IV.12 Individual DEIR Mailed Comments P-198 to P-229

This section presents responses to individual public comments (i.e., not form letter or form letter based) received the U.S. mail or other non-electronic delivery services. The responses immediately follow each letter and are organized in the same order as the comments in each letter. Several of the letters included attachments. Attachments were not included herein if our response did not directly reference the attachment.

Some of the comment items in this section were provided in written form to the Board at hearings. Some items were provided to the Board outside of the CEQA comment period for the DEIR but are relevant to the record.

P-198

February 22, 2006

61 Park Way
Piedmont 94611

Dear Y6 Gentry,

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

I am writing concerning
SCH #2004022025.
My first letter was returned
to me, stamped "Not able to deliver."

1 I am opposed to this plan, as
it does too much unnecessary
damage to the environment.

There must be some way your
planners can develop a plan
with less impact.

Mary Santana
property owner: 15825 Bonville
Dear Ca
Meadow 95415
Road

Mailed Letter P-198

Response to Comment 1
The comment provides no specific information regarding potential environmental impacts. A reasoned response is not possible. The DEIR analysis found that implementation of the proposed project Alternative C1, as mitigated, would not cause any significant adverse environmental impacts. The ADFFMP has placed greater emphasis on protection and restoration, with the goal of improving all resource values over time in comparison to existing conditions. Implementation of the ADFFMP is not expected to cause any significant adverse environmental impacts.

Sent By: ; +++++; Feb-27-06 4:57PM; Page 1

P199

RECEIVED BY
FEB 27 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

California Native Plant Society

FAX

Date: February 27, 2006

To: State of California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94344-2460
(916) 653-0989 FAX

From: Lori Hubbart, CNPS/DKY
(707) 882-1655 Voice (707) 882-1645 FAX

Subj: Comment Letter -- Jackson Demonstration State Forest
Draft Environmental Impact Report

Pages: 7 plus cover sheet

Following is a letter to the BOF from the DKY Chapter of CNPS commenting on the Draft Environmental Impact Report for the Jackson Demonstration State Forest.

Please contact me at the numbers shown above if all pages do not transmit.

Sincerely,

Lori Hubbart

Lori Hubbart, President
DKY Chapter, CNPS

California Native Plant Society

Dorothy King Young Chapter – P.O. Box 985 – Point Arena, CA 95468

February 10, 2006

George Gentry, Executive Officer
California State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Mr. Gentry and Members of the Board:

The Dorothy King Young Chapter of the California Native Plant Society (CNPS) would like to offer the following comments on the Draft Environmental Impact Report (DEIR) for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan, December 2005.

CNPS is concerned with assessments, management proposals and conditions that have a bearing on native botanical resources on the Jackson Demonstration State Forest (JDSF).

CNPS respectfully requests written responses to all the questions and concerns raised in this letter.

1 **Length and Organization of DEIR:** The California Environmental Quality Act (CEQA) stipulates that an EIR must be written in a manner that is understandable by the public, allowing members of the public to comment on the EIR. The language is supposed to be clear, and the information presented in an organized, systematic manner. (Pub. Res. Code § 21003 subd. (b) and CEQA Guidelines §§ 15006, 15120, 15140.)

2 The CEQA Guidelines state, "The text of draft EIRs should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages." It appears to CNPS that the California Board of Forestry and Fire Protection (CDF) did not comply with the intent of the CEQA Guidelines to "… reduce unneeded bulk in EIRs and to help the documents disclose the key environmental issues…" Instead, the sheer bulk of the DEIR makes it difficult for the public to identify these issues and evaluate them.

3 The DEIR also has mitigation measures and other information scattered throughout the document, undefined acronyms, and pages of highly technical verbiage that is not strongly tied to the conclusions reached in the EIR, but often appear to be arbitrary or subjective. How does CDF, in the DEIR, fulfill its obligation to the public to provide clear, understandable information?

4 **Mitigation Measures:** The DEIR fails to summarize proposed mitigation measures or provide a detailed plan for mitigation and monitoring of impacts covered by the management plan. Many mitigation details are omitted, with the explanation that they will be included at some unspecified later date in individual Timber Harvest Plans (THPs).

5 CEQA allows deferral of this kind only when a series of projects within a larger project are expected to occur in very similar settings and have very similar impacts. Does not this deferral misapply the intent that the state's Forest Practice Rules (and hence JDSF's Management Plan and individual THPs) be functionally equivalent to CEQA?

6 In fact, such deferral of mitigation measures is inappropriate in a setting like JDSF, which is characterized by complex variables such as diverse topography, different hydrological patterns, soil types and micro-climates. Please explain how the public could be expected to evaluate the sparse language about mitigation of environmental impacts contained in the DEIR.

Dedicated to the preservation of California native flora

7 Would not an analysis and summary by independent scientific professionals be needed in order for the public to understand and evaluate the scientific information?

6.2 Botanical Resources --6.2.1 Regional Setting
Bishop Pine Series

8 The discussion of the bishop pine series, a vegetation community dominated by *Pinus muricata*, fails to include the following information about how the California Department of Fish and Game (CDFG) ranks bishop pine forests:

9 The Northern Bishop Pine Forest vegetation type is recognized by the State as a sensitive and limited vegetation type in California, State rank S2.2 (endangered with 6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres, and threatened).

10 This vegetation type is currently listed in California Natural Diversity Database (CNDDB) RareFind Communities. The Northern Bishop Pine Forest is very limited in distribution, and is often poorly understood within its range.

11 How will this information be reflected in the way bishop pine forest is treated in the DEIR and the JDSF Management Plan?

6.2 Botanical Resources --6.2.1 Regional Setting
Pygmy Cypress Series

12 The DEIR text leaves out a crucial piece of information, namely that the total extent of Mendocino pygmy cypress forest has decreased markedly in the last few decades. It correctly states that the original extent of Mendocino pygmy forest was about 4,000 acres. It fails to take into account that due to permanent loss, significant amounts of pygmy forest have been extirpated. Recent estimates place existing pygmy forest at about 2,600 acres [Davis, F. W., D. M. Stoms, A. D. Hollander, K. A. Thomas, P. A. Stine, D. Odion, M. I. Borchert, J. H. Thorne, M. V. Gray, R. E. Walker, K. Warner, and J. Graae. 1998. *The California Gap Analysis Project--Final Report*. University of California. Santa Barbara, CA..]

13 The DEIR states that the pygmy forest at JDSF constitutes 14% of the total pygmy forest area. However, that statistic is based on the original pygmy forest acreage, rather than current estimates. If extant pygmy forest totals approximately 2,600 acres, then JDSF's 613 acres constitute nearly 25% -- one quarter -- of the remaining Mendocino pygmy forest. This would seem to place a great obligation on CDF to be a responsible steward of its considerable pygmy forest land holdings.

14 Please explain how this insight will change the language of the DEIR and the Management Plan for managing JDSF's pygmy forest acreage.

15 Please explain how CDF can responsibly manage its bishop pine forests and pygmy forests utilizing a Management Plan based on an EIR that omits or misrepresents basic background information on the regional setting for its botanical resources.

Threatened, Endangered and Sensitive Species

CNPS takes issue with the following text in the DEIR:

16 "Although CNPS is considered an authority on rare plants in California, and maintains an exhaustive database of rare, threatened, endangered and uncommon plants, they are a private organization operating independently of CDFG and USFWS. … CDFG currently accepts the premise that placement of plants on CNPS lists 1A, 1B and 2 provides a fair argument that they qualify as rare, endangered, or threatened under Section 15380(d) of CEQA."

This language implies that collection, development and review of CNPS data on sensitive plants are conducted in a completely independent manner. Is CDF aware that CNPS and CDFG share plant data
17 and work in partnership to develop and maintain databases on rare plants and vegetation classification? How does CDF in the DEIR plan to acknowledge this scientific cooperation between CNPS and CDFG?

Federal and State-Listed Plant Species

It is the position of CNPS that the salvage exemptions contained in the NPPA apply only to taxa
18 state listed as rare, and that the salvage provisions apply ***only after*** compliance with all provisions of CEQA. Please see Donald H. Weburg v. State Board of Forestry and Fire Protection, case #02-CS00204 – Sacramento County Superior Court, 04-02-02.

6.2.3 Project Measures for Protection of Botanical Resources

Under Goals and Objectives, the DEIR refers to pygmy forest as an "uncommon plant community"
19 apparently at the same level as something vaguely described as "meadows." How does CDF justify such imprecise, careless language regarding a rare resource like pygmy forest?

6.2.4 Specific Management Actions – Special Concern Areas and Unique Habitats

This section refers repeatedly to measures supposedly specified in the JDSF Management Plan. Since the final form of the JDSF EIR has yet to be determined, it follows that the Management Plan, the
20 "project" covered by the EIR does not yet exist in its final form. How can the public be assured by or comment on measures contained in a Management Plan that is not yet finalized?

Again, the intent of CEQA is to provide, in an EIR, clear, thorough and understandable information to
21 allow the public to comprehend and comment. How can CDF fulfill this mandate with a DEIR that is far too lengthy for CEQA requirements that refers the public to another lengthy document?

Plant Species of Concern

Habitat Management Practices-- CNPS absolutely opposes any plan for "Limited removal of species
22 in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly."

First, scientists do not really know that *Lotus formosissimus* is the host plant for the larvae of the lotis
23 blue butterfly. There is some evidence that this species might be the host plant, but it is far from certain.

Even if this *Lotus* is the larval host, this plant grows readily in wet meadows, so that other, more
24 suitable habitats for it can be found. There is no justification for sacrificing pygmy forest in order to foster the growth of this plant.

How does CDF justify an action that is not supported by science and that would leave CDF vulnerable
25 to legal action?

Invasive Exotic Plant Species Control

Invasive exotic plants are a major environmental problem at JDSF, and have been for a long time. The
26 invasive weeds choke out native plants and present a considerable fire hazard. Please explain how emphasizing integrated weed management, a "prevention-oriented approach" will have an impact on an already-serious weed infestation.

27 None of the measures outlined in the DEIR address the large stands of macro-weeds like *Cortaderia jubata, Cytisus scoparius and Rubus armeniacus* (formerly *R. discolor*).

While CNPS advocates for an active, ongoing weed-control program at JDSF, CNPS is also concerned about the effects of herbicides on native plants. Herbicides are often applied *after* a THP is closed, and CNPS is aware of cases where herbicide applications were fatal to sensitive botanical taxa.
28 CDF claims that it has no authority over such applications, since the application is done after the THP closes. Does not this constitute illegal CEQA piecemealing? Shouldn't CDF address all
29 herbicide impacts, including cumulative impacts, in the DEIR, as well as in the THP process?

6.2.6 Impacts – Impacts 1 through 6

30 It is generally accepted in the scientific community that a complete biological inventory, resulting in baseline data is essential for creating a realistic management plan. However, the DEIR discusses methods of assessing impacts to botanical resources without reference to any baseline data.

The DEIR goes on to state that "An extensive inventory of the botanical resources of JDSF has not been conducted. JDSF maintains a map of known rare plant occurrences and has compiled available supporting documents. Inventory is planned to occur on a project-by-project basis through surveys patterned after currently accepted protocol."

31 Please explain what is meant by "accepted protocol" and by whom it is accepted. Please explain how piecemeal, project-by-project surveys (to be conducted by whom?), possibly influenced by project timetables can provide sufficient data to inform project planning?

32 Please explain how "pre-survey scoping consultation with DFG" could help with the design of mitigation measures? In the absence of baseline biological data, how would CDFG or CDF personnel have sufficient knowledge to design protections for botanical resources?

33 How does CDF intend to deal with the fact that many rare, herbaceous plants can be easily missed by low-intensity, non-floristic or off-season surveys?

34 How can CNPS, not to mention the general public, evaluate the DEIR's language on mitigation for impacts to sensitive plants, without measures targeted to specific plant taxa?

35 The highly variable natural features found within JDSF indicate the need for mitigations like buffer zones tailored to the needs of each project site. Mitigation measures designed to protect plants should also be informed by knowledge of pollinator populations and behavior and dispersal mechanisms.

36 Why has CDF failed to provide assessments based on past THPs of the effectiveness of mitigation measures in protecting or avoiding sensitive plants or habitats? If these data exist, why not utilize them? If these data do not exist, why don't they, in a state research and demonstration forest?

37 Please explain what the public can expect in cases where mitigation measures fail to protect or avoid sensitive plants or habitats.

38 CNPS would like to see areas containing rare plant populations or vegetation types set aside and protected from the effects of logging and related activities. This would include smaller, but significant populations, in addition to large blocks of habitat. Since this is the most effective, scientifically defensible way to protect rare plants and habitats, why does the EIR not specify reserves for botanical "hot spots"?

39 Please explain how the material in the Botanical Resources section of the DEIR supports the conclusion that there will be no significant impacts to botanical resources. Given the absence of botanical inventory requirements, survey protocols, monitoring plans or specific, targeted mitigation

39 measures, how does the DEIR provide assurances to the public about the conclusion of "no significant impacts" to botanical resources?

Impact 1: The project has the potential to threaten to eliminate a plant community (Less than significant)

Impact 3: Have substantial adverse effects, either directly or indirectly through habitat modifications, on any species identified as a candidate, sensitive, or special-status plan species in local or regional plans, policies or regulations, or by the CDFG or USFWS (Less than significant)

The DEIR proposes to avoid potential adverse impacts to plant species of concern by having a botanist or "trained personnel" periodically check plant occurrences.

40 Please explain how this simple tally of plants would provide meaningful data about any decline in plant health in time for CDF to take remedial action? What remedial actions would CDF take in such cases? Please explain why the public should be satisfied with surveys conducted by "trained personnel" when complete, accurate botanical surveys require qualified scientists?

41 Such monitoring is apparently intended only for areas "subject to management activities," which might exclude the plant species of concern in the pygmy forest areas. Please explain how this monitoring would be useful in assessing any decline in special-status, pygmy forest species not directly impacted by "management" activities.

42 Pygmy forest and the plant species of concern that occur there are extremely vulnerable to altered hydrology, changes in soil chemistry and surface erosion. Such adverse effects can be caused by grading and trenching, road building and by recreation involving motorized vehicles and trail bikes. These activities can be damaging even if they happen adjacent to, but not in the pygmy forest.

43 The fact is that the pygmy forest within JDSF has been very poorly managed. Mechanical disturbances that alter the hydrology, off-highway vehicles (OHVs) and dirt bikes, road building, poor road maintenance, invasion by exotic weeds, and trash dumping, continue to cause damage.

44 Please explain how the DEIR's proposed "incidental protection" for sensitive plant species in SCAs can be valid under such the existing scenario.

Impact 6: Cumulative effects resulting in a reduction in the range of a species, or local extirpation of a plant species on a spatial scale that includes the larger analysis area. This threshold includes changes in the environment caused by the interaction of ecological processes and multiple effects. (Less than Significant)

45 With respect to Mendocino pygmy cypress forest, cumulative effects to special-status plant species in the pygmy forest within JDSF have already occurred and are continuing to occur. These cumulative effects are the result of altered hydrology and continual erosion caused by poor road maintenance and off-road vehicle activity. Please explain exactly how the proposed management and mitigation can be expected to halt or reverse these impacts.

46 The DEIR refers to "future road management" and the future implementation of "measures for scoping, survey and mitigation" to be implemented at some later date, on a project-by-project basis. How do such vaguely described measures meet the CEQA mandate for a clearly written EIR understandable by the public, and avoid the CEQA prohibition against piecemealing?

47 The DEIR erroneously states that, "Pygmy forest and pygmy-type vegetation on private lands are subject to Mendocino County land use planning and are designated as Environmentally Sensitive Habitat Areas. These areas are subject to more rigorous environmental review and restriction than most other areas (Mendocino Co. Plan Sect. 20.532.060 and 20.496045)."

47 In fact, only the small amount of Mendocino pygmy cypress forest found within the California Coastal Zone receives consideration as an Environmentally Sensitive Habitat Area in Mendocino County.

48 Both allowable activities and illegal uses, such as OHV recreation have taken their toll. There has been little or no enforcement of regulations prohibiting vehicle activity in the pygmy. The DFMP and DEIR do not provide any detailed management plan to protect the pygmy forest from high-impact vehicle activity. If CDF cannot generate a good plan to manage the JDSF pygmy forest, would CDF be willing to transfer ownership of those lands to another organization?

49 Given the concentration of illegal activities in JDSF's pygmy forest, the plan in the earlier DFMP for annual review of reported nuisances is woefully inadequate. It states that, "Additional restrictions will be implemented as needed." Those restrictions have not been implemented yet, and they are needed now. Citations for illegal vehicle use, dumping, shooting, etc. represent an excellent potential source of revenue. Have CDF, State Parks, or the local law enforcement agencies considered this?

50 Please see CNPS comments above on plans to remove pygmy forest vegetation in a misguided attempt to "restore" habitat for the lotis blue butterfly.

51 CNPS could support projects to regenerate Mendocino pygmy cypress forest using prescribed fire, in cases where intact pygmy forest geomorphologic structure makes success probable.

Project Information

Goal #1. Research and Demonstration

52 A meaningful, long-term research program at JDSF that involves biological resources must be founded upon a complete biological inventory. Both the CDFG and CNPS guidelines require a complete *floristic* survey prior to commencement of operations. Surveys for only a set of sensitive taxa do not provide a sufficient basis for conducting research.

