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

February 4, 2008

Ms. Alice B. Carlton, Forest Supervisor
Plumas National Forest
P.O. Box 11500
Quincy, CA 95971-6025

Subject: 2nd Draft Supplemental Environmental Impact Statement for Watdog Project, Feather River Ranger District, Plumas National Forest, Butte and Plumas Counties, California (CEQ # 20070533)

Dear Ms. Carlton:

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

EPA reviewed the Draft and Final Supplemental Environmental Impact Statement (DSEIS) and provided comments to the U.S. Forest Service (USFS) on October 16, 2006 and May 9, 2007 respectively. We rated the DSEIS as Environmental Concerns - Insufficient Information (EC-2) because of concerns regarding cumulative watershed effects. We recommended the selection of Alternative D, or a less harvest intensive alternative, as a way to reduce impacts to riparian resources, water quality, soils, and native plants (from noxious weeds). Our concerns remained upon reviewing the Final Supplemental EIS.

We appreciate the additional clarifications in the 2nd Supplemental DEIS and have rated this document as Environmental Concerns – Adequate (EC-1). We continue to have concerns regarding cumulative impacts to watersheds and short-term impacts to old-forest species and recommend consideration of Alternative D or a less harvest intensive alternative for selection, which will meet the project purpose and need with reduced impacts.

We appreciate the opportunity to review this 2nd Supplemental DEIS. If you have any questions, please contact me at (415) 972-3846 or Karen Vitulano, the lead reviewer for this project. Karen can be reached at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Karen Vitulano for

Nova Blazej, Manager
Environmental Review Office

Enclosures: Summary of EPA's Rating Definitions

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SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Frank Stewart
Counties' QLG Forester

Lassen, Plumas, Shasta, Sierra, Tehama Counties

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Chico, California 95928

Phone/Fax 530-345-3876
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February 2, 2008

Sharon Parker
USDA Forest Service
Plumas National Forest
Feather River Ranger District
875 Mitchell Avenue
Oroville, CA 95966

Dear Sharon:

Thank you for the opportunity to review the third Draft Supplemental Environmental Impact Statement for the Watdog Project that is being implemented under the Herger-Feinstein Quincy Library Group Forest Recovery Act – Pilot Project. I have reviewed the "additional information" and it further supports the selection of Alternative – B in the Record of Decision. As you know, it has been three years since the scoping phase of this project and it is critically important that this project be implemented on the ground as soon as possible in order to provide the urgently needed social, economic, environmental and fire protection benefits for the citizens, businesses and local governments in Plumas and Butte Counties.

Since the inclusion of "additional information" in the November release of the DSEIS two prominent scientists and members of the "God Squad" (Norman Johnson and Jerry Franklin) testified before the Subcommittee on Public Lands and Forests of the Senate Committee on Energy and Natural Resources and their December 13th testimony supports the importance of moving this project forward without further delay:

> ***"We will lose these forests to catastrophic disturbance events unless we undertake aggressive management programs"***
>
> ***"Without action, we are at high risk of losing these stands – and residual old growth trees that they contain to fire and insects and the potential for these losses is greatly magnified by expected future climate change."***
>
> ***"We know enough to take action (uncertainties should not paralyze us)."***
>
> ***"Action is also needed to restore hardwood species"***
>
> ***"To conserve these forests, we need to modify stand structure (e.g., treat fuels) on one-half to two-thirds of the landscape."***

As the attached map displays, the catastrophic fire problem in the west is getting worse, not better and it is critically important that the only landscape level hazardous fuel reduction and forest restoration strategy that ties into adjoining fuel reduction projects on private property be implemented at a pace and scale that will get the job done in the pilot project area. The Watdog project is a portion of the landscape DFPZ shaded fuel break network that has been incorporated in both the Plumas County and Butte County Fire Safe Council – County Fire Plans.

To demonstrate the urgency for moving this project forward I have included two pictures from the devastating Moonlight and Wheeler Fires that burned 90,000 acres last summer in Plumas County. The "nuked" landscape picture is where a proposed DFPZ was held up from construction due to appeals and lawsuits and the other picture shows the hand line that was constructed within Antelope Border DFPZ to help stop the Moonlight Fire.

Cordially,

Frank Stewart

Forest Restoration and Hazardous Fuel Reduction Efforts in the Forests of Oregon and Washington
Testimony of
K. Norman Johnson Jerry F. Franklin
December 13, 2007

Hearing of Subcommittee on Public Lands and Forests of the Senate Committee on Energy and Natural Resources

I am Dr. K. Norman Johnson and I am here today to give testimony for myself and Dr. Jerry F. Franklin regarding forest restoration and hazardous fuel reduction efforts in the forests of the Pacific Northwest. I am a University Distinguished Professor in the College of Forestry at Oregon State University. Jerry Franklin is Professor of Ecosystem Sciences in the College of Forest Resources at University of Washington. These comments represent our view and not those of our respective institutions.

Our testimony focuses on forest restoration in the National Forests of Oregon and Washington. Collectively, we have been studying these magnificent forests and the amazing variety of benefits that they provide for almost 100 years. In addition to research, we have served on many scientific panels analyzing forest policy issues, including the Northwest Forest Plan, and recently completed for the Klamath Tribe, a comprehensive restoration plan for their historic tribal lands, which are currently a part of the Winema-Fremont National Forest.

Our definition of "restoration" is the re-establishment of ecological structures and processes on these forests where they have been degraded and, simultaneously, restoration of economic and other social values on these lands. One product of this restoration will be substantial reductions in uncharacteristic fuel loadings. We emphasize restoration activities in which ecological, economic, and other social goals are compatible.

Northwestern Forests Require Multiple Restoration Approaches

Forests of the PNW are very diverse in their characteristic disturbance regimes and developmental patterns, and therefore restoration policies and practices must acknowledge and accommodate these differences. This diversity is obvious when one compares a typical old-growth forest of Douglas-fir, western hemlock, and western redcedar on the western slopes of the Cascade Range, with a typical old-growth ponderosa pine forest found on dry sites on the eastern slopes of the Cascade Range. The complexity of environmental conditions, as measured by variation in macroclimate, soils, landform, elevation, etc., and related differences in disturbance regimes make simple stratifications of forests, such as into areas either west or east of the Cascade Range divide, poor bases for policy or management prescription.

Plant associations and groupings of similar plant associations (PAGs) provide a sound scientific basis for stratifying these forests into different disturbance regimes for purposes of policy development, management planning, and silvicultural prescription.

Restoration needs and objectives contrast greatly between forests representative of plant associations historically characterized by (1) relatively frequent (<100 year interval), low- to mixed-severity fire, such as the ponderosa pine and dry mixed-conifer forests common east of the Cascade Range, or (2) relatively infrequent (>100 year interval), high-severity disturbance regimes, such as west side Douglas-fir—western hemlock forests. Although there are many plant associations and sites that exhibit intermediate behavior, in this presentation we will focus our discussion on types that are more at one end or the other of the disturbance gradient.

Restoration of Forests Characterized by Frequent, Low- and Mixed-Severity Fire Regimes

These forests have been grossly modified during the last century by a variety of management actions including fire suppression, grazing by domestic livestock, logging, and establishment of plantations. Consequently, they differ greatly from their historical condition in having much higher stand densities and basal areas, lower average stand diameters, much higher percentages of drought- and fire-intolerant species (such as white or grand fir), and many fewer (or no) old-growth trees.

We will lose these forests to catastrophic disturbance events unless we undertake aggressive active management programs. This is not simply an issue of fuels and fire; because of the density of these forests, there is a high potential for drought stress and related insect outbreaks. Surviving old-growth pine trees are now at high risk of death to both fire and western pine beetle, the latter resulting from drought stress and competition. Many fir-dominated stands are now at risk of catastrophic outbreaks of insect defoliators, such as the spruce budworm, as has occurred at many locations on the eastern slopes of the Cascade Range in both Oregon and Washington.

Without action, we are at high risk of losing these stands--and the residual old-growth trees that they contain--to fire and insects and the potential for these losses is greatly magnified by expected future climate change. Historically, much of the loss of old growth trees and forests has come during time of drought. The expected longer and more intense summer drought periods with climate change will put additional stress on the forests here. The stress on old growth trees will be especially severe where they are surrounded by dense understories.

We know enough to take action (uncertainties should not paralyze us). Inaction is a much more risky option for a variety of ecological values, including preservation of Northern Spotted Owls and other old-growth related species. We need to learn as we go, but we need to take action now. Furthermore, ***it is critical for stakeholders to understand that active management is necessary in stands with existing old-growth trees in order to reduce the risk that those trees will be lost.***

Activities at the stand level need to focus on restoring ecosystems to sustainable composition and structure--not simply to acceptable fuel levels. Objectives of these treatments need to include: Retention of existing old-growth tree populations; shifting stand densities, basal areas, diameter distributions, and proportions of drought- and fire-tolerant species (e.g., ponderosa

pine and western larch) toward historical levels; and development of spatial heterogeneity. Plant associations provide a good basis for providing site-specific target goals for stand parameters, such as basal areas. Finally, ***restoring old-growth tree populations to, and maintaining them at, historical levels should be a goal of restoration management.***

Action is also needed to restore hardwood species, such as aspen, willows, and alders, which have declined in these landscapes as a result of lack of regeneration and overtopping by dense conifers. Elimination of large predators is probably an additional key factor in the changes that have occurred in hardwood representation and riparian vegetation.

Restoration programs must be planned and implemented at the landscape scale to be effective; management over the last century has altered entire landscapes and created the potential for very large wildfires and insect outbreaks. Treating isolated stands within these landscapes will not be effective.

Creating fuel treatment patches and strips is a useful first step to help control wildfire, but is not sufficient to save these forests or the important array of values that they provide, including owls and old-growth trees. Many of the intervening areas will eventually burn and, even if they do not, old-growth trees will succumb to insects during periodic drought, since they are surrounded by dense competing vegetation.

To conserve these forests, we need to modify stand structure (e.g., treat fuels) on one-half to two-thirds of the landscape. This level of restoration will create a matrix of more natural and sustainable forest, which has a greatly reduced potential for stand-replacement fire and insect mortality, interspersed with islands of dense stands. These interspersed dense stands will provide habitat for species like the Northern Spotted Owl that utilize such areas. In fact, an approach that results in restoring conditions on the majority of the dry forest landscapes is the only way in which sustainable habitat for Northern Spotted Owls can be provided.

Key elements of actions to restore these forests include:

Conserving old growth trees as a first priority.

Utilizing historical conditions, such as historical densities and distributions of tree sizes, as an ecological guide, modified, as needed, by recognition of coming climate change.

Combining conservation of old growth trees, stand density targets, and emphasis on drought and fire-tolerant species as an overall guide to action. We suggest moving away from approaches based on diameter limits. Young, shade-tolerant trees of substantial size often contribute to the unnaturalness of many stands, as well as threatening old-growth trees. Also, old-growth trees may be smaller than a proposed diameter limit but still should be retained.

Focusing on areas with concentrations of old growth structure as a high priority for treatment. Recognition that such areas should receive early attention is recent; there

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has been a tendency to think that stands with numerous old-growth trees should be left alone or, at least, be of much lower priority for treatment. The reality is the opposite! Forests that still retain substantial numbers of old-growth trees should be priorities for treatment because these are irreplaceable structures that are at great risk from uncharacteristic wildfire and bark beetle attack. Hence, *reducing the potential for accelerated loss of these old trees should be at the top of the agenda.*

Working to regain complexity—forests have been simplified through harvest, fire suppression, and grazing—work for heterogeneity at all spatial scales.

Returning understory community composition and ground fuels to characteristic composition and structure. Many areas that characteristically had frequent, low-frequency fire regimes no longer do, due to the accumulation of branches and dead trees on the forest floor and the loss of fine fuels (that used to carry these fires) to grazing. Reversing these effects will be needed.

Giving special attention to the hardwood component of the dry forest landscapes, both riparian and upland. In many ways, hardwood species and communities are in as much difficulty as conifer-dominated stands.

Ensuring conservation of aquatic systems. Limiting new roads, closing unneeded roads, improving road systems, revitalizing aspen and willow forests, and controlling aggregate watershed effects will all play a role in this effort.

Prescribed fire is a useful tool in forest restoration but is not sufficient alone—mechanical silvicultural activities typically will be required. Difficulties exist in safely dealing with the build-up in fuel; in many cases harvest is required to help reduce fuel loads. In addition, the uncertainty of a burn program, due both to smoke and safety issues, makes it difficult to base a forest management program for a large area solely on prescribed fire.

Harvest can help pay for actions and provide useful economic and social benefits, but additional funds will be needed. Significant commercial volumes need to be removed to restore these forests. They can provide the funds for treatment and also help maintain milling capacity and communities. Rarely has there been such a coming together of ecological, economic, and social considerations. Commercial harvest, though, will not pay for all that needs to be done.

Fire or other actions must follow harvest to reduce the short-term fuel hazards generated by mechanical treatment. Fire, at least to consume activity fuels (debris and small trees left on site), is an ideal follow-up to harvest where it can be carried out. Without treatment of activity fuels, thinning has a significant probability of actually accentuating the fuel hazards in treated forests for at least a period of time. *Better yet, use this residue in biomass power plants.*

Finally and most profoundly, policy makers and managers need to plan for continued active management of these restored stands. *These activities and others will need to be repeated*

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through time to maintain the sustainable structure and composition. Sometimes, this may be accomplished with burning but most of the time repeated silvicultural treatment of stands and landscapes will be required in the more productive mixed conifer types.

Restoration of Forests Associated with Infrequent, High-Intensity Fire Regimes

On the west side of the Cascade Range, the primary restoration need is for silvicultural activities to accelerate the development of structural complexity in the plantations created following timber harvest. Tens of thousands of acres of young stands exist which could benefit from activities that reduce stand densities, favor biodiversity, and create spatial heterogeneity. There is an immense opportunity and need for restoration in these plantations that could result in significant contributions to ecological, economic, and social goals.

Restoration efforts can increase structural complexity in the plantations created after clearcutting. These plantations usually contain dense conifers dominated by one or two commercial species. Most have little or no structural legacy of standing and down trees from previous stands. Thus, these stands are much simplified from the young naturally regenerated forests that would have developed historically. Thinning and other activities can accelerate the development of complexity within these stands. Also, such thinning can speed the development of late-successional characteristics.

