



# North Central Climate Adaptation Science Center

Volume 1 Issue 5

May/June 2020

## NC CASC Welcomes New USGS Director



Nicole DeCrappeo is the U.S. Geological Survey (USGS) Director of the **Northwest and North Central Climate Adaptation Science Centers (CASCs)** and brings a strong research background, proven leadership skills and a deep commitment to advancing the state of climate adaptation

science and practice. Nicole's many years working in the CASC network have provided her with a thorough understanding of the stakeholder-engagement processes necessary to help resource managers incorporate adaptation science into their on-the-ground work. Nicole has also served as the Deputy Director of the Alaska CASC, Deputy Director of the NW CASC and Research Coordinator of the NW CASC.

Nicole's research experience includes ten years with the USGS Forest and Rangeland Ecosystem Science Center, where she studied the links between native and exotic invasive plants, soil biological communities and nutrient cycling in arid lands of the western U.S. She has also worked on topics ranging from biodiversity and ecosystem functioning in tallgrass prairies to climate change effects on soil communities in the Dry Valleys of Antarctica. Nicole has a Ph.D. in Soil Science from Oregon State University, an M.S. in Ecology from Colorado State University and a B.A. in Environmental Studies from American University. Nicole is currently based in Corvallis, Oregon.



## NC CASC Launches New Webinar Series

The NC CASC has launched a new webinar series aimed at highlighting ongoing research from **the seven state NC CASC network**, as well as featuring topics of critical importance to natural resource managers and other stakeholders within the NC CASC region. Our first webinar was held on Thursday, July 9th and featured Dr. Kimberley Davis and Dr. Phil Higuera from the University of Montana and their ongoing research on post-fire tree regeneration in a changing climate.

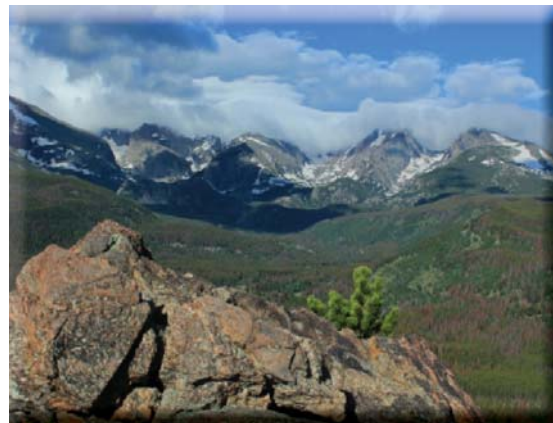
Webinars will be held bi-monthly on the second Thursday of the month from 11am-12pm MT. Beginning in January 2021, webinars will be held on a monthly basis. **Information on how to register** will be announced on our website and through our mailing list. After air dates, webinars will be available for **viewing on our website**. To receive announcements about future webinars, please **subscribe** to our mailing list using the Mailchimp icon on our website.



## ***USGS Project Proposals Selected, Details Coming Soon***

Alisa Wade, USGS Research Coordinator

In November 2019, the USGS released a Request for Proposals (RFP) to members of the NC CASC consortium or USGS scientists for proposed science projects related to high-priority natural or cultural resource management issues that can benefit from science to support climate-informed planning and adaptation management. Proposals responding to topics in the RFP call were submitted in April, 2020. Eight science projects have been selected for intended funding. Planned projects will kick-off toward the beginning of 2021 and project details will be announced once funding processes are approved and complete.



## **New Research Project Relating to Forest Vulnerability and Fire-Catalyzed Change**

*Phil Higuera, University of Montana*

Principal Investigator Dr. Phil Higuera at University of Montana is leading a new project, “Anticipating forest vulnerability to fire-catalyzed ecosystem change.” Climate change is impacting forest ecosystems both directly, through changes in tree mortality and regeneration, and indirectly through an increased frequency of tree-killing disturbances, such as wildfires. This project will leverage ongoing and previous research, funded by the Joint Fire Science Program, the National Science Foundation, and NASA, focused on quantifying the biophysical drivers of post-fire conifer regeneration across Rocky Mountains forests. The main goal of this work is to create a vulnerability assessment that broadly highlights geographic areas and forest types most vulnerable to fire-catalyzed ecosystem transitions under current and future climate change scenarios.



