



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

April 11, 2023

Marianne Emmendorfer, District Silviculturist
U.S. Forest Service, Sequoia National Forest
35860 Kings Canyon Road
Dunlap, California 93621

Subject: EPA Comments on the Draft Environmental Assessment for the Hume Basin
Restoration Project, Fresno and Tulare Counties, California

Dear Marianne Emmendorfer:

The U.S. Environmental Protection Agency has reviewed the above-referenced document pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The U.S. Forest Service has proposed to apply mechanical and fire treatments on up to 6,700 acres in the Sequoia National Forest in Fresno and Tulare counties, California to improve forest health, wildlife habitat, and reduce fuels buildup. The proposed action would target the reduction of high fuel loads and noxious weeds in efforts to restore healthy riparian hardwood forest conditions under intact fire regimes.

The EPA supports the objectives of the Hume Basin Restoration Project. Following our review of the Draft EA, the EPA has identified additional analyses for the Forest Service to complete in order to disclose impacts of the project, best inform a potential Finding of No Significant Impact, and improve the environmental outcomes of the proposed action.

We appreciate the opportunity to review this Draft EA. When the Final EA and FONSI are available, please email them to nelson.chloe@epa.gov. If you have any questions, please contact me at (415) 972-3308, or contact Chloe Nelson, the lead reviewer for this project, at 415-972-3502.

Sincerely,

Janice Chan
Acting Manager, Environmental Review Branch

Enclosure: EPA's Detailed Comments

Project Timeline

The proposed action does not include a project timeline for the thirteen proposed treatment types (p. 7). While the timeline of treatments is briefly included in Table 5 (p. 15), describing this information in the proposed action would provide a clearer framework to track treatment applications and monitor effectiveness. In addition, unspecified implementation could result in delayed project implementation if application windows for condition- or seasonal-specific treatments, such as prescribed burning or limited operating periods (LOPs) for California spotted owls, are missed. Prolonged project implementation could exacerbate forest health risks and may thereby alter Forest Service management priorities.

Recommendation for the Final EA: In the Proposed Action section, disclose the estimated project timeline for each treatment type at each project site.

Air Quality

Prescribed fire is a valuable tool that can have ecological benefits over other treatment techniques, yet it has the potential to cause periodic degradation of air quality and visibility and may present a human health risk. Potential air emissions associated with the proposed project activities also include air pollutants from gasoline and diesel equipment and vehicles traveling on paved and unpaved roads, including re-entrained dust. We note that the project area is in nonattainment for the 2015 8-hour ozone, 2012 annual PM_{2.5}, and 1987 24-hour PM₁₀ health-based National Ambient Air Quality Standards that protect ambient air quality. We are concerned that the Fuels, Fire Behavior, Greenhouse Gas Emissions, and Carbon Storage report states that emissions of greenhouse gases from this project would not be regulated under existing laws and that the concentrations of pollutants or emissions produced from equipment is unknown and considered “unmeasurable” at this time (p. 22).

The Clean Air Act also provides Class I Areas special protection for air quality and air quality related values (AQRV), including visibility. The Sequoia National Park is a Class I area near the project area and the Monument Plan designates the entire project area as high scenic integrity, requires a visibility monitoring program, and determination of sensitive indicators for each AQRV in national forest Class I areas.¹ Additionally, there are nearby towns and Class II areas with sensitive resources. The Draft EA does not include measures in Management Requirements addressing how impacts would be avoided or minimized to both Class I and II areas.

We recommend including an Air Quality Section and an overview of site-specific impacts in the Draft EA, including the method the Forest Service will use to notify the public of these burns, as described below in more detail, and potential impacts to Class I and II areas. We also recommend that the Forest Service implement best management practices as prescribed by the National Wildfire Coordination Group (NWCG) to reduce emissions from prescribed burns and other fuel treatments to the greatest possible extent.²

¹ U.S. Forest Service. August 2012. Giant Sequoia National Monument Management Plan. Available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3797629.pdf.

² National Wildfire Coordinating Group. May 2022. Standards for Prescribed Fire Planning and Implementation.

Recommendations for the Final EA:

- Include an air quality section to disclose different sources of air pollutants or emissions associated with the project activities and potential impacts.
- Include all applicable air quality and visibility measures from The Monument Plan in Management Requirements.
- Implement best management practices as prescribed by the NWCG.

Prescribed Burn Public Notification

This project area overlaps with two key recreation sites (p. 4). The Draft EA includes that signage will be posted when vegetation treatments are being completed near roads, but no information is included regarding notifying the public of prescribed burn events. Effective notification is important to ensure that sensitive individuals with compromised respiratory or pulmonary systems can avoid exposure to smoke from prescribed burns.

Recommendations for the Final EA:

- Disclose the outreach strategies the Forest Service will employ to notify the public of burning treatments and minimize potential for activities to affect public safety.
- Add burn notifications to the Sequoia National Forest's website and corresponding social media page(s). Translate notifications where applicable.

Pile Burning

Although pile burning is included in the proposed action to treat activity-generated fuels, it is unclear whether the Forest Service develops plans for pile burns, if there is a burn plan process already established for this project, or if pile burns would be subject to the same process that is utilized for prescribed fire treatments as described in the NWCG Standards for Prescribed Fire Planning and Implementation (May 2022).

