



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

May 5, 2006

Jonathan M. Beck
Project Manager
North Kaibab Ranger District
Kaibab National Forest
430 South Main
Fredonia, AZ 86022

Subject: Draft Environmental Impact Statement for Jacob Ryan Vegetation
Management, Coconino County, Arizona (CEQ# 20060083)

Dear Mr. Beck:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above document. 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 Section 309 of the Clean Air Act. Our detailed comments are enclosed.

Based on our review, we have rated the proposed Jacob Ryan Vegetation Management project as Environmental Concerns - Insufficient Information (EC-2). A *Summary of EPA Rating Definitions* is enclosed. We are concerned with potential effects to regional air quality, water quality, and late-seral forest characteristics ("old-growth"). We recommend the Final EIS (FEIS) include: 1) a separate and more specific air quality effects analysis, 2) a commitment to implement water quality Best Management Practices and mitigation measures as soon as possible; and 3) a description of how the Proposed Action will maintain and promote late-seral forest characteristics. We support and commend the proposal to close up to 110 miles of roads that are no longer necessary or are associated with resource degradation. We recommend closure of roads associated with resource degradation as soon as feasible.

We appreciate the opportunity to review this DEIS. Please send one copy of the Final EIS to the above address (mail code: CED-2) when it is released for public review. If you have any questions, please call me at 415-972-3988 or Laura Fujii, of my staff, at 415-972-3852, or at fujii.laura@epa.gov.

Sincerely,

/s/

Duane James, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosure:
Summary of EPA Rating Definitions
Detailed Comments

**EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE JACOB RYAN VEGETATION MANAGEMENT PROJECT, MAY 5, 2006.**

Air Quality Effects Analysis

Evaluate the impacts on regional haze and the Grand Canyon National Park Class I Airshed. The Draft Environmental Impact Statement (DEIS) does not appear to analyze the potential effects of prescribed burning and logging activities on regional haze or the Grand Canyon National Park Class I Airshed that is directly to the south of the project area. Of specific concern are the cumulative impacts of recent and future management activities such as the Telephone Hill, Dry Park, East Rim vegetation management projects and Jack Jolly, Lookout, and Burnt Saddle fuels reduction projects (pps. 78, 102).

Recommendations:

The Final EIS (FEIS) should provide a detailed description of the existing regional air quality. Describe whether there is a regional haze issue or concerns with visibility, especially regarding the Grand Canyon National Park viewshed. The FEIS should evaluate the potential direct, indirect, and cumulative impacts of the project and future management activities on regional haze and the Grand Canyon National Park Class I Airshed.

We recommend Chapter 3 – Affected Environment and Environmental Consequences include a separate section for the Air Quality Effects Analysis.

Describe and evaluate the effects of smoke. The DEIS does not provide specific information on smoke generation, potential health and environmental impacts, or methods to reduce these impacts from proposed prescribed fires and logging activities. Excess exposure to constituents in smoke can cause eye and upper respiratory irritation and potential decline in lung function.¹

Recommendations:

The FEIS should include information on the effects of smoke from prescribed burning and logging activities. For instance, describe the potential adverse effects on public and firefighter health such as respiratory irritation from smoke, and the reduction of visibility within key regional viewsheds (i.e., regional haze). Describe methods for smoke management and the reduction of adverse effects. The FEIS should include a Smoke Management Plan (SMP) that describes practices that will be used to protect air quality, public health, and the environment.

¹ Smoke Exposure Among Firefighters at Prescribed Burns in the Pacific Northwest. Research Paper Pacific Northwest Research Station RP-526, 2000. Timothy E. Reinhardt, Roger D. Ottmar, and Andres J.S. Hanneman, Portland, OR: U.S. Department of Agriculture, Forest Service

The FEIS should also describe how to reduce exposure of firefighters to adverse smoke constituents such as carbon monoxide (CO), aldehydes, and particulates while working prescribed fires. We recommend a commitment to specific measures to reduce smoke exposure of firefighters.

Provide a General Conformity analysis, if applicable. The DEIS does not address General Conformity requirements pursuant to the Clean Air Act (CAA). The 1990 amendment of the Clean Air Act states that in federal nonattainment areas, a determination must be made that the emissions will not exceed a *de minimis* threshold level measured in tons per year for the criteria pollutant of concern. If the action exceeds the *de minimis* level, then a conformity determination is required to document how the federal action will affect implementation of the State Implementation Plan to reach attainment. The proposed project includes prescribed burning and logging activities that could result in air emissions such as fine particulate matter (PM_{2.5} and PM₁₀), volatile organic compounds (VOC), and nitrogen oxides (NO_x).

Recommendation:

The FEIS should describe CAA General Conformity requirements and whether the project is within a nonattainment area for any criteria pollutant. Describe whether a general conformity analysis is required and how the proposed action would comply with the State Implementation Plan and State and local air district regulations. If a General Conformity analysis is necessary, we recommend it be included in the FEIS.