53 Even though JDSF is touted as a research and demonstration forest, JDSF currently has no on-site botanical staff, and virtually no science staff.

54 CNPS calculated in 2002 that JDSF's expenses were less than 17% of its revenues. CNPS believes that a portion of the substantial revenues derived from JDSF timber harvests should be returned to JDSF in the form of qualified botanical and ecological staff capable of actually carrying out a viable research program. Please outline the reasons why this has not yet occurred. CNPS requests a step-by-step proposal for re-investing a portion of JDSF's timber revenues in JDSF's research program.

55 As for the research program itself, CNPS advocates the establishment of a formal research program, with results published in peer-reviewed journals, data made easily accessible to the public, and formal agreements with academic institutions. the DEIR cites a focus on "...investigations directed to the needs of the general public, small forest landowners, resource professionals, timber operators, and the timber industry."

56 CNPS suggests that studies in the following areas would be of great interest and relevance to many or most of the constituents cited:

57 • The relationship between sensitive plant taxa that appear to flourish in forest openings (e.g., *Sidalcea malachroides* and *Astragalus agnicidus*) and timber harvest practices

58 • Projects to evaluate how increased regulation of timber harvesting will actually affect the economics of timber harvesting

59 • Examination of impacts to timber harvesting when tree species vulnerable to Sudden Oak Death (e.g., *Lithocarpus densiflora*) become state or federally listed. Such listing could cause a "train wreck" for timber harvesting, so research conducted on JDSF could help small timber owners cope.

60 • Research into silvicultural prescriptions, equipment management, and other exotic control technologies that can be effectively used to combat invasive exotics in the north coast forests

61 • Research into techniques for forest restoration to maximize biological diversity and ecological functions.

62 • Research projects that focus on compatibility of logging and preservation of biodiversity

63 • Restoration, recovery and fire regimes in the pygmy forest, since the current, damaged state of JDSF's pygmy forest would provide ideal conditions for such research.

64 Please provide a list of planned research projects that would have far-reaching relevance while anticipating future challenges to resource stewardship in California's forests.

65 CNPS is also concerned about the "demonstration" goals for JDSF. How can CDF justify "demonstrating silvicultural prescriptions that result in even-aged management, when such methods are already widely used and understood?

66 Any silvicultural prescription that is widely use and is a viable method, can no longer be considered "innovative", and is therefore not a fit subject for "demonstration" in a state forest.

67 CNPS does not see much evidence that logging activities at JDSF are actually geared toward the small timberland owner. Instead, activities on the forest appear to focus on large, corporate, industrial timber companies.

68 How does CDF plan to greatly minimize the emphasis on industrial timber, and replace it with activities that are truly relevant to small landowners (as well as the general public)?

Concluding Remarks

69 CNPS also wishes to address CDF's assessment of the public's responses to the DEIR. Written responses should be weighted in importance on the basis of their scientific and legal arguments, rather than by subjective measures like the number of responses.

70 With a well-written Environmental Impact Report and Management Plan, CDF would not have lost several years' worth of revenues from JDSF due to legal actions. Funding from JDSF revenues could have provided CDF with trained, competent professionals to write these documents.

Sincerely,

Lori Hubbart

Lori Hubbart
Chapter President
Dorothy King Young Chapter
California Native Plant Society

Mailed Letter P-199

Response to Comments 1, 2
The DEIR is not for a single focused project but is programmatic in nature, addressing a large (48,650 acres) forest with many natural resources, including listed species and TMDL-listed watersheds, and with a wide range of management purposes (research, demonstration, timber management, recreation, etc.). A DEIR in such a context must necessarily be lengthy in order to be complete.

Key issues and potential environmental impacts are clearly identified in each resource analysis section. The same pattern of organization was followed for each resource area.

The "*Discussion*" following the cited CEQA Guidelines section clearly identifies these page limits as being "recommended", not absolute. Given the history of this project – the public involvement, past litigation, controversy, etc. – the Board believes that the public and other agencies expected a level of disclosure, analysis and discussion which resulted in a document larger than what is recommended in the Guidelines.

See also General Response 5.

Response to Comment 3
Mitigation measures, specifically, are found at the end of each resource analysis section where the specific potential environmental impacts are discussed. A list of acronyms and abbreviations was provided in Appendix to assist the reader. The Board made a good faith effort to ensure that the DEIR, while lengthy, was complete, clear, and understandable.

Response to Comments 4-6
The mitigation necessary to reduce project impacts to a level of less than significant is summarized in the DEIR in Table I.2 and in the RDEIR Table I.1. Further, proposed mitigation measures are clearly identified at the end of each resource analysis section where the specific potential environmental impacts are discussed. Monitoring measures for the mitigations are found in the same place. Chapter 5 of the Draft Forest Management Plan (DFMP) or the Administrative Draft Final Forest Management Plan (ADFFMP) details the monitoring and adaptive management program for JDSF.

Since the DEIR and RDEIR are largely programmatic; thus, they provide programmatic mitigations and the direction for their application at the project level, such as timber harvesting plans (THPs). Because they are programmatic, the DEIR and RDEIR cannot provide site-specific mitigation details for the project level. However, they can and do direct that the need for further mitigation be assessed and that mitigations be applied where the need for them is identified at the project level. This project-level analysis and disclosure will occur under the functional equivalency of the THP process or in project specific documents prepared in compliance with CEQA. The public will have the opportunity to comment on the adequacy of the mitigation during the routine review of those project documents.

In addition to presenting mitigation measures identified as necessary to prevent significant adverse impacts, the DEIR and RDEIR also identify many of the environmental protection measures already included in the DFMP or Alternative G. In addition, the DEIR and RDEIR identify "additional management measures" that were developed as part of the EIR process to provide additional environmental protection or enhancement, but were not found to be specifically necessary to mitigate a potential significant adverse impact.

The complex JDSF setting provides the reason that some degree of project-level assessment and, as needed, mitigation must occur at the site-specific project level. A programmatic EIR cannot possibly anticipate every situation that will arise at the site-specific and project-specific level. The DEIR, DFMP, and ADFFMP require the further site-specific and project-specific CEQA analysis and mitigation to assure that significant adverse environmental impacts will be avoided.

Response to Comment 7
The DEIR was prepared by professionals with appropriate scientific and technical education, training, and experience. The DEIR contains adequate information and analysis to consider and mitigation the potential environmental impacts of the alternatives and to inform the public. A separate analysis and summary by independent scientific professionals would likely prove duplicative of the information provided in the DEIR and be unnecessary.

Response to Comments 8-10
Northern Bishop Pine Forest was not initially listed as a California Natural Diversity Database (CNDDB) Vegetation Type in the DEIR Analysis area because CNDDB had not listed any occurrences in Mendocino County as of the date the query was done, nor has it as of 6/07 The only "Northern Bishop Pine Forest" is listed in Monterey County. The information on the CNDDB ranking will be added to the EIR.

This information on the Bishop Pine Series will be added to the FEIR:

> **The Northern Bishop Pine Forest vegetation type is recognized by the State as a sensitive and limited vegetation type in California, State rank S2.2 (endangered with 6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres, and threatened). This vegetation type is currently listed in California Natural Diversity Database (CNDDB) RareFind Communities. The Northern Bishop Pine Forest is very limited in distribution, and is often poorly understood within its range.**

Response to Comment 11
A vegetation type of this name was not specifically listed as a Unique Habitat type in the DFMP nor were specific management requirements developed for it. Bishop Pine Forest at JDSF is a component of the vegetation between the Pygmy Forest and the Redwood Forest types. Much of this area has soil types that are not considered productive for commercial timber management. The DEIR recognized that "Stands dominated by pygmy cypress occurring on unproductive soils outside of true pygmy forests will not be harvested." The bulk of the cypress-Bishop Pine forests mapped at JDSF fall on low site soils (Class 8 or less) though a few are found in areas mapped as site class 4. The JDSF typing of these stands listed Bishop pine as the dominant overstory tree with cypress present in a mid or understory layer. In general, the only reason for management activities in Bishop pine forest would be for improving the transportation system or correcting a existing management problem. Site-specific analysis will be conducted before actions will take place in the Bishop Pine forest.

Response to Comments 12-14
The DEIR does recognize the rarity and loss of the pygmy cypress community (see Page VII.6.2-1 to -2). The DEIR notes that estimates of the extent of pygmy forest vary, and it quotes the DFMP statement that JDSF contains approximately 40% of the pygmy forest in the County, making it clear that this is a very important botanical resource that exists on the Forest.

The DEIR notes the variations in mapped extent of Pygmy Cypress. The CALVEG information used was dated 1991 to 1998 with a minimum mapping unit of 2.5 acres. The Gap Analysis data is dated 1998.

Under "data use" the Gap Analysis projects states:

"Appropriate Uses: The following is a general list of applications:

- .....
- Large area resource management planning
- Coarse-filter evaluation of potential impacts or benefits of major projects or plan initiatives on biodiversity, such as utility or transportation corridors, wilderness proposals, regional open space and recreation proposals, etc.
- .....
- Environmental impact assessment for large projects or military activities.

- ....

It is far easier to identify appropriate uses than inappropriate ones, however, there is a "fuzzy line" that is eventually crossed when the differences in resolution of the data, size of geographic area being analyzed, and precision of the answer required for the question are no longer compatible.

- Use of the data to map small areas (less than thousands of hectares) typically requiring mapping resolution at 1:24,000 scale and using aerial photographs or ground surveys.
- ....
- Determining abundance, health, or condition of any feature.
- Establishing a measure of accuracy of any other data by comparison with GAP data."

Based on the qualifiers included in the cautions section, using the Gap data to verify the CALVEG Data may not be appropriate. The Gap Analysis data show approximately 500 acres total in state ownership that would include both JDSF and State Parks. This number is smaller than the JDSF acreage alone (619 acres).

The DEIR discussion of the extent of pygmy forest on and outside JDSF appropriately notes the several estimates of its extent. This comment provides no new information that would identify a need to alter the DEIR or RDEIR.

Response to Comment 15
The Board finds the premise that the DEIR has "misrepresented basic background information" to not be valid. CAL FIRE has accepted DFG's statement that "Northern Bishop Pine Forest," though designated in Monterey County (CNDDB), is a valid designation in Mendocino County. The pygmy area reference cited by CNPS may not be valid for application at the scale it was cited.

Response to Comments 16-17
The paragraph (page VII.6.2-16) as a whole provides CNPS with recognition for its role in plant conservation and notes that coordination with CNDDB (DFG) occurs. Underlining has been added to the relevant text.

> CNPS listed rare plants have not been through the formal public review process to qualify as listed or candidate species under the federal or State ESA. The CNPS lists are developed through a formal review process involving a scientific advisory committee composed of noted academic, professional, and amateur botanists across the state. The scientific advisory committee reviews the best available data to aid in compilation of rare, endangered, threatened, and uncommon plant lists. <u>The review process includes close consultation with CNDDB.</u> CDFG currently accepts the premise that placement of plants on CNPS lists 1A, 1B and 2 provides a fair argument that they qualify as rare, endangered, or threatened under Section 15380(d) of CEQA.

Response to Comment 18
This section will be modified. Inclusion of this section without notes on the Weburg case represents an artifact of editing, not a decision by CAL FIRE to rely on this approach for protection of rare plants. Because NPPA Section 1913(c) may now be confusing; this section will be removed from the document. CAL FIRE will continue to follow relevant laws and regulations, recognizing legal judgments. The Board regrets any misunderstanding that resulted from this section.

Response to Comment 19
This section references terms used in the DFMP. The section lists among the "Goals and Objectives" some "Specific Management Actions" for pygmy forest. This language in the DEIR was used precisely to reflect language in the DFMP. The rarity of the forest is addressed in detail in the Regional Setting section. For brevity, the status of a resource is not always included every time there is a reference to that resource.

Response to Comments 20, 21
The adoption of a Management Plan by the Board is a "project" subject to CEQA; as such the Board is required to prepare a draft EIR and to certify a final EIR prior to the adoption of the Plan. The EIR is intended to identify the environmental impacts associated with implementing the Plan and providing measures to avoid or mitigate those impacts when they are found to be significant. The necessary mitigations identified by the Board have been incorporated into the Plan prior to adoption.

The Executive Summary (Section I) explains the relationship to the Draft Forest Management Plan (DFMP). The Draft Forest Management Plan dated May 2002, is one of the seven alternatives analyzed in the DEIR. The complete DFMP has been available on the Board of Forestry and Fire Protection's website throughout the entire CEQA process for the DEIR and was provided free of charge to the public on a CD that also contained the DEIR.

The most important elements of the DFMP for providing a full understanding of Alternative C1 and Alternative G—including anticipated management actions and included measures to protect and enhance the environment—are contained in the DEIR. Thus, while direct referral to the DFMP may help to improve the reader's ability to comprehend the DEIR or RDEIR, it is not essential.

The CEQA process and Board of Forestry decision-making process, including the DEIR and RDEIR, and including public comments such as those of CNPS, are the critical mechanisms through which the DFMP has been revised, resulting in the current ADFFMP. The ADFFMP has been made available to the public in advance of the Board's consideration of certifying the EIR and consideration of approving the ADFFMP as the Final Management Plan.

See also the above response to Comments 1 and 2.

Response to Comments 22-25
The section will be modified to state:

> **Habitat Management Practices: The concept of conducting control burns in the pygmy forest originated some years ago as an idea to benefit the Lotis blue butterfly and a host species coast hosackia (*Lotus formosissimus)*. Currently it is understood that other herbaceous members of the pea family may be hosts for the butterfly and that host plant habitat is not limited to pygmy forest. The concept of manipulating the rare pygmy forest for the possible benefit of the Lotis blue butterfly is not supported at this time. Local Botanists have supported the concept of carefully reintroducing fire into pygmy forest areas on JDSF. CAL FIRE recognizes that any proposal would be; research focused on improving understanding of the pygmy forest, limited in scope, based on sound ecological and botanical knowledge, supported by experts in the field, undergo appropriate CEQA analysis, and include appropriate survey, study, and monitoring.**

The following will be deleted:

> **Limited removal of species in the pygmy cypress forest may occur as a result of habitat development projects for the Lotis blue butterfly. Prior to habitat development projects, rare plant surveys will be conducted according to accepted survey guidelines (see previous section) to address sensitive plant resources. A qualified botanist will assess the appropriateness of removal of any sensitive plant species in relationship to fostering habitat for the growth of the butterfly's host species, Harlequin lotus (*Lotus formosissimus)*. Effectiveness monitoring will be conducted for any habitat management practice involving removal of plant species in the pygmy forest to assess the response of the forest to habitat alteration.**

The FEIR Errata section will modify the wildlife section to incorporate changes that reflect the other potential hosts and habitat for Lotis blue butterfly.

Response to Comments 26, 27

The DEIR recognizes that invasive weeds are frequently found on JDSF. It has taken decades for some of the species to become widely established. Like most lands in this area, jubata grass, brooms and Himalayan berry are well established. Given the large scale on which they exist, management is challenging. Integrated Weed Management (IWM) focuses first on managing new small infestations to prevent their spread. IWM is JDSF's adoption of Integrated Pest Management principles, focused on invasive weed management for the forest. The next priority for JDSF IWM is "controlling existing infestations that to minimize conflicts with important management objectives and maintain natural ecosystem processes". This was made more explicit by including Additional Management Measure 1 in the DEIR**:** Protection of rare plants (candidate, sensitive, or special status species) from invasive plants will be a high priority for Integrated Weed Management activities (see DEIR p. VII.6.2-16**)**.

In the 1990s large-scale attempts to control the broadly distributed invasive weeds generated public controversy, which in turn precipitated a steep decline in herbicide use at JDSF. JDSF will need to use an adaptive management approach with IWM to address the wide spread invasive weeds like jubata grass, brooms and Himalayan berry. The IWM approach detailed in the DFMP includes:

> IWM emphasizes control of the environmental conditions that cause or promote weed infestations. IWM includes direct suppression of existing weeds as well as modifying environmental conditions to reduce their suitability for weeds by encouraging the weeds' natural enemies, or increasing competition for the scarce resources they require.

IWM's focus on managing for the environmental conditions that limit invasive weed's habitat is an principle that can be applied for wide spread invasive weeds. For example, the WLPZ protection measures for Class I streams call for 85% overstory canopy cover in the inner 75 feet and 70% in the next 125 feet will make these areas less suitable for Himalayan berry. Other adaptive management strategies can be used to avoid expanding invasive weed populations along roads and in recently disturbed areas such as harvest units. The DFMP includes continued support for biocontrol research, as this technique has utility for wide spread invasive weed species.

Response to Comment 28

The DEIR recognizes and addresses the need to carefully target herbicide applications to avoid impacts to desirable native plant species. In addition, the ADFFMP commits to survey and protection of sensitive species in relationship to management activity, including timber harvest planning. This protection would extend to the consideration, planning, and application of herbicides following completion of active timber operations, so that sensitive native species are protected. Given the limited and cautious use of herbicides proposed by JDSF, no significant negative effects to rare or listed plants are anticipated.

