



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

August 24, 2007

Diana Craig  
Sierra Nevada Forests MIS Amendment  
US Forest Service  
Pacific Southwest Region  
1323 Club Drive  
Vallejo, CA 94592

Subject: Amendment Draft Environmental Impact Statement for Sierra Nevada  
Forests Management Indicator Species (CEQ# 20070282)

Dear Ms. Craig,

The U.S. Environmental Protection Agency (EPA) has reviewed the Amendment Draft Environmental Impact Statement (ADEIS) for the above 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.

Based on our review, we have rated the Sierra Nevada Forests Management Indicator Species (MIS) proposed action as Environmental Concerns – Insufficient Information (EC-2). A *Summary of EPA Rating Definitions* is enclosed. EPA acknowledges the need for range-wide consistency and for a MIS monitoring system that effectively informs Forest Service decisions at the landscape, multiple forest level. Nevertheless, we have significant concerns with the ability of the proposed MIS monitoring system to address Forest-specific unique resources, issues, and concerns; the need to integrate past collaborative decisions, such as the 2001 Sierra Nevada Forest Plan Amendment Record of Decision, into the proposed action; and the potential elimination of MIS monitoring requirements for existing projects.

EPA does not support Alternative 1R-Proposed Alternative, Retroactive Application, as currently proposed. This alternative would eliminate any prior requirements to analyze impacts to MIS for projects already in place. The current MIS monitoring system was developed to help meet the National Forest Management Act requirements related to maintaining the diversity of plant and animal communities.

Elimination of MIS monitoring for existing actions, without replacement with a comparable or more robust monitoring system, could place MIS species and overall diversity goals at increased risk.

We recommend the Amendment Final Environmental Impact Statement (AFEIS) describe and evaluate management measures for monitoring Forest-specific unique resources, issues, and concerns; an alternative that combines the benefits of Alternative 1-Proposed Action and Alternative 3-SNFPA Appendix E; and a replacement MIS monitoring system for existing actions, if Alternative 1R-Proposed Action, Retroactive Application, is implemented. We recommend that any alternative selected as the preferred alternative include measures to monitor Forest-specific resources and issues, and a replacement MIS monitoring system for existing actions, if appropriate.

We appreciate the opportunity to review this ADEIS. We are available to discuss our comments. When the AFEIS is released for public review, please send one copy to the above address (mail code: CED-2). If you have any questions, please call me at 415-972-3846 or Laura Fujii, of my staff, at 415-972-3852 or [fujii.laura@epa.gov](mailto:fujii.laura@epa.gov).

Sincerely,

/s/

Nova Blazej, Manager  
Environmental Review Office

Enclosures:

Summary of EPA Rating Definitions  
Detailed Comments

cc: Vicki Campbell, U.S. Fish and Wildlife Service  
Howard Brown, National Marine Fisheries Service  
Peter Ode, California Department of Fish & Game  
Peter A. Stine, Pacific Southwest Research Station

**EPA DETAILED COMMENTS ON THE AMENDMENT DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE SIERRA NEVADA FORESTS MANAGEMENT INDICATOR SPECIES, SIERRA NEVADA RANGE, CA, AUGUST 24, 2007.**

**Alternatives**

***Include specific management measures that provide the flexibility to monitor and address Forest-specific unique resources, issues, and concerns.*** Alternative 1–Proposed Action would replace the current Forest-specific Management Indicator Species (MIS) lists with a common list of MIS and monitoring requirements for ten National Forests across the Sierra Nevada Range. The proposed MIS list includes 12 habitat types and 15 indicator species, eliminating specific habitats such as cliffs and litter and down logs, and 54 species (pps. 24, 34). While EPA acknowledges the need for range-wide consistency and for a MIS monitoring system that effectively informs Forest Service decisions at the landscape, multiple forest level, we have identified a need for flexibility in the proposed MIS approach. We have concerns with the ability of the proposed MIS monitoring system to monitor and address Forest-specific unique resources, issues, and concerns given the elimination of Forest-specific MIS habitats and species monitoring.

**Recommendation:**

We recommend the preferred alternative include specific management measures that provide the flexibility for individual Forests to monitor and address Forest-specific unique resources, issues, and concerns. For example, consider a measure which would allow expansion of the proposed MIS monitoring system to help track Forest-specific habitats and species. The FEIS should describe how the proposed action will address habitat variability, local issues, and local concerns such as, unique habitats and geological features (e.g., cliffs, caves, edge habitat), Forest-specific fire regimes, microhabitats/climates (e.g., fens, bogs), and Wildland Urban Interface ratios.