Key elements of actions to increase structural complexity in plantations:

Conserving all remnant old growth trees. There is rarely an ecological justification for cutting old growth trees as a part of restoration programs.

Utilizing silvicultural prescriptions that encourage development of spatial heterogeneity, such as variable density thinning.

Allowing plantation thinning beyond 80 years of age.

Ensuring conservation of aquatic systems Limiting new roads, closing unneeded roads, improving road systems, and controlling aggregate watershed effects will all play a role in this effort.

Using Management Objectives and Restoration Principles to Guide Activities Following Severe Disturbances

Management activities following major disturbance events, such as large intense wildfires, are among the most controversial issues in national forest management. Such "restoration" activities should follow the same principles previously emphasized with the goal of restoring structures and ecological processes where they have been degraded while simultaneously restoring economic and social values on these lands.

Management goals should be the starting point in determining appropriate post-disturbance activities. Hence, if ecological objectives are primary objectives prior to the disturbance they should be primary considerations in any post-disturbance restoration process.

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Comparable structural goals should guide management before and after wildfire; these will certainly differ depending upon whether the management focus is primarily on ecological processes or wood production. Where ecological objectives are primary, proposed salvage operations should retain structures of the same size and density as those developed for the green forest. Old-growth trees should be conserved, whether alive or dead. This approach provides a solid reference for action and can eliminate intense arguments over such issues as the probabilities that burned trees will die.

Similarly, approaches to reforestation should reflect restoration principles and management objectives. For example, attempts to establish dense conifer plantations on ponderosa pine and dry mixed-conifer sites are not appropriate; if successful, such efforts simply have created, at best, stands in need of restoration thinning or, at worst, the next generation of uncharacteristic stand-replacement fires. Furthermore, the structurally-rich early successional communities that exist between a severe disturbance and re-establishment of a closed canopy of trees are very rich in biological diversity, including species and key ecological processes. Rapid termination of this successional stage is inappropriate where management objectives emphasize ecological objectives.

Trust but Verify; Third-Party Review as a Key to Forest Restoration

Successful restoration of these forests will require large-scale actions over space and time, as we have discussed above, and managers will need the latitude to adapt general policies to specific situations. Public acceptance and support will be needed and the social license for these efforts is tenuous in many places. A key component in gaining public support will be credible evidence that the actions are moving the forests toward restoration goals and a mechanism for changing management where the actions are not achieving the desired objectives.

Monitoring is necessary but not sufficient. Given the uncertainties that we face in forest restoration, keeping track of the state of the forests and the effects of actions is a first principle of forest management. We believe, though, that people are increasingly skeptical of an agency keeping score on the effectiveness of its own actions.

Third-party review will be essential to gain and retain public acceptance. We need mechanisms that provide trusted evaluations of the linkage between actions and goals along with the ability to suggest change as needed. Creation of third-party review as a regular part of forest restoration would go a long way toward this goal. As an example, a broad group of community leaders and resource managers could periodically review the results of restoration work and publish a report on their findings and suggestions for change. Other approaches, such as certification, could also be used. In sum, third party review could go a long way toward dispelling distrust in the public about the purpose and results of forest restoration programs.

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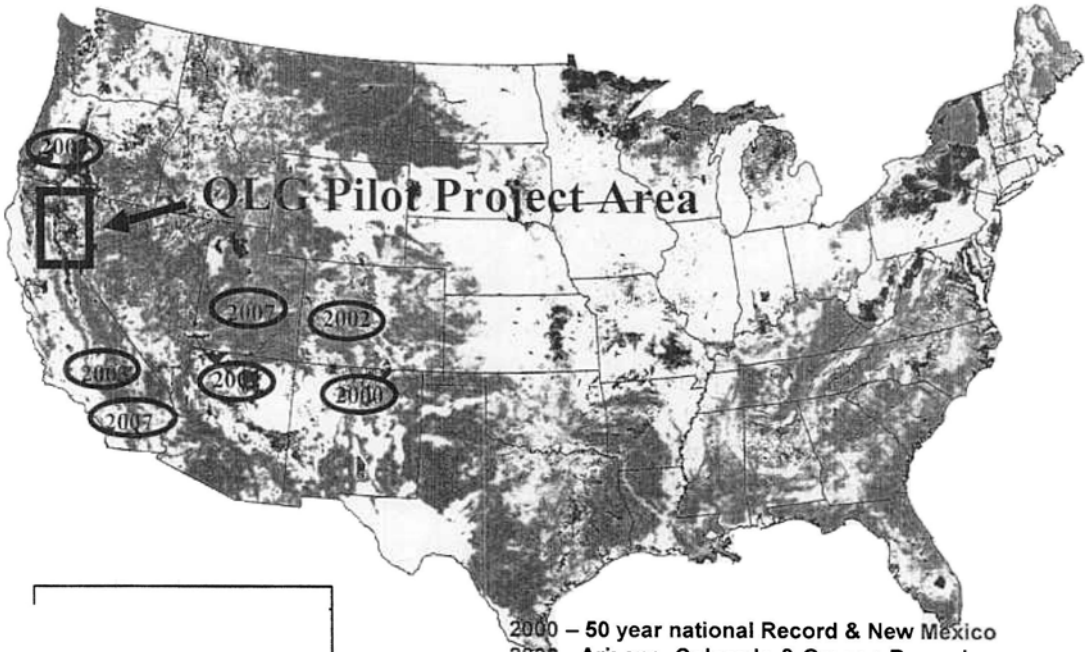
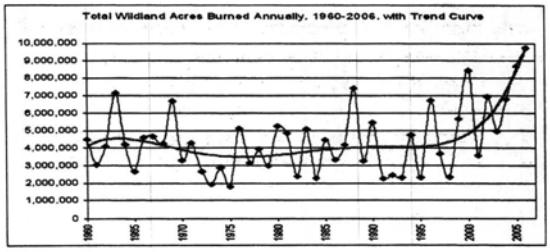
A Growing Threat to Communities, Watersheds & Wildlife

The National Fire Plan was started in 2000 after New Mexico experienced its worst fire season in state history. Since 2000, Arizona, Colorado, Oregon, California (twice), Alaska & now Utah have experienced historic state fire seasons. Acres burned in 2005 exceeded the 50 year record of 2000 and the 2006 national acres burned exceeded the 2005 record by 115%. The problem is GETTING WORSE – NOT BETTER and full implementation of the QLG Pilot Project is urgently needed locally and it should be replicated throughout the western states as needed.



2000 – 50 year national Record & New Mexico
2002 - Arizona, Colorado & Oregon Record
2003 – California Record
2004 – Alaska Record
2005 – *55 year national record*
2006 – New 75 year national record
2007 – Utah Record & new California Record



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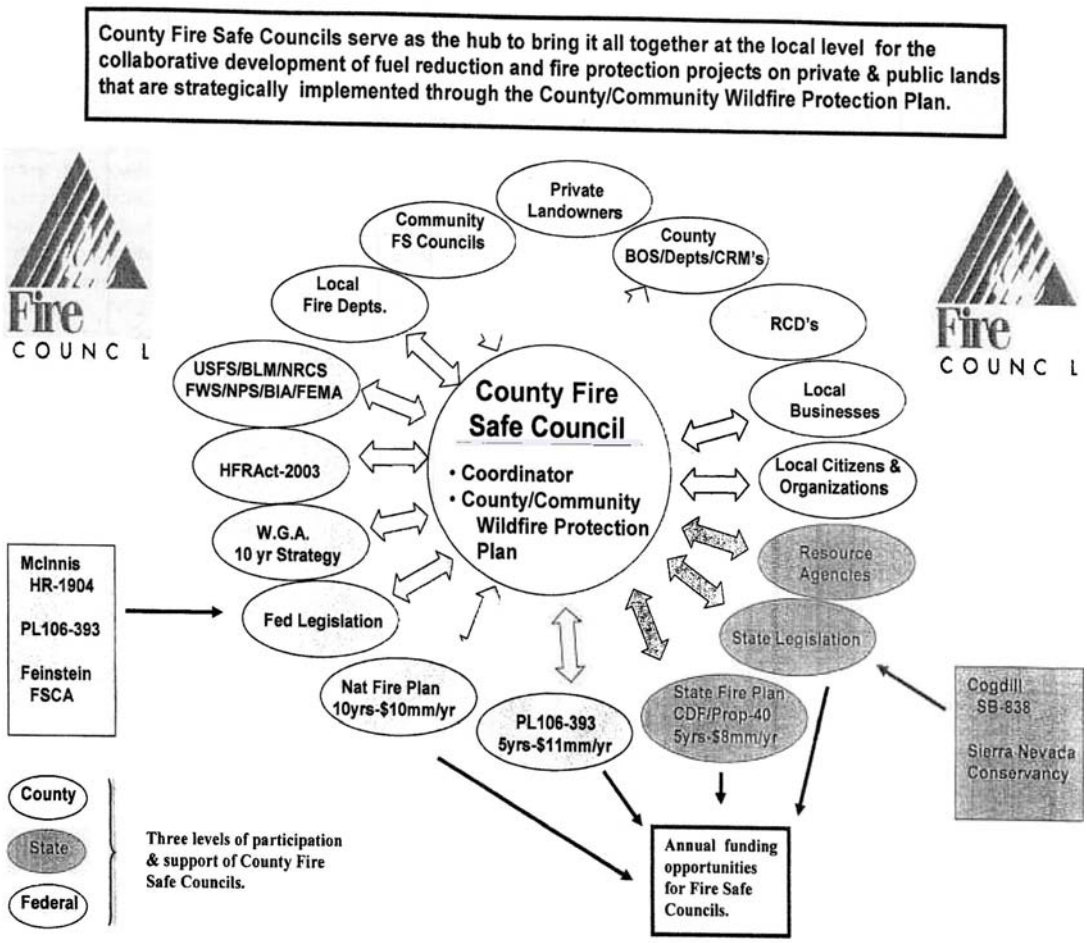
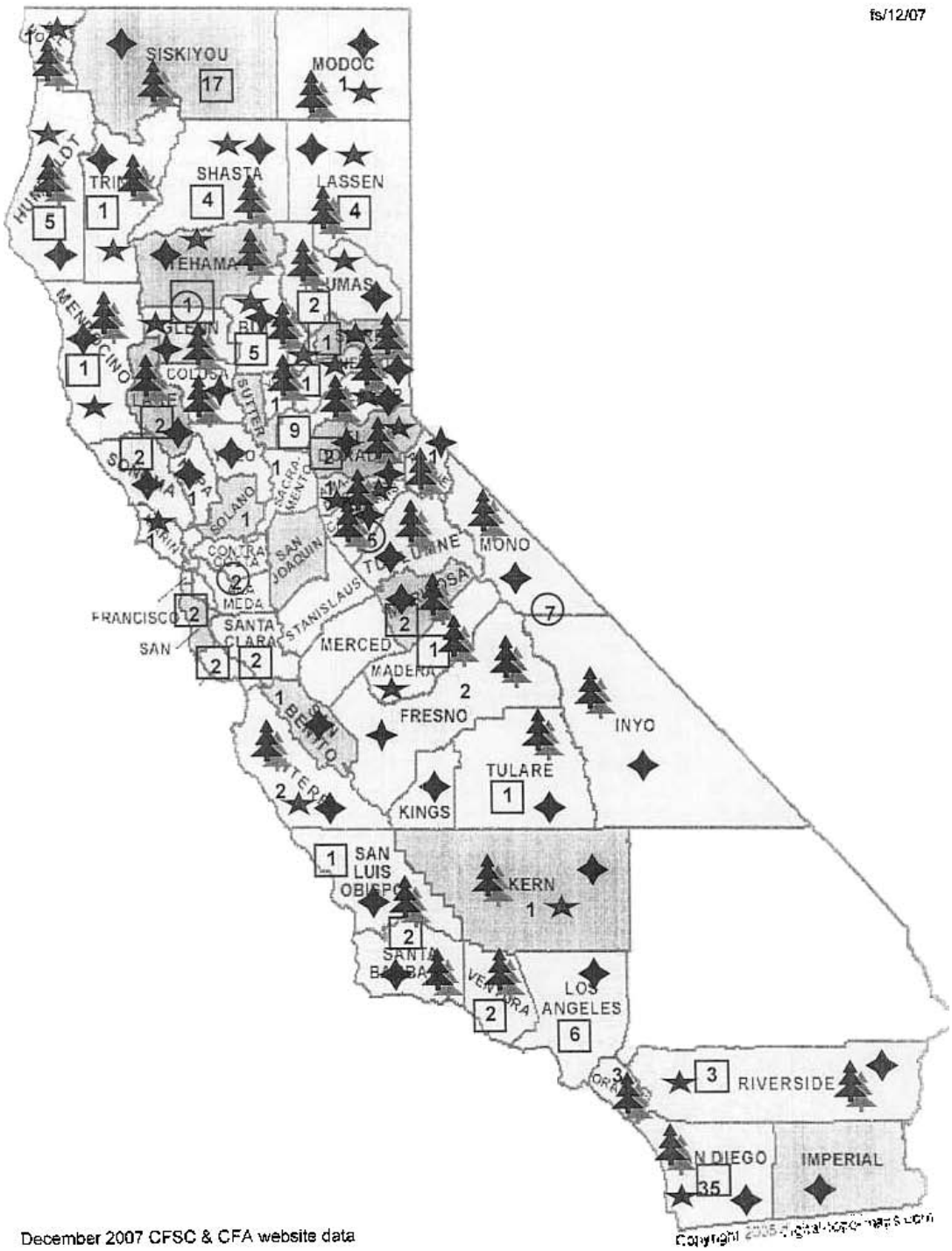