## ***RSS Supplemental Guidance: Integration of Climate Change Scenario Planning into the RSS Process***

Brian Miller, USGS Research Ecologist

The NC CASC’s Brian Miller and the National Park Service are excited to announce the publishing of the ***Resource Stewardship Strategy (RSS) Supplemental Guidance***. RSSs are strategic plans for NPS units, intended to help park managers achieve and maintain desired resource conditions. This document provides a repeatable methodology to more thoroughly address climate change in RSSs through scenario planning – a tool for supporting management decisions in the face of uncertainty. Scenario planning enables stakeholders to identify key climate sensitivities of resources, examine a range of relevant and plausible future conditions, and explore management options that can be effective across scenarios.

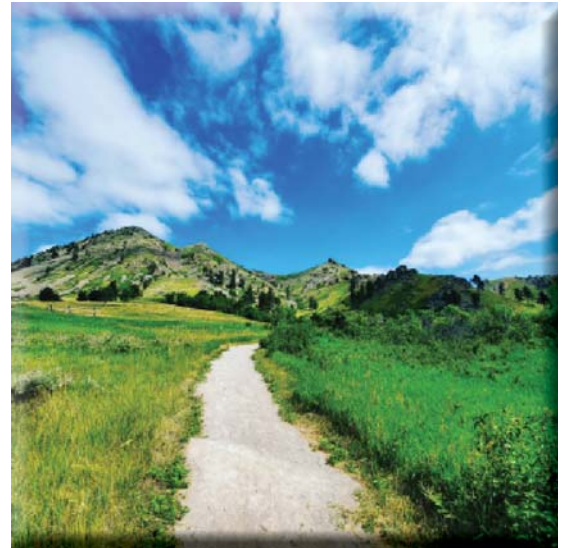




## NC CASC Launches Tribal Climate Leaders Program

Heather Yocum, Stakeholder Engagement & Communications Lead

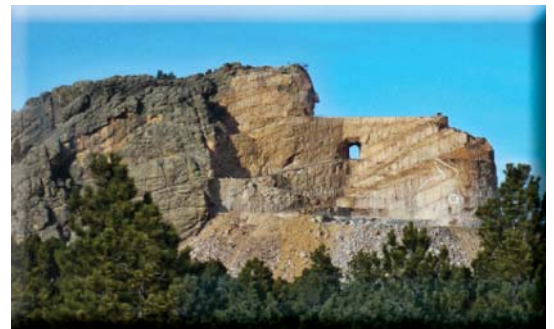
The North Central Climate Adaptation Science Center (NC CASC) is pleased to announce the launch of the **Tribal Climate Leaders Program** that will support Native American students pursuing a graduate degree at the University of Colorado Boulder in fields related to climate adaptation science. The Tribal Climate Leaders Program (TCLP) provides five fully-funded, 2-year fellowships to Native American students affiliated with the 32 federally-recognized tribes in the North Central region. The NC CASC welcomed the first PhD student to the Geography Department in Fall 2019, and four master's degree students will be joining the Environmental Studies Program and Department of Civil, Environmental and Architectural Engineering this fall.



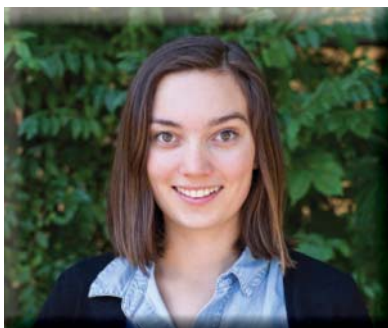
## How the Earth Observation Community Can Learn From Indigenous Peoples and a Lakota Worldview

James Rattling Leaf, Sr., Consultant to Great Plains Tribal Alliance

James Rattling Leaf, Sr., was recently interviewed by Diana Mastracci for the Group on Earth Observations (GEO). In the interview, James discusses the role of the GEO Indigenous Alliance, what we can learn from the Lakota Worldview, and the GEO Indigenous COVID-19 Hackathon, which took place June 5-7th. Read the full interview in **GEO's blog**.



## USGS Hires New NAGT Summer Intern



The USGS has hired Indigo Bannister, a masters student at the Bren School of Environmental Science and Management at the University of California, Santa Barbara, as a virtual summer intern. Indigo will help summarize how NC states used, or could benefit from, additional climate data and adaptation information in their State Wildlife Action Plans (SWAPs). This will help the NC CASC prepare to engage states and provide data, syntheses, training, or capacity as they gear up to do their 10-year SWAP revisions. Read more about the **NAGT Program on their website**.

## Recent Publications

***Fire as a Fundamental Ecological Process: Research Advances and Frontiers*** • Journal of Ecology • April 2020 • In Collaboration with NC CASC

***Wildlife-Driven Forest Conversion in Western North American Landscapes*** • BioScience • July 2020 • Shelley Crausbay, Phil Higuera