

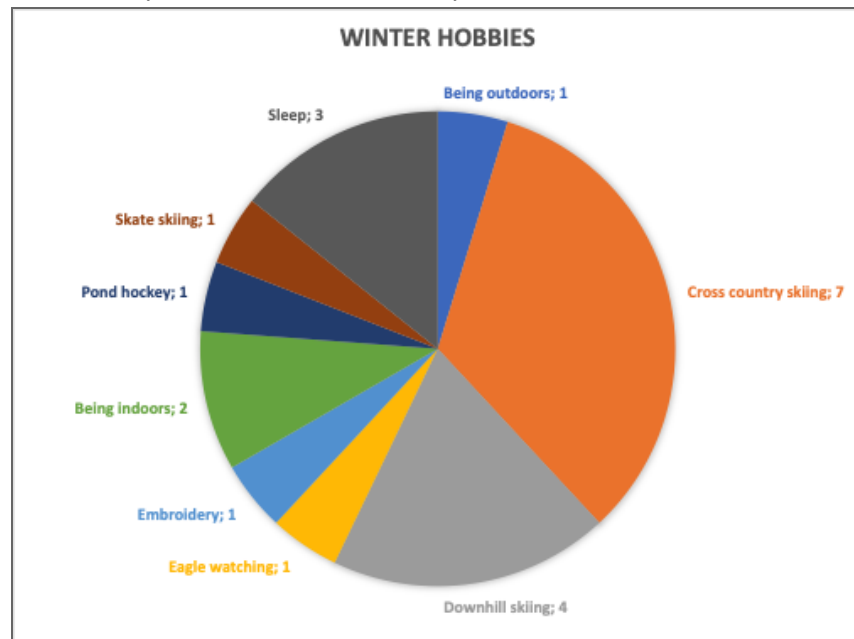
**USGS North Central Climate Adaptation Science Center & USDA Northern Plains Climate Hub Joint
Stakeholder Committee Meeting
December 3, 2020; 10 AM - 12 PM MT**

Meeting Objectives

1. Familiarize JSC members with the resources and recent activities of the North Central Climate Adaptation Science Center (NC CASC) and the USDA Northern Plains Regional Climate Hub (Hub)
2. Provide briefings on key science topics of interest to JSC members
3. Discuss plans for 2021 Listening Sessions

Welcome and settling in

- Ice breaker: What is your favorite winter hobby?



North Central Climate Adaptation Science Center updates

- Slides: <https://drive.google.com/file/d/1Sg1LBPOzKC79JZX2-BiYXEoRQK7vIaRt/view?usp=sharing>
- Tribal Climate Leaders Program: <https://nccasc.colorado.edu/tribal-climate-leaders-program>

USDA Northern Plains Climate Hub updates

- Slides: <https://drive.google.com/file/d/1drwSwggh1y2lt49szBzNq6CERecTOPyV/view?usp=sharing>
- NPCH quarterly reports: <https://www.climatehubs.usda.gov/hubs/northern-plains/northern-plains-climate-hub-quarterly-five-year-accomplishments>
- Grass-Cast paper: <https://doi.org/10.1002/ecs2.3280>
- Grass-Cast tool: <https://grasscast.unl.edu>
- Learn from Your Neighbors StoryMap: <https://bit.ly/3n5CcJV>

JSC members' round robin:

Please share: your name, organization, and position; and one climate-related management decision / adaptation challenge your organization faces

- Lance Foster, Iowa Tribe, THPO & Alan Kelley - obtained a tribal climate planning grant, working

w/ Stefan, traditional ecological knowledge as a framing for talking about climate change, acquired land from TNC and [created new park](#), regenerative agriculture efforts

- Doug Kluck, NOAA, Regional Climate Services Director - works w/ NCEI and can help facilitate access to raw climate data to inform climate adaptation and management decisions
- Brandi Skone, MT FWP, wildlife biologist sitting in for Justin Gude - deals with sagebrush and grasslands, non-game species, would like to know about info and tools re: future climate and what plants and animals would thrive against invasive species, part of agency's climate committee - need better ways to relate to landowners and communicate this information to them
- Julianna Leno, USDA APHIS, veterinary epidemiologist - works on a national scale to understand climate factors as disease drivers
- Claudia Regan, USGS NOROCK, center director - do a lot of research that has climate or climate stressors as central to the theme of the research, lead for national integrated USGS eco-hydrology project with an emphasis on impacts of drought on aquatic habitat in headwater systems
- Greg Josten, SD state forester - merging dept of ag and dept of natural resources for the state over the next 3-4 months, emerald ash borer found in 2018 and expanding since then, ash is 5th most abundant tree species / 30% of tree canopy / 30% of windbreak species, will have a really devastating impact - trying to get people to accept biodiversity
- Dennis Longknife, Fort Belknap, climate change coordinator - recovering from COVID-19, climate adaptation resiliency plan is still in draft form, consultants obtained WCS funding to do some thinning in tree stands ~100 acres, other funding will help thin addl 200 acres
- Greg Pederson, USGS NOROCK, research scientist - works for Claudia, has obtained funding from NC CASC to work with BOR to develop historical and future projections of climate change and water for basin management, BOR secure water report due to be delivered to Congress this year - will be a summary of all the work
- Jason Daniels, EPA R7, water resilience coordinator - encouraging nature based solutions via EPA, NRCS, FEMA funds, 120 days to develop SOP on disaster mitigation for climate risks
- John Guinotte, USFWS R6, ES spatial ecologist - working on quarter time detail with CASC to advance climate information needed for Species Status Assessments
- Katie Stevens, BLM, district manager for Western MT - extended drought in PJ/sage ecosystems, recent WBP listing and how climate change will factor into restoration
- Kevin Foley, BOR - constructing synthetic hydrology time series using paleo records, impact of wildfire on changing hydrologic regimes especially in snowpack dominated systems
- Mark Junker, Sac and Fox, tribal response coordinator - what we can do, what we want to do, what we should do - trends aren't always clear to see so can be hard to decide, moving to a viewpoint where climate change has to be discussed, climate dashboard - <https://hprcc.unl.edu/tribal-dashboards/dashboard.php>, working on improving mitigation plan (e.g., potential for animal disease)
- Rick Northrup, MT FWP - conserving lands by purchasing land and conservation easements, how do we continue with those investments by targeting high priority habitat for future climate?
- Sara Meloy, MT DNRC - works with Michael Downey, regional water planner primarily in Yellowstone River basin, revising statewide drought plan
- Tom Olliff, NPS - intermountain region, climate futures has become the gold standard of climate change for parks, articulating fire risk under the changing nature of wildland fire particularly for wildland-urban interface
- Laura Farris - EPA R8 Climate Change Coordinator, working to build resilient communities through various tools and resources, and through EPA R8's core program work.
- Kevin Whalen, USGS coop units - dropped off
- Tim McCoy, NE Games & Parks - dropped off

