

DOI North Central CASC & USDA Northern Plains Climate Hub

Joint Stakeholder Committee (JSC)

Listening Session #1: Fire in Forests and Grasslands

Meeting Summary

In this listening session, held on May 13, 2021, the JSC reconnected and shared information about their climate-related management priorities regarding fire with the DOI North Central CASC and USDA Northern Plains Climate Hub. Listening to and learning from participants helps the two centers make stakeholder-informed decisions regarding science directions, priorities, and activities.

Participants learned about cutting edge climate- and fire-related science through two research presentations: *Our changing fire*, Dr. Jennifer Balch, University of Colorado – Boulder; and *Socio-ecological factors influencing the use of fire on grassland ecosystems*, Dr. David Toledo, USDA Agricultural Research Service. Participants were then divided into two topical breakout rooms (Wildfire and Prescribed Fire) to share the management challenges and concerns they have surrounding climate change and fire, resource management, and adaptation. The two tables in this meeting summary provide a synthesis of the comments and ideas shared by participants in each breakout room.

Summary of **Wildfire** Management Challenges and Concerns

Q1. What's keeping you up at night regarding fire?

Fire is changing, but people aren't. More specifically, fire intensity, size, number, severity, and season length are all increasing, but managers are still employing the same actions (e.g., building the same way, fighting fire the same way). How do we develop/evolve/employ new fire management technologies and tactics and get people to use them?

Q2. What is your organization or tribe doing regarding fire?

Climate-informed management actions are generally bottom-up, local initiatives, with little or no top-down guidance. Implemented management actions include trying to increase fuel reduction projects, letting fire burn when possible to create landscape mosaics, and prescribed fire in the 'off season' so that the fire season is safer. Current research efforts include understanding future changes to fire risk, regimes, and impacts.

Q3. How robust are these plans or actions (from previous question) to future climate change?

It is hard to assess how robust actions or plans are until a fire occurs. Recent fire activity (e.g., 2020 Cameron Peak and East Troublesome Fires) indicate that there is still much work to be done.

Q4. In a more focused future conversation, who would you want to talk to and about what?

Suggestions for future focused conversation topics included fire ecology (and a deeper understanding of the relationship between Fire Return Interval and Fire Return Interval Departure), alpine fuel treatments and whether fuel transitions should be promoted, fire management and fuel treatments in riparian areas, and effective fire management strategies in a time of climate change.

Q5. What do you wish we were thinking about?

Participants asked for science-based guidelines for effective fire management strategies in a time of climate change and for information on socio-economic factors around the use of prescribed burning.

Summary of **Prescribed Fire** Management Challenges and Concerns

Q1. What's keeping you up at night regarding fire?

The increasingly shorter window each year for prescribed fire layered on top of fuel buildup, invasive species, and other ecosystem changes. Additionally, social issues around smoke and human health, history of fire suppression on the landscape, and differences in management approach for decisions that have multi-jurisdictional impacts.

Q2. What is your organization or tribe doing regarding fire?

Climate-informed management planning for prescribed fire is lacking, but managers are becoming more adventurous and working together to overcome some of the initial barriers to using prescribed fire as a tool (e.g., equipment sharing). Managers are also beginning to consider how to adjust replanting in a fire/climate-informed manner. Research efforts include gathering interested users and producers of fire science to understand values and possible solutions.

Q3. How robust are these plans or actions (from previous question) to future climate change?

Fire management plans tend to be based on historic conditions, not future climate change.

Q4. In a more focused future conversation, who would you want to talk to and about what?

Suggestions for future focused conversation topics included hearing from other managers about their experiences deploying climate-informed actions (e.g., forest thinning), understanding how invasive species and other changes to fuels will influence how prescribed burning should be conducted, and generally to gain a better understanding of what to do, when, and where.

Q5. What do you wish we were thinking about?

Participants asked for information about what future ecological scenarios might look like under a changing climate, so that they can begin to have conversations within their communities about what the desired or preferred outcome might be. They also requested more information on the interactions between fire and downstream ecosystem services, so that they can better consider how effects on these might inform applications of prescribed fire and forest restoration and management.

For more information:

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