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

August 11, 2005

Mr. James Peña, Forest Supervisor
Plumas National Forest
159 Lawrence Street
P.O. Box 11500
Quincy, CA 95971-6025

Subject: Draft Environmental Impact Statement for Watdog Project, Feather River Ranger District, Plumas National Forest, Butte and Plumas Counties, California (CEQ # 20050251)

Dear Mr. Peña:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced Draft Environmental Impact Statement (DEIS) 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.

The proposed project is part of the Herger-Feinstein Quincy Library Group Forest Recovery Act Pilot Project (Quincy Pilot Project) and includes construction of defensible fuel profile zones (DFPZs) and tree harvest using group selection silvicultural methods on over 4000 acres of forested land in Plumas National Forest. EPA previously expressed environmental objections to the Quincy Pilot Project with concerns that included water quality impacts from road construction, increased habitat fragmentation, and the potential for noxious weed proliferation. We continue to have these concerns in relation to the Watdog Project. We are rating the Preferred Alternative (B) as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions").

We are especially concerned that Alternative B will allow timber harvesting in subwatersheds where riparian areas are susceptible to significant adverse cumulative affects from the existing extensive road network and past timber harvest activities, and in areas that do not currently meet minimum effective ground cover to maintain productive soils and healthy timber stands. Additionally, Alternative B would cause average canopy levels to fall below minimum suitable habitat levels for forest carnivores, impacting the established forest carnivore network, and below the minimum suitable foraging levels for the California spotted owl and northern goshawk, both Federal Species of Concern. Last, we are concerned that the project will encourage noxious weed establishment in group selection harvest areas.

EPA has identified Alternative D as environmentally preferable while still meeting the project purpose and need, and should be identified as such in the Final EIS (40 CFR 1505.2(b)).

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We strongly encourage the selection of this alternative over the preferred alternative for the following reasons:

- Road density in the majority of the project's subwatersheds currently exceeds the desired condition established to minimize road impacts to aquatic and riparian environments. No new road construction is needed to access proposed treatment units under Alternative D. This is especially important for subwatersheds 23 and 30, where existing conditions approach the threshold of concern (TOC) for the entire watershed, indicating increased risk of significant adverse cumulative effects;
- Alternative D has more mastication treatment units, increasing surface organic matter which benefits soils. This is especially important for those areas where existing soil cover is below minimum standards or within 10% of the minimum soil cover standard;
- Canopy cover would be maintained above suitable levels for forest carnivores, the California spotted owl, and the northern goshawk in Alternative D; and
- Fewer acres of group selection treatments are proposed in Alternative D, reducing the amount of area vulnerable to noxious weed infestation.

If Alternative D is not selected, EPA strongly recommends modifications to the preferred alternative to minimize additional cumulative watershed and soil impacts, and to better preserve the forest carnivore network. We are willing to meet with the USFS to discuss these issues further.

We appreciate the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me or Karen Vitulano, the lead reviewer for this project. Karen can be reached at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

/s/

Nova Blazej, Acting Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosures:
Summary of EPA's Rating Definitions
EPA's Detailed Comments



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**Environmentally Preferable Alternative**

The Draft Environmental Impact Statement (DEIS) has identified several resource areas that would experience reduced impacts under Alternative D than under the Preferred Alternative B. These resource areas include watersheds/riparian resources, soils, and wildlife habitat. Because Alternative D meets the project purpose and need and would result in fewer impacts, it is EPA's position that Alternative B is not the environmentally preferable alternative.

Recommendation:

EPA recommends selection of Alternative D as environmentally preferable for protection of watersheds and water quality/riparian environments because of smaller predicted increases in Cumulative Watershed Effects (CWE) on existing impaired riparian resources. Alternative D would result in greater average canopy cover and less acreage of group selection harvest, reducing the possibility that soil cover would fall below minimum standards and result in detrimental accelerated soil erosion (p. 120, 127). Alternative D would meet minimum habitat levels for forest carnivores and minimum suitable foraging levels for the California spotted owl and the northern goshawk.

The Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) should identify Alternative D as the environmentally preferable alternative per 40 CFR Section 1505.2(b) (Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act). As such, EPA recommends that the U.S. Forest Service select Alternative D for the Watdog Project. If Alternative D is not selected, EPA strongly recommends that the preferred alternative be modified so that impacts to resources are further reduced, as per EPA's recommendations outlined in the detailed comments below.

