

## **WILDFIRE EMISSIONS AND FUEL TREATMENTS--TO INFINITY AND BEYOND? (6F)**

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Project Title: Wildfire Emission Scenarios

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Summary: This project aims to answer several questions/address gaps in knowledge in how large wildfire frequency, emissions, and carbon sequestration will change as a function of changing climate and fuels treatments. Using a co-production of knowledge approach, the scientists on this project hope to work directly with a group of land managers in the Sierras to develop a series of data tools to support management planning that will address the current limitations of our abilities to project future wildfire frequency, extent, and direct (i.e., vegetation change) and indirect (i.e., changes to wildfire behavior) effects. The three gaps addressed by this project:

1. how we understand the relationship between wildfire and high temperature events that are outside of the historic range
2. uncertainty if emission levels and outputs will follow the frequency and type of wildfires
3. uncertainty if post-fire vegetation recovery will provide similar fuel for other wildfire events.

Relevance to land managers, FMOs: provide Information needed to make planning decisions on how forest treatments may 1) affect the carbon balance of wildfire mitigation treatments, 2) affect climate change mitigation and adaptation.

Specifically, we hope this project will inform land management objectives for Forest and ecosystem level planning efforts and provide data for planning wildfire treatments when considering mid and long range effects from emissions on air quality. The goal of this project is to provide information that is usable by land and air quality managers

Initial questions for land and air quality managers:

1. How would people find the outputs useful for their management needs?
2. What is the most useful way to provide land managers this information?
3. How can this type of information contribute to your planning process?
4. What are the legal mandates that drive your planning process? How do these mandates limit your planning or treatment options?
5. Are there related information needs that have not been met?
6. What are your immediate planning timelines, needs? Long-term?
7. Does your management area work with other other management areas in planning efforts?

Time Commitment for managers/planners:

- either a one-day or 2 half-day workshop(s) each year of the project (3-4 years).
- evaluate visualization tools as they develop, provide feedback, both individually and in small groups

Key words: Fire Emission, Wildfire, Air Quality, Climate Change, Adaptation