CAL FIRE's enforcement of the Forest Practice Act and the rules of the Board of Forestry and Fire Protection regarding THP review, approval and monitoring is a separate process from the development of the DEIR and subsequent development and implementation of THPs on Demonstration State Forest timberlands. However, both processes require compliance with CEQA and other applicable laws and regulations. In reviewing THPs prior to approval, CAL FIRE must consider the potential effects of the project as a whole. Where herbicide use is considered likely to facilitate implementation of a THP, regardless of whether the use is pre-harvest or post-harvest, the THP must address the likely application and the potential environmental effects of herbicide use, including the effects to listed plant species.

Response to Comment 29
Regarding cumulative effects, the Hazards section found no significant effect relating to herbicides (VII.8-21) and noted that effects of such use relating to THPs are generally not cumulative impacts because uses are separated in time and distance, thus effects rarely reinforce or interact with each other. The Cumulative effects section page VIII-61 includes cumulative effects within a regional context. Potential cumulative effects of herbicide use have been addressed in the DEIR and RDEIR.

Additionally, we note that Alternative G and the ADFFMP include additional restrictions on the use of herbicides as compared to the DFMP.

Also, see responses to Comments 3 and 4-6.

Response to Comments 30, 31
The DEIR has been modified to clarify the accepted protocol (see the FEIR Errata or the ADFFMP):

> **For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the <u>Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities</u> (CDFG 2000). On smaller scale projects, the survey effort will be appropriate for the level of CEQA analysis and the risk of impact to rare plants.**

The following text will be deleted:

> **Survey designs will be based on the concepts contained in the CG Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (CDFG, 2000). Surveys conducted as part of THP development will follow the practices commonly accepted by CAL FIRE and CDFG for THP review. Surveys for other types of projects will recognize the specific features of those projects. [For example, road surface maintenance and roadside brushing are ongoing activities that create repeated periodic disturbances, pre-commercial thinning typically occurs a few years following the more substantial disturbance of a commercial harvest, and shaded fuel break construction targets ground cover vegetation].**

This change clarifies that the protocol used is contained in the CDFG Guidelines. It is unclear what the commenter means by “possibly influenced by project timetables can provide sufficient data to inform project planning?”

The following is a response to a CDFG concern that surveys at JDSF could possibly be conducted after the THP review process resulting in DFG’s inability review, comment and consult on the potential to impact a sensitive species in this situation. CAL FIRE response was:

> For timber harvesting projects, CAL FIRE intends to conduct surveys and include resulting reports and material during the THP preparation process so that they can be reviewed by CDFG and other agencies. If for some reason surveys are delayed past the THP review period, CAL FIRE will provide the surveys to CDFG for review and comment. For non-THP projects for which surveys are conducted, CAL FIRE will comply with the consultation requirements per CEQA.

In addition to project-level surveys, the ADFFMP commits JDSF to conduct periodic floristic survey in some areas to gain a better understanding of the relationships between the local plants, their distribution, and their habitats.

Response to Comment 32
Pre-survey scoping is included to help make JDSF aware of most recent information on rare plants and habitat relationships. The CDFG Guidelines provide for surveys that are floristic in nature. This ensures there is "base line data" for plant occurrence in the areas affected by the proposed harvests or other actions. In the past CAL FIRE has conducted plant surveys in non-timber areas that are unique (example Bob Woods Meadow). These efforts can incrementally build the base line plant data for JDSF.

Response to Comment 33
Through the application of the CDFG Guidelines to project botanical surveys, the surveys will not be "low-intensity, non-floristic or off-season".

Response to Comment 34, 35
The DFMP states:

> Upon determination that a proposed action is likely to result in a significant adverse effect, mitigation measures proposed to substantially lessen or avoid the impact will be included in project-associated documentation.

This will occur at the project level during the THP or other CEQA process, and will include constitution with CDFG and opportunities for the CNPS and the public to evaluate the measures.

Both species-specific and site-specific mitigation measures should be based on state of the art knowledge of plant biology, the specific situation at a given occurrence, and the types of effects anticipated. Fixed measures may be found to be inadequate or even counter productive in specific situations. Project-specific mitigation measures for individual species can use the most recent information on rare plants to ensure mitigation and protection measures are effective.

Response to Comment 36
The protection of rare plants and their habitat, when found within THP areas, has been effective. This is due to the fact that the Department has conducted survey for sensitive plants, and when found, has protected the plants and their habitat through avoidance or maintenance of conditions favorable to the species. The level of survey and protection provided to rare plants and their habitats has increased substantially in recent years. The analysis and mitigation provided by the EIR and management planning process is expected to increase the protection level for sensitive plants and their habitats.

Response to Comment 37
The Department does not anticipate failure to protect sensitive plants and their habitats. However, through the use of survey, monitoring, and adaptive management, the risk of damage to sensitive plants will be reduced.

Response to Comment 38
Under Alternative C1 and C2 the DFMP provides for no timber harvest in the most significant "hot spot", the pygmy forest. These protections also are extended under Alternative G and the ADFFMP. Alternative G and the ADFFMP place one-third of the forest in designations for the development of late seral or older forest structure conditions. Additionally, the existing old growth groves (about 650 acres) would be protected from harvest.

These are protections that are being provided at the programmatic level. Specific research projects could result in similar or more stringent protections being applied to designated area as a part of the project. This is a typical research approach that includes both treated areas and untreated controls.

For example, research that would examine the relationship between stand age and plant associations or series and specific rare plants would certainly be of value for understanding rare plant distribution.

Research to improve understanding of rare plants associated with varying level of disturbance would be of value as well.

Response to Comment 39, 40
The DEIR, as modified, contains botanical inventory requirements, requires the CDFG survey protocols for THPs and other large projects, includes both general monitoring and the recognition that specific, targeted mitigation measures will be developed at a the project level. Regarding Impact 1 and 3 the logic behind the "less than significant" impacts is based on 17 paragraphs. The provision listed in the comment letter is only small part of the measures included and is not "a simple tally of plants"

The CDFG protocol does not require "scientists" per se, but does require the person conducting the survey, sometimes referred to as a Botanical Consultant, to have specific experience, knowledge and familiarities.

Monitoring is discussed in the DEIR, DFMP, and proposed ADFFMP. Monitoring rare plants for threats of invasive species is included as Additional Management Measure 1 in DEIR section 6.2.8 and carried forward to the ADFFMP. The proposed ADFFMP includes a Monitoring and Adaptive management section (Chapter 5). Plant resources are included. Additional monitoring can be developed for site-specific projects.

Response to Comment 41, 42
Under Impact 3, the statement about "subject to management activities" focuses on both on-site and on nearby locations where activities could impact rare plants or communities. The DFMP states "JDSF will maintain the current distribution and species composition of this plant community and protect it from harmful human disturbance, while continuing to allow recreational activities." Research or monitoring on pygmy forest may occur in the absence of "management" activities.

Response to Comments 43, 44
The DEIR notes some of the impacts and vulnerabilities described by the commenter under Impact 6, Functional Plant Groups, The Pygmy Forest and Closed Cone Forest/ Openings Functional Group. These impacts occur on other pygmy forest areas beyond JDSF as well. Incidental protection refers to the fact individual rare plants like Bolander's pine will be protected as a consequence of its occurrence in Pygmy forest.

JDSF does have ongoing protection activities for the pygmy forest area. These include:

- barricading or gating the access points from neighboring private lands or public roads;
- patrolling and enforcing the vehicle trespass laws;
- garbage removal;
- educating the adjacent landowners as to state forest ownership;
- and educating the public-at-large about the value, sensitivity and need to protect the pygmy forest.

Response to Comments 45, 46
The EIR is limited to considering the environmental impacts that have a potential to occur, directly or indirectly, as a result of implementing the project (the Plan). As such, a project which does not propose activities that could impact a particular resource (in this case the Pygmy) is going to be found to not have an impact and therefore no mitigation is required. Projects and their associated EIRs are under no obligation to mitigate existing impacts where the project does not contribute to that impact directly or cumulatively.

This section of the DEIR explains how the road management activities would benefit the pygmy forest and reduce impacts of erosion and altered hydrology. Exact actions will be dependent on the site-specific analysis and the road management plan. The CEQA framework here is tiering, not piecemealing. Project-level activities are tiered to the programmatic EIR.

Response to Comment 47
As indicated in the FEIR Errata section, this language has been modified to reflect the fact about the Coastal Zone.

Response to Comment 48
CAL FIRE recognizes that pygmy forest is impacted by illegal OHV use both on JDSF and beyond. CAL FIRE actively works to restrict illegal actions and protect the pygmy forest resources. The road management plan will help with some of this problem. The DEIR documents the problems with enforcement and protection. Transfer of the ownership of pygmy forest lands to another organization is beyond the scope of the DEIR.

Response to Comment 49
The California Code of Regulations has specific land protection rules already in place. Violation of State Forest regulations is a misdemeanor. JDSF law enforcement officers work with local District Attorney to prosecute offenders, and they maintain a comprehensive history of law enforcement actions taken against individuals. However, any money recovered is not returned to the unit of origin, but rather to the State of California General Fund. It would be a conflict of interest if an agency cited in order to provide a revenue source. The State Forest could advertise violations as a potential deterrent, and this will be considered.

Response to Comments 50, 51
Please see response to Comments 22-25.

Response to Comment 52
Please see response to Comments 30-31.

Response to Comment 53
This is an operational not an environmental question. CAL FIRE's commitment regarding DFG protocol surveys will entail extensive training for existing staff and or increased reliance on botanical consultants in the short term. JDSF management has expressed hope that future staff additions would include expertise in botany and wildlife biology. A wildlife biologist was recently added to the Forest's staff.

Response to Comment 54
The relationship between historic expenses and revenues is not an environmental issue. CAL FIRE has committed to operate in compliance with the provisions in the DFMP/ADFFMP. Allocation of revenues is not a function of the Management Plan, it is a function of Legislative authority and direction though the state budget process.

Legislative action taken in 2006 limited the uses of State Forest revenues, which are deposited into the Forest Resources Improvement Fund (FRIF). Revenues in FRIF may be allocated only for supporting the State Forests. Excess revenues beyond the needs of the State Forests will be transferred to the General Fund. As the State's largest Demonstration State Forest, JDSF harvesting revenues are critical to funding management at JDSF.

Response to Comment 55
JDSF has a long history of supporting high quality research that leads to publications in peer-reviewed journals. The long-standing research on the Caspar Creek watershed is recognized world-wide and well documented (including datasets) on the website of the USDA Forest Service Pacific Southwest Experiment Station: http://www.fs.fed.us/psw/topics/water/caspar/.

CAL FIRE has developed its own website compilation of JDSF publications and data sets. This resource will soon be integrated into the Department's main website.

The recently published Proceedings of the 2004 Redwood Region Forest Science Symposium provides an excellent example of the high volume and wide range of research that is conducted on JDSF (see http://www.treesearch.fs.fed.us/pubs/27742).

In developing Alternative G and the ADFFMP, the Board provided clear direction that its goal for the management of JDSF is to provide a world class forest research and demonstration program. The Department shares this commitment. The ADFFMP's number 1 goal for JDSF is:

> Goal #1 - RESEARCH & DEMONSTRATION: Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.

See also the response to Comments 56-63.

Response to Comment 56-63
Appendix IV of the DFMP or Appendix III of the ADFFMP describes proposed research and demonstration priorities for JDSF. Many of the CNPS research suggestions would have value and would fall under the identified priorities.

Response to Comment 57
JDSF staff has begun working with local academic and agency botanists to develop research projects in the harvested areas with *Astragalus agnicidus. Sidalcea malachroides* has yet to be found at JDSF, but information on that species would be of value as well.

Response to Comment 58
This topic would be of interest and is congruent with one of the ADFFMP's objectives under Goal #1:

> Increase the use of JDSF for research that tests and demonstrates the short-term and long-term costs and effectiveness of various forest resource protection measures.

Response to Comment 59
JDSF is cooperating with U.C. Berkeley researches looking at ecological effects of *Phytopthora ramorum*. Research on this pathogen has been ongoing for several years at Soquel Demonstration State Forest, where the pathogen is present. The research at JDSF will not introduce the pathogen, but will examine measures to increase forest resistance to the pathogen with other areas with active infections.

The assumption that tan-oak or other species will become endangered or listed as a result of this disease is speculative at this point. Rizzo and Garbeletto (2003) note that mortality in 2000-01 reached 22% for tan-oak . "The distribution of the pathogen across the landscape has not been well quantified but is clearly patchy. Even within the areas with the greatest amount of tree mortality, there are large areas with susceptible host plants that are apparently free of disease." No doubt if this pathogen becomes more established, many ecological changes will take place, however extirpation of tanoak does not appear likely based on current observations.

Response to Comment 60
Research on mechanical and "alternative" treatments to invasive weeds have been conducted on JDSF in the past. JDSF will continue to use knowledge gleaned from these and other sources as well as an adaptive management approach to IWM. JDSF remains interested in any "alternative" control research proposals for control methods at JDSF.

Response to Comment 63
Pease see response 22-25 for burning in the Pygmy.

Response to Comment 64
The specific list of research projects would be dynamic and dependent on Advisory Committees recommendations, interest of potential researchers, fund types available, and current issues.

Response to Comment 65, 66
Although the regeneration and growth of conifers is relatively well understood in even-age silviculture, other species or ecosystem components are not. Some questions would require a landscape or sub-watershed level approach such as mobile wildlife species or plants with a distribution limited to specific forest conditions. See also General Response 10.

Response to Comments 67, 68
In compliance with CEQA the DEIR and RDEIR focus their analysis on activities that have a potential to impact the environment. The target audience of the demonstration that occurs on the forest is not a factor likely to result in differences in the impacts that may occur. Also, the relevance of the demonstration that occurs at the forest for industrial or small landowners is unlikely to result in differing environmental impacts. As such the EIR does not address such questions.

Please see the following sections of the ADFFMP for information on JDSF management direction and priorities on these issues:

- Executive Summary
- Chapter I Introduction
- Chapter 4 Research and Demonstration
- Appendix III Research and Demonstration Program.

Response to Comment 69
The Board agrees with this recommendation.

Response to Comment 70
The cited previous EIR and management plan were prepared in good faith, involving a significant level of professional effort. Both of these documents were subjected to public and agency review, and the management plan was ultimately approved by the Board of Forestry. The adequacy of the EIR was eventually challenged, and the Superior Court found that some elements of the analysis were flawed.

In response to this earlier outcome, the Board made significant a effort to develop a new EIR and the proposed ADFFMP.

<u>References</u>

Rizzo, D. and & M. Garbelotto, 2003. Sudden oak death; endangering California and Oregon forest ecosystems. Front Ecol Environ 1(5) 197-204

P-200

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

Feb. 18, 2006

Dear Mr. Jameson,

Please convey to the Board of Forestry
1 our strong disapproval of any clearcutting in
the Jackson State Demonstration Forest.

Having hiked extensively in the Jackson
State Forest last May, we were captivated by
its lush grandeur. Many others were in
the forest at the time, judging from the number
2 of cars in the entrance parking lot. Obviously,
it is a major recreational destination.
Clearcutting would be incompatible with
this recreational use.

We urge the Board of Forestry to practice
good stewardship of the forest, eliminating
the possibility of clear cutting.

Thank you,
Bonnie Biddison
Jeremy Quigneau

Mailed Letter P-200

Response to Comment 1
Opposition to clearcutting noted. Please see General Response 10. The Board will finalize a plan that includes reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, and an increase in the area dedicated to development of late-seral forest conditions.

Response to Comment 2
See General Response 14. At the time of purchase most of the land that is now JDSF was in a cut-over condition, with relatively low stocking. The “lush grandeur” is the result of 50 years management aimed primarily at demonstrating economic and sustainable timber practices. That management has included the use of clearcutting as a silvicultural tool. As stated in the General Response 10 referenced above, there are important reasons for retaining clearcutting and even-aged management as part of the management plan. The comment that JDSF is obviously a major recreation destination supports the Board’s contention that timber management and recreation are compatible uses of JDSF.

P210

RECEIVED
FEB 27 2006
BOARD OF FORESTRY

February 24, 2006

Dear Board of Forestry & Fire Protection Members,

Re: Jackson State Demonstration Forest Management Plan Draft Environmental Impact Report (SCH #200422025):

As a neighbor of JSDF for over 30 years, I am aware of the need to balance forest productivity with sustainability. Besides board feet of timber and wood-based forest products, the public
1 value of a wisely managed forest can be counted in its support of the essential cycles of water, carbon, and oxygen
2 exchange. Shade, which protects understory flora and fauna of the understory and the waterways, is also a forest resource, as
3 is the nutrient-exchanging mycorrhizal mass underground. JDSF in
4 its wholeness also stands as a spiritual, recreational, and visitor-serving resource.

I urge you to prioritize these values, and to manage JSDF
5 to preserve them. Please be guided by Alternative F, per State Senator Wesley Chesbro's 2005 legislation, which prohibits
6,7 clearcutting and pesticide application, and supports sustainable
8,9 harvesting, sparing of large, old seed trees, stream protection,
10 and recreational use.

Sincerely,

Liz Helenchild

Liz Helenchild
Box 1276
Mendocino CA 95460
latenightliz@hotmail.com

Mailed Letter P-210

Response to Comment 1
The ADFFMP represents significant advancement in the management practices aimed at protection and restoration of environmental resources. One of the primary goals of the JDSF Management Plan is to achieve net improvements of conditions for all natural resources over time in comparison to existing conditions. Implementation of the plan is not expected to negatively affect the water, carbon and oxygen exchange cycles.