**Riparian Resources/Cumulative Watershed Effects**

Existing Conditions/Impacts to Beneficial Uses

EPA is concerned that the existing conditions in the watershed sensitive areas are substantially impaired prior to project implementation and that beneficial uses may already be impacted. The DEIS identifies general high road density in the project area, high road density in Riparian Habitat Conservation Areas (RHCAs), and high stream crossing density as problems in the existing condition of the Watdog Project watershed (p. 94). Roads result in alterations of physical processes in streams, which can be dramatic and long-lasting and can degrade water quality and aquatic habitat (p. 95). The DEIS states that existing road density in the majority of the project subwatersheds exceeds the desired condition established to minimize road impacts to aquatic and riparian environments (p. 95). The DEIS identifies other disturbances in the watershed, which include recreation impacts in RHCAs with high Off-Highway Vehicle (OHV) traffic that has been "particularly damaging", streambank destabilization, and inadequate stream

crossings (p. 95).

CWE were estimated using an "equivalent roaded areas" (ERA) methodology to measure impacts on downstream water quality (p. 91). The analysis includes the establishment of thresholds of concern (TOC), which are upper estimates of watershed tolerance to land use that indicate increased risk of significant adverse cumulative affects occurring within a watershed (p. 93). The CWE analysis results shows that two subwatersheds are approaching the TOC under the existing pre-project conditions, and 18 subwatershed sensitive areas (RHCAs and Streamside Management Zones (SMZ)) are near or exceed threshold under existing conditions. When ERA values are over threshold, water quality may be impaired to the extent that the water is no longer available for established beneficial uses (p. 96).

The DEIS identifies several beneficial uses for the Middle Fork of the Feather River and its tributaries, including municipal and domestic water supply, warm and cold water fisheries, cold water spawning habitat, and wildlife habitat. Because the CWE results yielded a "yellow flag" (p. 103), further analysis should be conducted to determine if beneficial uses are being maintained and to clarify the extent of environmental impact of the proposed project.

Recommendation:

The FEIS should clearly identify whether beneficial uses are already impacted under pre-project existing conditions. Include a more thorough discussion of beneficial uses in relation to existing conditions and project effects. Use additional indicators or analyses to determine whether over-threshold results for CWE in riparian areas indicate degradation of established beneficial uses. This information should be used to modify the proposed project and mitigation measures as necessary.

Analysis Results/Riparian Impacts

The CWE analysis indicates that 18 out of 30 subwatershed riparian areas either approach or are over the TOC prior to project implementation. The DEIS concludes that the methodology is probably subject to substantial error since RHCAs were overestimated. There is no attempt to remedy this error in the DEIS and provide a corrected estimate of riparian impacts.

Recommendation:

The FEIS should include a corrected estimate of riparian impacts. Recalculate the total areas of "designated" RHCAs, or reclassify low order stream channels within the general watershed as the DEIS suggests to remedy the methodology error. Indicate what percent of the riparian areas are represented by overmapped conditions. Clarify the text on page 97 regarding how RHCAs are differentiated from SMZs and why this is significant in assessing impacts to riparian resources.

The analysis of CWE for the action alternatives is presented in Tables 3-19 through 3-21. The text descriptions reference the riparian areas of 18 subwatersheds that approach or



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exceed TOC, and the DEIS concludes that they would remain near or above TOC with the proposed action for all alternatives. However, numerical data is not included in the tables to demonstrate this conclusion or to confirm the statement that "no subwatershed sensitive areas would experience an increase in ERA from the proposed action treatments" for Alternatives B and C (p. 103, 105). We recommend amending Tables 3-19 through 3-21 to include ERA, percent disturbed, and percent of TOC for subwatershed sensitive areas (RHCAs) for existing and post-project conditions. If this information demonstrates that RHCAs under Alternatives B and C will result in an increase in ERA, specific mitigation should be identified, as appropriate.

Timing of road decommissioning and restoration opportunities

EPA is concerned about the timing of road decommissioning and interim impacts to resources in the project area. Road decommissioning and closure will benefit the watershed, especially as the roads slated for decommissioning or closure were selected because they are currently causing "significant resource impacts" (p. 139) and are needed to "reduce erosion, sedimentation and soil compaction" (p. 138). However, road decommissioning will not begin until after the final decision of the OHV route designation is rendered in 2008 (p. 8, 141). The proposed project is scheduled to begin in 2006 (p. *x*), and Appendix J identifies harvest activities occurring the first year of the project. Also it is not clear that the "additional opportunities" for aquatic and riparian ecosystem restoration will indeed occur, as no timelines or funding requirements are identified.