The EPA also notes that it may be appropriate to utilize equipment such as air curtain burners to reduce smoke generation and promote full combustion of slash material. The reduction in emissions achieved from utilizing air curtain burners to process residual fuels can be considerable; according to a report prepared by the Forest Service scientists with the Rocky Mountain Field Station, Fire Sciences Laboratory, emissions from prescribed burns averages 36 pounds per ton of PM_{2.5}, emissions from pile burns 25.5 pounds per ton, and the emissions from an air curtain burner creates only 1.1 pound per ton.³

Recommendations for the Final EA:

- Disclose that the smoke management plan will be submitted to the San Joaquin Valley Air Pollution Control District for approval before burn activities are implemented.
- Prepare burn plans to outline preferable wind directions, wind speeds, and proper fuel moistures to ensure adequate smoke dispersal and limit potential effects to smoke

Available at <https://www.nwcg.gov/sites/default/files/publications/pms484.pdf>.

³ U.S. Forest Service. November 2005. The Use of Air Curtain Destructors for Fuel Reduction and Disposal. Available at <https://www.fs.usda.gov/t-d/pubs/html/05511303/05511303.html>.

sensitive receptors.

- Include information about the pile burn plan process and if pile burns would be subject to the same process utilized for prescribed fire treatments as NWCG's recommended standards.

Design Features

There are no design features related to air quality impacts; therefore, we recommend that the Forest Service consider measures to reduce air quality impacts.

Recommendations for the Final EA: Consider including the following measures in Appendix B as project design features:

Fugitive Dust Control:

- Limit vehicle speeds to 15 miles per hour on unpaved roads (i.e., Maintenance Level 1).

Mobile and Stationary Source Controls:

- Reduce unnecessary idling from heavy equipment.
- Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations for maintenance.
- Lease or buy newer, cleaner equipment using the best available emissions control technologies.
- Use lower-emitting engines and fuels, including electric, liquified gas, hydrogen fuel cells, and/or alternative diesel formulations, if feasible. Nonroad vehicles and equipment should meet or exceed the EPA Tier 4 exhaust emissions standards for heavy-duty nonroad compression-ignition engines (e.g., nonroad trucks, construction equipment, etc.).⁴

Administrative Controls:

- Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and other sensitive receptors (e.g., schools, daycares, hospitals, senior centers, etc.).
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before project implementation.⁵
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.

Fuels:

- Disclose that the smoke management plan will be submitted to and approved by the San Joaquin Valley Air Pollution Control District prior to implementation.
- Prepare burn plans to outline preferable wind directions, wind speeds, and proper fuel moistures to ensure adequate smoke dispersal and limit potential effects to smoke

⁴ See <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OA05.pdf>.

⁵ Suitability of control devices is based on whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.

sensitive receptors.

Wildlife

Sierra Marten

The Draft EA states that a LOP for units containing potential fisher denning habitat overlaps with Sierra marten habitat; however, no marten den protections are specified. The Biological Evaluation (BE) states that Sierra martens are the most habitat specific of the five listed Forest Service Sensitive Species (p. B-8). The Monument Plan requires establishment of den site buffers of 100 acres of high-quality habitat surrounding known dens. No den site buffers have been designated in this project area and no surveys for martens have been completed.

Recommendation for the Final EA: Survey for Sierra martens within the project area and establish subsequent den site buffers in accordance with The Monument Plan, as applicable.

California Spotted Owl

Since 2020, wildfire has affected approximately two million acres of forested habitat within the California spotted owl's range, including the Windy (2021), Caldor (2021), Dixie (2021), Creek (2020), and North Complex (2020) fires.⁶ To improve wildfire resiliency of California spotted owl habitat within the project area, the Forest Service is proposing treatments that align with the *Operational Resilience in Western US Frequent-fire Forests* study by North et. al (2022) (p. 28). Given that California spotted owl habitat is scheduled for higher levels of canopy treatment compared to the Forest Service's *California Spotted Owl Conservation Strategy* (2019), we are concerned that the Draft EA does not provide details about California spotted owl monitoring or include a monitoring plan. As such, we recommend that the Forest Service Discuss California spotted owl monitoring in the Final EA.

Recommendations for the Final EA:

- Discuss California spotted owl monitoring and append the monitoring plan. Ensure that adaptive management is included in the plan.
- Describes how and with what resources the Forest Service will conduct monitoring to ensure that the project achieves desired forest resiliency outcomes while also successfully protecting California spotted owl habitat and minimizing impacts.

Tribal Consultation

The Draft EA lists three tribal consultation engagements including a 2021 project scoping letter, a 2022 tribal forum, and a tribal consultation letter regarding the GSER overlap with the Hume Basin (p. 39). Notes from the tribal forum include concerns raised regarding the need for tribal monitors on fires and the importance of keeping records of and referring to tribal input when planning projects (Cultural Resource Management Report Appendix B). The Draft EA does not address these concerns.

⁶ California Department of Forestry and Fire Protection. April 2023. Current Wildfire Emergency Incident Archive. Available at <https://www.fire.ca.gov/incidents>.

The Advisory Council on Historic Preservation (ACHP) highlights that “traditional knowledge is frequently used by Indian tribes to identify historic properties of religious and cultural significance to them in the Section 106 review process.”⁷ As such, we recommend working with Tribes to best apply TK to the project area, as applicable.

Recommendations for the Final EA:

- Disclose the concerns raised during the tribal forum and in response to the Tule River Indian Reservation GSER consultation.
- Further engage with the Dunlap Band of Mono Indians, the Wuksachi Indian Tribe, Kern Valley Indian Council, the Tule River Indian Reservation, and other applicable tribes before the determination of a FONSI and summarize the results of expanded tribal consultation, identify the main concerns expressed by tribes (if any), and address how those concerns were considered in the project design, implementation schedule, and identification of mitigation measures.
- Work with Tribes to apply TK to the project area, as applicable.

⁷ Advisory Council on Historic Preservation. March 2021. Traditional Knowledge and the Section 106 Process: Information for Federal Agencies and Other Participants. Available at <https://www.achp.gov/sites/default/files/2021-05/TraditionalKnowledgePaper5-3-21.pdf>.