrolled in a full-time degree program can apply.

*DEADLINE - February 28th, 2020*

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### Other Funding Opportunities

#### [WaterSMART Drought Contingency Planning Grants](#)

These grants through the Department of Interior will support states, tribes, irrigation districts, and water districts in the western United States to update comprehensive drought plans and

[EcoClimate News SW] Atmospheric Rivers Cost the West Billions  
implement projects that will build long-term resilience to drought.

*DEADLINE - February 5th, 2020*

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**Contact us at:**

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