Recommendation:

The Final EIS should consider the expected timing of disturbance activities and road decommissioning in the discussion of indirect impacts of the project alternatives. An implementation timeline for road decommissioning should be identified, and a commitment to this timeline included in the Record of Decision (ROD) to ensure that the benefits of decommissioning on the watershed are realized. If possible, roads that are slated for decommissioning that are unlikely to be designated in the OHV network should be decommissioned before, or concurrent with, project implementation.

Timing and funding circumstances should be discussed in relation to the additional restoration opportunities. If it is reasonable to expect that funding for the additional restoration opportunities will not be available, this should be disclosed and/or other sources of funding identified. Commit to a restoration project timeline in the ROD.

**Soils**

The DEIS states that "soil organic matter and nutrients could be profoundly affected on the scale of the harvest unit", and that "a large proportion of all living biomass will be removed from the Group area, with little retention of standing live trees or the carbon/nutrient pools they represent"(p. 135). Since the Feather River Ranger District receives the greatest amounts of mean annual precipitation in the range (p. 94), erosion could be a concern in the group selection areas, which would contribute to the watershed impacts described above.



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The soils impact analysis methodology uses an erosion hazard rating to determine the maximum amount of soil cover that could be removed and still meet standards outlined in the Plumas National Forest Land and Resource Management Plan. This analysis revealed that unit area #73 has soil cover less than minimum standards under existing conditions, and will not meet minimum effective ground cover needed to maintain productive soils and healthy timber stands. Additionally, three other units, #51, #65 and #98, are currently within 10% of the minimum standard.

Recommendation:

EPA recommends that no group selection timber harvest take place in unit numbers 73, 51, 65 or 98 due to impaired existing soil conditions in these units. If defensible fuel profile zone (DFPZ) treatments will be performed in these units, we recommend the implementation of the higher canopy cover associated with Alternative D (50%) to guard against soil loss from rain splash, overland flow and sheetwash in this high precipitation region.

The Final EIS should also provide descriptions of the "additional mitigations" proposed to maintain soil cover that meets or exceed standards (p.124), and of the soil restoration needed to restore soil cover (p. 128). Estimate costs associated with these restorations and state whether these additional costs were included in the economic analysis. Include a commitment to this additional soil restoration in the Record of Decision (ROD).

**Wildlife**

Forest Carnivores

EPA commends the Forest Service for establishing the forest carnivore network across Plumas National Forest, which provides a corridor for habitat connectivity between Tahoe, Plumas and Lassen National Forests. The Watdog project area is part of this network and American Marten have been spotted within one quarter mile of a Watdog DFPZ treatment unit (p. 192). EPA is concerned that the preferred alternative will significantly impact this network. The DEIS states that there is concern for protection of corridors between the reserves that allow immigration and emigration to maintain healthy populations of forest carnivores (p. 192), and "Both Alternative B and C would cause canopy cover in the majority of DFPZ units within the Forest Carnivore network to fall below minimum levels for suitable habitat". Under Alternative D, canopy cover would be maintained above minimum levels (p. 194).

The DEIS indicates substantial cumulative effects impacting forest carnivores, including other proposed Herger-Feinstein Quincy Library Group (HFQLG) projects that will result in over 1000 acres of treatments occurring within the carnivore network, with almost 600 acres lost to group selection (p. 196). Existing road density conditions are more than three times greater than that recommended by the Duncan Furbearer Interagency Workgroup for moderate impacts to forest carnivores. Even after road decommissioning, road density remains over two and a half times



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greater for moderate impacts, implying existing and future high impacts from road density in the project area (p. 195).

Recommendation:

EPA disagrees with the conclusion on page 196 that cumulative effects would be low for forest carnivores for the reasons mentioned above. We recommend reevaluating this conclusion in light of the impacts identified in the DEIS including high road density even after road decommissioning, concern for protection of corridors between the reserves, canopy cover below minimum levels for suitable habitat, and cumulative effects of habitat alteration from other HFQLG projects. We also recommend selection of Alternative D, the only alternative where canopy cover would be maintained above minimum levels for suitable habitat (p. 194). If Alternative B is selected, modifications should be made to the alternative to protect critical wildlife movement corridors. Such modifications could include the reduction of group selection, or changes in canopy cover.

The DEIS states twice that no treatments are proposed within the forest carnivore network (p. 192). This conflicts with the statements on page 194 that reference "DFPZ units within the Forest Carnivore network". Clarify the statement on page 192 in light of this reference.