Describe the SASEM air quality model and the model data generated. The Simple Approach Smoke Estimation Model (SASEM, ver. 2.1) was used to determine if Alternative B, the Proposed Action, would cause an exceedence of the air quality standards for PM_{2.5} and PM₁₀. The DEIS states that air quality standards would not be exceeded at the Jacob Lake, AZ receptor site, according to the results of the model (p. 82). A description of the SASEM model and the data produced by it are not provided in the DEIS. In addition, the DEIS does not state whether Alternative C, the Southwest Forest Alliance alternative and second action alternative, was evaluated in a comparable air quality effects analysis using the same SASEM air quality model.

Recommendations:

The FEIS should provide a description of the SASEM model and the predicted smoke emission results of the model runs. All alternatives should be evaluated at a comparable level of detail, including SASEM model runs for each alternative.

Water Quality Best Management Practices

Implement erosion control structures prior to skidding or landing operation. Mitigation measures proposed for the action alternatives include installation of erosion control structures within 15 days after the skidding or landing operation (p. 20).

Recommendations:

We recommend the installation of erosion control structures prior to skidding or landing operation, especially if the activity would occur in watersheds draining into Jacob Lake, during the desert flash flood season, or in key wildlife watersheds. We recommend ground disturbing activity be restricted to the dry season.

Evaluate the affect of the Kaibab Plateau weather, climate, and hydrology on project impacts. The Jacob Ryan Vegetation Management project includes a large portion of the Kaibab Plateau. It is our understanding that this region is arid with a meteorological regime of high intensity storms and flash floods. These storms could result in significant water quality impacts if erosion control measures are not in place or effective.

Recommendations:

The FEIS should include specific information on the weather, climate, and hydrology of the Kaibab Plateau. State whether flash floods are a risk in the project area. Evaluate the potential direct, indirect, and cumulative effects of the proposed action given the weather, climate, and hydrology of the Kaibab Plateau.

Provide specific information on the schedule and method of proposed road closures.

The action alternatives propose closure or re-closure of all roads except those identified for retention. This action would result in the closure of 110 miles of roads. Miles of roads per square mile would be reduced from 6 miles of roads per square mile to 3 miles of roads per square mile after treatment (p.103).

Recommendation:

EPA supports the proposal to close 110 miles of roads that are no longer necessary or are associated with resource degradation. We recommend closure of roads associated with resource degradation as soon as feasible. Closure of these roads would reduce potential adverse water quality and habitat impacts from sedimentation, erosion, and unauthorized off-highway vehicle use. The FEIS should also provide information on the schedule and method of road closures. Describe whether roads would be recontoured, closed with barriers, and/or include features such as water bars and culverts to prevent erosion.

Integrate hand thinning and use of rubber-tired machinery into the Proposed Action.

Alternative C, the Southwest Forest Alliance alternative, would minimize soil disturbance and compaction that may be caused by thinning activity by using hand thinning and rubber-tired machinery where possible (p. 20).

Recommendation:

Where feasible, we recommend the Forest Service integrate hand thinning and the use of rubber-tired machinery into the proposed action (Alternative B) in order to reduce soil disturbance and compaction caused by vegetation management activities.

Late Seral Forest Characteristics

Describe how the Proposed Action will maintain and promote late-seral forest characteristics. The Proposed Action vegetation management prescriptions are intended to perpetuate the large tree element characteristics of late-seral forest (old growth) by avoiding logging of trees that are equal or greater than 24" diameter-at-breast-height (dbh). However, the DEIS states that other elements commonly associated with late-seral forests, such as a high number of snags and downed logs, trees 18" dbh and larger, and moderately high basal areas and high canopy closures, will not characterize the stands treated under the Proposed Action alternative (p. 33).

Two definitions and parameters of late-seral forest are utilized in determining whether the action alternatives would meet management goals for old growth: the Kaibab National Forest Land Management Plan Record of Decision (KNFLMP ROD) and MASS old growth phase definitions. The KNFLMP ROD requires a landscape management approach to old growth that allocates no less than 20% of each forested ecosystem management area to old growth characteristics. The MASS old growth model was developed by the Old Growth Collaborative Group and classifies old growth based on identifiable characteristics (p. 29).

Recommendation:

The FEIS should describe in detail how the retention of the large tree element of late-seral forest, without other late-seral forest characteristics, meets the KNFLMP ROD goal of providing no less than 20% of the landscape in old growth characteristics. This description should address the ability to meet old growth management goals under both the KNFLMP ROD and MASS definitions of old growth.

General Comments

Describe the project implementation schedule. We recommend the FEIS include the proposed implementation schedule for the prescribed burning and logging activities. For instance, describe whether logging activities would occur over 1 or more years, year-round or during only a part of the year.