



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
75 Hawthorne Street  
San Francisco, CA 94105

February 7, 2011

Scott Armentrout  
Forest Supervisor  
Sierra National Forest  
1600 Tollhouse Road  
Clovis, CA 93611

Subject: Draft Environmental Impact Statement for Kings River Experimental Watershed  
Forest Health and Research Project, Sierra National Forest, Fresno County, CA  
(CEQ# 20100477)

Dear Mr. Armentrout:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above-referenced project. Our review and comments are pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA acknowledges the importance of the project's goals to improve forest health, reduce fuel loading, and conduct research regarding the effects of vegetation treatments on watersheds and forest health. The preferred alternative (Alternative 5) fully meets research objectives, as described in the purpose and need, to fully investigate a treatment strategy that is intended to protect headwater resources in the southern Sierra Nevada. We recognize the ecological significance of the Sierra National Forest and support the inclusion of the resource protection measures and best management practices described in the DEIS. Overall, the DEIS contains valuable information useful to both the public and decision maker(s); however, we have some concerns that should be addressed in the Final Environmental Impact Statement (FEIS).

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*"). EPA recommends the FEIS include supplementary analysis on air quality emissions and climate change. Our enclosed detailed comments provide additional information regarding the concerns identified above.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD to the address above (mail code: CED-2). Should you have any questions regarding our comments, please contact me at (415) 972-3521, or contact

Stephanie Skophammer, the lead reviewer for the project. Stephanie can be reached at (415) 972-3098 or skophammer.stephanie@epa.gov.

Sincerely,

/s/

Kathleen M. Goforth, Manager  
Environmental Review Office  
Communities and Ecosystems Division

cc: Judi Tapia, Environmental Coordinator, Sierra National Forest

Enclosures: Summary of EPA Rating Definitions  
Detailed Comments

**EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)  
FOR KINGS RIVER EXPERIMENTAL WATERSHED FOREST HEALTH AND RESEARCH PROJECT,  
FRESNO COUNTY, CALIFORNIA, FEBRUARY 7, 2011**

**Air Quality**

***Fully evaluate impacts to Class I airsheds.*** The DEIS does not sufficiently analyze the potential effects of prescribed burning and commercial treatments on air quality within Class I airsheds that are located within 100 kilometers of the project area. The DEIS lists 3 areas within 4-8 miles of the project that could potentially be affected, including Kings Canyon National Park, Dinkey Lakes Wilderness, and John Muir and Monarch Wilderness (p. 3.1-7).

**Recommendation:** The FEIS should discuss how emissions from the proposed project and alternatives would affect air quality, including visibility, within the impact area. Impacts to the listed Class 1 airsheds should be assessed as well as specific measures that would be included as part of the project to minimize those impacts to air quality in these areas.

***Describe health impacts from prescribed burns.*** There is growing concern that Environmental Justice (EJ) communities may be more vulnerable to pollution impacts than other communities. EJ communities may experience greater health impacts than would be predicted using traditional risk assessment. Consistent with NEPA and the goals of Executive Order 12898, if human health could be impacted by the proposed project, it would be beneficial to use a screening process to determine which aspects of human health could be impacted. Depending on the results of the screening, an analysis may need to be conducted in order to determine the direct, indirect, and cumulative impacts to human health. Such impacts could arise from smoke emissions from prescribed burning that affect the Fresno metropolitan area and the foothill communities, which are within the geographic scale of the project (p. 3.1-2).

**Recommendation:** We recommend that the FEIS include a discussion of the potential health effects resulting from the prescribed fire treatments and other vegetation management activities. A screening process should be conducted to determine which aspects of human health could be impacted. The Forest Service should partner with local, State, and federal health departments to conduct the appropriate analysis, and to determine appropriate and effective mitigation measures to address potential adverse health impacts, particularly from smoke.

**Climate Change**

***Describe climate change and its effects on successful reforestation.*** Current research indicates that climate change could impact the amount, timing, and intensity of rain and storm events; increase the length and severity of the fire season; modify the rate and distribution of harmful timber insects and diseases; and aggravate already stressed water supplies. A significant change in the weather patterns could have important implications for how we manage our forests. A number of studies specific to California have indicated the potential for significant environmental impacts as a result of changing temperatures and subsequent environmental

impacts.<sup>1</sup> The California Climate Action Team released a report<sup>2</sup> on the impacts of climate change to California, the latest research, and State efforts to adapt to impacts. The report indicates that estimates of the long-term risk of large wildfires in California are substantial, with increases in occurrences statewide ranging from 58% to 128% in 2085.

One objective of the project is to prevent the occurrence of large uncontrolled wildfires that result in high levels of GHG (p. 1-10). EPA recommends that the Forest Service consider the potential effects of climate change on Forest Service resources and describe how the Forest Service will adaptively manage affected resources. For example, the likelihood of larger and more frequent wildfires could increase erosion, sedimentation, and chemical and nutrient loads in surface waters, resulting in adverse impacts to water quality and quantity as well as species diversity. The DEIS states that climate trends for the Sierra National Forest indicate increasing temperatures with increasing precipitation, but indicates that no climate change or vegetation modeling has been carried out for the Sierra National Forest (p. 3-16).

**Recommendation:** We recommend the FEIS include a more detailed description of climate change and the implications for successful reforestation. For example, describe and evaluate projected climate change impacts on the frequency of high intensity storms, magnitude of rain events and severity and frequency of insect outbreaks, droughts, and fire seasons, and their effects on the success of reforestation efforts. We encourage the Forest Service to elaborate on aspects of the project's research related to climate change, including temperature and precipitation, and how they can be incorporated into the goals of successful fuel management and watershed restoration.

We recommend that the Final EIS estimate the quantities of greenhouse gas emissions resulting from mobile and non-mobile sources during project implementation. As appropriate, mitigation measures for direct sources of greenhouse gas emissions should be considered.

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<sup>1</sup>Our Changing Climate: Assessing the Risks to California, A Summary Report from the California Climate Change Center, July 2006.

<sup>2</sup> Draft 2009 Climate Action Team Biennial Report to the Governor and Legislature. See internet address: <http://www.climatechange.ca.gov/publications/cat/index.html>.