



USDA Forest Service Climate Change and Wilderness Briefing Paper

“Climate change makes droughts worse, causing worse insect outbreaks and worse fires, which in turn means more smoke and carbon in the atmosphere – and more climate change. This cycle threatens the capacity of our forests to provide all kinds of environmental services that people have come to expect, including clear air and water, habitat for fish and wildlife, and opportunities for hunting, fishing, skiing, and other kinds of outdoor recreation”.

– Forest Service Chief Gail Kimbell

Wilderness must be an important and integral part of an effective Forest Service climate change strategy.

- Wilderness, as a land use designation, contributes positively to the mitigation of climate change. Mitigation refers to reducing emissions and enhancing sinks of greenhouse gases. However, there is no clear evidence that changing how wilderness is managed would have a significant effect on the mitigation effectiveness of Forest Service lands.
- How wilderness is managed can have a substantial effect on adaptation to climate change. Adaptation refers to actions taken to reduce the adverse effects of climate change on ecological, economic and social systems.
- Almost one in every five acres of the Forest Service is designated wilderness and wilderness lands are disproportionately critical to a climate change adaptation response.
- For a Forest Service climate change strategy to be effective, wilderness must be better integrated with the rest of the Forest Service. Other Forest Service staff areas must contribute more time and resources to wilderness and wilderness staff must be more willing to work with others to find compromise large-scale solutions to climate change and biodiversity conservation issues that work within and outside of wilderness boundaries.

To support an effective Forest Service climate change program, traditional wilderness management must be strengthened and stewardship goals need to be reassessed.

- Appropriate wilderness management is particularly important in minimizing the adverse effects of climate change on biodiversity conservation and the ecosystem services of fresh water and regulation of the hazards associated with wildfire.

- It is critically important to ensure that (1) grazing, recreation, mining and other threats to water quality are appropriately managed; (2) wildfire hazard is more effectively managed by better balancing suppression policies with strategies that reduce long-term risk by allowing more fires to burn, and (3) biodiversity conservation strategies are developed at large spatial scales.
- Given climate change, wilderness stewardship goals will need to be reassessed. Goals based on the traditional concept of naturalness, will need to be supplemented or replaced by goals that more precisely describe the desired ecological outcomes of stewardship programs, particularly where they involve intentional manipulative intervention and restoration.
- Monitoring and research needs to be increased in wilderness to provide the ecological foundation for effectively responding to climate change. Wilderness provides some of the best large undisturbed landscapes available as natural laboratories.