County Fire Safe Councils serve as the hub to bring it all together at the local level for the collaborative development of fuel reduction and fire protection projects on private & public lands that are strategically implemented through the County/Community Wildfire Protection Plan.
Fire COUNCIL
Private Landowners
Community FS Councils
County BOS/Depts/CRM's
Local Fire Depts.
RCD's
USFS/BLM/NRCS FWS/NPS/BIA/FEMA
Local Businesses
County Fire Safe Council
• Coordinator
• County/Community Wildfire Protection Plan
HFRAct-2003
Local Citizens & Organizations
W.G.A. 10 yr Strategy
Resource Agencies
McInnis HR-1904
PL106-393
Feinstein FSCA
Fed Legislation
State Legislation
Nat Fire Plan 10yrs-$10mm/yr
PL106-393 5yrs-$11mm/yr
State Fire Plan CDF/Prop-40 5yrs-$8mm/yr
Cogdill SB-838
Sierra Nevada Conservancy
County
State
Federal
Three levels of participation & support of County Fire Safe Councils.
Annual funding opportunities for Fire Safe Councils.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SISKIYOU
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MODOC
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LASSEN
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GLENN
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MENDOCINO
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COLUSA
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SUTTER
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9
YUBA
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SOLANO
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CONTRA COSTA
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SAN JOAQUIN
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MONO
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MERCED
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MADERA
2
FRESNO
INYO
TULARE
1
KINGS
2
SAN LUIS OBISPO
1
KERN
1
SANTA BARBARA
2
VENTURA
2
LOS ANGELES
6
3
RIVERSIDE
SAN DIEGO
35
IMPERIAL
December 2007 CFSC & CFA website data

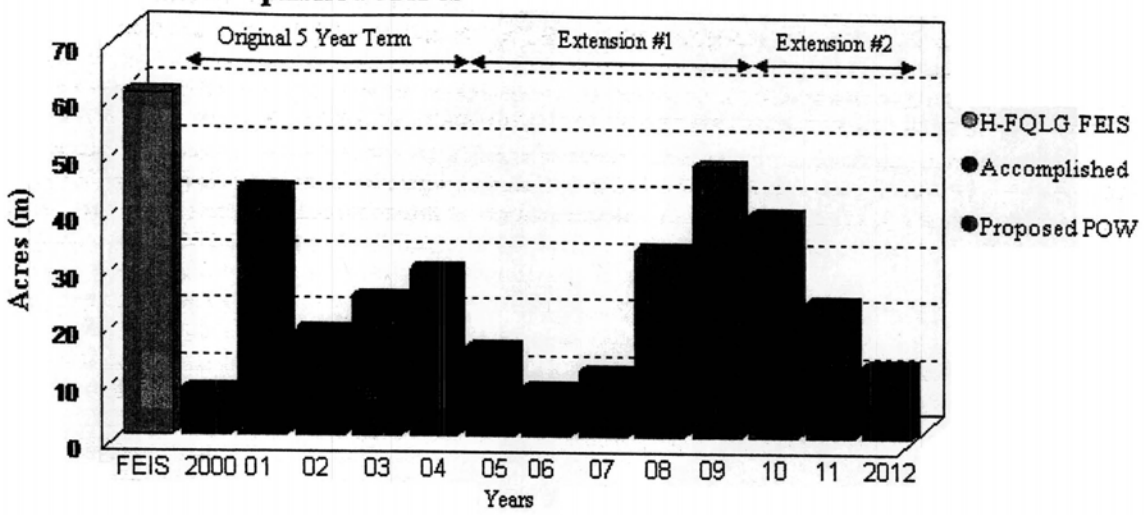
H-FQLG Pilot Project

Measurable Annual Performance Factors

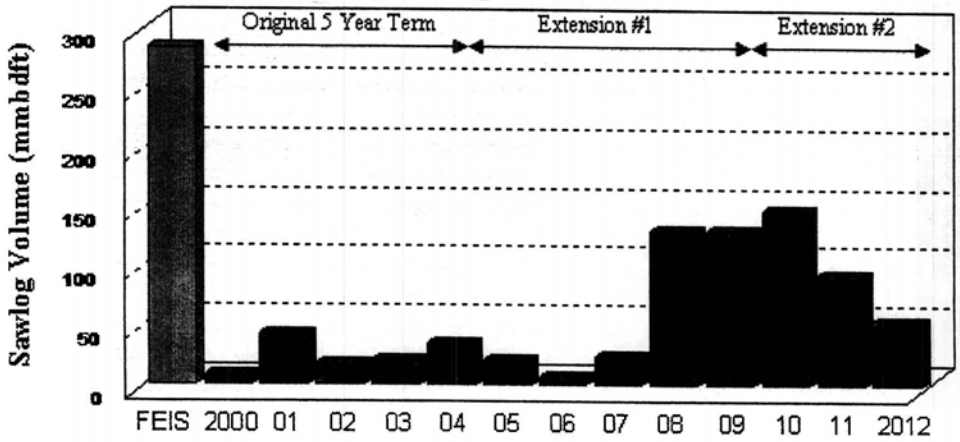
(Acres, Sawlog Volume & Biomass Volume)

FS12/07

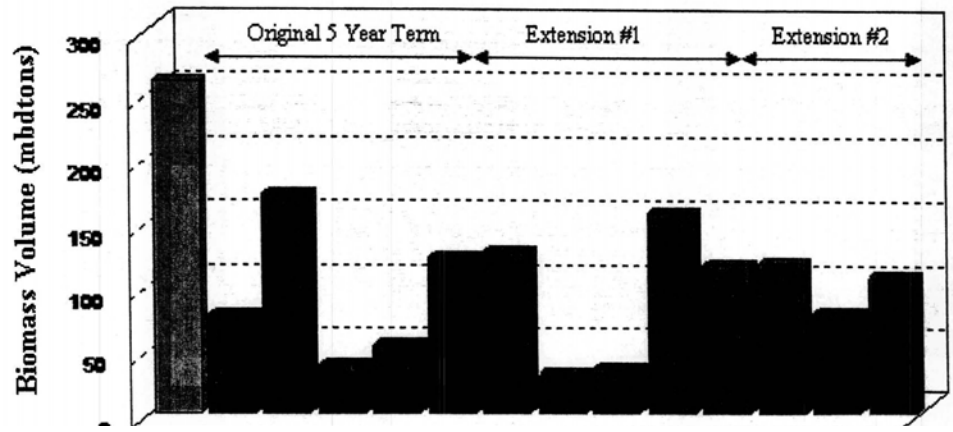
Accomplished Acres



Accomplished Sawlog Volume



Accomplished Biomass Volume



Herger-Feinstein QLG Pilot Project
2008-2012 Program of Work
Impact of Appeals & Lawsuits
January 2008

To appreciate the vulnerability of the 2008 POW you need to understand that 3 projects are tied up in the 9th Circuit Court of Appeals, 2 projects have ROD-1 and ROD-2 appealed, 3 projects are waiting for their 2nd ROD's and 1 project is waiting for its 3rd ROD. Table A displays the 2008 POW projects tied up in appeals and lawsuits and Table B displays the 2008-2012 POW that has 4 projects working towards ROD-1 & 3 projects working towards DN's while the balance have yet to start the NEPA scoping process.

	National Forest	Ranger District	POW Year	Project NEPA Name	Project Status	Acres (m)	Sawlog Vol (mmbdft)	fs/1/25/08 Bio-Mass Volume (mbdtons)
A.	***Projects Appealed &/or tied up in court:***							
1.	Lassen	Hat Creek	2008/09	North 49	Crt/ROD-2	11.3	34.4	56.5
2	Lassen	Almanor	2009/10	Creeks	Crt/ROD-2	3.0	6.4	20.5
3.	Lassen	Eagle Lake	2008/09	Champs	**ROD-1(Appealed)**	6.6	10.1	39.6
4.	Lassen	Almanor	2008	Minnow	DN-1	0.5	6.3	3.6
5.	Plumas	Feather River	2008	Basin	**Crt-PI**	1.4	30.1	
6.	Plumas	Mt. Hough	2008	Empire	**Crt-PI**	6.6	17.2	58.2
7.	Plumas	Feather River	2008	Watdog	ROD-3	4.3	14.0	7.8
8.	Plumas	Beckwourth	2008	Happy Jack	ROD-2	3.0	3.0	10.2
9.	Plumas	Feather River	2007	Slap Jack	**Crt-PI**	2.3	5.0	15.3
10.	Tahoe	Sierraville	2008/09	Phoenix	**ROD-2(Appealed)**	3.5	20.9	34.7
						42.5	**147.4**	**246.4**
B.	***Projects in NEPA Process:***							
1	Lassen	Almanor	2008	Scott's John	Scope	5.8	26.9	28.2
2	Lassen	Almanor	2008	Gray's Peak	Scope	1.0	1.6	2.8
3	Lassen	Almanor	2008	Lotts	Scope	0.6	7.7	3.7
4	Lassen	Hat Creek	2008	Old Station WUI	DN-1	1.0	0.2	2.0
5	Tahoe	Sierraville	2008	Jumbuck	DN-1	0.2	2.6	0.5
6	Tahoe	Sierraville	2008	Montez	DN-1	0.2	0.8	1.5
7	Lassen	Hat Creek	2009	Backbone	ROD-1	5.9	5.0	12.0
8	Lassen	Hat Creek	2009	Cabin	Scope	0.2	0.2	0.5
9	Lassen	Eagle Lake	2009	Ebay	Scope	5.2	10.7	34.5
10	Lassen	Eagle Lake	2009	Gooch	Scope	3.9	7.6	28.5
11	Plumas	Beckwourth	2009	Freeman	ROD	1.2	2.0	2.5
12	Plumas	Beckwourth	2009	Griz	Scope	2.6	3.0	3.6
13	Plumas	Mt. Hough	2009	Keddie Ridge	ROD-1	6.8	16.0	78.0
14	Plumas	Feather River	2009	Sugarberry	ROD-1	3.4	35.5	5.8
15	Plumas	Feather River	2009	Flea	ROD-1	2.2	2.0	5.3
16	Tahoe	Sierraville	2009	Brumby	Scope	0.5	2.2	
17	Tahoe	Sierraville	2009	Dingo	Scope	0.3	3.4	
18	Tahoe	Sierraville	2009	Dinkum	Scope	0.3	1.0	
19	Tahoe	Sierraville	2009	Outback	Scope	2.5	7.7	6.0
20	Lassen	Almanor	2010	Buzzard	Scope	9.4	41.6	60.0
21	Lassen	Eagle Lake	2010	Campbell	Scope	8.0	14.2	50.8
22	Lassen	Hat Creek	2010	South Bunch	Scope	6.0	22.0	13.2
23	Plumas	Beckwourth	2010	Ingalls	Scope	2.4	5.0	2.5
24	Plumas	Beckwourth	2010	Big Hill	Scope	1.0	1.9	2.4
25	Plumas	Feather River	2010	Lewis Flat	Scope	0.9	10.0	
26	Plumas	Feather River	2010	Little Grass Valley	Scope	0.7	7.0	
27	Plumas	Mt. Hough	2010	Belden	Scope	7.6	34.5	41.4
28	Tahoe	Sierraville	2010	Borda II	Scope	2.1	9.5	12.5
29	Lassen	Almanor	2011	Trail	Scope	9.0	36.2	61.2
30	Plumas	Beckwourth	2011	Adam	Scope	0.5	1.6	
31	Plumas	Beckwourth	2011	Artray	Scope	0.6	1.8	
32	Plumas	Feather River	2011	Monitor	Scope	0.7	6.0	
33	Plumas	Feather River	2011	Pinchard	Scope	0.9	9.0	
34	Plumas	Mt. Hough	2011	Antelope Creek	Scope	1.1	3.0	7.2
35	Plumas	Mt. Hough	2011	Genesee	Scope	1.8	11.0	13.2
36	Plumas	Mt. Hough	2011	Middle Fork	Scope	0.6	6.0	14.4
37	Tahoe	Sierraville	2011	White Lace	Scope	1.2	1.3	3.8
38	Tahoe	Sierraville	2011	Checkboard	Scope	1.4	8.2	9.7
39	Lassen	Almanor	2012	Mineral	Scope	1.6	13.2	22.6
40	Lassen	Eagle Lake	2012	Susan River	Scope	3.1	7.5	18.0
41	Plumas	Beckwourth	2012	Mare	Scope	0.8	2.4	1.2
42	Plumas	Beckwourth	2012	Cottonwood	Scope	0.9	2.7	3.6
43	Plumas	Feather River	2012	French Creek	Scope	1.5	15.0	
44	Plumas	Feather River	2012	Dogwood	Scope	1.7	10.0	24.0

duct an oil shale lease sale pursuant to subsection 369(e) of such Act.

SEC. 434. Section 401 of the Herger-Feinstein Quincy Library Group Forest Recovery Act, Public Law 105–277, division A, § 101(e) [title IV], 112 Stat. 2681–305, is amended—

(1) In section (g) by striking "until" and all that follows and inserting "until September 30, 2012.";

(2) By deleting section (i) and inserting: "By June 1, 2008, the Forest Service shall initiate a collaborative process with the Plaintiffs in Sierra Nevada Forest Prot. Campaign v. Rey, Case No. CIV–S–05–0205 MCE/GGH (E.D. Cal.), appeal docketed sub nom. Sierra Forest Legacy v. Rey, No. 16892 (9th Cir. Oct. 23, 2007) and the Quincy Library Group "to determine whether modifications to the Pilot Project are appropriate "for the remainder of the Pilot Project."; and

(3) By adding at the end the following:

"(m) Sections 104–106 of Public Law 108–148 shall apply to projects authorized by this Act.".

SEC. 435. In addition to the amounts otherwise provided to the Environmental Protection Agency in this Act,

Sierra Forest Legacy

Protecting Sierra Nevada Forests and Communities

February 4, 2008

Alice Carlton
Forest Supervisor
Plumas National Forest
P.O. Box 11500
Quincy, CA 95971-6025

DELIVERED VIA EMAIL TO: comments-pacificsouthwest-plumas@fs.fed.us

Dear Ms. Carlton:

These comments on the Watdog draft supplemental environmental impact statement (DSEIS) are submitted on behalf of the Sierra Forest Legacy, Sierra Club, and Plumas Forest Project.

We have a long history of involvement with this project. We submitted scoping comments dated January 6, 2005, comments on the original draft EIS dated August 5, 2005, an appeal of the first ROD dated November 14, 2005, comments on the supplemental DEIS dated October 16, 2006, and appeal of the second ROD dated March 20, 2007. In these comments and appeals (which we hereby incorporate by reference), we raised substantial concerns regarding the project's environmental impacts and the inadequacy of the environmental disclosure and analysis. Despite these comments, the final Watdog decision appears to be essentially unchanged from the original proposed action. In important respects, the Forest Service has failed to respond to our comments and to the scientific opinion and information presented in our comments. Although the Forest Service has supplemented its environmental analysis, the DSEIS continues to fail to provide essential information and analysis that would allow for careful consideration of the project's environmental impacts.