***Design and evaluate an alternative that combines the benefits of Alternative 1-Proposed Action and Alternative 3-SNFPA Appendix E.*** EPA is concerned that the proposed alternative does not integrate past collaborative decisions, such as the 2001 Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision (ROD), into the development of the range-wide MIS monitoring system. Both alternative 1 and 3 have benefits: 1) Alternative 1-Proposed Action streamlines the current MIS monitoring system and ensures range-wide consistency, cost effectiveness, and applicability to range-wide management decision-making; while 2) Alternative 3-SNFPA Appendix E focuses management attention and resources on habitats and species of significant public concern and which have strong consensus support.

**Recommendation:**

We recommend the Forest Service design and evaluate in the FEIS an alternative that combines the benefits of Alternative 1-Proposed Action and Alternative 3-SNFPA Appendix E.

***Implement a monitoring program to avoid existing project impacts if Alternative 1R-Proposed Action, Retroactive Application, is selected.*** Alternative 1R–Proposed Action, Retroactive Application, would eliminate any pre-existing Land and Resource Management Plan (LRMP) commitments to monitor or analyze MIS. At the project level, this would mean that any prior requirements to analyze impacts to MIS would be eliminated for projects already in place. However, the new MIS monitoring or analysis requirements rising out of this decision would not be retroactively applied (p. 22). Therefore, requirements to analyze the impacts to MIS for existing LRMP actions would be eliminated without providing a mechanism to identify and monitor potential impacts to MIS from existing and past actions.

EPA does not support Alternative 1R as currently designed. Many existing projects pose significant impacts to MIS species. The current MIS monitoring system was developed as one element to address the National Forest Management Act requirements related to maintaining the diversity of plant and animal communities. Elimination of MIS monitoring for existing actions, without replacement with a comparable or more robust monitoring system, could place MIS species and overall diversity goals at increased risk.

**Recommendations:**

If elimination of MIS monitoring requirements for existing actions is selected, we recommend immediate replacement with a comparable or more robust monitoring system. The FEIS should describe and analyze the replacement monitoring system and how monitoring changes for existing projects will be communicated to the public.

***Include specific habitat and population objectives and action thresholds.*** Alternative 1-Proposed Action would implement a standardized, streamlined list of MIS species and monitoring protocols. The stated goal is to provide meaningful monitoring information on LRMP implementation and the effects of management activities. However, the alternative does not include specific habitat or population objectives or clear thresholds that would prompt management evaluation and changes.

**Recommendation:**

We recommend the Forest Service include in the selected alternative specific habitat and population objectives, or references to specific LRMP objectives, and identify clear thresholds that prompt management evaluation and changes.

***Provide specific data to support the selection of the habitat and ecosystem components included in the MIS monitoring system.*** Alternative 1-Proposed Action identifies 12 major habitats and ecological components that are affected by Forest Service management activities. Species for the proposed MIS list and associated monitoring were selected based on their strong association with these specific habitats and ecological components (pps. 12 to 19).

**Recommendations:**

We recommend the FEIS include additional data on the location of management activities to support the selection of these specific habitats, ecosystem components, and species. For example, provide data on the types and amount of management activity in each of the selected habitat and ecosystem components. We also recommend the FEIS provide data supporting the elimination of specific habitat and ecosystem components from coverage under the MIS monitoring system. For instance, provided data on the lack of Forest Service activities in these habitat types.

***Include a measure to redirect freed resources to monitoring and management of at-risk species and habitats.*** The transition to the new MIS list could free-up resources that can be redirected to other monitoring and management efforts (Table 12, p. 31). We note that the potential reduction in MIS monitoring costs may be due to elimination of duplicative monitoring and greater reliance on existing monitoring programs such as the California Partners in Flight and Breeding Bird Survey (p. 17).

**Recommendation:**

We recommend the resources saved through implementation of the proposed MIS list and monitoring system be redirected to monitoring and management of at-risk species and sensitive habitats. For example, freed resources could be used to further support collaborative efforts with the California Partners in Flight, Breeding Bird Survey, Pacific Southwest Research Center, University of California, and other Sierra Nevada stakeholder groups.

***Describe how the selected alternative addresses identified scientific criticisms of the MIS concept.*** The DEIS lists identified scientific criticisms of the MIS concept. Specific criticisms include statements that members of the same species guild are not alike; each species, by definition, has unique characteristics and behaviors and may not reflect the response of other species or group of species; and habitat trend may not accurately predict population trend or visa versa (p. 4). The DEIS does not appear to address these scientific criticisms.