California Spotted Owl

All action alternatives propose treatments in the Home Range Core Areas (HRCA) of the Protected Activity Centers (PACs) of the California spotted owl (CSO), which is listed as Federal Species of Concern and Forest Service Sensitive Species (p. 174, 187). All action alternatives would result in the loss of suitable foraging habitat within the HRCA of PACs. In a majority of group selection units, the canopy cover will be altered so as to render it unsuitable for foraging or nesting (p. 189). Alternative B includes treatments in 10% of the HRCAs, including 58 acres lost to group selection. While it will not affect the acreage in the PACs themselves, it reduces the available area from which future PACs could be designated.

The cumulative impacts to the CSO include habitat modification from logging, road construction, fire, habitat modification of prey species from grazing, disturbances from roads, and increasing recreational use. The range expansion of the barred owl, which competes and preys on CSOs, also poses a concern to the long-term viability of the CSO population in the project area. Barred owls have been observed within 3 miles of the Watdog project boundary. Great horned owls, also effective competitors and predators of the CSO, prefer the edges created by group selection (p. 190).

Recommendation:

Because group selection treatments have no canopy cover requirements (p. 187) and create edges that may increase use by great horned owls, EPA recommends that no group selection treatments take place within the HRCA of PACs for the CSO. We also



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recommend that DFPZ treatments within these areas maintain the canopy cover and diameter limits of Alternative D, which is the only alternative with average canopy levels above minimum suitable foraging levels (p. 188).

Northern Goshawk

The DEIS states that the treatments for DFPZ prescriptions under Alternative B (40% canopy cover) would result in unsuitable habitat for the goshawk (p. 184), a Federal Species of Concern and Forest Service Sensitive Species. Alternative D impacts goshawk habitat less, with an average 50% canopy cover retained for stands classified as California Wildlife Habitat Relationships (CWHR) 4 and 5 (p. 185). Group selection will consume over 42 acres of foraging habitat within northern goshawk PACs (p. 184).

The northern goshawk experiences the same cumulative effects as the CSO, including habitat fragmentation from logging, road construction, fire, and disturbances from increasing recreational use.

Recommendation:

Because of substantial potential cumulative impacts, EPA recommends that no group selection treatments take place within northern goshawk PACs. Because Alternative D would pose the least risk to northern goshawks, with an average of 50% canopy cover retained in suitable nesting and foraging habitat (p. 185), it should be considered over the Preferred Alternative B.

**Botany**

Noxious Weeds

Table 3-4 on page 52 identifies the noxious weed species Bull thistle and Klamathweed as common within the DFPZ and group selection boundaries. The DEIS states that no noxious weeds rated A, B, or C on the California Department of Food and Agriculture's noxious weed list were found within DFPZ or group selection boundaries (p. 58), however Klamathweed is listed with a C-rating and bull thistle was recently listed but is presently unrated. This information should be reflected and discussed in the Final EIS.

The DEIS concludes that group selection units will likely become established with bull thistle and Klamathweed, and that the cumulative impact of all action alternatives to noxious weed invasion will be moderate (p. 60). The DEIS does not discuss other cumulative effects to noxious weed spread such as OHV recreation, which is noted to be dramatically increasing in the Forest (p. 113). Mitigation measures for this moderate impact are mentioned in Appendix F but no discussion of the effectiveness of these measures is included.



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Recommendation:

Update the discussion on noxious weeds in the Final EIS. Expand the discussion of cumulative effects of noxious weeds to include recreational uses. Discuss the effectiveness of mitigation measures to counter this threat. EPA recommends that the cumulative impact, which the DEIS identifies as moderate, be mitigated by reducing the acreage of group selection units, where these species will likely become established. Alternative D proposes less than half of the acreage of group selection (105 acres) than the preferred Alternative B (231 acres).

Verify that the website link to the noxious weed list included on page 58 is current.

Cumulative Effects

The discussion of cumulative effects on interior forest guild species (p. 56) states that for the past 20 years, treatments that could potentially eliminate "old growth" conditions have been designed to avoid species in this guild, but there is no indication of the success of these designs. Cypripedium Fasciculatum is the only interior forest guild species in the project area.

Recommendation:

In the Final EIS, provide trend data for Cypripedium Fasciculatum to provide an indication as to whether treatments designed to avoid this species for the past twenty years have been successful, and to help substantiate the conclusion that the project will not contribute to negative cumulative effects on the resource (p. 56).

Gap-phase guild species

The discussion of effects to gap-phase guild sensitive and special interest species from DFPZ and group selection treatments on page 54 identifies the threat of invasive species introduction that could out-compete native species, but also notes that DFPZ construction will likely reduce competition for resources such as light, water, and nutrients, resulting in an overall *benefit* to these species. It is not clear how the conclusion of overall benefit was obtained, since no measure of impacts or benefits was included.