As detailed below, we are concerned about the Watdog project's impacts to sensitive species, management indicator species, and species at risk, including the California spotted owl, the American marten, and the Pacific fisher. We are especially concerned about proposed logging within relatively high quality old forest habitat. Based on our field review of many marked units, we object to the location of group selection units within higher quality (CWHR 5D, 5M, and 4D) habitat, which will eliminate the suitability of these areas as habitat for old forest species. We also object to the reduction in canopy cover to 40 percent or below in many DFPZ units. This not only substantially degrades habitat suitability but is also not necessary to meet the Forest Service's fuels reduction objectives.

Below we set forth the specific grounds for our objections to the proposed alternative and the analysis provided. In addition, the Watdog project implements the 2004 Sierra Nevada Framework ROD (USDA Forest Service 2004a), and tiers to the accompanying FSEIS (USDA

Forest Service 2004b). As demonstrated in our appeal of the 2004 ROD and FSEIS (Sierra Nevada Forest Protection Campaign et al. 2004), both the 2004 plan and the FSEIS fail to comply with the National Forest Management Act, the National Environmental Policy Act, and other environmental laws. A lawsuit challenging the 2004 Framework is currently pending in federal court. Therefore, for the programmatic reasons set forth in our appeal of the 2004 ROD and FSEIS,[1] the Watdog project is also contrary to law.

I. AMERICAN MARTEN

The DSEIS fails to recognize the imperiled status of the American marten in the northern Sierra Nevada and the ecological significance of the project area in ensuring a viable and well distributed population of marten. The Watdog project is likely to further degrade habitat in the area and to further reduce habitat connectivity, contrary to legal requirements that connectivity be maintained and viability be insured. The Watdog DSEIS relies on a contradictory impact analysis for marten, and fails to adequately disclose these impacts, contrary to NEPA.

A. The Watdog Project Implements the 2004 Framework and QLG Project and Therefore Threatens the Marten's Viability and Distribution.

The Watdog project implements the 2004 ROD and the QLG pilot project. The forest carnivore experts who have reviewed the 2004 Framework have uniformly concluded that the plan threatens the marten's distribution and viability by allowing logging of medium and large trees, reduction in canopy cover, and reduction in large snags and down logs, particularly within the Quincy Library Group pilot project where the Watdog Project is located. (Barrett 2004; Buskirk 2003). The U.S. Fish and Wildlife Service has concluded that full implementation of the QLG project "poses a significant threat to the long- term viability of the … American marten due to the loss, degradation, and fragmentation of suitable habitat" (USDI Fish and Wildlife Service 1999, p.16), and according to marten experts "there is no new information that would change these conclusions." (Barrett 2004, p. 11). Please see our comments on the SNFPA (SNFPC et al., p. 9-10) for additional discussion of this issue.

B. The Gap In Marten Distribution Is Still Not Evaluated.

Our previous comments have continually identified that the Forest Service project documents do not address the impact of this project and other QLG projects on the marten in light of the recent survey information. This information presented by Zielinski et al. indicates that martens occur at alarmingly low density or not at all absent from much of their historic range in the northern Sierra Nevada, especially on the Plumas and Lassen national forests (USDA Forest Service 2001a, Vol. 3, Chap. 3, Part 4.4, p. 22; Zielinski et al. 2005a). The failure to acknowledge and analyze the meaning of the marten population gap in this area renders the NEPA analysis of impacts to marten inadequate. Since the NEPA process is uninformed, the impacts to marten are not properly assessed, yet the Forest Service still proposes significant reductions in marten habitat in the project area. For example, approximately 400 trees over 30" dbh are proposed for removal in new roadways and landings (BE, p.49). This despite the fact

[1] A copy of the appeal was attached to our earlier comments on this project and is hereby incorporated into this appeal by reference.

that the wildlife analysis points out the disproportionate impact of large tree removal in the area: " Large trees are an important habitat component. The removal of the 20 to 30" and greater trees would have the greatest long-term affects on species and their habitat. In addition, the loss of this large tree component affects numbers of large trees for future snag recruitment". (BE, p. 49).

As we noted in previous comments, marten is a species "with substantial changes in distribution," including "large gaps between contemporary detections that were not present historically" in the northern Sierra Nevada and southern Cascades. (Zielinski et al. 2005a, p. 1394). The authors conclude that marten "populations in the southern Cascades and northern Sierra Nevada now appear discontinuous." Notably, "the areas of Plumas and Lassen County where martens were not detected, and which have been managed for timber harvest, have relatively little forests with late seral/old growth attributes." (Zielinski et al. 2005a, p. 1394). The authors conclude that the apparent reduction in the range of the marten and other forest carnivores is most likely due to a combination of factors, including "loss of mature forest habitat." (Ibid. p. 1385-86).

The Watdog DSEIS interprets the marten's localized distribution within the Lakes Basin and Little Crass Valley area to simply mean that the "Watdog Project will not affect the marten's current distribution on the Forest." (DSEIS, p. I-27). Unfortunately, project impacts to future distribution, and future colonization of the project area are not addressed in the DSEIS. This analysis does not meet the "hard look" required by NEPA because it assumes, without information, that further reductions in habitat quality will not limit marten survival in the Plumas National Forest. The Forest Service has not assessed marten persistence over the next 30 years, given their isolation in the Lakes Basin and Little Grass Valley areas, without connectivity north to the off base areas on the Feather River or to the northern populations in the Lassen National Forest.

In light of the population gap for marten in this area, the Forest Service's conclusion that further reductions in marten habitat will not cause significant impacts does not constitute the requisite hard look under NEPA. Zielinski et al. (2005a, p. 1394) describes areas such as the Watdog Project where marten are now absent as having "relatively little forests with late seral/old growth attributes," which is probably due to timber harvest and road construction (Ibid.). Further, marten detections in the Northern Sierra were clustered protected areas like national parks and wilderness with greater LSOG attributes (Ibid.). However, the Watdog Project proposes to reduce 1,230 acres of CWHR 5 habitat to unsuitable. The Forest Service has not adequately considered why the current corridor network has not been adequate to maintain marten connectivity between the Lassen and Tahoe National Forests.

The DSEIS does acknowledge research by Zielinski, but dismisses concerns raised in the research because the Forest Service claims they will retain important habitat components in the project area such as large trees and large oaks (DSEIS, p. 3-223). The 2004 SNFPA defines a large oak as "a dbh of 12 inches or greater." (USDA Forest Service 2004b, p. 53). According to the Forest Service's own definition of a large oak, the Watdog project is actually proposing to remove 393 "large" oaks (DSEIS, p. 3-164). The DSEIS does not quantify or discuss in detail the impacts of large snag removal to old forest species habitat quality, either. The wildlife BE recognizes that: "The combined effects of past timber harvest and fire exclusion have changed the tree species composition and structure of the forest. The most important effect is the loss of

large trees and snags, which decreases habitat values for pallid bats, goshawks, forest carnivores, great gray owls, and spotted owls as well as cavity dependent species." (BE, p. 65). The claim that the Watdog project addresses marten habitat concerns by retaining important habitat structures for marten such as large oaks and large snags is incorrect and misleading.

C. The Forest Service underestimates project impacts on marten habitat.

As set forth in our previous comments, American martens are associated with late-seral coniferous forests with abundant large structure, including live trees, snags, and logs, and relatively closed canopy cover. Bull et al. (2005) found in northeastern Oregon that "martens showed a strong preference for old-structure, unlogged stands in subalpine fir and spruce forests with canopy closures >= 50%, a high density of dead trees and logs, and in close proximity to water. Martens avoided harvested stands, dry forest types, early structural classes, and areas with low densities of dead trees." Bull and Heater (2000) found that canopy cover around rest sites averaged about 90% and mean diameter of rest tree was about 20" dbh. In the southern Sierra Nevada, Zielinski et al. (1997) found that canopy cover in the vicinity of track plates where marten were detected averaged 85.8% with conifer basal area that averaged 190.5 ft2/acre. This study determined that "martens most frequently rested in size class 4, 5, and 6 Sierran Mixed Conifer (SMC) stands with >60% cover." A study in Yosemite National Park found that martens preferred areas with 100 percent cover overhead, especially when resting (Hargis and McCullough 1984). These studies all emphasize the importance of CWHR 5 habitat with larger tree densities and higher canopy for marten resting and movement.

The BE does not acknowledge or discuss these findings from experts or published research. This omission is critical because the BE presents an analysis that assumes marten utilizes a stand with 40% canopy cover to the same extent as habitat with higher canopy cover and larger trees. The conclusions of the studies cited above contradict this assumption. As a result, the BE underestimates the effects to marten resting and denning habitat.

The impact of reducing 2,020 acres of high quality marten habitat is underestimated. The Forest Service defines CWHR 4D, 4M, 5D, 5M as "moderately to highly important to the marten" (BE, p. 94). Forest stands with less than the minimum habitat attributes of 4M, such as canopy cover at or below 40%, are left to be interpreted as low quality or unsuitable habitat. This definition is not consistent with the recent studies summarized above which define suitable marten habitat with a 60% canopy cover minimum. Nevertheless, the Watdog Alternative B would retain an average of 41.3% for CWHR 5 (BE, p. 98). Although the resulting canopy cover is considered nearly unsuitable habitat for marten, the Forest Service concludes that the "effects as a result of implementing Alternatives B, C, or D should have minimal effects on nesting or foraging habitat of forest carnivores" (BE, p. 97). The BE goes on to describe the extent of the "minimal" project impacts to marten habitat: "Out of acres…. that are presently highly suitable habitat (60% or greater canopy cover)…900 acres being reduced to moderately suitable habitat (40-59% canopy cover) and 330 acres being reduced to low suitable habitat (below 40% canopy cover)." (BE, p. 97). In total, mechanical treatments would dramatically reduce 897 acres, or 8.8%, of the high quality (CWHR 5) marten habitat in the project area (BE, p. 97). There is no basis to support the claim that the conversion of high quality habitat to poor quality habitat would have "minimal" effect on the species.

The BE states that "low quality habitat does not mean it would not be utilized, it just means it's not likely to be used based on the quality" (BE, p. 97), however, according to the BE's own definition of preferred marten habitat (Ibid., p. 94, this is considered to provide only the minimal canopy attributes for marten. The Forest Service provides no basis for the claim that marten can persist in habitat without an understory and only 41% canopy cover. In fact, the citations provided above contradict this assessment. Based on the most recent research on marten, project impacts to marten appear to be large in both the extent (acres) and the magnitude of the effect. The extent of marten habitat that is negatively impacted in the project area (8.8%) is dismissed in light of the entire HFQLG project area, and is never fully addressed with respect to the available habitat in the project area. Additionally, the magnitude of negative impacts expected from a canopy cover at or below 40% is not addressed in the BE, but is demonstrated to have serious negative impacts to marten as described above.

The Watdog documents fail to take a hard look at potential impacts on the viability of marten in and adjacent to the project area. The Forest Service should adjust the project prescriptions to retain higher canopy cover in CWHR 5 habitat. This would result in a project that comes far closer to the "minimal" effects estimated to marten.

D. The impacts of road density are not adequately disclosed

The Duncan Furbearer Interagency Workgroup (1989) recommends reduction of the road density down to 2.0 miles per square mile where possible. In the entire Watdog project area road density averages 6.6 miles per square mile (BE, p. 39). The impact of high road densities on marten was not addressed in the current DSEIS. We also raised this issue in our comments on the previous DSEIS, and they were not addressed in the FSEIS (See response to comments DSEIS, p. I-20). We note that road densities are the same for all alternatives. The Forest Service should develop and adopt an alternative that reduces road density for marten in the project area.

E. Disclosure of effects to marten is unclear and incomplete.

The direction (i.e., negative or positive) of project effects on marten is unclear. We found descriptions of effects to marten as "minimal to low" several times in the BE but the direction of effect, negative or positive, is not indicated (BE, pp. 97, 100). BE states that proposed mechanical treatment of marten habitat in CWHR 4D, 4M, 5D, 5M and 6 "although modified will no be altered in a way that would degrade it's habitat for the future" (Ibid., p. 94). The BE does not disclose if overall habitat will be modified in a positive or negative direction. Furthermore, the Forest Service provides no basis for the claim that "greater thinning of the canopy within CWHR 4 and 5 will create CWHR 5 and 6 at a faster rate, creating more suitable and higher quality habitat in the long term." (Ibid., p. 98).

The Watdog DSEIS effects determination for marten is based on the assumption that there are no known marten den sites in the project area, and if they are discovered they'll be protected (Ibid., pp. 95-96). However, incidental detections of marten reported in the analysis area indicate potential for direct effects. This issue hasn't been resolved and suggests that there may be direct effect from roads, logging and habitat disturbance to undetected den sites. In summary, the Watdog effects analysis should clarify: 1) the direction and magnitude of impacts to marten, 2) why direct effects to marten are not expected despite expected reductions in habitat

quality, 3) potential for disturbance to marten disturbance during project implementation, and 4) the interpretation of marten detections in and around the project area.

II CALIFORNIA SPOTTED OWL

As stated previously, the Watdog and related projects threaten the viability of the California spotted owl. The 2004 ROD will result in substantial loss and degradation of habitat for the California spotted owl by allowing harvest of medium and large trees, reduction in canopy cover, and removal of large snags and down logs. The leading owl biologists who have reviewed the 2004 Framework have uniformly concluded that the new plan threatens the owl's viability throughout the Sierra Nevada and contributes to a trend towards federal listing[2] (Verner 2003; Blakesley and Noon 2003; Noon 2004; Peery 2004; Bond 2003; Franklin et al. 2003). The Forest Legacy is challenging the 2004 ROD with a lawsuit currently being reviewed by the 9th circuit court of appeals. *Sierra Nevada Forest Protection Campaign v. Rey,* Civ. S-05-0205 MCE/GGH (E.D. Cal.). Because the Watdog Project implements the 2004 ROD, it contributes to the risk to the owl's viability.