Tribal Needs Assessment preliminary findings (Stefan Tangen)

- Slides:
https://drive.google.com/file/d/163JTR7ZNb4Hn9VF62M4n9YkjF5VeZ5_k/view?usp=sharing
- Education/outreach/training
 - Needs to be locally relevant and tailored to each tribal nation - what does climate change mean specifically for them?
 - Priority groups mentioned to receive information included: youth, Tribal council, various administrative staff, and the general community
- Water
 - Quality: impacts from mining, ceremony and cultural events, agricultural impacts, and impacts on fish and wildlife
 - Quantity: allocation of water for certain activities like irrigation and those impacts, sufficient water for fish and wildlife, flow rates, storage, aquifer recharge
 - Drought-flood: extreme weather, dams, nature-based solutions, flood impacts on fish and wildlife, health of the community and how important that is, stream restoration, more precipitation falling as rain instead of snow
- Fish and wildlife - relevant to subsistence, recreation, and tourism
- Opportunities for trying to create more partnerships - create more awareness of NC CASC capabilities, building and growing networks between Tribal Nations

Science for Managing Natural & Cultural Resources

Future of Fire in the West: lessons from the 2020 fire season (Jennifer Balch)

- Slides:
<https://drive.google.com/file/d/1res-FdHUR4HwQxEjx3djuz8SoowOEn5E/view?usp=sharing> (some unpublished figures have been replaced)
- National CASC investment across the network to understand future of fire; NC CASC hired Jilmarie Stephens recently as part of a cohort of post docs to work on regionally-specific questions
- Fire 2020: need climate (“fire weather”), fuels, ignition source - clearly climate a big part of the story; 2020 saw some of the most sustained, extreme dry conditions on record
- Strong relationship between hot and dry and area burned, linked to increase in temperature, 2020 is extreme end point (burned area and increase in temperature)
- Takes just a little bit of warming to lead to a lot more burning
- This year, late burning, starting and burning through October, very unusual and long dry hot conditions leading to later and longer burns
- Lots of implications for domestic areas
- Firescape maps to guide development?
- JKB offered up some solutions that can be found in her recent op ed:
<https://theconversation.com/well-see-more-fire-seasons-like-2020-heres-a-strategy-for-managing-our-nations-flammable-landscapes-149323>
- Climate change is shrinking the window of opportunity to safely do prescribed burns for fire mgmt

The Grasslands Initiative (Dannele Peck, Heather Yocum, Christy Miller Hesed)

- Slides: https://drive.google.com/file/d/1Cg8FCzh1ZLj-ph-4_Mlh1Y63YQSEtzs1/view?usp=sharing
- Two projects being coordinated:
 - NPCH Mixed Prairie Vulnerability Assessment - focused on northern mixed grass prairie
 - NC CASC Grasslands Synthesis Project - all 4 types of grasslands
- Both looking for input/advisory councils:
 - Contact Dannele Peck (dannele.peck@usda.gov) if interested in working lands focus
 - Contact Christy Miller Hesed (Christine.Hesed@colorado.edu) if interested in ecosystem focus

Listening Sessions for 2021

- New idea to start next year to help the CASC/Hub listen to and understand management needs and priorities of our JSC members
- Zoom poll:
 - Lots of interest for participating in one or more focused listening sessions (91% Yes)
 - Preference for focus on processes/disturbances as opposed to ecosystem focus
 - Preference for JSC members to include other agency colleagues as needed based on session topic
- National Climate Assessment
 - Planning has started and they will be having listening sessions, want people to keep that in mind, lots of USDA NOAA, lots of tribes, some states participate in these things.
 - Might be good to listen to those conversations to get ideas of topics and to align timing of CASC/hub listening sessions with NCA ones.
 - ND: these listening sessions might be more focused but also want to make sure the CASC and Hub don't contribute to 'stakeholder fatigue' in the region