Response to Comment 2
Over two thirds of the forest will be managed with either uneven-aged, no harvest, or late seral development prescriptions. Although small openings in the canopy will occur, this type of management will retain much of the overstory, thereby providing shade for the understory flora and fauna. The remaining even-aged management areas will also provide substantial canopy cover except early in stand regeneration. The DEIR Figure VII.6.2.2 shows canopy cover increasing in the JDSF Analysis Area. For information regarding canopy cover relating to watercourses please see General Response 11.

Response to Comment 3
The Board recognizes the importance of mycorrhizal organisms for a healthy forest system. The DEIR and REIR include analysis of the plants which mycorrhizal organisms are linked, finding no significant impacts of the alternatives incorporated in the plan. The DEIR VII.6.2-1 notes that because fungi have similar mobility and dispersal attributes much of the analysis will be pertinent to it. Also please see the Response to Department of Fish and Game Comments for a discussion of plants dependent on mycorrhizal fungi. While mycorrhizae were not subjects to specific analysis in the DEIR or REIR, implementation of the ADFFMP is not expected to negatively impact mycorrhizae.

Response to Comment 4
The Board recognizes that JDSF is utilized as a visitor resource for recreation and spiritual reasons. While managing for these resources will not be adopted as the primary goal for JDSF, the ADFFMP, with its increased levels of resource protection, is not expected to negatively impact these compatible uses of the Forest.

Response to Comment 5
Please see General Response 2. Support of Alternative F noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative F. This includes a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 6
See General Response 10.

Response to Comment 7
See General Response 7.

Response to Comment 8
The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products. The ADFFMP calls for harvesting approximately 20 to 25 million board feet annually which is well below current growth. By setting harvest levels well below growth, the result will be an increasing inventory of larger, older trees on the Forest.

Response to Comment 9
See General Response 8 and 9.

Response to Comment 10
See General Response 11.

Response to Comment 11
See General Response 14.

P 211

Save-the-Redwoods League

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February 28, 2006

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OBJECTIVES
1. *To rescue* from destruction representative areas of our primeval forests.
2. *To cooperate* with the California State Park Commission, the National Park Service, and other agencies, in establishing Redwood parks and other parks and reservations.
3. *To Purchase* Redwood groves by private subscription.
4. *To foster* and encourage a better and more general understanding of the value of the primeval Redwood or Sequoia and other forests of America as natural objects of extraordinary interest to present and future generations.
5. *To support* reforestation and conservation of our forest areas.

Mr. George Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460
Email: board.public.comments@fire.ca.gov

Dear Mr. Gentry:

Thank you for the opportunity to comment on the administrative draft Environmental Impact Report for the Jackson Demonstration State Forest ("ADEIR"). We appreciate the Board extending the comment period for what is a complex and lengthy document and set of analyses. Our comments build upon our scoping letter of March 18, 2004.

1. <u>Regional Importance of Jackson Demonstration State Forest</u>

While the plan and ADEIR describes in depth the regional setting for JDSF, we believe it understates its actual and potential future contribution to the redwood forests in the central region of the redwood (broadly Mendocino and Sonoma counties) particularly with respect to old-growth forest. In section V (page 11) the ADEIR compares the 459 acres of old-growth redwood forest at JDSF to the 39,000-acres in Redwood National and State Parks – more than 125 miles to the north in the northern redwood region. A central League objective is to protect "representative areas of our primeval forest," by protecting representative stands of redwood throughout its natural range: JDSF plays a critical role in the central region of the redwoods, just as RNSP does in the northern region. 1

In reviewing the ADEIR we **encourage the Board to compare JDSF to other redwood parks in the central redwood region.** By way of comparison, the League estimates there is less than 4,000 acres of protected old-growth redwood forest in Mendocino and Sonoma County – most in small groves of less than 100 acres in size, and all of these in groves of less than 500 acres in size. The importance of old-growth protection and restoration strategies at JDSF cannot be over-estimated. 2

[continued]

This is recycled paper

Mr George Gentry
February 28, 2006
Page 2

2. Protection of old-growth stands and individual legacy old-growth trees

We appreciate the Board setting clear guidelines for protecting remaining old-growth stands, and would appreciate additional clarity on identification and protection of individual legacy old-growth trees. **In making decisions on individual legacy trees, we urge the Board to adopt clear guidelines that afford primacy to their protection during all harvesting activities.** For instance, an old-growth tree should not be felled because it happens to be in the way of a transitory cable yarding corridor. 3

3. Protection of second-growth stands that buffer, connect, or have the potential to become future old forest stands

The proposed project (Alternative C1) designates 20% of the forest to late seral development. Of this, only 7% [2,224 acres in the Mendocino Woodlands STA, and 1,239 acres buffering three old-growth stands] falls outside watercourse and lake protection zones ("WLPZ") and will over time be allowed to develop into large contiguous blocks of old forest habitat. According to the silviculture allocation map [Figure Z], several of these contiguous stands will be further affected by even-aged management in the short to medium term. These actions will act to further reduce the effective size of the late seral development areas. 4

By way of comparison, we understand that the Garcia River Forest project (Mendocino County) and the Arcata Community Forest (Humboldt County) have targeted 35% of their land base as ecological reserves – areas of high ecological value that support large-scale ecological processes and where management will only be used in pursuit of ecological objectives. 5

We urge the Board to give careful consideration to alternatives that protect all existing old-growth stands while seeking to restore contiguous blocks of old forest as part of a network of ecological reserves designed to capture the biological diversity at JDSF. When considered in relationship to adjacent State Park units, there is a valuable opportunity to restore a contiguous block of old growth and old forest habitat at the heart of the central region of the redwoods. Given time, this could anchor the central region of the redwoods, much as the 39,000 acres of old-growth redwoods does in the area around Redwood National and State Parks. By building from a well-designed network of ecological reserves, the Board will ensure that timber management and public use at JDSF will be truly sustainable for the long-term. 6

In conclusion, we encourage the Board to select an alternative that protects all remaining old-growth groves, buffers and connects these groves as part of a network of protected reserves, and uses forest restoration to promote development of old-forest 7

Mr George Gentry
February 28, 2006
Page 3

characteristics. It appears that elements of Alternatives E (late seral emphasis) and Alternative F (SB 1648 and Sierra Club) do this most effectively.

8 By selecting such an alternative, the Board will ensure Jackson Demonstration State Forest plays a leadership role in redwood forest science by contributing to our understanding of both forest restoration, and timber production that works in harmony with the natural processes that sustain the forest. The League stands ready to answer any questions the Board may have as it considers the future management of JDSF.

Sincerely,

Katherine Anderton
Executive Director

KA/rkh
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Mailed Letter P-211

Response to Comment 1
The intent of the DEIR in comparing the amount of old growth redwood forest on Jackson Demonstration State Forest (JDSF) to Redwood National Park was not to discount the importance of JDSF's old growth, but to indicate its significance as a relatively small remnant. The importance of the remaining old growth on JDSF is recognized and addressed through the proposed Administrative Draft Final Forest Management Plan's (ADFFMP's) high level of protection provided to the remaining old growth groves, old growth aggregations, and individual trees with significant old growth characteristics (ADFFMP Chapter 3). The ADFFMP also provides for 694 acres of late seral buffers to be developed adjacent to several of the old growth groves. Further, most of the groves will be connected through the establishment of a 6,803-acre Older Forest Structure Zone (OFSZ) composed of old growth groves, late seral forest development areas, and older forest structure areas.

Response to Comment 2
The Recreation section (VII.14) of the DEIR provides detailed information on the redwood parks found throughout the species' range in California, from Del Norte County to Monterey County (see, e.g., Tables VII.14.1 and VII.14.2). As noted in the response to Comment 1, the proposed ADFFMP provides substantial protection to the remaining old growth on the Forest. Note that the ADFFMP establishes Forest Restoration as its number 2 goal (see ADFFMP Chapter 1), including the objective of increasing "the amount of older forest structure and late seral forest . . . ."

Response to Comment 3
The ADFFMP provides clear guidelines for protecting remaining old growth stands, aggregations, and individual trees (see ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure):

> Existing old growth groves will be retained, as will aggregations of old growth trees. Individual old growth trees found outside of stands or aggregations and exhibiting specified characteristics will be retained, with limited exceptions, such as where the tree presents a public safety issue or retention would result in the potential for greater long-term environmental damage . . . including but not limited to issues related to road and landing sites, soil instability, damage to aquatic resources, or cable yarding requirements.

Response to Comment 4
The ADFFMP differs substantially from Alternative C1 with respect to the amount of area designated for older forest. The ADFFMP provides for one-third of the Forest, or about 16,200 acres, to be managed for old growth, late seral development, and older forest structure. The majority of this area is outside of designated riparian late seral recruitment areas.

ADFFMP Map Figure 5 shows the layout of old growth groves, late seral development areas, older forest structure areas, areas designated for unevenaged management, and areas designated for either even or uneven aged management. The old growth groves, late seral development areas, and older forest structure areas are mostly surrounded by areas that will not receive evenaged management. Where adjacent areas are scheduled to receive evenaged management, the ADFFMP (Chapter 3) provides that a 200-foot un-evenaged buffer will be provided to protect the integrity of the three types of older forest areas.

Response to Comment 5
The Integrated Resource Management Plan for the Garcia River Forest (Conservation Foundation Fund 2006 at p. 41) confirms that 35 percent of the property will be managed as an "ecological reserve network." The JDSF ADFFMP calls for one third of the Forest to be managed for old growth, late seral development, and older forest structure. In the past year, the Conservation Fund acquired 11,600 acres in the Big River watershed adjacent to JDSF, to be managed similarly to their Garcia

River tract. Since JDSF has been harvested much less intensively than the Conservation Fund's Big River tract, JDSF lands are significantly further along the trajectory to the development of older forest characteristics.

We note also that the California Department of Parks and Recreation acquired 7,334 acres in the Big River a few years ago. Today, JDSF, the Conservation Fund's Big River tract, and the State Parklands adjacent to JDSF total approximately 70,000 contiguous acres, all being managed for conservation or restoration purposes. This large contiguous area provides a significant opportunity for the three major landowners to come together and discuss how their joint management can help to pursue conservation and restoration goals at a large landscape level. CAL FIRE is committed to holding such discussions.

Response to Comment 6
The Older Forest Structure Zone provided for in the ADFFMP, combined with the large, 3,700-acres of late seral development areas in the southwestern corner of JDSF and the 5,600 acres of late seral development areas in water course protection zones outside of these large areas will provide the large blocks and networks that the League is recommending here. As noted in the response to Comment 5, CAL FIRE is committed to discussing, with the Department of Parks and Recreation and the Conservation Fund, how our adjacent ownerships can be managed to pursue conservation and restoration goals at a large landscape level.

Response to Comment 7
The ADFFMP direction chosen by the Board protects all remaining old growth groves, buffers and connects most of these groves as a part of the Older Forest Structure Zone, and uses forest restoration processes to promote the development of old forest characteristics.

Response to Comment 8
The Board direction provided in the ADFFMP emphasizes the research and demonstration role of JDSF. The ADFFMP establishes its top four goals as:

1. Research & Demonstration
2. Forest Restoration
3. Watershed and Ecological Processes
4. Timber Management

P-212

SENT VIA EMAIL

March 1, 2006

Mr. George Gentry, Executive Officer
Board of Forestry and Fire Protection
P.O. Box 94426,
Sacramento, CA 94344

Dear Mr. Gentry:

As Registered Professional Foresters practicing regularly in Mendocino County, we have a keen interest in the management of Jackson Demonstration State Forest.

1 We are writing in support of Alternative "D" in the Jackson State Demonstration Forest Management Plan Draft Environmental Report. Our support of this alternative is based on the following:

2
- Alternative D represents not only the recommendations of the JDSF Advisory Committee, which included a number of highly-qualified foresters; its emphasis on uneven-aged management is supported by the residents of Mendocino County. This support is evidenced by resolutions passed by the Mendocino County Board of Supervisors and the Ft. Bragg City Council in support of Alternative D.

3
- A substantial volume of timber (25 million board feet) can be harvested on an annual basis under this alternative, and we believe it represents the best prospect for avoiding law suits that will delay timber production at JDSF and result in continued serious economic impacts to Mendocino County and the State.

4
- The establishment of an Advisory Committee should substantially help the widely-held public perception that JDSF is managed without seriously considering the concerns of residents of Mendocino County. Both the Arcata City Forest and the Soquel State Forest have advisory committees, and JDSF needs one as well. We should note, however, that although the recommendations of the committee should be carefully considered, it should clearly be advisory and not have the authority to approve or disapprove forest management practices.

5 ▪ Although clearcutting is prohibited under Alternative D, it is our recommendation that this silvicultural prescription be allowed to continue solely in the Caspar Creek Watershed and solely for the purpose of continuing the valuable scientific research that has been ongoing in this area.

6 ▪ Alternative D calls for the 2,500-acre Special Treatment Area surrounding the Woodlands to be transferred to State Parks. We recommend against this action. This area can be managed for late seral structure, provide for wildlife, watershed, and aesthetic values and also demonstrate how these values can be balanced with timber production.

7 Lastly, the use of herbicides for vegetative management and site preparation is prohibited in Alternative D – something that is strongly supported by many citizens of the County and some of us writing this letter. However, on this particular issue, we must state that there is no consensus amongst ourselves. Some of us see herbicide use as a valuable tool for rehabilitating former conifer stands that are dominated by hardwoods. Some of us oppose the use of herbicides for this purpose and see their value primarily in removing invasive species.

Thank you for the opportunity to comment.

Sincerely,

Craig Blencowe, RPF #2003

Linwood Gil, RPF #2491

Tom Kisliuk, RPF #2676

Roger Sternberg, RPF #2620

Thembi Borras, RPF #2700

Nichols Kent, RPF #2418

Darcie Mahoney, RPF #2397

Mailed Letter P-212

Response to Comment 1
Support for Alternative D noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including Alternative D. This includes accelerated implementation of the Road Management Plan, a reduction in the use of even-age management and clearcutting, a reduction in the planned timber harvest level, an increase in the area dedicated to development of late-seral forest conditions, an increase in resource protection and restoration measures, such as snag retention and LWD placement, and a management emphasis on research, demonstration and education.

Response to Comment 2
While the Board has carefully considered Alternative D and the wishes of the Mendocino County Supervisors and the Fort Bragg City Council, the management of JDSF is not based solely on their support. The DEIR analysis determined that some elements of Alternative D may be inconsistent with the current Public Resources Code, regulations, and Board policy that guide the management of JDSF (see Table VI.1). It strives to balance the concerns of all Californians while remaining consistent with the legislative mandate and Board policy for the state forest system. Over two thirds of the forest will be allocated to uneven-aged management. Because even aged silviculture remains common in the redwood region, limited JDSF areas will be available for research and demonstration of this technique.

Response to Comment 3
The timber harvest level under the ADFFMP is based on providing a varied landscape with a set of forest structures designed to support a viable research and demonstration program rather than a goal of a particular level of production. This analysis has resulted in a planned average annual harvest level of approximately 20 to 25 million board feet which is well below current growth. The Board recognizes the negative economic impacts that the “shut down of operations” has had on the State and Mendocino County. The Board agrees that it would be highly beneficial for the State Forest to resume management activities, so the Board is working actively to certify the DEIR and approve a management plan.

Response to Comment 4
Please see General Response 18 regarding an advisory body.

Response to Comment 5
See General Response 10.

Response to Comment 6
Transferring the special treatment area surrounding the Woodlands to State Parks is beyond the scope of the plan. The existing legislation precludes the conversion of the any of the state forests into parks. The Plan designates the Woodlands Special Treatment Area and limits management to promoting late – successional forest conditions, maintaining aesthetic qualities and limiting impacts to the operations of Mendocino Woodlands.

Response to Comment 7
See General Response 7.

P-213

Peter F. Ribar
P.O. Box 322
Fort Bragg, CA 95437

February 29, 2006

George D. Gentry
Executive Officer
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94233-2460

Re: Draft Environmental Impact Report for the Jackson Demonstration State Forest Proposed Management Plan.

While I support Alternative B, which appears to most clearly achieve the legislative intent and Board Policy, I could support Alternative CI with the following change:

1 Eliminate the restrictions applied to the use of the clearcutting method within the even-aged allocation. As a long-practicing registered professional forester, I have always felt it is imperative to have the use of all silvicultural methods at my professional discretion. The clearcutting silvicultural method is currently being applied on a majority of industrial forest lands in the Redwood Region as a highly successful regeneration method. To artificially limit a Board of Forestry approved silvicultural system to purely "research purposes" or only to stands that are "very difficult to regenerate by other even-aged silvicultural systems" is unnecessarily restrictive. Past use of the clearcutting silvicultural method on Jackson Demonstration State Forest, in conjunction with prompt reforestation and appropriate use of other silvicultural treatments, has resulted in some of the best stocked conifer plantations in the region. The current even-aged stand structure and high stocking levels of the entire west end of the forest was essentially created by historic clearcutting. Implementation of clearcutting as a silvicultural method on JDSF in the past several decades has worked to produce equally well-stocked stands. Continuation of these successful practices seems intuitive. Contrast this outcome with the development and species composition of regeneration obtained by harvesting using individual tree selection (except stands with 75%+ redwood stocking) where the longer term growth appears problematic. It seems reasonable that 15% of the forest (approximately one-half of the even age allocation) should be used to maximize timber productivity through the application of clearcutting. Many other resource considerations are already being accommodated by 64% of the forest land base proposed for allocation to uneven-aged structure conditions (including late seral and late seral development). Current clearcut practices also generally incorporate some level of green-tree structural retention of value to wildlife within or adjacent to clearcut harvests. Also note that approximately one-half of the even-age acreage is allocated to medium to long rotations (90-150 years).