The Watdog project impacts to spotted owl breeding habitat are underestimated in three critical ways. First, the scarcity of higher quality (CWHR 5) spotted owl habitat is not discussed. In our previous comments, we discussed the results of a landscape assessment by the PNF (2005) for two basins in which the Watdog project occurs. Generally speaking, large tree stands (>24" diameter of any canopy closure) occupy 31% of these basins (Ibid.). Compared to the Sierra Nevada bioregion, the Watdog project area supports substantially less of the habitat utilized by spotted owl relative to the Sierra Nevada as a whole. Our previous review of the spotted owl territories in the Watdog project area led us to conclude that while supporting a greater proportion of suitable owl habitat than the larger area included in the landscape assessment, the Watdog wildlife assessment area still has a smaller proportion of suitable habitat for spotted owl when compared to the Sierra Nevada bioregion (i.e. 45% compared to 55%).

Second, the DSEIS makes contradictory claims regarding effects to spotted owl habitat. The DSEIS states that forest stands with 40% canopy cover may not provide even the minimal quality of foraging habitat for mature/old forest dependent species if adequate understory is not provided (DSEIS, p. 196). Later the Forest Service characterizes post-project conditions that maintain a minimum of 40% canopy cover as suitable spotted owl foraging (DSEIS, p. 3-214). In this last example, the impact of multi-layered canopy removal is not discussed and stands with no understory and minimal overstory are considered adequate for spotted owl survival.

Third, focusing on a 40% canopy cover threshold below which habitat becomes unsuitable is not supported by owl scientists. As stated in our previous comments, Verner et al. (1992, p. 96) recommended canopy closure in the range to 70-95% for roosting habitat. Recent findings by Blakesley et al. (2005) emphasize the importance of evaluating the effects of habitat quality on spotted owl persistence. Researchers report that "site occupancy was positively

[2] These reviews are included as part of the Campaign's appeal of the 2004 ROD, which we have previously submitted to the Forest Service and which we hereby incorporate by reference into these comments. (SNFPC et al 2004).

associated with the amount of the nest area dominated by large trees and high canopy cover within the nest area." (Blakesley et al. 2005, p. 1554). Large trees were greater than 24" in diameter and high canopy cover was that exceeding 70% (Ibid., p. 1556). These recent findings emphasize the importance of evaluating the effects of habitat quality on spotted owl persistence. By assuming that CWHR 5D stands reduced to 40% percent canopy cover will still provide breeding habitat, the Forest Service continues to ignore the real impacts of high quality breeding habitat removal from the project area, and ultimately, the project's likely adverse impacts to the owl (Bond 2005, p. 3). Furthermore, the agency does not evaluate the effects of the project at the home range scale even though a mechanism to do so exists (i.e., apply the principles in Bart (1995) and a similar analysis was completed for the HFQLG pilot project (USDA Forest Service 1999). The Forest Service should develop and alternative that retains full canopy in CWHR 5 to protect breeding habitat.[3]

Given the large quantity of spotted owl habitat proposed for treatment, the determination of "may affect, not likely to lead to a trend toward federal listing" is not congruent with HFQLG pilot analysis. The HFQLG FEIS BE found that a 7% loss of nesting habitat and an 8.5% loss of foraging habitat may lead to a trend toward federal listing (BE, p. 75). The Watdog project proposes to diminish 14.7% of all available foraging habitat to low or no habitat, and to eliminate[4] 6.3% of nesting habitat (BE, p. 81; DSEIS, p. 3-213). The DSEIS should revisit the magnitude of this impact. In addition, the significance of eliminated nesting habitat, instead of a reduction in nesting habitat quality, should also be addressed in the effects analysis.

III. NORTHERN GOSHAWK

The Watdog effects analysis relies on a unique definition of goshawk foraging habitat that includes CWHR 3M, 3D, 4P and 5P stands (BE, Table 14, p.90). According to the SNFPA FEIS, goshawk habitat is CWHR Sierran mixed conifer (SMC) size class 4M, 4D, 5S, 5P, 5M, 5D and 6 (USDA Forest Service 2001, Chapter 3, Part 4.4, p. 117). Despite the proposed reduction in 5M and 5D (see spotted owl section above), considered high quality habitat for goshawks, the BE concludes that "None of the action alternatives are considered detrimental to the Northern goshawk." (BE, p. 93). The goshawk habitat preferences used in the DSEIS likely overestimate the availability of suitable goshawk habitat in the project area and thus underestimate the true impact to goshawks.

IV. PACIFIC FISHER

Similar to the concerns we expressed on the previous FSEIS, the analysis of the Watdog project's impacts on the Pacific fisher is deficient in ways similar to the analysis of marten. We reiterate those concerns here. The best available research, some of which is not cited in the

[3] Our field visits and review of the DSEIS reveal that CWHR 4 habitat in the project area is dominated by trees under 20" (DSEIS, p.3-58, Table 1). Because the CWHR 4 habitat in the project area is low quality for old forest species, our primary concern lies with the protection of CWHR 5 habitat and retention of high canopy cover in these areas.

[4] Although the project documents still characterize 40% canopy as breeding habitat, the SNFPA (2001, Volume 3, Chapter 3, Part 4.4, p.73) defines spotted owl breeding habitat with a minimum of 70% canopy. Therefore a stand with 41% canopy cover is no longer suitable for breeding.

DSEIS, suggests that the Watdog project area may play an important role in fisher conservation in the Sierra Nevada. The DSEIS fails to adequately acknowledge this issue or to assess the project's likely adverse impacts on the fisher and its habitat.

The U.S. Fish and Wildlife Service, in its recent finding that the west coast population of the fisher warrants listing under the Endangered Species Act, confirmed the imperiled status of the Sierra Nevada population. "Preliminary analyses indicate West Coast fisher populations, particularly in the southern Sierra, may be at significant risk of extinction because of small population size and factors consequent to small population size such as isolation, low reproductive capacity, demographic and environmental stochasticity." (USDI Fish and Wildlife Service 2004, p. 18789). Fishers "appear to occupy less than half of their known historic range in the Sierra" and are likely "absent on the west, and probably east, side of the range north of Yosemite National Park." (USDA Forest Service 1998, p. 28). The southern Sierra population appears to be one of only two "extant native populations of the fisher remaining" in the Pacific coast states and appears to be "genetically distinct from fishers in the remainder of North America." (USDI Fish and Wildlife Service 2003, p. 41171).

According to the Forest Service, the fisher's failure to recolonize the central and northern Sierra, despite a moratorium on fisher trapping since 1945, is likely due to a combination of insufficient denning habitat, poor quality and fragmented dispersal habitat, and the small size of the fisher's population in the southern Sierra. (USDA Forest Service 1998, p. 28). "The most common opinion among scientists is that loss of structurally complex forest rangewide, the loss of well-distributed large conifers and hardwoods, and the fragmentation of habitat by roads and residential development are responsible for the loss of fishers from the central and northern Sierra and the failure of dispersing animals to recolonize the area." (Ibid.). Forest Service analysis in the 2001 SNFPA echoes this same assessment of fisher conservation status and risk factors in the Sierra (USDA Forest Service 2001, Volume 3, Chapter 3, Part 4.4, p. 5).

There is widespread agreement that the southern Sierra fisher population is not viable in the long term in the absence of efforts to expand the current range and to connect the population with the fisher population in northwestern California. (Barrett 2004, p. 6; Buskirk 2003). "The inability of extant fisher populations to support one another demographically, including those that are isolated by relatively small distances, or to colonize currently unoccupied areas within their historical range, are significant conservation concerns." (Aubry and Lewis 2003, p. 88). "Recolonization of the central and northern Sierra Nevada may be the only way to prevent fisher extinction in the isolated southern Sierra Nevada population." (Truex et al. 1998, p. ii).

Facilitating the fisher's dispersal to, and recolonization of, the central and northern Sierra Nevada requires that habitat be provided to promote connectivity and reduce fragmentation. "Retaining suitable habitat within and outside of the Southern Sierra Fisher Conservation Area is necessary to maintain linkage between the southern Sierra Nevada population and the population in northwest California." (USDI Fish and Wildlife Service 2001, p. 134). "To facilitate recolonization, the Forest Service must provide sufficient habitat for fisher denning, resting, and foraging, and that habitat must be located in a manner that will promote the fisher's occupation of, and movement throughout, the region." (Barrett 2004, p. 6). "The curtailment of habitat connectivity and genetic interchange between the southern Sierra Nevada fisher population and

those in northwestern California … may also result in the isolation of the southern Sierra Nevada fisher population, subjecting it to stochastic events and possible extirpation." (USDI Fish and Wildlife Service 2001, p. 134, emphasis added).

The 2004 Framework significantly weakens protection of fisher habitat in the central and northern Sierra. As a general matter, the new standards and guidelines allow significant degradation of potential resting and denning habitat throughout the Sierra Nevada. The likely impact will be to reduce the likelihood of the fisher's recolonization of the central and northern Sierra Nevada. (Barrett 2004, pp. 6-8). As forest carnivore expert Jeff Lewis concluded: "Fuel reduction treatments … to the north of the occupied fisher area … could prevent the expansion and recovery" of the southern Sierra population. (Aubry and Lewis 2003, p. 2).

More specifically, the plan allows full implementation of the QLG pilot project, which will significantly increase the amount and intensity of logging in the northern Sierra Nevada beyond that allowed even under the new plan's standards and guidelines. The U.S. Fish and Wildlife Service has expressed its view that full implementation of the QLG project "poses a significant threat to the long-term viability of the California spotted owl, Pacific fisher, and American marten due to the loss, degradation, and fragmentation of suitable habitat." (USDI Fish and Wildlife Service 1999, p. 16). As stated by the Fish and Wildlife Service in its consultation on the QLG pilot project, "the proposed action will disproportionately affect suitable habitat for [the fisher]…. The Service is concerned that the proposed project will preclude recovery of this species within the project area and throughout the Sierra Nevada." (Ibid., p. 11). The Service expressed concerns regarding habitat loss, habitat fragmentation, and effects on prey species (Ibid., p. 11). The Service expressed particular concerns about construction of DFPZs in the QLG area, which may fragment habitat and limit fisher movement and dispersal, "limiting population expansion and colonization of unoccupied habitat …, thus precluding future recovery options." (Ibid., pp. 11-12).

The need to promote fisher habitat in the central and northern Sierra is particularly acute given that old forests are "considerably more vulnerable" in this region and generally "occur in scattered, isolated blocks and small patches." (USDA Forest Service 2000, p. 3-7). "The central Sierra Nevada is the most fragmented [region in the Sierra Nevada] with a high number of highway crossings and several areas burned by large, severe wildfires, sometimes occurring across multiple ownerships." (Ibid., p. 3-46). "The loss of structurally complex forest and the loss and fragmentation of suitable habitat by roads and residential development have likely played significant roles in both the loss of fishers from the central and northern Sierra Nevada and the fisher's failure to recolonize these areas." (USDI Fish and Wildlife Service 2004, p. 18778).

Recent research suggests that the project area may be ecologically important in promoting the reestablishment of the fisher in the northern Sierra Nevada. Zielinski et al. (2005b) mapped fisher habitat suitability in the northern Sierra Nevada, based on a model of fisher habitat use. The authors also mapped potential fisher conservation areas, which are areas that may be suitable for fisher reintroduction. Britting (2005)[5] superimposed the Watdog project boundaries on the maps produced by Zielinski et al. (2005b). Based on Britting's analysis, the

[5] This report was submitted to our previous comments and is incorporated herein.

Watdog project area appears to provide moderate to high quality habitat for fisher. Similarly, the project area provides moderate to moderately-high quality habitat for fisher conservation and reintroduction. Given the ecological importance of the area (which is not addressed in the Watdog EIS), proposed logging that will degrade existing fisher habitat could adversely affect the likelihood of the fisher becoming reestablished or reintroduced in the northern Sierra Nevada, which would further threaten the fisher's viability and distribution throughout the Sierra Nevada.

The Forest Service should disclose the impacts of proposed logging on fisher habitat connectivity and on the fragmentation of existing habitat, particularly within checkerboard lands in the central and northern Sierra. (SNFPC et al. 2004, pp. 38-39). Special attention should be paid to impacts of proposed thinning and road construction on habitat connectivity and fragmentation. The agency should undertake a fragmentation analysis for fisher based upon the best available habitat models (see Zielinski et al. 2004, 2005b, and others). Rest site habitat requirements of very high canopy cover in portions of female home ranges should be clearly identified and used as a measure of habitat suitability when conducting habitat assessments for fishers. This may require the Forest Service to specifically identify potential fisher rest sites throughout project areas and protect them for future use. Recent research suggests very low levels of re-use (14%) of rest sites in female home ranges (Zielinski et al. 2004). Given the lifespan of the fisher and low levels of reuse of rest structures within a female fisher home range (appox. 3000 acres) high levels of trees >20" must be retained across the project area to be consistent with fisher conservation.

Black oak is an important species for fisher rest sites. Zielinski et al. (2004) found that hardwoods in provided 45% of fisher rest sites in the Sierra, and these sites were predominantly black oak. The DSEIS proposes to remove approximately 400 black oaks over 12" dbh during mechanical operations (DSEIS, p.3-164).[6] The impacts to fisher by the proposed hardwood removal are not addressed adequately. The project effects cannot be quantified based on available information. The Forest Service simply states: "Although suitable forest carnivore habitat may be affected the project activities are not expected to result in significant indirect effects." (BE, p.99). This statement is problematic for two reasons. First, it is not clearly stated whether habitat is positively or negatively affected. Second, there is no analysis or rationale provided to support the claim that indirect effects would not be significant.

