UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
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April 14, 2008

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Subject: Draft Environmental Impact Statement (DEIS) Warm Fire Recovery Project, Coconino County, AZ (CEQ# 20080070)

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document 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.

We acknowledge the project design features to address salvage harvesting effects on soil compaction, erosion, water quality and wildlife. Of note are features to restrict salvage harvest to gentle slopes, no new road construction, limiting ground-based activities to old skid trails and landings, and the commitment to providing sufficient course woody debris (CWD) to increase much needed ground cover.

While there are positive aspects of the proposed action, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns with the environmental impacts of the existing high-density road system and recreational use in the project area. We are specifically concerned with potential water resources and habitat impacts. We recommend the FEIS include separate sections describing the affected environment, existing conditions, and environmental consequences of the proposed project on the road system and recreation.

The DEIS states that most of the green vegetation, duff, litter, fine fuels, and CWD were consumed in the moderate to high burn severity areas leaving ash and surface rock fragments above the mineral soil surface. Erosion is a concern with heavy monsoon rains already transporting surface ash offsite. Due to the high density of roads and the erosion potential, we recommend selection of Alternative 3 which would restrict ground-based skidding operations to over-snow or frozen soil conditions on areas classified as "severe erosion hazard". Winter over-snow salvage harvesting would significantly reduce the projected erosion rates and potential effects on soil, water resources, and down-slope sensitive resources. At a minimum, we recommend maximizing the optional use of winter over-snow salvage harvesting if another action alternative is selected.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3846 or Laura Fujii, the lead reviewer for this project. Laura can be reached at (415) 972-3852 or fujii.laura@epa.gov.

Sincerely,

/s/

Nova Blazej, Manager
Environmental Review Office

Enclosure:
Summary of EPA Rating Definitions
Detailed Comments

cc: Lois Pfeffer, Interdisciplinary Team Leader, Kaibab National Forest

EPA DETAILED DEIS COMMENTS WARM FIRE RECOVERY PROJECT, KAIBAB NATIONAL FOREST, COCONINO COUNTY, AZ, APRIL 14, 2008

Roads

Describe the road system and demonstrate that re-opened roads and their use will not result in resource impairments, erosion, and sedimentation. EPA is concerned with the potential water resource effects, wildlife habitat impacts, and noxious weed proliferation that can be caused by use of the existing high-density road system. Many of these roads are old skid trails, unclassified roads, and landings not part of the forest transportation system (p. 87) which continue to exhibit lingering compaction inhibiting woody vegetation growth and infiltration (p. 82).

Given the existing road network, no new roads will be constructed for this project. Instead, the action alternatives (Alternatives 2 to 4) would re-open 65 to 95 miles of older, existing closed spur roads and close them at completion of the project (p. x). The DEIS does not include a separate section on roads describing the affected environment, existing conditions, proposed road preparation and closure methods, or the environmental consequences of the proposed action on this existing road system.

> ***Recommendations:***
> We recommend the final environmental impact statement (FEIS) include a separate section on the existing road system describing the affected environment, existing conditions, proposed road preparation and closure methods and environmental consequences of the proposed action. We recommend the analysis describe pre-fire and current road conditions; past, present and projected use patterns; known resource issues (e.g., mass wasting, erosion); the history of road construction and maintenance in the project area; and the existence and condition of road culverts. Of specific interest is whether the re-opened roads are able to support the proposed action and current salvage harvest technology and the potential for increased recreational use (see comment below). The FEIS should clearly demonstrate that the re-opened roads and their use will not result in resource impairments, erosion, and significant sedimentation.

Water Resources

Select Alternative 3--Winter Logging for Increased Soil Protection or Maximize Use Of Winter Logging. The DEIS states that most of the green vegetation, duff, litter, fine fuels, and coarse woody debris (CWD) were consumed in the moderate to high burn severity areas leaving ash and surface rock fragments above the mineral soil surface. Erosion, and potential associated effects on water resources, is a concern due to heavy monsoon rains. Significant amounts of surface ash have already been transported offsite (p. 82). Due to the high density of roads and the high erosion potential, we remain concerned with potential adverse effects to down-gradient water resources.

> ***Recommendation:***
> We recommend selection of Alternative 3 which would restrict ground-based skidding operations to over-snow or frozen soil conditions on areas classified as "severe erosion hazard" (pps. 22-27). Skidding on soils with low to moderate

erosion hazard would be restricted to existing roads and designated skid trails (p. 22). Alternative 3 would also provide the least risk for impacts to stream channels due to road use and maintenance (p. 91). Winter over-snow salvage harvesting would significantly reduce the projected erosion rates (p. 92) and potential effects on soil, water resources, and down-slope sensitive resources. At a minimum, we recommend maximizing the use of winter over-snow salvage harvesting whenever feasible if another action alternative is selected.

Provide specific criteria describing when equipment operations would be restricted. The DEIS states that operation of equipment will be restricted when soil conditions are such that accelerated soil erosion, excessive soil surface displacement, or excessive compaction would occur (p. 31). A description of the criteria for determining these soil conditions is not identified.

Recommendation:
We recommend the FEIS describe the specific soil condition criteria that will be used to determine and trigger when operation of equipment will be restricted to avoid adverse soil effects. Possible criteria to consider are level of soil wetness, soil strength, rutting depth, and existing road and weather conditions.

Recreation

Describe recreational use of the project area and potential effects of the project on recreation. The DEIS does not include a separate section on recreation describing the affected environment, existing conditions, or the environmental consequences of the proposed action on recreation. Due to potential erosion effects, the pre-fire, current, and projected use of motorized vehicles in the project area and on the existing and proposed re-opened roads is of interest.

Recommendation:
We recommend the FEIS include a separate section on recreation describing the affected environment, existing conditions, and the environmental consequences of the proposed action on recreation. For instance, describe the types of recreational use and their intensity, the potential for user-created route development, history of recreation management in the project area, and known resource impairments or user conflicts. We recommend the analysis of environmental consequences evaluate the potential effects of noise, traffic, visual impacts on recreational uses, as well as the effects of recreation on proposed re-opened roads.

General Recommendations

Provide a short discussion of potential effects of climate change on the achievement of project desired conditions. A number of studies specific to the Colorado River Basin have indicated the potential for significant environmental effects as a result of changing

temperatures and precipitation.[1] As stated in the DEIS there is also a long-term drought that has adversely affected the region (p. 115).

> ***Recommendation:***
> We recommend the FEIS include a separate discussion of climate change and its potential effects on the proposed action and the achievement of project desired conditions. We recommend the discussion provide information on the models used to predict forested cover and successional stages and whether they have been revised to include climate change considerations.

Provide a topographic map of the project area. The DEIS states that salvage treatments are located in areas such as ridgetops and areas with good access where it is likely that suppression resources can effectively and safely apply tactics that would slow fire spread (p. 176). A topographic map is not included in the DEIS, making it difficult to visualize the ridgetop location of treatment units.

> ***Recommendation:***
> We recommend the FEIS include a topographic map of the Warm Fire Recovery Project area.

[1] For example, Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability (2007); The Colorado River Basin and Climatic Change, Linda L. Nash & Peter H. Gleick (1993) (EPA Publication 230-R-93-009).