2 Therefore, commensurate with the above recommendation I suggest that the acreage allocated to other even-aged methods (primarily Shelterwood) and the Variable Retention Special Prescription should be not exceed 14% of the even-aged allocation. This would continue to allow an adequate area to demonstrate and/or flexibility to apply these methods based on site-specific conditions.

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the Jackson Demonstration State Forest Proposed Management Plan.

Sincerely,

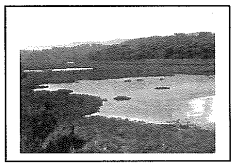
Peter F. Ribar

Peter F. Ribar
RPF #1766

Mailed Letter P-213

Response to Comment 1
Support for Alternative B is noted. Alternative G was developed by blending the elements and management strategies of several Alternatives, including B. The plan will emphasize the research and demonstration mission of the state forest. The Board supports a balanced, multiple use concept that provides high levels of resource protection and sustained production of high quality timber products

Response to Comment 2
The allocation of various management strategies is based primarily on long term goals for desired stand structures on the forest (see General Response 2). Due in part to strong public opposition to the use of clearcutting as a management tool on this publicly owned forest, the allocation of this silvicultural method has been restricted to that needed to retain a viable research and demonstration program, as well as for those areas with specific regeneration concerns (see General Response 10).



Peter R. Baye, Ph.D.
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The California Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

February 28, 2006

SUBJECT: Comments on the Environmental Impact Report for the Comprehensive Update to the Jackson Demonstration State Forest Draft Management Plan, December 2005.

To the Board of Forestry:

Please accept the following comments on the 2005 Draft Environmental Impact Report (DEIR) on the Jackson Demonstration Forest Draft Management Plan. I reviewed the administrative draft EIR supplied by Vince Taylor of the Dharma Cloud Foundation, and supplemented the ADEIR review with modifications from the DEIR. These comments were prepared on behalf of the Dharma Cloud Foundation, but the content of my comments reflect my independent professional opinion as an environmental professional.

My qualifications to comment are based on my scientific, regulatory, and environmental background. I am a professional plant ecologist and botanist (Ph.D., University of Western Ontario, Canada), specializing in the study and conservation of terrestrial and wetland coastal plant species, communities, and their ecosystems, for over 27 years. My professional experience includes preparation, review, and management of joint NEPA/CEQA documents (EIR/S) for U.S. Army Corps of Engineers (San Francisco District, regulatory staff, 7 years), California Coastal Conservancy, and California Department of Water Resources; and preparation of Endangered Species Act recovery plans and Section 7 consultations and for the U.S. Fish and Wildlife Service (Sacramento Office, staff biologist, 5 years).

The primary focus of these comments concerns the EIR's treatment of (1) impact assessments for species, other biological resources, and ecological processes; (2) alternatives comparisons in terms of ecological merits and risks; and (3) adequacy of mitigation and monitoring actions linked to impacts. The standards of review applied here are for (1) CEQA compliance and (2) scientific soundness of data, methods, use and interpretation of cited or relevant scientific and technical literature, analyses and arguments, and conclusions. This scope of my review concerns the information presented in the EIR as well as potential omissions, inconsistencies, or fallacies. The scope of review is limited to the EIR as a stand-alone CEQA document (Ch. II, p. 10), and does not include the JDSF Management Plan itself. It does, however, consider the scope of the EIR in terms of public comments and response to comments of the 2002 EIR, which are properly considered part of scoping because the proposed action (JDSF Management Plan) itself has not been substantially modified. Page references are keyed to the Administrative Draft EIR.

GENERAL COMMENTS

Length, organization, and clarity of ecological information and impact assessments

1 Plain and technical language. EIRs must be organized and written in such a manner that they will be meaningful and useful to decisionmakers and to the public (Pub. Res. Code § 21003 subd. (b)), and they should "emphasize feasible mitigation measures, follow a clear format, be written in "plain language" (CEQA Guidelines §§ 15006, 15120, 15140), and be "analytic rather than encyclopedic (§§15006, 15141). This EIR fails all these criteria. In my professional experience with NEPA and CEQA documents, I have never encountered any that compares with this one in terms of the sheer volume of text laden with jargon, highly technical language, with highly inconsistent relevance to impacts, all placed in the body of the EIR. The EIR itself is written like a technical appendix, interspersed with short segments of a Negative Declaration. Much of the EIR text appears to employ the unmitigated technical language of the scientific literature and resource agency professionals, including profuse use of acronyms, scientific terms generally unknown to the general public (and often unavailable in most dictionaries).

Compilation of excessive background information. The EIR contains an extraordinary amount of encyclopedic background information in the body of the text, approaching 100 pages in sections
2 on Aquatic Resources. The excessive amount of background technical information presented in the body of the EIR is entirely disproportionate with its application to the actual assessment of impacts. A very small proportion of background information is discussed in the assessment of impacts, and relatively little is indeed specifically relevant to Jackson State Forest. An outstanding example is the treatment of Aquatic Resources (Section 6.1). The discussion of
3 background information exceeds 90 pages in length, and is composed of an indiscriminate assemblage of general studies with unstated relevance to the discussion of logging impacts in Jackson State Forest. The actual 12 page discussion of aquatic resource impacts (6.1.7) does not
4 specifically refer to the massive compilation of background material. The problem of relevance of the background information is exacerbated by the erratic shifts in the geographic scope of background information, ambiguously varying from "the region", "study area" and "project area", depending on the scope of the various studies cited, and digression of the discussion.

5 The selection of technical background information in the EIR is largely indiscriminate. Long and highly technical sections lack even plain language summaries, and they generally lack an explanation of their relevance to the EIR's impact and alternatives issues. The EIR fails in its obligation to place appropriately selected technical background information in appendices. It is among the most extreme examples of this defect in EIRs that I have encountered in my professional career.

As an environmental professional with over 15 years of NEPA /CEQA and environmental regulatory experience, I found it exceptionally difficult to read and take notes on this document because of the excessive compilation (and poor editing) of technical appendix-quality background material in the body of the EIR, and the lack of relevance to the actual impact analysis. I must conclude that the general public reader of the EIR would be completely overwhelmed by this. The
6 voluminous, jargon-laden technical background information, therefore, obfuscates the subject and precludes the general public's understanding of the context of impact assessment.

Impact assessment

The encyclopedic approach to background scientific information abruptly ends in the very brief discussions of impacts. The actual assessments of impacts are reduced to short (one to two paragraphs) and highly generalized discussions, or mere assertions of conclusions without specific reference to information specific to Jackson State Forest. The discussions of impacts generally employ a formula:

7

> minimize or omit reference to proposed JDSF actions, past monitoring data, or surveys, assessments, or research specifically relevant to the impact and locations in question;
> instead emphasize proposed generalized impact prevention and avoidance measures of the JDSF Management Plan, and Forest Practice Rules; and
> assert (unsupported by evidence) expectations of their success in reducing impacts to less-than-significant levels.

Again, the 13 page Aquatic Resources impacts/mitigation (6.1.7) section illustrates this formula that recurs generally in other sections. The conclusions about impacts are largely creed-like assertions rather than assessments or reasoned arguments based on evidence from JDSF data (past THP surveys, monitoring, project area-specific research) or the voluminous background information sections. This defect of vague and generalized impact assessment is particularly significant because it was one of the principal criticisms of the California Department of Fish and Game in its comment letter on the 2002 EIR. The defect was not corrected.

8

The conclusions about impacts generally lack any prior general discussion about the *efficacy* (track record, monitoring data, or other empirical evidence) *of management actions or mitigation measures* proposed. The overall result is a marked asymmetry between excessively technical background information, and largely arbitrary, tendentious, and subjective assessments of impacts. It appears as though a cursory Initial Study/Negative Declaration (narrative expansion of checklist impact assessment) were simply cut and pasted within a larger technical appendix of background information.

Mitigation

9

The EIR is extraordinarily deficient in its CEQA-required "emphasis of mitigation measures". It lacks a comprehensive mitigation and monitoring plan, or even a summary of all proposed mitigation measures associated with potentially significant impacts, and the monitoring actions associated with them. Mitigation measures of varying degrees of generality are scattered throughout the document. Section 6.6.7, Mitigation and Monitoring, consists of 3 sentences and a single mitigation measure, following all discussion of biological resources. That places undue reliance on "functionally equivalent" JDSF Management Plan measures and Forest Practice Rules as mitigation, and precludes public review of their adequacy. This certainly does not comply with the EIR's intention to function as a "stand alone" document (II, p. 10). It is a "trust us" approach to mitigation that fails to comply with CEQA's analytical requirements. Given that there is substantial legal, expert scientific and public controversy regarding the adequacy of Forest Practice Rules in mitigating impacts to aquatic resources (see Aquatic Resources, Specific Comments), and that these very same protections have failed to protect sensitive species from decline in the Forest (see discussion below on NOAA determination of "take" impacts to listed salmonid species), this results in a fatally flawed CEQA document.

10

Monitoring and resource management criteria for comparison of alternatives

The introduction (II) repeats many official Board of Forestry policies, goals, and objectives that are relevant to the comparison of alternatives in relation to adaptive management and monitoring of biological resources in a regulatory context. The EIR cites fundamental Board policies stating that the primary purpose of JDSF is "to conduct innovative demonstrations, experiments, and education in forest management", to "improve the amount and quality of information concerning economic forest management...", to "conduct monitoring of resource management activities to gauge their effectiveness in meeting project objectives", and "investigate methods to mitigate conflicts...in multiple use of forestland", while consulting and cooperating with "universities and colleges, the U.S. Forest Service, and other...researchers..." (II 3-4). The policies also include very specific, substantive resource and monitoring objectives pertaining to ecological processes, watershed integrity, and forest restoration. These are quite significant criteria for the basic "project" purpose, and comparison of alternatives. The comparison of alternatives in Table VI.1, however, does not include a substantive comparison of alternatives in the degree to which they
11 meet or fail Board policies to provide innovative demonstrations, experiments, and education, and implement monitoring objectives of Board policies in JDSF. The EIR lacks a comprehensive
12 discussion of alternatives that integrates basic purpose and policy, management, public interest values, and environmental impacts. Instead, comparison of alternatives is broken out among different chapters and resources.

Monitoring and survey data for mitigation and impact assessment

The EIR makes clear that JDSF is dedicated by Board policy to experimental, scientifically sound forestry demonstrations, aimed at generating useful data for forestry management with consideration for wildlife and watershed values. It is remarkable that the assessment of impacts do not make robust use of existing CDF data from past Timber Harvest Plans (THPs) conducted on JDSF pursuant to this mandate. The EIR does not explain and emphasize what JDSF's
13 management has instructed about the key environmental impacts of forest practices (and in particular, Forest Practice Rules; FPRs) on stream sedimentation, stream temperatures, aquatic species, riparian wildlife habitats, and other key environmental impact issues of concern identified in scoping and in comments on the 2002 EIR. The discussions of impacts in the EIR again rely on highly generalized, speculative or arbitrary assertions about the alleged sufficiency of FPRs or JDSF Management Plan protections to mitigate impacts to less-than-significant levels, rather than on readily available data from the Forest.

The essence of adaptive management, a key policy and specific objective of the Board of Forestry for JDSF (Goal 1, objective 1-2, Goal 3, objective 3-6, and Board policies 0351.2, 0351.3) is to treat questions about natural resource management as hypotheses to be tested by data, and modify hypotheses based on data. The efficacy of mitigation measures (particularly the Forest Practice Rules on which the EIR substantially relies for determinations of "less than significant impacts"), consistent with Board Policy, should be viewed as a hypothesis in the EIR. The EIR fails to apply
14 JDSF monitoring data or survey data to provide critical, empirical tests of its reliance on Forest Practice Rules or other mitigation measures.

The EIR generally does not cite data or analyses from past THPs on JDSF that test hypothesis with respect to assessment of specific impacts (see specific comments below). For example, there
15 are no comparisons of pre-THP biological surveys and post-THP biological surveys to empirically demonstrate rates or patterns of post-disturbance recovery of specific plant, fish, or

wildlife species. Even when the EIR does use local data from JDSF and its adjacent watersheds on significant impacts such as logging sedimentation of streams, it misdirects study conclusions to comparisons of old and current Forest Practice Rules efficacy, rather than comparisons with current environmental baseline (existing conditions, as required by CEQA). The study design of Cafferata and Spittler (1998) on Caspar Creek (cited in the EIR in this context) does not address this deficiency: it compared sediment and water quality in watersheds affected by current logging conducted under current FPRs with watersheds subject to residual effects of logging under discontinued FPRs. It does not address comparisons of stream habitat and fish/amphibian impacts among reaches with equivalent background conditions, but differing in current silvicultural prescriptions or left as controls. The CEQA impact issue is not whether current FPR protections are significant improvements over pre-regulation logging; the CEQA issue is whether logging under current FPRs still has significant direct, indirect, and cumulative impacts that require mitigation in the context of the EIR. A comprehensive JDSF monitoring program for stream water and habitat quality with an experimental adaptive management design could, and should, yield such data in a state demonstration forest.

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17

In the absence of systematic survey, monitoring, or research data from JDSF applied to impact assessments, the EIR assumes that FPRs and Management Plan are sufficient as mitigation, despite voluminous data to the contrary. Given the continuing decline of federal and state-listed fish and wildlife species and concerns over the adequacy of the Plan and THPs to protect the species expressed by experts tasked with the protection of these resources (note the comments from NOAA Fisheries, Regional Water Quality Control Board, on the 2002 EIR, still not addressed or rebutted in the 2005 EIR), this approach appears arbitrary and fails to mitigate the project's impacts. The EIR should be revised to apply substantive monitoring and survey data from past THPs and research in JDSF (or at least its watersheds) to explicitly inform assessments of specific environmental impacts and mitigation. Otherwise predictions of impacts and mitigation efficacy will remain arbitrary and speculative. This deficiency is *not* compensated by grossly inflating the length and technical level of background discussions about environmental setting.

18

The description of monitoring and adaptive management at 6.1.4 (p. 92), adapted from the JDSF management plan, is representative of scattered mitigation and monitoring discussions for specific resources in the EIR. It is reduced to statements of monitoring goals, priorities, and parameters. It does not provide any information on when and where or whether it would be applied in relation to management actions, and defers substantive decisions to "professional judgment of JDSF staff" with no reference to scientific peer review or agency reporting. Because the EIR relies on faith in the sufficiency of FPRs and management practices of JDSF to prevent significant impacts, it is essential that monitoring be conducted not "as opportunities arise" or "to the extent necessary" or "as budget allows" (frequent caveats included in JDSF monitoring provisions described in the EIR), but as an essential condition of timber harvest approval (potential impacts) in JDSF. In any case, monitoring does not substitute for, or serve as, mitigation for potentially significant impacts, so the impacts addressed by them must be considered potentially significant and unmitigated.

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The EIR should synthesize its own mitigation monitoring requirements and the general JDSF Management Plan's monitoring provisions in a single, comprehensive chapter of the EIR, presented for public review and comment as part of the EIR. Currently, mitigation and monitoring provisions are diffused throughout the EIR in a way that precludes meaningful review. The mitigation and monitoring measures should be in substantive, clear, and enforceable language,

21

22

22 cont.

even if they are framed as programmatic. Some examples of this approach are given in Section 6.1.5, New Management Measures to Contribute to Recovery of Aquatic Resources: "The following apply to all THPs:....". The last EIR statement of mitigation monitoring (IX p. 2) consists of a single paragraph that merely identifies the incorporation of EIR mitigation and monitoring in the JDSF Management Plan, leaving the reader unaided in searching out the scattered, inaccessible component sections of mitigation monitoring discussions in the EIR. Missing in all these component discussions is a description of reporting and review requirements, responsible parties, schedule of submittal and review, duration and frequency of monitoring, and other standard features. Without these, reviewers of the EIR are unable to determine whether mitigation monitoring is a perfunctory paper exercise or an enforceable procedure.

Vague narrative description of alternatives

23

CEQA states that a firm, fixed project and alternative description is essential to assessing and disclosing project impacts. The descriptions of alternatives (which serves as the project description), even for programmatic alternatives, are vague and indefinite. Their component proposals are couched in indefinite qualifiers that do not indicate whether or not proposed components of alternatives are mere options, goals, exceptional or occasional actions, or typical or normal programmatic actions: "work towards...", "...as opportunities arise", "as needed", "only for research purposes", "limited to demonstration purposes" (in a demonstration forest, what is categorically not demonstration/research?) "conservation-oriented..." (what is categorically not "conservation oriented" in a demonstration forest with sustained yield as a mandatory principle?), "emphasis on....". These indefinite qualifiers should be standardized with explicit, definite statements of the criteria that trigger them, whether they are general (normal/prevalent), and the frequency and magnitude of exceptions. To the extent that alternatives can be represented graphically (labeled GIS map of JDSF for each alternative, with estimated acreages of each alternative management feature proposed), they should be illustrated to distinguish crisply the contrasts among them. Without firm, fixed descriptions of alternatives, it is impossible for the EIR to adequately assess and compare their impacts. This deficiency is apparent in the EIR's repeated failure to identify substantial differences in impact significance among the alternatives.