Lastly, for the reasons described in our discussion of the marten, the DSEIS fails to provide clear and consistent information regarding the amount of suitable fisher habitat currently within the project area and the amount that will be degraded if the project is implemented. However, given that the project will admittedly degrade a high percentage of the existing fisher denning and resting habitat, including a significant amount of high quality LS/OG forest, substantial adverse effects are likely. Denning and resting habitat is more likely to be limiting than foraging and traveling habitat for fisher, and recent research confirms that logging such as that proposed in Watdog has a significant adverse effect on denning and resting habitat (Truex and Zielinski 2005). The Watdog project will reduce the canopy cover from approximately 60% to 40% or lower in 900 acres of DFPZ and GS units. According to Forest Service definitions of fisher denning and resting habitat provided (BE, p. 94), the Watdog project would remove 900 acres of

[6] We note that the BE indicates there may be more uncertainty with regard to this estimate: "The exact number of hardwoods between 17-21" dbh that will be lost is not known." (BE pg. 99).

suitable denning/resting habitat. The Forest Service only discusses reductions in habitat quality and does not consider impacts from the removal of denning/resting habitat. The DSEIS fails to adequately disclose these impacts, and the Watdog project should therefore be reconsidered based upon a revised EIS that includes this information and analysis.

V. SURVEYS FOR FEDERALLY PROTECTED AND FOREST SENSISTVE SPECIES

Surveys for the federally threatened California red-legged frog (CRLF) are required by USFWS. Because suitable habitat was located within 1 mile of the project area, surveys were conducted for Watdog (BE, p.27). These surveys were conducted in 2003, and suitable aquatic and upland frog habitats within treatment units have not been surveyed for 5 years. It is entirely possible that the suitable habitat may have been colonized by frogs since surveys were conducted. The BE identifies mitigation measures to apply if CRLF are found in stream crossings (BE, pp. 14-15), but in the absence of current surveys in all existing suitable habitat, no measures will be implemented and CRLF may be adversely affected. These potential impacts are not disclosed to the decision maker, the public, nor to the USFWS as required under Section 7 of the Endangered Species Act. Surveys should be conducted prior to project implementation and should inform the effects analysis prior to project design. The USFWS should be consulted again since the project is now proposed for implementation 6 years after the previous consultation and the anticipated timeline for completion of the project is 2018 (DSEIS, p. 3-39).

The Watdog project area was surveyed for great gray owl in 2002 with no detections (BE, p. 43). Two years later, a great gray owl was detected two miles from the project area in 2004 (Ibid.). This new sighting suggests that the previous surveys are now out of date and the project area should be resurveyed. Once occupancy is known, effects analysis should be revised to reflect any new information.

Spotted owl surveys were last conducted for the Watdog project in 2003. The 1991 USFWS protocol for spotted owl has a two year expiration on survey results if conducted in two consecutive years. Therefore, Watdog spotted owl surveys no longer meet protocol and estimation of project effects are not accurate. Activity centers have undoubtedly moved and new territories may have been established. The Forest Service should conduct spotted owl surveys to protocol in all suitable habitat, regardless of past occupancy, in order to determine current occupancy status. The DSEIS should also clearly adopt the wildlife survey requirements as part of the project's proposed action.

Goshawk surveys were last conducted in 2002-2003 (BE, p. 37). The activity center locations from these surveys are outdated because goshawks tend to relocate their nests annually and "there is the potential that new territories would be established after surveys were complete and therefore not protected." (BE, p.89). Uncertainty regarding the presence of new goshawk territories and new activity centers in existing territories remains unresolved. In addition to reestablishing activity centers in known goshawk PACs, surveys should also be conducted in suitable goshawk nesting habitat with unknown occupancy status (i.e., outside of PACs).

VI. WILDLIFE MONITORING

The Regional Forester recently amended the MIS list and Appendix E for the 11 national forests covered by the 2004 Sierra Nevada Forest Plan Amendment. This recent amendment purports to remove the requirement to conduct population monitoring for MIS and species at risk listed in the affected forest plans and in Appendix E. We believe this decision is a violation of law and intend to appeal it to the Chief. We will submit a copy of the appeal when it is completed and ask that it be included in the record. Because the decision is contrary to law, the preexisting monitoring requirements for MIS and species at risk (SAR) remain applicable. Our comments below address the deficiencies with respect to wildlife monitoring in connection with the Watdog Project.

The DSEIS does not address the monitoring required by the Plumas Land and Resource Management Plan as originally adopted or amended by Appendix E. In several cases, the annual population monitoring required by the original forest plan has not been completed. In addition, population monitoring required in Appendix E for MIS and species at risk is not addressed. The failure to address these monitoring issues violates the forest plan and the National Forest Management Act.

The Forest Service is required by its own regulations and management plans to monitor the populations of management indicator species ("MIS") and other wildlife. 36 C.F.R. § 219.19 requires that the population trends of MIS be monitored. These regulations require "that the Forest Service identify [MIS], monitor their population trends, and evaluate each project alternative in terms of the impact on both [MIS] habitat and [MIS] populations." The Lands Council v. Powell, 379 F.3d 738 (9th Cir. 2004). Because the Plumas LRMP was adopted and amended pursuant to these regulations, they continue to govern management and apply to the Slapjack project. Sierra Nevada Forest Protection Campaign v. Tippin at *15. In addition, both the Plumas LRMP and the 2004 Framework, which amended the Plumas LRMP, include monitoring requirements, including the requirement that population trends of certain MIS and species at risk (SAR) be monitored annually. The Forest Service has not met these requirements in the DSEIS. As a result, the DSEIS also failed adequately to assess the project's environmental impacts to these species and their habitat.

The Plumas LRMP was first approved in 1988. This plan was subsequently amended in 1992, 2001 and 2004. The amendment in 2004 adopted an adaptive management and monitoring program that is described in Appendix E of the FEIS issued in 2001. (USDA Forest Service 2001a). The Plumas plan as amended in 2004 includes the monitoring originally specified as well as the additional monitoring identified in Appendix E. As described below, the Forest Service has failed to comply with these requirements.

A. The Annual Monitoring Required By The Forest Plan As Adopted in 1988 Has Not Been Completed.

1. Annual Population Monitoring

The Plumas LRMP, as first adopted in 1988, requires annual population monitoring for several of the MIS species including three that are addressed in the Watdog Project documents – golden eagle, prairie falcon, and goshawk. The MIS report for the Plumas National Forest (Plumas National Forest 2006) lists 20 species and summarizes the monitoring results for these species. Golden eagle, prairie falcon, and goshawk are addressed in this report.

The LRMP requires the national forest to "Report on territory occupancy and reproductive success at selected sites annually" for both golden eagle and prairie falcon. (Plumas National Forest,1988, p. 5-9, Table 5-1). For golden eagle, the number of birds counted on five consecutive years (1988 to 1992) is displayed in Figure 11 of the forest wide MIS report. (Plumas National Forest 2006, p. 25). Results are not reported for "territory occupancy" or "reproductive success," as required by the LRMP, for the five years of monitoring displayed. The LRMP also requires that golden eagle sites be monitored "annually," and there is no data reported in the MIS report for the period 1993 to 2006. The situation is similar for prairie falcon. Annual counts of birds from 1988 to 1992 are presented in Figure 12 of the MIS report. (Ibid., p. 27). Results are not reported for "territory occupancy" or "reproductive success," as required by the LRMP, for the four years of monitoring displayed. The LRMP also requires that prairie falcon sites be monitored "annually," and there is no data reported in the MIS report for the period 1993 to 2006.

Goshawk also is addressed in the forest wide MIS report which states that there are currently 144 protected activity centers (PACs) established on the forest. (MIS report, p. 31). The LRMP requires the survey for occupancy in 25% of established nest groves annually. (Plumas National Forest, 1988, Table 5-1, p. 5-7). Thus, the LRMP monitoring requirement is to survey 25% of the 144 nest stands or 36 nest stands. The MIS report indicates that between 38, 28 and 21 active nests were monitored in 2004, 2005, and 2006, respectively. In all but the first year of this monitoring, less than 25% of the nest stands across the forest had been surveyed. Based on the data provided, it appears that the annual monitoring requirements of the forest plan as adopted in 1988 have only been met for one out of 18 years.

In sum, the type of monitoring and frequency required by the LRMP, as originally adopted in 1988, has not been completed for these MIS.

2. Annual Monitoring Of Snags

The Plumas LRMP requires that "sample counts of snags on project areas" be conducted "annually on selected projects." The PLRMP (p. 5-12) requires that snags be inventoried annually "during timber sale planning, compartment exams, or fuel reduction programs." The DSEIS and wildlife reports do not disclose the snag levels on the project area nor do they present the results of the snag monitoring required by the forest plan. In numerous instances, the DSEIS

relies on the statement that a certain number of snags will be retained, but neglects to discuss just how many snags presently exist in the project area.

As we noted in our comments on previous EISs, large snags are an essential habitat element for many wildlife species including California spotted owl, northern goshawk, and woodpeckers. (See for example BE, p. 20-23). Furthermore, the BE concluded that "[p]ast management practices, including logging, firewood cutting, road construction, and other activities, have probably led to a decline in the number of large diameter trees and snags in the project area, with a detrimental effect on associated wildlife species." (Ibid., p. 24). Despite the recognized importance of snags to wildlife and the likely negative effect of the project on snags, the DSEIS fails to report any monitoring information on the current level and quality of snags in the project area. Instead, project documents simply report that certain densities of snags will be retained where available. Such statements can not serve as an assessment of the existing condition.

The DSEIS includes an analysis of projects intending to remove hazard trees in and adjacent to the Watdog Project. This analysis also misses the point that the existing condition must be characterized in order to evaluate the effect of removing hazard trees, including snags, from the analysis area. The analysis of hazard trees erroneously focuses on comparing the removal of hazard trees to the total number of live trees in the analysis area. The issue is the effect that removing hazard trees has on the existing level of snags in the project area. For instance, if snag levels are low even small reductions could result in significant adverse effects. Without a characterization of the existing levels of snags, as required by the forest plan, there is no basis for evaluating the relative effect of removing snags from the project area.

The failure to gather and report information on snag densities is a violation of the forest plan. The failure to consider this information in the environmental analysis is also a violation of NEPA since in its absence, the quality of the available habitat can not be known nor can mitigation measures that might improve poor conditions be identified.

B. Annual Population Monitoring Required by Appendix E Has Not Been Completed.

Appendix E of the 2001 ROD (USDA Forest Service 2001a, Volume 4, Appendix E) was adopted by the 2004 ROD (USDA Forest Service 2004a, p. 70). This appendix outlines the monitoring requirements for a variety of species including forest sensitive, MIS, SAR, and other species of lesser vulnerability. Ten species were identified in Appendix E as being of particular concern and they were addressed individually in the narrative of Appendix E. The monitoring requirements for the remaining species are summarized in a series of tables. Appendix E also states that "Population and/or habitat monitoring will be conducted for all MIS and species at risk." (USDA Forest Service 2001a, Volume 4, Appendix E, pp. 62, 75, 96). Further, the appendix makes clear that such monitoring is to occur annually.[7] Thus, annual monitoring of

[7] See for example Appendix E, p. 63, in reference to "Management Indicator and Species at Risk Issue" for Old Forest and Associated Species, "It is possible that, after a period of annual population monitoring (distribution and abundance), we will have sufficient understanding of important habitat characteristics that we can confidently

"population[s] and/or habitat" for MIS and SAR is required by Appendix E, as several courts have held. See Sierra Nevada Forest Protection Campaign v. Tippin at *20; Earth Island Institute v. U.S. Forest Service, 442 F.3d 1147 (9th Cir. 2006).

There are several species at risk that were addressed in the project level environmental documents for which the monitoring requirements of Appendix E for SAR have not been met. The following table lists these omitted species.

Table 1. Species at risk (SAR) considered in the Watdog Project for which the monitoring requirements in the Plumas Land and Resource Management Plan (as amended in 2004) have not been satisfied in the environmental analysis.

Species
Western red bat
[illegible]

The BE reports for the three bats listed above reports survey results from 1991, 1992, 2001 and 2002. Annuals surveys were required by the LRMP as amended in 2001 and 2004. Despite this requirement, surveys were only completed in 2 out of the five years since adoption of Appendix E. Survey results for the period 2004 to present have not been reported. Despite the lack of population information for these bats, the BE (p. 99) concludes that effects to these bat species would be "low."

There are additional SAR that may occur in the project area, based on their geographic range and the association of habitat types affected, for which the required monitoring has not been reported.

Table 2. Species at risk (SAR) from Appendix E (USDA Forest Service 2001a) that require population monitoring and that may be affected by the Watdog Project. These species were not addressed in the environmental analysis.

		Habitat Type[1]
B251	Band-tailed pigeon	Hardwood, hardwood-conifer and conifer
B272	Long-eared owl	Riparian, dense tree
B309	Olive-sided flycatcher	[illegible]
B385	Swainson's thrush	Riparian and dense shrub
B510S1	[illegible]	[illegible]
M025	Long-eared myotis	[illegible]
M026	[illegible]	Hardwood-conifer; crevices, mines
M027	Long-legged myotis	[illegible]
M029	Small-footed myotis	[illegible]
M030	Silver-haired bat	[illegible]

monitor habitat without annual monitoring of species' distribution and abundance." Similar statements are made on pages 75 and 96 of Appendix E.

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		Habitat Type[1]
		Dense foliage of medium to large trees
M037S1	Pacific western big-eared bat	Caves
M049S1	Sierra Nevada snowshoe hare	Montane riparian with thickets of alder/willow; young conifer with chaparral
	White-tailed hare	Early successional stages of various conifer

[1] Extracted from "California's Wildlife" edited by Zeiner, D.C. et al., 1988-1990.

Additionally, the potential impacts of the Watdog Project on these at risk species have not been evaluated in the environmental analysis. Such evaluation is warranted since elsewhere the Forest Service has determined that, for a majority of these species, a full viability analysis was required to satisfy NEPA and NFMA. (USDA Forest Service 2001a, Volume 4, Appendix E, p. 16).[8]

C. Analysis Of Effects On Forest Sensitive Species, MIS And SAR

The previous section in these comments identifies a number of species for which the population monitoring was not completed or the data or analysis was inadequate. Among these species are management indicator species (MIS) species for the Plumas National Forest. As identified in the Regional direction on the analysis of management indicator species and documentation in project level NEPA (USDA Forest Service 2006), "when the governing LRMP requires population monitoring or population surveys, the MIS effects analysis for the project must be informed by population monitoring data." Since the population monitoring data are absent or inadequate for many of the MIS the effects analysis for these species is also inadequate.