**Recommendation:**

We recommend the FEIS describe how the selected alternative addresses the identified scientific criticisms of the MIS concept.

***Provide examples of how Alternative 4-Ecosystem Sustainability does not meet regulatory requirements.*** The DEIS states that Alternative 4-Ecosystem Sustainability does not meet regulatory requirements and was eliminated from further evaluation (p. 30). This alternative was developed in response to comments from the scientific community and would employ indicator species representing specific ecosystem sustainability indicators such as habitat types, different locomotive patterns, and different activity patterns.

**Recommendation:**

The FEIS should provide specific examples of how this alternative does not meet regulatory requirements.

**Adaptive Management for Deleted MIS Species**

*Describe how adaptive management and conservation strategies for deleted MIS species will be maintained.* The DEIS states that removal of 54 species from the existing MIS list would not place these species at greater risk since MIS designation does not, per se, provide protection (p. 34). However, the MIS monitoring system is an important part of the Forest Service's adaptive management and conservation strategy for MIS and related species; and, thus, may indirectly benefit these species.

**Recommendation:**

The FEIS should describe how meaningful adaptive management and conservation strategies for the deleted MIS species and related species at risk will be maintained.

**Reference Conditions**

*Describe the process for selecting reference conditions and accounting for historical disturbances.* Alternative 1-Proposed Action would use macro-invertebrates as biological indicators to monitor aquatic habitat. Impacts from forest practices would be determined by the level of impairment relative to reference conditions. Reference conditions are defined as aquatic macro-invertebrate community composition in the absence of impacts from human activities such as timber harvest, grazing, road building and mining (p. 19).

The Sierra Nevada Range has undergone major historical disturbances-- grazing, hydraulic mining, replacement of native grasses with annual grasses--which are still affecting macro-invertebrate communities and their aquatic habitats. Thus, existing aquatic conditions may not represent desired conditions. While use of macro-invertebrates as biological indicators may be appropriate, reference conditions need to be carefully defined to ensure accurate evaluation of impacts from Forest Service management practices.

**Recommendation:**

The FEIS should describe the process for selecting reference conditions. This process should include a description of how the effects of historical disturbances are accounted for.

**Calibration of the Macro-Invertebrates Model**

*Describe the River Invertebrate Prediction and Classification System and implement periodic field assessments of macro-invertebrates in high risk watersheds.* Monitoring of the aquatic macro-invertebrate community will be based on a multivariate, predictive model called the River Invertebrate Prediction and Classification System (p. 22). While models are useful, they can be limited by their underlying assumptions and should be periodically recalibrated with field-based data.

**Recommendation:**

We recommend the FEIS include a detailed description of the River Invertebrate Prediction and Classification System in an appendix. For example, describe model assumptions and calibration. We recommend macro-invertebrate monitoring include periodic field assessments and recalibration or validation of the River Invertebrate Prediction and Classification System model. Watersheds at high risk of significant impacts from management activities and those with unique and sensitive habitats should receive management priority for field-checking of model results. We recommend the FEIS commit to periodic field-verification for high risk watersheds.

**Related Judicial Decisions**

*Provide a description of the judicial decisions referenced in the purpose and need for action.* The need for action is due, in part, to recent judicial decisions that have led to the conclusion that the LRMP provisions related to MIS and MIS monitoring need to be amended (p. ii). The DEIS does not describe these judicial decisions or the information supporting the conclusion that the MIS monitoring system needs to be changed.

**Recommendation:**

We recommend the FEIS include a description of the referenced judicial decisions. We recommend including in the Purpose and Need for the Action a summary of the final judicial ruling and direction given to the Forest Service, and a detailed description of the decisions in an appendix.

**Climate Change**

*Provide a short discussion of climate change and its potential effects on the long-term applicability of the proposed MIS monitoring system.* There is growing evidence for the potential for significant environmental impacts as a result of changing temperatures and precipitation.<sup>1</sup> A more extensive discussion of climate change and its potential effects on the proposed MIS monitoring system would better serve decision-making on this action, as well as long-term, regional forest management planning.

**Recommendation:**

We recommend the FEIS include a separate discussion of climate change and its potential effects on the long-term applicability of the proposed MIS monitoring system. We recommend this discussion provide a short summary of climate change studies specific to California and the Sierra Nevada Range, including their findings on potential environmental effects and forest management implications, and their recommendations for adaptations, mitigation, and measures to address these effects.

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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 at [www.climatechange.ca.gov](http://www.climatechange.ca.gov)