Need for scientific peer review or recirculation

24

The EIR relies on an extraordinary volume of technical and scientific background information and technical jargon for the majority of its most important arguments regarding potential significant impacts, mitigation, and alternatives. It also lacks plain-language summaries of its arguments and conclusions, leaving the general public reader no reasonably available means to assess the scientific soundness of its assertions. It places an undue burden on the public to read and comprehend the technically obscured and excessively long EIR. It is urgent, therefore, that the EIR be subjected to independent scientific peer review so the public has some reasonable means of evaluating and commenting on the EIR. The public cannot provide meaningful comments on this technically obscure EIR without a summary and assessment by qualified scientific professionals with authority and expertise in the disciplines covered in the document. I suggest that the Board of Forestry convene an independent scientific review panel, comparable to the scientific peer review teams that evaluate forestry Habitat Conservation Plans (HCPs), to provide a concise review of the information, evidence, analysis, and major conclusions of the EIR. The panel's written review should be available to the public prior to a public hearing with additional opportunity for public and expert comments, and prior to circulation of the final EIR,

and. In the alternative, a technically adequate revised draft EIR written in plain language should be recirculated.

SPECIFIC COMMENTS

Aquatic resources

25 Watershed analysis versus case-by-case THP proposal and review. The EIR defers analysis and mitigation of logging impacts to aquatic resources to individual THPs as governed by the Forest Practice Rules (FPRs) and the JDSF Management Plan protections that exceed them. This approach has systemic influence on impacts and mitigation to all aquatic resources. It contradicts the most basic recommendation of the Scientific Review Panel assessment of FPRs in relation to salmonid conservation (Ligon et al. 1999), which is to prepare a watershed-level analysis of hydrology and geomorphic processes to guide assessment and mitigation (including avoidance) of logging impacts to aquatic habitats in North Coast streams. The EIR instead defers analysis within the narrower, partial framework of future individual THP-proposals. The best scientific judgment available (Ligon et al. 1999) concludes that project-driven assessments of impacts and mitigation are unreliable and likely ineffective. CDF is well aware of this controversy, but the preparers of the EIR have chosen to disregard this framework without explicit justification. The

26 EIR persists in relying primarily on the assumptions that the joint protections of the FPRs and JDSF Plan will mitigate to insignificance sediment-related impacts to aquatic resources (e.g. 6.1.7 p. 100), contrary to strong evidence of continuing decline of federally listed salmonids. This approach is not reasonable in view of the weight of scientific opinion against it, and the lack of substantive empirical arguments to support it. The inflated compilation of general technical background discussion regarding the environmental setting of aquatic resources in the EIR (6.1) does not address this defect. Background information, no matter how long and technical, does not serve as an implied watershed analysis for JDSF.

27 Watershed baseline for salmonid impact assessment: The EIR does contain information that provides many of the elements of a potential watershed-level analysis of impacts. NOAA Fisheries (in its comment letter on the 2002 EIR) stressed the importance of "site-specific watershed analyses" in creating meaningful timber harvest strategies that protect salmonids. The EIR shows in Map Z a precise configuration of proposed silvicultural spatial allocation across planning watersheds; Map Y shows the distribution and location of stream habitat restoration projects. Map E shows a modeled stream class and fish distribution map, but Map E and all other maps lack stream habitat typing (habitat quality) data from current field assessments representing the "existing conditions" required by CEQA as an environmental baseline. Map F, which represents riparian canopy change (crude ranking, no habitat parameters), does not provide stream habitat quality information. These maps come fairly close to the minimal database requirements for a valuable watershed-based GIS analysis of potential timber harvest impacts. Integrating and re-analyzing data sets using other large-scale stream databases and studies, such as KRIS Noyo and Big River projects, updated and supplemented to meet JDSF Management planning requirements, could generate a more robust and adequate predictive model of impacts than the EIR currently provides. This would also address fundamental deficiencies of the 2002 EIR that were not corrected in the current one (viz. valid criticisms of Patrick Higgins' 2002 comment letter), and it would comply with the authoritative recommendations of the Scientific Review Panel report (Ligon et al. 1999). The same GIS-based watershed model could also become the template for a multi-species habitat conservation planning tool.

Salmonids (coho salmon, steelhead) population status and conservation significance.

28 Despite the excessive compilation of technical data regarding regional salmonid population status of coho salmon (6.1.7) the EIR fails to emphasize the most relevant information for decisionmakers and the public, which is the relative conservation importance of coho populations in JDSF watersheds to the North Coast as a whole. This "metapopulation" perspective is fundamental to conservation biology of any species, including salmonids. The survival and recovery of coho in segments of its range where it has been extirpated will depend on immigrants from source populations in remaining stable, high-quality habitats. The 2002 EIR comment letter by Patrick Higgins, a regional expert in North Coast fisheries biology, establishes this point clearly and authoritatively in the EIR record. Higgins (2002) cited data from The KRIS Big River and Noyo projects (neglected in the EIR), revealing that the some of the last local streams that are still dominated by coho salmon are on JDSF. This regional significance of JDSF as a refugium for coho remains obscured in the indiscriminate technical coho study compilations at 6.1.7. The
29 EIR cannot adequately assess impacts to the survival and recovery of federally listed coho without specifically addressing metapopulation structure of the species and the role of streams affected by logging in JDSF; therefore this information must be added to the EIR.

Equally relevant is the contrasting coho status in commercially logged privately owned watersheds. Higgins, citing 2001 National Marine Fisheries Service data, clarified that stocks of coho are also severely declining in adjacent watersheds in response to intensive land use: coho were absent from 80% of tributaries to the Ten Mile River that formerly harbored them. These Big River tributary populations have distinctive genetic significance for wild coho recovery because they were not subject to artificial genetic modification by fish hatchery operations. This relevant background about contrasts in coho population status within and outside JDSF, in conservation biology context, cannot be inferred from the encyclopedic technical information compiled in the EIR that obscures the decisive issues. Indeed, the EIR states in Section 6.1.8 (p. 74), "In the absence of evidence that conditions in assessment area streams differ greatly from
30 other Mendocino County streams, it is reasonable to assume that salmonid populations have likely declined from pre-logging levels...". This statement gives a highly misleading impression of a general decline in salmonids, rather than retention of biologically significant population refugia in JDSF. It is more serious than an inaccuracy or "data dump" misdirection: it obscures of a regionally unique resource and suppresses public comments on potential impacts to it.

The EIR should adopt a Habitat Conservation Plan approach (consistent with the critical habitat
31 designation of both coho and steelhead) and identify priority watershed areas within JDSF to minimize impacts of activities contributing to direct and indirect stream habitat degradation, and focus restoration efforts to benefit salmonid recovery. Indeed, the July 18, 2002 EIR comments provided by NOAA (National Marine Fisheries) state that JDSF cannot mitigate for unauthorized "take" of Federally listed salmonids, and that the management plan lacks a strategy to avoid "take". This "unauthorized take" defect was not addressed in CDF's response to comments, nor
32 was it addressed in the 2005 EIR. Therefore, consideration of a Habitat Conservation Plan is not an optional "possibility of undertaking the...incidental take permit process by CDF in the future" (CDF's dismissive response to NOAA comments on "take"), but a legal requirement, according the lead federal agency with jurisdiction and expertise in the matter. CEQA requires disclosure, analysis, and mitigation approaches for all harm to endangered species. Clearly, this has not been achieved by the 2002 or the 2005 EIR. This is a critical defect.

33 A conservation planning framework for salmonids would emphasize the locations of important salmonid refugia, high quality habitats with robust remnant populations, and adjacent stream reaches and slopes. Priority areas for recovery are those which are above prime habitat or refugia where erosion will inevitably be triggered by a major storm or catastrophic event. Higgins (2002) suggested that the highest priority restoration targets should be the South Fork Noyo River (including Parlin Creek), Caspar and Hare creeks and Russian Gulch, because these areas are known to be the healthiest remaining habitats for coho salmon, and function regionally as core populations. This would constitute an adequate, scientifically sound approach to mitigating the uncertainties and impacts of the primary water quality causes of observed salmonid decline within designated critical habitats.

34 Herbicides, surfactants, and potentially significant aquatic vertebrate impacts. The EIR fails to identify potentially significant impacts of herbicide runoff and groundwater contamination of stream baseflow on eggs and juvenile salmonids. The EIR fails to quantify and disclose total herbicide and surfactant (spray additive; detergent-like spread-stickers) loads to streams allowed under the JDSF Management Plan. It does not address restrictions on types, amounts or timing (in relation to salmonid or amphibian reproduction) of applied herbicides. Some herbicides and adjuvants (spreader-stickers) remain biologically active for weeks or months after application, and can be detected and physiologically active in aquatic habitats after application to adjacent terrestrial habitats. Some herbicide surfactants (e.g. POEA) are known to have weak estrogenic

35 effects on salmonid embryos and juveniles, and can significantly affect endocrine-mediated development, but this potentially significant impact is not assessed or mitigated. The EIR should include assessment of herbicide ecotoxicology on salmonids, focusing on specific herbicide formulations that have been used in JDSF, and may be used in the future. The assessment should not be speculative, but should be based on diligent review of the scientific literature.

36 Impacts and mitigation for amphibian species (treated in Wildlife section, 6.6.6). The EIR provides cursory and insufficient assessment of impacts to amphibian species. Most discussions merely disclose whether there are any known records (presence/absence) of amphibians species in JDSF, and add general habitat and life-history information, not specific habitat or population status in JDSF as baseline. All proposed mitigation for amphibians, based on implementation of

37 FPRs (WLPZs) and their presumed efficacy, assumes that all life-history stages occur in the primary aquatic habitat. This is unjustified: amphibians also forage in terrestrial habitats, and some like the red-legged frog, seek refuge in mammal burrows or under logs when their primary feeding and breeding habitats become seasonally dry. The WLPZ "mitigation" approach to protect viable populations of amphibians is focused on direct logging impacts only, and does not address indirect impacts to amphibians due to adverse modification of terrestrial moisture refugia. The WLPZ "mitigation" for amphibians is unsupported by local or other monitoring data on

38 amphibians collected before and after logging under contemporary FPRs. In addition, the EIR does not refer to any detection or survey procedures for recognizing and protecting isolated seasonal wetlands, seeps, and springs outside expected watercourse zones (see discussion of Wetlands, below). The EIR cannot reasonably conclude that impacts to amphibians in JDSF are "less than significant".

One of the primary purposes of a Programmatic EIR on a Plan is to address landscape-level impacts and identify Forest-wide mitigation strategies. However, the EIR's assessment of

39 impacts to amphibians fails to consider larger landscape-level variables of THPs, such as geographic pattern of intact remnant habitats, distribution of high-quality refugia (aspects of metapopulation structure), and the recovery interval (rotation) between logging disturbances.

40 Therefore, all potentially significant large-scale indirect spatial impacts to amphibian populations are ignored. The impact assessments for amphibians focus narrowly on internal habitat impacts within THP boundaries. This deficiency precludes discussion of the basic landscape-level habitat conservation planning essential to ensure maximum likelihood of viable amphibian populations over long-term logging disturbance cycles. In the absence of geographic planning of habitat impacts and mitigation, sensitive species (such as tailed frog, which has less thermal tolerance than coho salmon) would be at greater risk of local long-term extinction. Interactions between local population declines, logging disturbances, and climate variations (droughts, hot summers) could cause significant cumulative impacts unless mitigated by landscape-level amphibian habitat planning within JDSF.

41 Please note that the geographic limits of the federally listed subspecies of red-legged frog, *Rana aurora draytonii* (*R. draytonii*) are now know to extent to Elk, Mendocino Co, based on molecular data (Shaffer et al. 2004).

Botanical Resources and plant communities

42 Incomplete scoping of rare species. The EIR states that ponds occur within JDSF (Lost Lake, McGuire's Pond). *Howellia aquatilis*, a rare aquatic plant of the Pacific Northwest, was recently rediscovered in Mendocino County at multiple locations after 1995; see CNDDB. The EIR ignored the expert advice to include this species, provided by Prof. Teresa Sholars in her 2002 EIR comment letter. This small, inconspicuous species is very difficult to detect without focused searches in appropriate seasons. It was erroneously omitted from the Jepson Manual. Although accurate modern records of the federally endangered *Arenaria paludicola* are lacking in Mendocino county, its historic range included wetlands of the North Coast forest region, and like *Howellia*, it could be rediscovered there. It should be included in the scoping list as a low-probability endangered plant. The EIR fails to assess potentially significant direct and indirect impacts to this aquatic species that could result from logging activities, such as excessive sedimentation in wetlands and ponds originating from erosion above WLPZs. .

43

Scoping misuse of floristic databases as surrogates for surveys

44 The EIR commits the same misuse of the database searches for rare plants that is prevalent in poor quality THPs. The EIR relies on the California Native Diversity Database (CNDDB) and California Native Plant Society Inventory (CNPS Inventory) as "scoping tools" to determine likelihood of occurrence of sensitive plant species, but it does not commit to standard, routine CDFG or CNPS protocol-level surveys (with coverage and survey intensity sufficient to detect actual sensitive plant populations in THP areas) as mitigation/monitoring measures to prevent potentially significant impacts to sensitive plant species.

45 The EIR, following CDF practices, is using CNDDB and CNPS inventories in reverse: these databases are not original sources of survey data, but repositories dependent on field data generated by land managers and plant experts. The lack of reported occurrences in remote or inaccessible extensive timberlands is more a function of past survey intensity than actual probability of occurrence. Database searches are useful in well-botanized, publicly accessible areas near trails, parks, or other publicly accessible sites, but are an inherently weak tool in remote, extensive timberland tracts. Therefore these databases would not generate meaningful numbers of reported past occurrences from remote timber harvest plan areas in JDSF unless CDF itself performed such surveys. The emphasis on database searches in the absence of firm

commitment to site-specific, protocol-level plant surveys provides a false cosmetic appearance of diligence in mitigation and monitoring. The EIR should expressly identify pre-THP floristic surveys with CDFG protocols as the primary standard for scientifically adequate detection of sensitive plant species.

Instead, the EIR describes only (non-mandatory) goals for plant surveys: "A qualified botanist *or trained staff* will conduct seasonally appropriate rare plant surveys, *as necessary*, to assess plant occurrence...survey designs will be *based on the concepts* contained in the DFG guidelines....will follow the *practices commonly accepted* by DFG and CDFG *for THP review*". It is no exaggeration to state that this is a formula built on equivocation, aimed at allowing the same low standards for incomplete and erroneous botanical surveys by non-expert forestry technicians or RPFs that are routinely accepted in THPs. I have reviewed numerous THPs in the Mendocino-Sonoma coastal forest region, and found most to contain basic and obvious deficiencies: errors of identification and nomenclature, erratic seasonal timing for detection of sensitive species, and likely omissions of less familiar species (particularly graminoids).

46 The EIR's misplaced reliance on database searches has significant potential consequences because it states that the "current population status and trend" for many sensitive plant species that may occur in JDSF "are unknown" (e.g. *Boschkiana hookeri*, *Carex livida, C. arcta, C. californica, Erythronium revolutum,* and others) or "location, rarity, and endangerment information are needed" (e.g. *Carex comosa*). The EIR states that multiple sensitive species "could be adversely affected by timber harvest and road construction", but with no determination of "significance", for example *Campanula californica*. The EIR makes a reasonable argument that potentially significant impacts to these species could occur precisely because species may occur in THP areas but remain undetected because crude CNDDB database searches and inadequate (or lacking) surveys are the standard protocol in JDSF. Yet the EIR arbitrarily concludes that there would be no significant impacts to botanical resources.

47 The EIR should include requirements for plant surveys as part of a comprehensive and mandatory mitigation and monitoring program. The survey methodology should cover qualifications of surveyors, survey intensity, seasonal timing based on expected/known plant community composition, and coordination/review procedures by CDFG. Given that "inventory [of plants] is planned to occur on a project-by project basis through surveys ..." and "an extensive inventory of botanical resources at JDSF has not been conducted" (6.2 p. 24), this is an essential mitigation and monitoring element to include.

<u>Lack of paired pre- and post-THP surveys to verify impacts and mitigation efficacy</u>

As noted above, THP plant surveys, regardless of adequacy, generally are supposed to precede timber harvest. The EIR does not discuss or recommend post-THP surveys to determine whether plant species become extirpated within THP areas, or whether they recover over time. The EIR does not recommend specific population re-surveys to monitor whether sensitive plant species "protected" by avoidance measures in fact are protected successfully, or whether their demise occurs through indirect impacts of logging rather than direct impacts. No post-THP surveys or monitoring results are discussed in the assessment of impacts and mitigation to enable the public to review their efficacy and reliability. Post-THP plant surveys and monitoring should be
48 recommended by the EIR, and included in the mandatory mitigation and monitoring program to ensure implementation.