A similar problem exists for the Forest Sensitive Species and SAR for which annual population monitoring is required by the forest plan. For example, annual population monitoring for numerous bat species is required by the forest plan. The pallid bat, Townsend's big-eared bat, and western red bat have all been detected in and around the project area. (BE, p. 40-14). These bats are identified as SAR and in some cases are on the forest sensitive species list. Habitat requirements for these species are varied and in many cases include the use of large snags and trees for nesting and roosting. The pallid bat, in particular, tends "to select snags and large diameter (greater than 20" trees) to roost within" and "could potentially be impacted … due to their general use of the forest for roosting and foraging. (BE pp. 102, 105). Despite having no information about population trends on pallid bats in the project area and no baseline data on habitat quality (including snag levels in the project area), the BE concludes that the effects to pallid and other bats are "expected to be low." (Ibid.) In the absence of information about population trend and existing habitat quality, the conclusion that effects will be low can not be supported.

Similarly, the silver haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), long-eared Myotis (*Myotis evotis)*, long-legged Myotis (*Myotis volans*), and the

[8] See also the Table of Contents for the 2001 FEIS (USDA Forest Service 2001a, Volume 3, Chapter 3, part 4) that lists the species for which viability assessments were completed.

fringed Myotis (*Myotis thysanoides*) are all SAR and the *Myotis* species are USFWS federal species of concern. These bats are primarily associated with western coniferous forests. Late successional forests provide significantly greater bat roosting sites than surrounding younger forest Gellman and Zielinski 1996; Tappeiner et al. 1997; Ormsbee and McComb 1998; Hayes 2003). Larger trees above the forest canopy tend to absorb more solar radiation and have less temperature fluctuation (Hayes 2003). Forest management activities can directly influence the survival of bats by influencing the abundance, distribution and quality of roost sites, especially for reproductive sites known as maternity roosts (Nagorsen and Brigham 1993). The fringed Myotis is the species that most likely breeds throughout the project area, and thus the species most vulnerable to timber harvest activities (Ellison et al. 2003). The silver haired bat is a migratory, solitary tree roosting bat often associated with late-successional and old growth conifer forests (Betts 1996; Ellison et al. 2003). The hoary bat roosts in the foliage of conifers and research has suggested that the crown structure of late succession and old growth trees may be most suitable for roosting (Hayes 2003). Monitoring and impacts to all of these bat species should be addressed and mitigated. The failure to collect and disclose population data and the baseline condition of the habitat, including existing levels of large snags and down logs, is significant and should be corrected in a supplemental DEIS and re-circulated for public comment.

VII. BOTANICAL RESOURCES

The Forest Service has not adequately disclosed effects of oak removal on hardwood ecosystem management objectives outlined in the 2004 SNFPA, nor on wildlife. The 2004 SNFPA ROD outlines management objectives for lower Westside hardwood ecosystems including maintaining a diversity of structural and seral conditions that are sustainable on a watershed scale, providing sufficient regeneration and recruitment of young hardwoods, and providing for habitat elements such as cavities and acorns that are important for wildlife and native plant species (USDA Forest Service 2004, p. 35). In addition, the HFQLG plan requirements to retain a minimum of 25-35 ft^2/acre basal area per acre of oaks over 15" dbh (BE, p.55). The Watdog project does not demonstrate compliance with these standards and goals. To the contrary, the project would remove 400 trees over 12" dbh, and "It is also not known how many acres of pure or mixed oak habitat was avoided in group selection placement and how much would be impacted." (BE, p. 55). Despite this lack of information, the BE concludes that the indirect effects to habitat will be insignificant (p. 99). There is no data or analysis provided to support this claim. Oak tree age and ability to provide acorns, suitable cavities, and other habitat for wildlife is not described, thus the environmental impact of oak removal cannot be adequately analyzed. The analysis of project induced impacts on oak resources should be evaluated in a revised DSEIS.

Elsewhere in the Sierra, oaks over 12" dbh are retained in vegetation management projects designed to reduce fire risk and their removal is not necessary to achieve fuel objectives. The proposed group selection practices conflict with the stated purpose and need and undermine the enhancement of oak in the treatment area. An alternative should be developed to more fully address the need to enhance oak habitat in the project area.

Upon review of the Watdog botany effects analysis, we note that that although plants such as Mosquin's Clarkia and Lassen daisy may be "buried, uprooted…and killed as a result of harvest activities." (DSEIS, p.26, and 28), there were no cumulative effects expected from the project. None of the cumulative effects analyses considered impacts of climate change, drought or other disturbances such as OHV use, livestock grazing and wildfire (DSEIS, pp. 3-16 to 3-38). We request clarification on project impacts to plants. The Forest Service should carefully consider mitigation to avoid direct impacts to special interest, federally protected and watch list plants.

VIII. FIRE AND FUELS

The DSEIS suffers from the same deficiencies we identified in the previous EISs for this project. In her review of the FSEIS, fire specialist Carol Rice found that claims about the effects of the alternatives on fire resiliency, fire behavior and tree mortality that are not supported by data or recent scientific literature. (Rice 2007). Rice also found that factors critical to the evaluation of the alternatives were not considered. Rice (2008) reviewed again the DSEIS and found the same deficiencies. NEPA requires that underlying data and methodology be disclosed; generalized conclusions, in the absence of underlying data, do not suffice to comply with NEPA. *See, e.g., Idaho Sporting Congress v. Thomas,* 137 F.3d 1146, 1150 (9th Cir. 1998); *Sierra Club v. Eubanks,* 335 F. Supp.2d 1070, 1079 (E.D. Cal. 2004)

Ultimately, Rice found that "Alternative D, modified to allow 40% canopy in the CWHR 4 stands, best meets the overall goal of an environmentally preferable alternative while still achieving fire management goals." (Ibid., p. 4)

A. The Analysis Does Not Support the Reduction of Canopy to 25% to Meet Fuel Objectives.

The results of the fire behavior modeling in the FEIS demonstrates that there is no difference between Alternatives B, C, and D in the type of fire or the flame length expected post-treatment for ten representative stands. (DSEIS, p. 3-55). Under all action alternatives, the fires encountered in each stand would be surface fires. (Ibid.) Despite the lack of differences among the alternatives, DSEIS claims that it is necessary to reduce the canopy cover to as little as 25% in order to meet the fuel objectives. As will be described below, Rice (2007 and 2008) reviewed the DSEIS and found that on a number of counts the claims that canopy cover needed to be reduced to 25% were not supported by evidence or overlooked existing information that was contrary to the claim.

The DSEIS claims that the increased number of trees in Alternatives C and D would make crown fires coming into the DFPZ less easy to moderate due to increases in canopy density. Rice found that "the type of expected fire spreading into the DFPZ is not a sustained crown fire, but a fire that frequently torches. The Fire and Fuels Report supports this conclusion and acknowledges that torching, not crown fire spread, is the main fire behavior characteristic of concern … The problem of crown fire initiation is not solved by reduction of canopy cover, but through increasing the crown base height." A passive crown fire is expected outside of the DFPZ. (DSEIS, p. 3-55, Table 3-16). Rice found that changing surface fire behavior is critical

to controlling passive crown fire and that "canopy density has nothing to do with torching potential." (Rice 2007, p. 3).

The DSEIS also claims that fire retardant drops would be less effective under Alternative D.[9] Rice found that these conclusions were not supported by evidence and states:

> The DSEIS claims that the increased canopy closure in Alternative C and D makes fire retardant drops less effective in fire suppression, when compared Alternative B. This distinction between effectiveness in retardant drops in three canopy covers ranging from 30% in Alternative B to 50% in Alternative D (based on Table 3-17), however the only information provided in the DSEIS is an observation made for treated and untreated stands encountered in the Peterson Fire. This observation is a comparison between a treatment vs. no treatment, not a comparison between treatments resulting in 30% to 50% canopy cover that, as supported by modeling results, have the same fire intensity. This observation is not relevant to the comparison of treated stands nor is it a valid reason for selecting Alternative B.

(Rice 2008, p. 2) Rice also found that there are no studies to support a distinction between the performance of an alternative based on differences in canopy closure of 10%:

> While general trends may exist between canopy cover and retardant penetration, the difference in retardant effectiveness due to a 10 or even 20 percent increase in canopy cover has not been determined. The relationship between canopy density and fire retardant effectiveness has not been established except in broad terms. Robertson et al (1997) state, "…the effect of forest canopy should be investigated…Paired tests, where one grid is set up in the open and another under a canopy, are required to compare the effect of open drops with canopy interception. Paired drops need to be performed under similar wind and flight conditions." The threshold for success has not been determined for the efficacy of fire retardant application. The level of acceptable risk regarding the application of fire retardant has not been determined. The use of this criterion for evaluating an alternative is arbitrary.

(Ibid., p. 3) Thus, the information used to support the claims in the DSEIS is based on anecdotal findings of a circumstance that is not relevant to the present situation. Further, data has not been presented to support the claim of reduced effectiveness fire retardant under Alternative D.

B. Tree Mortality Estimates Fail to Account for Mortality Due to Timber Harvest

Based on a reported lowered tree mortality resulting from wildfire, the DSEIS concludes that Alternative B out performs the Alternatives C and D.[10] (DSEIS, pp. 3-61 to 3-62). This comparison, however, fails to take into account the actual number of live trees remaining in the modeled stands following wildfire. As identified by Rice in the FSEIS (which is unchanged in the DSEIS):

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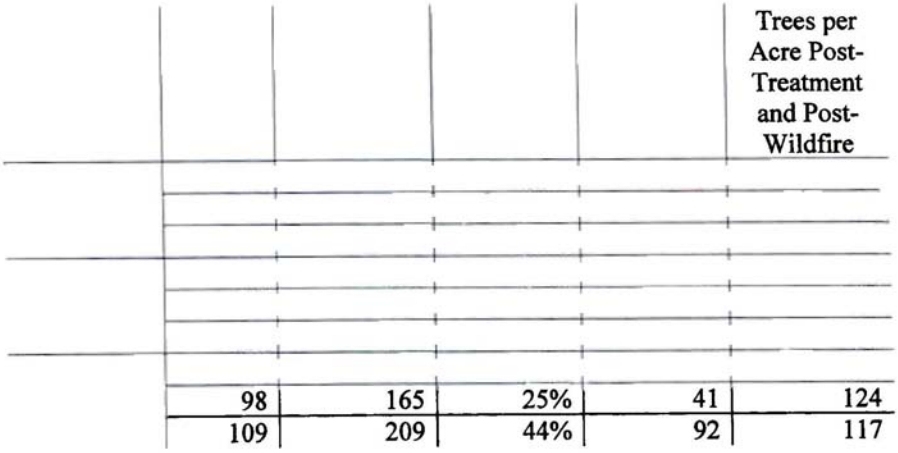
[9] This claim is the same that was made in the FSEIS dated March, 2007.
[10] This claim is the same that was made in the FSEIS dated March, 2007.

The FSEIS (p. 3-64) incorrectly claims the irretrievable effects of Alternatives B and C will be less than Alternative D. Irretrievable effects in the FSEIS are based on an evaluation of post-treatment tree mortality and fail to consider the mortality of the stand resulting from tree harvest. A correct analysis of irretrievable effects would include an evaluation of mortality that includes trees lost to harvest. The following table displays such an analysis.

Table 1. Trees retained per acre following trees losses from harvest and wildfire. Data for "post-treatment trees per acre" and "projected stand mortality" were taken from FSEIS, Tables 3-17, 3-18, and 3-19. "Trees lost per acre" and "Trees per acre post-treatment and post-wildfire" were calculated from this data.



				Trees per Acre Post-Treatment and Post-Wildfire
98	165	25%	41	124
109	209	44%	92	117

The above calculations indicate that more trees are left with Alternative D even after a higher proportion of trees are killed in a wildfire. Wildfires tend to leave a higher proportion of larger trees because of the tree's thicker bark and other adaptations to wildfire. Stands harvested under Alternative D (and C) after a wildfire would contain more trees per acre compared to Alternative B and result in fewer irretrievable losses.

(Rice 2007, pp. 7-8) Ultimately, following a wildfire, stands harvested following Alternative B would contain fewer than half the number of trees per acre remaining following harvest under Alternative D. These stands would also have considerably fewer than the target for Alternative B of 70 trees per acre. Clearly, the total mortality (harvest plus wildfire) is higher under Alternative B. The FSEIS fails to acknowledge this in the analysis. This same failing of analysis was identified by fire scientist Dr. Dennis Odion in his comments on the Empire Project (Mt. Hough Ranger District, Plumas National Forest). Dr. Odion found that "[m]ore importantly, none of the tree mortality resulting from timber harvests is included in the assessment of how much tree mortality may occur. The only guaranteed direct tree mortality that can be presumed is that which would occur due to harvest of trees. … Conversely, the mortality associated with timber harvest is not preventable. This should be listed as direct mortality in any

tables describing expected mortality, and hypothetical mortality from a future fire should be described as such." (Odion 2005, p. 5).[11]

Thus, the conclusion that Alternative B outperforms the other alternatives because it results in less tree mortality can not be supported by the information provided in the DSEIS. In contrast, Alternative D results in the least mortality of all the alternatives and this can be supported by the analysis.

C. The Alternatives All Result in the Same Condition Class Post-Treatment.

The DSEIS bases, in part, the conclusion that Alternative D under performs relative to the other alternatives on changes expected to condition class.[12] The DSEIS claims that Alternative B would move the stands closer to condition class I compared to the other alternatives. Rice finds that this claim is not correct:

> The DSEIS still erroneously claims on page 3-66 that "The combined effect of the action alternatives along with the present actions will begin to move the analysis area from Condition Class 3 towards conditions the desired condition of 2 or 1. Alternative B would produce the greatest change, followed by C and finally D." However as I stated in my comments dated May, 2007, all Alternatives would result in a Condition Class 1. There would be no difference between the alternatives in the ranking of the Condition Class. Because this is a category, there is not distinction within the category; this should not be used as a criterion for selecting Alternative B.

(Rice 2008, p. 3) Thus, the claims made about relative changes in condition class are not consistent with the definitions provided in the DSEIS.