Recommendation:

Expand the discussion of effects on gap-phase guild species to substantiate the conclusion mentioned above.

**Air Quality**

The DEIS states that prescribed fire is the only activity proposed as part of the Watdog Project that has a direct impact on air quality (p. 45), however the project description includes mechanical treatment and road work, which will impact air quality from construction equipment



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and dust generation. The DEIS contains no discussion of these sources or measures to mitigation them. Additionally, the air quality analysis includes particular matter estimates by burn type, stand type, and fuel loading in tons per acre, but the analysis does not estimate the emissions associated with each alternative.

Recommendation:

In the Final EIS, quantify the particulate and other emissions associated with construction equipment and road building/decommissioning, in addition to those for prescribed fire, for each action alternative, to provide a clear basis for comparison. Include mitigation measures that will be employed to reduce these impacts and quantify the environmental benefit of this mitigation, if possible.

**Economics**

The Economic Analysis in Appendix G contains the following discrepancies which favor the preferred alternative:

- "Biomass value when removed" for Groups and DFPZ is valued differently for the alternatives: $15/ton for Alternatives B, and $11.50/ton for Alternatives C and D
- Mileage of "Road Construction – New", "Road Construction - Recon", and "Temp roads" are the same for all alternatives and do not correspond to Table 2-6 on p. 31 which states that no new roads will be constructed under Alternative D and only 0.5 miles of temporary road will be constructed.

Recommendation:

Clarify and/or correct discrepancies in the Economic Analysis in Appendix G to correct for the issues mentioned. Update the discussion and conclusions in Section 3.4 accordingly.

**Discrepancies Regarding Treatments in Riparian Areas**

The DEIS provides conflicting information regarding the treatments that will occur in riparian areas or riparian habitat conservation areas (RHCAs). For example, page 24 states that an estimated 25% of the total acreage of the treatments units are in RHCAs. Page 26 states that group selection would avoid RHCAs, and page 55 states that "no DFPZ or group selection treatments are planned in riparian areas for any of the alternatives". On page 146, the DEIS states that group harvest would not be located in riparian habitat conservation areas (RHCA's). Page 100 however, states "full RHCA protection would apply to any areas of proposed groups that fall within RHCAs" implying there could be group selection in RHCAs. Page 194 states that there are no proposed DFPZ treatments and group selections within RHCAs.



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Recommendation:

Make explicit in the Final EIS what percentage of each alternative involves treatments in RHCAs, and which treatments types would occur. Make any necessary corrections to references throughout the document.

**Discrepancies Regarding Roads**

Table 2.6 on page 31 states that Alternatives B and C include 1.2 miles of new road construction, and that Alternative D includes only 0.5 miles of temporary road. Page ix also states that no new road construction would be completed for Alternative D. Table I-1 in Appendix I indicates that new construction of 1.2 miles is proposed under Alternatives B and C only. Page 141 however, states that under Alternatives B, C and D, construction of 1.2 miles of new road is considered an irretrievable effect. As noted above, the economic analysis in Appendix G also includes costs for 1.2 miles of "road construction – new" for Alternative D.

Recommendation:

Correct the discrepancies regarding new road construction in the Final EIS. Update the economic analysis in Appendix G and the economics discussion in Section 3.4 as needed.

**Miscellaneous**

- In the discussion on Fire and Fuels, it is not clear whether privately-owned lands are included in the analysis. The Final EIS should clearly define the "Watdog Project Area" referred to in this section (p. 72), and make clear if the fuels on private lands are included in the fuel models. Providing a map of fuel model areas would clarify the existing conditions. The DEIS states that because of increased tree spacing and decreased shade from canopies, Alternative B would create slightly hotter and drier conditions and slightly increased wind speeds in the treatment areas (p. 76). It is not clear if these factors are included in the fuel modeling, or why the indirect effects of all alternatives are then presented as the same (p. 79) when each has different amounts of canopy cover and acreage of group selection treatments.

- In the discussion of Heritage Resources, the DEIS states that 46 cultural resource properties were identified in the Watdog Project area (p. 84). It is not clear if these sites are within DFPZs or Group Selection areas, as the Watdog Project area is not well defined.

- Pages 120 and 121 include references to Sections 3.9.2.2 for discussion of soil cover indicators, and Section 3.9.2.3 for soil porosity indicators respectively, which are not within the DEIS.

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