The discussion of general biological surveys at 6.6.3 (p. 115-117, in context of wildlife, but applicable to plants) is largely editorial and apologetic in effect, reflecting current policy rather than programmatic proposals to evaluate. It provides a rationale for non-systematic, minimalist survey efforts. This discussion has no place in an EIR. The EIR should describe a comprehensive biological survey framework and protocol in the context of a comprehensive mitigation and monitoring plan pursuant to CEQA, clearly written for public review. 49

Cumulative impacts on declining, uncommon to rare plant species. The scientific literature, in addition to state and CNPS lists of state-rare plants, provides substantial evidence regarding range contractions, range collapse, and significant declines of some plant species over major portions of their ranges. Some of these species are clonal perennial forest forbs, mycotrophic ericads or orchids, or woody plants that regenerate poorly after major disturbances, or take long periods to recover populations. The flora of Mendocino County enumerates many plant taxa of extremely limited distribution, often disjunct populations or species occurring near their range limits. Such "non-listed" species have conservation significance because of their precarious population status and biogeographic patterns (Lomolino and Channel 1998). For example, Pacific yew (*Taxus brevifolia*) is in widespread decline because of slow growth and reproduction, and poor regeneration after timber harvest (Busing et al. 1995). The EIR arbitrarily assesses only impacts to taxonomically rare species, and ignores potentially significant impacts to plant biodiversity based on regionally declining, slow-growing, uncommon plant species that are not necessarily globally rare. The EIR should adopt an ecologically based rather than administrative, list-based plant conservation perspective on impacts to native species diversity. It should assess the Management Plan and alternatives' impacts to native species richness and diversity based on currently available scientific evidence, not just legally or administratively listed species. This is particularly important for impact assessment of even-age timber management that depletes soil seed banks and clonal bud banks of species with poor colonizing ability. The assessment should be based on evidence, not speculation and generalization. 50

Cumulative, long-term herbicide impacts on viability of small plant populations

The EIR does not adequately address (and scarcely discloses) the potentially significant impacts of broadcast broad-spectrum herbicide applications on non-target plants, particularly uncommon or rare plants (either mature plants or seedlings recruited from seed banks following timber harvest disturbances). Many plant populations survive logging disturbances by vegetative regeneration or seedling recruitment. Broadcast application of herbicides can severely deplete seed banks after flushes of germination, and can cumulatively enhance mortality due to disturbance. The interaction of post-disturbance recovery of plant populations and herbicides (applied to control brush, weeds, or hardwoods) can result in significantly increased risk of population extinction. Rare or uncommon plants would be particularly at risk of such cumulative herbicide impacts. Because survey efficiency (detection probability) is low at the spatial scale of herbicide application, particularly in disturbed ground with seedlings and suppressed individuals, mitigation of herbicide impacts by detection and selective avoidance would be extremely difficult. The EIR also fails to disclose the potential off-target transport of active herbicides in runoff and groundwater. (See comments on aquatic resources regarding potential significant indirect impacts of herbicide/surfactant mixes on juvenile fish and amphibians.). The EIR's conclusion that there are no potentially significant impacts to plants is unreasonable and unsupported in the absence of an analysis of herbicide effects on sensitive plant populations. No such analysis would be possible without survey data (see preceding comments on plant surveys) 51 52

53 Impacts on epiphytic plant communities. The EIR focuses narrowly on individual special-status vascular plant species, and fails to consider impacts to highly diverse epiphytic plant communities associated with old tree canopies, composed of lichens, mosses, ferns, liverworts, and some forbs. These communities are not treated in classifications of terrestrial vegetation, but are nonetheless significant botanical resources.

Cumulative and indirect impacts of even-age management, invasive species, and herbicides

54 The EIR fails to disclose or analyze basic interactions between even-age management and invasive plants, and herbicide use. Most of the most noxious wildland weeds identified are most invasive in disturbed ground lacking forest canopy. Timber harvest activities can not only open forest to new invasions, equipment can readily spread seeds. Invasive plants that rapidly dominate post-harvest sites can suppress seedling growth of desirable conifer species as well as native flora. There is ample evidence in the scientific literature about facilitation of plant invasions in disturbed plant communities, including forests. The EIR should assess the potentially significant impacts of even-age management (compared with other silvicultural treatments) on plant invasions and demand for herbicide use.

55 The EIR's sweeping reference to Integrated Weed Management (IWM) as a philosophy or approach does not substantively address the nature of interactions between weed invasions and silvicultural treatment, nor does it substantively address issues of herbicide impacts. The EIR's reference to the IWM emphasis on weed prevention makes is disingenuous and misleading in the context even-age timber management and spread of significant wildland weeds such as *Rubus discolor, Genista monspessulana*, and *Cortaderia jubata*: the spread of these species is facilitated primarily by disturbance, and timber harvest provides more disturbance to the landscape than any other activity. The EIR fails to disclose potentially significant impacts of ground-disturbing timber harvest practices on the invasion of forestlands by these weeds.

56 The EIR does not distinguish herbicide loads that are specifically justified by wildland weed management objectives, and herbicide loads justified by hardwood management objectives. It would not be possible to evaluate minimization of herbicide use (impact reduction) without an account of what herbicides are used for, and in what quantities, in JDSF.

57 The EIR offers no examples (i.e. monitoring data) to support the broad assertion that "Project-specific THP and CEQA analyses can identify and mitigate potentially significant cumulative effects resulting from multiple effects" (6.2, p. 42) with respect to herbicides. The EIR's statement thThe EIR should specify programmatic actions to minimize cumulative and indirect impacts of herbicide use on native plants. Such measures should include pre-THP reduction of invasive plant propagules sources, and must include adequate pre-THP native plant surveys, restrictions on the timing and amounts of herbicides.

Potentially significant effects of fertilizer application

58 There is no mention in the botanical section (6.2) of the potential effects of fertilizer applications described in the timber resources section (6.3). Elevated levels of soil nitrogen from fertilizer application can have persistent and significant impacts on native plant diversity, mediated by competitive interactions. Many invasive plant species with high potential relative growth rates gain competitive advantage over slower-growing native plants in nutrient-enriched soils. Many rare, stress-tolerant native plants are also at a competitive disadvantage to dominant native

species in productive soils. Some rare plant communities are essentially oligotrophic (dependent on extreme nutrient-poor conditions), such as sphagnum bog and pygmy forest. Surface runoff or groundwater containing even a single pulse of high soil nutrient levels from fertilizer can have
59 effectively irreversible significant effects on community dominance and persistence of rare plant populations in oligotrophic plant communities, particularly those with impeded drainage (nutrient sinks). The EIR should disclose the likely locations and application rates of fertilizers, and soil types to which they are likely to be applied. It should propose mitigation including minimization and avoidance of fertilizer near invasive plant populations and unique or rare native plant communities and populations.

60 The cumulative effects of fertilizer applications and the nutrient flux (primarily nitrogen) that follows logging (Dahlgren 1998; cited in EIR) are not analyzed. The combined effects of these two silvicultural impacts on plant communities, invasive species, and also aquatic resources may be potentially significant, particularly for sensitive oligotrophic (naturally nutrient-poor) habitats.

Deferred, programmatic, essentially administrative "mitigation" of invasive exotic species.

The bulleted items of 6.2 p. 20 are mostly administrative actions, not substantive programmatic protection measures. Stating that impacts of weeds and re-establishment of native vegetation "will be considered" is not meaningful or enforceable. Training staff in weed identification has no
61 substantive value unless weed management programs are implemented; similarly, cooperation (vague) with other agencies has no meaning unless it is linked to specific categories of substantive actions to implement. Updating staff on weed information and supporting (actions?) weed control initiatives outside the jurisdiction of JDSF are similarly attenuated from connection to substantive actions that affect weed invasions. The EIR should identify substantive programmatic actions that reliably contribute to reduction of forestland weed spread. These purely procedural and vague, unenforceable "mitigation" measures are unacceptable for CEQA, and are ineffective. Note that invasive exotic species control programs should not include native post-logging invasive species in their objectives.

Narrow and insufficient mitigation for direct impacts to sensitive plants

The only substantive mitigation identified for impacts to sensitive plant populations is survey detection followed by unspecified avoidance measures. There are no quantitiative buffer specifications assigned to different slopes, soils, population structures, or community types. There are no buffer provisions that address retention of pollinators or seed dispersal vectors (biotic or abiotic). There are no measures that specify consultation procedures or scientific peer review of
62 protection measures, or monitoring and reporting requirements for protection measures. The mitigation measures do not even commit to criteria for enforcing implementation of protection measures, and for what species. The mitigation does not address compensation for potential failure of protection/avoidance measures, nor does it assess efficacy of protection/avoidance measures from past THPs. All this can and should be treated at a programmatic level, but the EIR improperly defers all mitigation to project-specific THPs. This is invalid under CEQA.

63 The EIR lacks any mitigation provisions to cover contingencies of under-performance or failure of proposed plant protection/avoidance measures. It is reasonable to assume that there would be at least some failure rate (local population extinction) of avoidance/protection measures, especially given that there are no scientifically based criteria for detection of populations or buffer guidelines, and given the large scale of timber harvest activities (especially even-age

prescriptions). The most reliable scientifically accepted approach for conservation of rare plant populations is establishment of designated refugia (blocks of self-sufficient habitat containing all ecosystem support for life-history needs) within managed, working timberlands. Currently, all consolidated set-aside areas within JDSF are based on old-growth, late-seral forest stands, "owl circles" (programmatic buffer areas to avoid legal exposure to risk of unauthorized "take" of federally listed species), pygmy forest, and selected wetlands. Smaller reserves based on "hot spots" of rare plant species locations, or large "core" populations of rare plants, should be included as EIR mitigation for potential significant unavoidable impacts to sensitive plant species, following the same principles as a Habitat Conservation Plan and basic tenets of modern conservation biology. The selection of priorities for species and designated refugia should be developed in consultation with CDFG botanists. 64

"No significant impacts" to botanical resources. The EIR's conclusion that there are no significant impacts to botanical resources is not supported by the information and proposals of the EIR. As described above, the critical omissions of adequate scientific survey protocols, botanical inventory or reconnaissance-level original contemporary baseline data on the flora of the JDSF, and substantive, effective mitigation (including contingency and preventive measures for rare plant protection) make the "no significant impact" conclusion unreasonable and arbitrary.

Wetlands

As described below, the information the EIR provides on the distribution, extent, and types of wetlands within JDSF, and potential impacts, is flatly inadequate inadequate for meaningful public review or review by resource agency professionals. Wetlands are described in cursory text (2 paragraphs) under Wildlife (6.6 p. 20), and list in one sentence "...sphagnum bogs, a few isolated ponds, stream margins, and several springs and seeps" to describe the wetlands occurring in the nearly 50,000 acres of JDSF. The subsequent paragraph discusses only sphagnum bogs in general, not the local features. P. 21 erroneously states that "coastal salt marsh, coastal brackish marsh" occur in JDSF. Coastal salt and brackish marsh are limited to the immediate coast where daily ocean tidal flows occur. P. 21 also states that "coastal and valley freshwater marsh" occurs in JDSF, but provides no information about their composition, distribution, or abundance. Given that this chapter is about wildlife, it is a gross deficiency of the discussion that no wetland-dependent wildlife (waterfowl, amphibians, etc, including sensitive species such as red-legged frogs, salamander species) are identified in relation to these habitats. 65

The EIR fails to disclose in this discussion of wetlands (p. 20) the widespread but localized occurrence of wetland sedge and rush communities, riparian backwater marsh patches, marine terrace hardpan wetlands (pygmy forest and raised bog), hillslopes seeps and springs with wetland shrub thickets, and other widely distributed small wetland features. These are in fact the types of wetlands most likely to occur within timber operations, and are most likely to be directly impacted. These wetland types are partially listed in the botanical resources section (6.2; see table VII 6.2.3.), but are not described (or mapped) to emphasize their wetland habitat status or explain their distribution, abundance, species composition, hydrology, and wildlife habitat functions. A laundry list of wetlands that includes some that do not occur within JDSF is not an impact assessment. 66

The EIR describes no mitigation survey protocols for advance identification of wetlands. Many wetlands, particularly sedge/rush meadows and seeps, are seasonal wetlands, and are recognizable as wetlands by non-experts only in the winter-spring months. Many riparian wetlands are difficult 67

to identify in the dry season (summer-fall) unless they support dense stands of perennial marsh plants. Rare plants difficult to recognize in low-intensity surveys, such as *Campanula californica, Calamagrostis bolanderi*, *Carex* spp., *Glyceria grandis*, *Lilium maritimum* (especially non-flowering), *Lycopodium clavatum*, *Pleuropogon hooverianus*, *Rhynchospora alba*, Sidalcea calycosa ssp. *rhizomata* and others, are most likely to occur in seasonal wetlands within forests and forest gaps. Therefore, impacts to under-identified seasonal wetlands are likely to be the coarse controls for significant impacts to many rare plants. Seep and spring wetlands are the most likely types to be associated with rare plants such as *Cypripedium montanum*. The EIR should include at minimum reconnaissance-level surveys of wetlands to reflect at least typical wetland conditions (distribution, abundance, composition, hydrology) within each soil series wherever timber management operations may occur.

The EIR should be revised to accurately and fully identify the potential impacts of all Plan timber management activities to wetlands. Minor alteration of topography and drainage by ground-based equipment (tractor logging) can cause major hydrologic changes in wetlands, and their functions in supporting wildlife and flora. Protecting wetlands through avoidance requires (a) accurate detection of wetlands; (b) accurate understanding of local wetland hydrology and soil characteristics, geomorphic processes, especially controls of drainage, transport of sediment and organic matter, and water sources; (c) expert judgment on setting effective wetland buffers. The EIR should include programmatic wetland identification (not formal delineation of federal jurisdictional wetlands) and planning protocols to ensure that there are no significant cumulative impacts to wetlands in JDSF.

68

"Significant impact" determination for wetlands. Without adequate assessment and programmatic mitigation for wetland resources in JDSF as described above, the EIR must conclude that there is unmitigated potential for significant impacts to wetlands. The EIR preparers should consult with wetland experts from CDFG and USFWS or USFS, or other qualified experts to re-assess wetland resources and mitigation planning.

Terrestrial Wildlife

Habitat modification impacts assessment (6.6.6, p. 121). This single paragraph discussion of habitat modification impacts includes no impact assessment at all. It simply states that a short list of categorical impacts (direct mortality, permanent habitat loss or modification, reduced reproductive success) "are considered significant", and are more significant for habitats of rare species. It states only that rare habitats are not proposed for removal, and some habitats, depending on their location, "could be at risk". This is merely a declaration, not an analysis of habitat modification. Habitat modification impact assessment is the cornerstone for predicting viability of wildlife populations, so this deficiency is not trivial or local. This section does not cross-reference to the comparison of alternatives (6.6.8) that generates a series of coarse numeric index habitat capability (potential habitat quality; California Wildlife Habitat Relationships System) predictions for all alternatives. These model predictions are non-spatial, lacking in any biological dimensions dependent on habitat patch size, configuration, life-history, and population distributions. The results are presented essentially as scorecards, without interpretation; it contributes minimally to the EIRs assessment of long-term habitat modification impacts in JDSF. The numeric WHRS results, as the EIR notes, are not particularly accurate or ecologically meaningful predictions. The discussion includes no information in a spatial context (Map Z) about the timing or rate of timber harvests, block size, and their dispersion over vegetation and

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soil types (Maps J, U) and landslide risk zones (Map W). It is therefore impossible to evaluate mitigation for this significant impact on wildlife habitat.

72 Only internal small-scale habitat mitigations, such as snag retention, exclusion or buffer zones, etc. are discussed. These mitigation measures are important, but they are subordinate to the larger-scale habitat modification impacts. Despite over 50 years of timber harvest and inventory analysis in JDSF, the habitat assessment does not even provide a local conceptual model for forest habitat successional development to inform assessment of impacts. With widely available
73 GIS capabilities, at least a crude spatially explicit model of dynamic (successional) habitat modification over time would be feasible and appropriate for impact assessment; and in the absence of any adequate assessment at all, it would be necessary. Again, it should be noted that the primary biological focus of a programmatic EIR is the larger—scale habitat issues. Additionally, because many of the mitigations for these large-scale impacts can only successfully be identified and implemented at a program level.

Rare, threatened or endangered terrestrial wildlife species

Marbled murrelet impacts and mitigation

The discussion of marbled murrelets in JDSF includes excessive and extraneous information that obscures the salient facts that (a) JDSF was designated *critical habitat* for this federally listed
74 species; (b) the recovery plan for the marbled murrelet identifies the Mendocino Zone (in which JDSF occurs) as at high risk of local extinction, but "highly recommended" for conservation measures to benefit the species (p. 116, USFWS 1997); (c) Russian Gulch is considered to be occupied habitat by CDFG (S. Martinelli). This last point is somewhat confused by the contradictory statement on p. 127 that the species "has not been determined to use stands on JDSF". The EIR defers mitigation to individual projects in the impacts discussion. It does not
75 cross-reference to the earlier discussion at 6.6.8, "New Management Measures" including an assessment of what areas offer the greatest potential for marbled murrelet habitat. This generalized programmatic mitigation is a raw concept, and does put mitigation ahead of impacts, but at least it (potentially) offers a substantive and significant contribution to the recovery of the species within JDSF. The EIR needs to reformulate this proposal as an enforceable (mandatory) proposal or mitigation measure for implementation, and link it to a valid assessment of JDSF
76 Management Plan impacts to the species. Otherwise, it would be merely a sketch draft of paper mitigation. The proposal should specify scientifically sound spatially explicit conservation planning methods and principles, agency and expert coordination and review, and a time-line for implementation.