D. Group Selection Units located in DFPZs Are Inconsistent with the Fuel Objectives.

The DSEIS raises concerns about the potential for extreme fire behavior on steep slopes. This concern is used to justify reducing canopy cover to and below 40%. Despite these claims of extreme fire behavior, the DSEIS proposes to place group selection units throughout the DFPZs. As identified by Rice:

> Group selections are not compatible with fuel breaks because of the long time in which they are vulnerable to damage from fire and because they produce dramatic fire behavior, and exhibit unsafe conditions for fighting fire during that time. The DSEIS acknowledges that the group selection areas would be susceptible to torching, but rationalize the placement in the DFPZ because they are small and scattered throughout the DFPZ.
>
> Fuel breaks are intended to be continuous, not broken with group selection areas that result in plantations that are notorious for burning rapidly and with great intensity.

[11] The statement from Odion (2005) was attached to our comments on the DSEIS issued in August, 2006.
[12] This claim is the same that was made in the FSEIS dated March, 2007.

> Plantations are not the locations that firefighters would choose to contain fires, and this is contrary to the purpose of installing a DFPZ.
>
> Of the three Alternatives, Alternative B has the greater proportion of group selections and would be the Alternative most dangerous for firefighters and more vulnerable to the effects of wildfire.

(Rice 2008, p. 4) Thus, the group selection units combined with the increased abundance of shrubs noted above clearly indicate that Alternative B will produce conditions that are inconsistent with the stated objectives.

E. Creating A Fire Resilient Stand Does Not Require Reduction of Canopy Cover to Less Than 50%.

Recent research papers have demonstrated that fire resiliency can be achieved in stands with relatively high canopy cover. Stephens and Moghaddas (2005a, p. 16) found that "prescribed fire only and mechanical treatment followed by prescribed fire treatments resulted in the lowest average fireline intensities, rate of spread and predicted mortality." Canopy cover in the treated stands exceeded 50% and the average canopy cover following treatment ranged from 51% to 65%. (Ibid., p. 26). Ultimately, the predicted mortality for treatments using prescribed fire alone and mechanical treatments with prescribed fire was significantly less than no treatment or treatment of the canopy fuels with mastication of the understory. (Ibid., p. 31). Thus, resilience to fire, as evidenced by reduced rate of the spread of fire, the reduced intensity of the fire line, and reduced mortality, was demonstrated for stands that retained canopy cover in excess of 50%.

Stephens and Moghaddas (2005b) examined a number of stands on which commonly used silvicultural systems had been applied and compared the predicted fire behavior of these stands to young growth and old growth reserves. They concluded that "overall, thinning from below, and old-growth and young-growth reserves were more effective at reducing predicted tree mortality." (Ibid., p. 369). In these stands with the most fire resilient fuel profiles, average canopy cover ranged between 57% and 75%. (Ibid., p. 374). Thus, canopy cover in excess of 50% was consistent with reduced tree mortality in reserved and treated stands.

These papers examined stands under 97.5th percentile weather conditions which are far more extreme than that evaluated in the Watdog FEIS (i.e. 90th percentile weather). (DSEIS, p. 3-48). Even under more extreme weather conditions, stands with high canopy cover performed well as long as surface and ladder fuels were sufficiently low. They also found that reserve stands that had undergone fire suppression and had not been treated in 90 years, performed well in response to wild fire. (Stephens and Moghaddas 2005b, p. 369 and 371). Thus, conclusions in the dSEIS that stands with canopy cover exceeding 50% are not adequate to resist wildfire are not supported by recent fire research.

Other recent studies of the effects of fuel treatments on fire behavior also support the conclusion that fuel reduction that focuses on ladder fuels and small diameter material is effective in reducing catastrophic fire. Stephens (1998) examined a number of fuel treatments

and used the model FARSITE to evaluate their efficacy. In all cases, the most successful fuel treatments included prescribed fire. Further, prescribed fire alone was as effective in reducing fire risk as treatments with logging and prescribed fire combined. "These treatments resulted in fuel structures that will not produce extreme fire behavior at 95th percentile conditions." (Ibid., p. 32). Beyond this, the vegetative conditions in the watershed where the fire effects were modeled included canopy cover conditions of up to 100 percent cover. The prescribed burning treatments did not reduce in any way the canopy cover of the dominant and co-dominant trees, yet these treatments were as effective as the thinning/biomass/prescribed burn treatments in which canopy cover was reduced to 50 percent in some areas of the watershed. Thus, no change in canopy cover of the dominant and co-dominant trees was necessary to meet the fuel objective under extreme weather conditions. Furthermore, reducing canopy in some areas to 50 percent did not result in any additional benefit.

Fire scientists participating in the Forest Service's Science Consistency Review of the Sierra Nevada Framework 2004 also concluded:

> The lowest priority is to treat the overstory trees (CROWN fuels). Generally, the larger trees are more resistant to fire damage than are smaller trees, regardless of species. Additionally, from a FIRE HAZARD perspective, if surface and ladder fuels are adequately treated, there is often little need to treat large, overstory trees (e.g., Megram Fire) because independent crown fires are very rare in California type forests.

(Dr. Carl Skinner, PSW fire scientist, in Guldin and Stine 2003, p. 8).

> Only under the very most unusual circumstances will a fire move through the crowns without a surface fire to keep it going. Remove the surface fuels AND the ladder fuels (i.e., the standing live trees up to 6 inches in diameter). Treat the surface and ladder fuels, and you have reduced the risk of an active crown fire to an insubstantial level.

(Dr. Jan van Wagtendonk, fire scientist with the National Park Service, in Guldin and Stine 2003, p. 8).

Thus, the overwhelming evidence provided by recent studies and observations from fire experts who work in the Sierra Nevada is that reducing surface and ladder fuels, rather than logging of medium-large trees and reducing canopy cover, is the most effective means to reduce the risk of crown fire in mixed conifer, ponderosa pine, and Jeffrey pine forests in the Sierra Nevada.

Fire scientists have also clearly addressed the negative effects on fire behavior that can result from the reduction of canopy cover. "Thinning or otherwise opening a stand allows more solar radiation and wind to reach the forest floor. The net effect, at least during periods of significant fire danger, is usually reduced fuel moisture and increased flammability (Countryman 1955). The greater the stand opening, the more pronounced the change in microclimate is likely to be." (Weatherspoon 1996, p. 1173). Weatherspoon and Skinner (1995) observed that uncut stands, with no treatment of natural fuels, burned less intensely than partial-cut stands with no fuel treatment or partial-cut stands with fuel treatments. They determined that the partial cuttings created a warmer, drier microclimate compared with that of the uncut stands and that

fuel treatments of surface fuels might have been only partially effective. Even where thinning logging occurs in combination with fuels treatments, the warming and drying of the stand has potential to offset the reduced fuel loading. (Stephens 2003, p. 3). Thus, the "removal of more mature trees can increase fire intensity and severity, either immediately post-logging or after some years" (Christensen et al. 2002, p. 2).

In sum, the DSEIS draws conclusions about the success of various alternatives based on the incorrect application of scientific information or an incomplete evaluation of such information. In instances where analysis is presented, i.e. tree mortality and fire behavior modeling, the stated conclusions are contrary to the evidence provided in the DSEIS.

IX. SOIL QUALITY

The Region 5 Soil Quality Standards (FSH 2509.18,2[1]), the service-wide soil management handbook (FHS 2905.18-91-1), and the forest plan provide the regulatory framework that governs soil management in this project. This framework establishes soil properties, conditions, and associated threshold values that are used to avoid detrimental soil disturbance.

As was the case in previous EISs, the soils analysis for the DSEIS fails to discuss the effects that the extremely low levels of large woody debris have on soil quality in the project area. This failure is a violation of NEPA.

The soils report (pp. 38-40, Table 5) indicates that the level of large down wood is presently below the standard of five logs per acre on 23 units. The report also identifies that previous monitoring indicates that there were substantial decreases in the number of logs per acre in group selection and thinning units. (Ibid., p. 56). However, the report fails to estimate that likely decrease in large wood for all units following treatment. An approach similar to that used for soil cover could be applied to the large wood analysis. The 2005 monitoring results "suggests large woody material decreases from an average of 10 logs per acre to 2 logs per acre. (Westmoreland and McComb 2005)." (Ibid., p. 56). By applying a loss of 8 logs per acre to the existing conditions reported in Table 5 (Ibid., pp. 38-41) an additional 36 units may have levels of large down wood below the 5 per acre identified in the soil quality standards. This could result in post-treatment levels of large wood below the required standard on 59 units out of the 82 units reported in Table 5. The soils analysis does not disclose this potential effect. Further, despite the importance of large wood to soil quality, the report (Ibid., p. 57) declares that "Large woody material has no importance on soil nutrients (personal communication with Robert Powers)," and thus dismisses its importance to the analysis of soil effects. This position is inconsistent with the Regional Soil Quality Standards and requires additional discussion.

Of the units that are below the standard for large down wood, the soils analysis justifies this reduction by stating that "The R5 guidelines allow for the adjustment of this threshold when fuel management treatments are needed. It has been determined that the Watdog Project is needed for fuel managements 'See Fire and Fuels Report for further information'." (Ibid.) The Fire and Fuels Report does not identify the need to reduce levels of large wood to meet fuel objectives. In fact, the report states that "where down logs exist, 10 to 15 tons per acre of the

largest down logs with diameters greater than 12 inches would be retained." (Fire and Fuels Report, p. 4). Furthermore, contrary to the notion expressed in the Soils Report that large log levels needed to be adjusted downward to achieve the fuel objectives, the DSEIS (p. 2-8) identifies that "Where down logs exist, an average over the treatment unit of 10–15 tons per acre of large down wood would be retained." Thus, the claim in the soils report that the fuel treatments require reduced levels of large woody is not supported in the specific report or by the measures included in the preferred alternative.

X. CUMULATIVE EFFECTS

EISs are required to consider cumulative impacts, which are the impacts on the environment from the proposed action "when added to other past, present, and reasonably foreseeable future actions regardless of what agency … or person undertakes such other actions." 40 C.F.R. § 1508.7. The Ninth Circuit has recently clarified NEPA's cumulative impacts requirement in two decisions, both of which overturned Forest Service timber sales for failing adequately to consider cumulative impacts. *See Klamath-Siskiyou Wildlands Center v. BLM,* 387 F.3d 989 (9th Cir. 2004); *The Lands Council v. Powell,* 379 F.3d 738 (9th Cir. 2004). In addition, the Ninth Circuit has recently confirmed that timber sale EISs must analyze the cumulative impacts of logging on private lands within the project analysis area. *Natural Resources Defense Council v. U.S. Forest Service,* 421 F.3d 797, 814-16 (9th Cir. 2005).

To comply with NEPA, an EIS must discuss the environmental impacts of past, present, and proposed logging; a mere listing of projects and acreage, in the absence of specific analysis of the environmental impacts of the projects, is inadequate. "[T]he general rule under NEPA is that, in assessing cumulative effects, the EIS must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment." *The Lands Council,* 379 F.3d at 745. In particular, the EIS must include "discussion of the connection between individual harvests and the prior environmental harms from those harvests." *Id.* at 744. The EIS also needs to provide "adequate data of the time, type, place, and scale of past timber harvests." *Id.* at 745.

It is essential that the cumulative effects analysis provide "quantified or detailed information; … [g]eneral statements about possible effects and some risk do not constitute a hard look." *Klamath-Siskiyou,* 387 F.3d at 993. Thus, for example, EISs need to include "quantified assessment" of the "combined environmental impacts" of the various projects considered, *id. at 994.* Not only does the cumulative effects analysis need to provide quantified data with respect to factors such as the amount of spotted owl habitat that will be affected, i*d.* at 994 n.1, but "the effect of this loss on the spotted owl" and other species throughout the planning area also needs to be analyzed. *Id.* at 997.

As we identified in previous comments, the DSEIS fails adequately to consider the cumulative impacts of the Watdog project together with other past, present, and reasonably foreseeable projects in the area. In particular, the DSEIS still fails to consider the cumulative impacts of several hazard tree projects that the Forest Service has approved and is considering within and adjacent to the Watdog project area, including Tamarack Flat, Mule, American

House, Lost Creek, Fowler Peak, and Devil's Gap. The Forest Service has made final decisions approving the Tamarack Flat, Mule, and American House, and the latter three projects are described in the most recent Schedule of Proposed Actions. Based on our review of the map entitled Feather River District-Roadside Hazard Tree Small Sales 2007, all of these projects (with the possible exception of American House) are within the wildlife analysis area for the Watdog project. Moreover, four of the projects – Tamarack Flat, Mule, Lost Creek, and Fowler Peek – appear to be within unit boundaries for the Watdog project. Therefore, the possibility of cumulative effects is substantial.

The existence of six hazard tree projects in close proximity to the Watdog project raises the possibility of cumulative impacts, particular to species associated with large trees, large snags, and large down wood, including the pileated woodpecker, the bat species at risk described above, and the owl, marten, and fisher. Based on our field review of Tamarack Flat and Mule, many large trees (some in excess of 30" dbh) are marked for removal, which will affect not only the number of remaining large trees but also the current and future number of large snags and the recruitment of large down logs. The DSEIS now includes an assessment of the number of trees by size that will be removed for each hazard tree project, but provides little data quantifying the existing or baseline condition for large snags and large down wood. The assessment simply estimates the total number of large trees in the assessment area and only makes comparisons to this value. As cited above, the BE and Soils Report each indicate that existing levels of large snags are likely depleted throughout the project area and large down wood is low in a number of units. Further, levels of large wood are expected to be further reduced following harvest.

The failure to compare the projected future losses due to salvage logging is especially important to the development of mitigation measures. For instance, the low levels of large down wood can be mitigated by felling and leaving in place salvage or green trees. Similarly, salvage or green trees can be moved to areas where down wood is in low abundance. Thus, failing to analyze cumulative impacts limits the ability to identify mitigation measures that can improve degraded environmental conditions.

In sum, we urge that the Watdog project and the three approved hazard tree projects – Tamarack Flat, Mule, and American House – be reconsidered based upon an adequate analysis of cumulative impacts.

XI. CONCLUSION

For the foregoing reasons, the Watdog DSEIS and the proposed action fail to comply with the National Forest Management Act, the National Environmental Policy Act, and other federal laws. The DSEIS should be revised to comply with NEPA, and the revised DEIS should be circulated for additional public comment.

Thank you for considering our comments. Please contact us if you would like to discuss our concerns.

Respectfully submitted,

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