77 The EIR lacks basic ground-truthed (field-verified) habitat suitability classification for the marbled murrelet in JDSF, and relies on surrogate vegetation and timber data to assess marbled murrelet habitat distribution and abundance. Like the lack of habitat typing in the assessment of JDSF aquatic resources (stream habitat quality), the absence of accurate empirical habitat assessments and adequate surveys for the species precludes a meaningful analysis of impacts for a federally listed endangered species in a designated recovery area. This deficiency is likely to cause inaccurate assessments of impacts.

Northern spotted owl

The EIR does identify competition with invasive barred owls and predation by great horned owls as potential threats to the viability of habitat occupied by the federally listed northern spotted owl (NSO) in the lengthy species account. Great horned owls are known to significantly constrain the occupancy by NSO in otherwise suitable habitat (Zabel 1995). Predictive models of NSO habitat must consider spatial distribution of habitat structure that influences NSO foraging and breeding, refuge from predators, as well as habitat that favors predators (Zabel et al. 2003). The EIR does not, however, identify interactive (cumulative) effects of habitat modification from logging and the spread of these competitor and predator owl species in the cursory 2 paragraph impacts section (6.6.6. p. 128). Unlike the EIR's approach to marbled murrelet impacts and mitigation, the treatment of NSO is essentially the same as a 50,000 acre THP: following the FPR requirements that establish minimum, isolated "owl circle" buffers around known occupied habitat in THP areas, while landscape-level habitat structure suffers long-term degradation by logging. The EIR does offer snag protections, retention of some late-seral and old-growth stands over some portions of JDSF, but the larger matrix of forest will be managed according to standard silvicultural prescriptions, with no additional spatially distributed refugia or reserves for NSO. This is a formula for the same decline in NSO in privately managed commercial timber land, and is less protective than voluntary interim guidelines for NSO protection by some private timber companies. The impact analysis and mitigation for NSO is grossly deficient, and falls far below the current scientific standards of analysis for NSO conservation (Zabel et al. 2003).

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Strong, substantial, indirect adverse impacts or injury to NSO may occur through interference with essential foraging, and elevated risk of predation. Recent evaluations of NSO foraging ecology, prey use, and home-range characteristics in California have suggested that NSOs use a wider variety of forest habitats (including younger forests) for foraging in relatively drier conditions in California compared with the Pacific Northwest, especially where woodrats are the principal prey species. The high affinity for old growth may be due to refuges from predators such as great horned owls (Solis et al. 1990, Blakesley et al. 1992, Hunter et al. 1995, Zabel *et al.* 1995, Ward *et al.* 1998, Thome *et al.* 1999). Structural habitat restriction of great horned owls in late-seral coniferous forests is one of the principal factors affecting the functional characteristics (quality) of NSO habitat. Franklin *et al.* (2000) found nonlinear relationships between traditional "suitable" (mature forest) habitat and NSOs, indicating that a range of forest habitats, not just old growth forest, are needed for all life-history stages and needs in California. The EIR's assessment of impacts to NSO is incomplete and unreliable without consideration of indirect impacts of habitat modification on predation and competition.

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Therefore, the DEIR must be revised to include a well-tested, calibrated NSO habitat models to JDSF (comparable to Zabel et al. 2003) to assess long-term impacts of the management plan, with due attention to indirect and cumulative impacts related to habitat modification, prey availability, competition with barred owls, and great horned owl populations. It should then develop a system of managed reserves (analogous with the 'new management measures' for marbled murrelet conservation and old-growth/late-seral reserves) within JDSF. In essence, this effort would be equivalent to a Habitat Conservation Plan (HCP) for JDSF. Indeed, it would be both consistent with Board policy and prudent to develop an HCP for both the murrelet and NSO, as a "demonstration" for private forest landowners and the general public in California. A system of reserves within a working timber landscape would probably be the only viable long-term mitigation approach to conserve the NSO under the JDSF Management plan.

80 Like the management plan's effects on listed salmonids, its actions would cause reduction of population, habitat, and unauthorized "take" (prohibited by the Endangered Species Act) of endangered NSO. This would be significant and unmitigated, in the absence of an approved HCP. Unauthorized take of an endangered species amplifies the CEQA threshold for mandatory findings of significance based on "reduction in numbers or range". The management plan and its derivative THPs evaluate impacts to endangered NSO as though only direct, lethal impacts mattered. Even the narrowest legal definitions of "takings" of federally endangered or threatened species ("harass, *harm*, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct") address injury or death due to indirect causes, under the interpretation of "harm" in case law, which includes any "act which actually kills or injures wildlife" – not restricted to direct death or injury. In the preamble to the final regulatory definition of "harm", the U.S. Fish and Wildlife Service expressly rejected the limitation of "harm" to direct physical injury. "Harm"..."may include significant habitat modification or degradation, where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" (Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon). Proximate indirect causes of injury or death, such as complete removal of habitat around an "activity center", plainly meet the criteria for "take", as long as it is "sufficiently imminent or certain" that take (harm) will occur. (North Slope Borough v. Andrus). In the absence of a final HCP, there is no mechanism for authorization of "takings" of NSO.

81 Because long-term impacts of a management plan are forest-wide issues, this program-level EIR is the CEQA-mandated vehicle for providing adequate impact assessment and mitigations. Deferral of this to the THP-stage would be both inappropriate under CEQA, and ineffective.

Conclusions

82 The EIR is basically inadequate as a CEQA document, and as a scientific assessment of forestry impacts and mitigation in Jackson Demonstration State Forest. As a CEQA document, it fails because it is unintelligible to most intelligent public citizens, burdened by extraordinary length of extraneous and highly technical background information in the body of the EIR. Even as an environmental professional, I found it unusually difficult to review this cluttered and discursive EIR. It also fails because despite its excessive technical length, it does not apply relevant information and arguments to its relatively cursory assessment of impacts and mitigation. There are widespread cases of unsupported conclusions of "less than significant impact", often in contradiction to information in the EIR. The environmental baseline information in the EIR specific to JDSF (empirical habitat typing, assessment, species surveys) is woefully deficient, and the lack of even minimally adequate baseline survey information about aquatic and terrestrial biota precludes meaningful assessment of significant impacts. The EIR makes substantial errors in its conclusions about potentially significant impacts to botanical resources, wetlands, federally and state listed salmonid species, and federally listed wildlife species. The EIR should be revised and recirculated, and a preliminary or administrative draft should be subject to independent scientific peer review before public circulation to ensure that scientifically sound methods and reasonable interpretations support its conclusions.

I look forward to reading a substantially improved recirculated draft EIR for Jackson Demonstration State Forest, and without prejudice to the selection of the Board of Forestry's preferred alternative. I would encourage the EIR preparers to develop alternatives that adequately reflect the Board's admirable policies for "innovative demonstrations, experiments, and education in forest management", to "improve the amount and quality of information concerning economic forest management...", to "conduct monitoring of resource management activities to gauge their effectiveness in meeting project objectives", and "investigate methods to mitigate conflicts...in multiple use of forestland". If these principles are faithfully followed in the JDSF management plan, there should be no difficulty in preparing an adequate CEQA document.

Respectfully submitted,

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Response to Comment 1
The Board of Forestry has attempted to strike a balance between providing extensive data and technical analysis requested by previous DEIR commenters and providing a document whose conclusions are stated clearly and simply for public understanding. The complexity of the project, consisting of a complex set of management activities over a large landscape, necessarily results in some complexity in describing the project and its potential effects. Some portions of the DEIR are more technical than others. The impact summary tables at the end of each resource analysis section provide one example of a relatively non-technical presentation of the potential impacts of the alternatives considered in the DEIR and RDEIR. The DEIR provides a list of acronyms and abbreviations and a glossary to assist the reader (see DEIR Appendices 1 and 2). The Board has responded to specific questions or concerns about specific aspects of the DEIR that are raised in this and other comment letter.

Response to Comment 2
The amount of background information presented was what was judged as relevant to support analyses and conclusions specified in the DEIR. Much of this information was acquired and presented in specific response to public comments made on the previously circulated DEIR. Judicial action on the previous EIR found that it provided an inadequate discussion of project setting, necessitating the inclusion of a substantial amount of setting-related information. Setting information often examined JDSF management related issues at multiple levels: the Redwood Region, the North Coast, Mendocino County, the cumulative effects assessment area, and JDSF itself.

Response to Comment 3
The information presented is not “indiscriminant,” in that all of it is relevant to the species, management actions and measures, and impacts as analyzed at various scales. Much of the information depicts resource conditions at a regional and species level, in response to requests from numerous commenters on the previously-circulated DEIR. Further, the information is not intended simply to support an evaluation of the impacts of logging, but rather to address the comprehensive resource management program outlined in the plan. The DEIR provided the relevant elements of a watershed analysis to provide regional context and setting as well as JDSF ownership.

Response to Comment 4
While the discussion of resource conditions is presented at difference geographic scales, each of these scales (project area, study area, and region) are defined in the DEIR (Paragraph 1, P. V11.6.1-2 and in Figure V.3 on P. V-14) and treated consistently throughout the document. See also response to comment 3, regarding the need for analysis at these different scales.

Response to Comment 5
See response to comment 3.

Response to Comment 6
Although readers may vary about appropriateness of the information presented and the form of presentation, the receipt of nearly several thousand comments from the general public on the DEIR, many of which were substantive, supports the conclusion that the public was able to understand the document and form meaningful responses. One purpose of the FEIR is to clarify information and conclusions where the need has been identified by public commenter. See also the response to comment 1.

Response to Comment 7
The level of detail of the impact assessment is appropriate for a program level document. As individual projects are proposed, site-specific analysis will be conducted and mitigation developed and applied, as required. More detailed assessment and documentation of effects will be presented in individual THPs or other CEQA compliance for other project types.

Response to Comment 8
The EIR preparers have summarized substantial information from previous monitoring studies on a variety of species, including salmonids, aquatic amphibians, marbled murrelet, and northern spotted owl. Responses to habitat changes and effectiveness of management and mitigation measures are based upon a variety of information sources that are available, including onsite monitoring results, extensive watershed studies conducted on JDSF's Caspar Creek experimental watershed, assessment of population changes in response to habitat changes, habitat modeling, evaluation of research and management studies conducted in similar environments, and professional experience of preparers. This approach incorporates the best mix of available scientific and managerial information into the impact assessment. The EIR analysis did not ignore any available data sets on mitigation effectiveness. The plan proposes enhanced forest-wide monitoring to generate better information over time by which to evaluate the efficacy of management and mitigation measures.

Response to Comment 9
See response to comment 1. Board policy for the JDSF management plan is to incorporate a full array of management measures into the plan to actively manage for all natural resources, rather than emphasizing development of mitigation measures as after-the-fact additions to the plan through the EIR process. The impact analysis therefore considers most management measures as a part of the plan. The result is that the impact assessment evaluates a more integrated management plan. The DEIR and REIR explicitly offer the opportunity for the public to review adopted management measures, just as they could review them as mitigation measures. The proposed mitigation measures are found in the same part of each resource analysis section. Impact areas for which mitigations were identified to be necessary are summarized in two adjacent tables in the executive summaries of both the DEIR and RDEIR (DEIR Tables I.2 and I.3; RDEIR Tables I.1 and I.2). Each proposed mitigation measure identifies specific associated monitoring actions, including timing, scope, implementation responsibility, and monitoring responsibility. Monitoring and adaptive management are further supported by the monitoring and adaptive management program provided as a part of the management plan (see ADFFMP Chapter 5).

Response to Comment 10
Section VII.6.6.7 does not apply to "all discussion of biological resources," as the comment indicates, but only to wildlife and wildlife habitat.

Management measures in the JDSF management plan are not "functionally equivalent" under CEQA, except to the extent that individual programs, such as Timber Harvesting Plans, have been explicitly recognized by the legislature as functional equivalents to and EIR. The referenced page to the term "stand alone" document on page II-10 clearly referred only to a stated desire to present adequate information in the DEIR so that interested readers would not have to refer to review both the plan and EIR to make comments.

A substantial number of "management measures" which are equivalent to mitigation measures, have been adopted since the previous DEIR, in response to public and agency comments. These measures include substantial management to recover marbled murrelet habitat, manage and enhance large woody debris, and implementation of an accelerated road management plan (See DEIR Section 6.6.4; Pp VII.6.6-118-120), as well as snag management measures (V.6.6-131). The RDEIR included additional direction and measures resulting from Alternative G, such as Department of Fish and Game protocol botanical surveys for THPs and other large projects, designation of an additional 1,549-acre area for late seral forest development to support potential marbled murrelet habitat, designation of a 6,803-acre older forest structure zone, and significant restrictions on the use of clearcutting and other forms of even-aged management.

The public is encouraged to comment to comment on whether the THP practices and standards identified in the plan are adequate to achieve resource protection and management goals, or to comment on the many additional management and mitigation measures that have been included, or any desired additional measures that the public recommends.

Response to Comment 11
The commenter is mixing the Board's responsibilities for setting State Forest Policy, the goals and objectives of the proposed project and the Board's responsibilities under CEQA. The Board's policies related to managing State Forests are described in DEIR section II.2. The project goals and objectives are described in section III.2. The Board's CEQA responsibilities for certifying this EIR and approving the DFMP are found in section IV. CEQA requires alternatives be considered in an EIR that mitigate one or more of the proposed project's potentially significant effects and meet most of the proposed project's objectives (CCR §15126.6). The Board selected for consideration in the DEIR (and RDEIR) seven alternatives that met these requirements. It also identified eight alternatives which were dismissed from further consideration because they did not meet those requirements. The Board had already made the determination that the alternatives met the basic Board policy requirements in selecting the alternatives for analysis. The intent of an EIR is to disclose the potentially significant effects of a proposed project and provide mitigations and alternatives that reduce those impacts. The Board has the discretion, independent of their decision on this EIR, to approve or disapprove the DFMP (or ADFFMP) based on its ability to meet their policy intent or the goals and objective of the Plan.

Response to Comment 12
The extent to which each alternative meets plan goals and objectives is summarized at the end of the analysis of each resource topic. These tables provide a detailed basis for comparison of alternatives. The rationale and elements of each alternative are presented in the DEIR at pages VI-1 to VI-13 and in Table I.2, a 14-page table that summarizes significant effects of alternatives and associated mitigation measures, provides an accessible basis for comparing alternatives. Also, see response to Comment 11. A similar scope of information about Alternative G is provided in the RDEIR (see RDEIR pages II-1 to II-17 and Table II.4.)

Response to Comment 13
To the extent that data collected within the Forest exists, it has been utilized to help quantify and characterize the effects of forest management, and inform the analysis performed for the DEIR. These data sets include, but are not limited to vegetation typing, forest stand inventory, stream water temperature, and plant and animal survey and species/habitat relationships, where known. Because of its longstanding role as a research and demonstration state forest, and ongoing cooperation in data collection with partners such as the Department of Fish and Game and the National Council for Air and Stream Improvement, there is likely more detailed environmental data available for JDSF than any other comparable area in the Redwood Region. Detailed data sets at the level of single THPs do not exist.

The comment ignores the very substantial amount of research on watersheds and watershed cumulative effects that has been conducted at the Caspar Creek experimental watershed at JDSF. See DEIR sections VII.6.1 (Aquatic Resources), VII.7 (Geology and Soils), VII.10 (Hydrology and Water Quality), and section VIII (Cumulative Effects). The Board believes that the Caspar Creek studies summarized in the DEIR provide a firm basis for many of the watershed and aquatic resource impact conclusions in the DEIR and RDEIR. Results from the Caspar Creek study have been reported on in over 150 scientific papers that are available on the internet (http://www.fs.fed.us/psw/topics/water/caspar/caspubs.shtml). These papers include study results on changes in peak flows, sediment yield, hillslope erosion, fisheries, and macroinvertebrate communities. New study results are posted as they are available, with entries for papers completed in 2007 available.

Response to Comment 14
The DEIR/RDEIR does not rely exclusively on the Forest Practice Rules (FPR) in determining that no significant impacts will occur from implementation of the plan. Numerous mitigations and management measures that exceed the minimum standards in the FPRs have been included in the DEIR/RDEIR and ADFFMP as well as incorporating adaptive management and monitoring requirements. The DEIR/RDEIR relies upon JDSF data throughout the documents. The comment ignores the adaptive management and monitoring program that is included as part of the DFMP and

ADFFMP (Chapter 5 of both documents). This program provides exactly the kind of empirical testing that the commenter calls for. Additionally, the ADFFMP calls for the establishment of three Riparian Restoration Demonstration Areas to test various approaches to protecting and enhancing riparian and aquatic habitats.

Response to Comment 15
The lack of comparison data regarding pre- and post-harvest populations for wildlife, fish, and plants mostly reflects the lack of such data. The plan specifies a monitoring program that will provide additional information in the future that will help to validate the conclusions in the DEIR and RDEIR. Also, the comment seems to suggest that a scientific testing of hypotheses is a requirement and standard practice in CEQA documents. In fact, this is not a typical approach; rather, more typical approaches to predicting impacts are to model management actions and their effects, as was performed in this EIR.

Response to Comment 16
Comparisons of the effectiveness of current practices to past practices is a valid approach for evaluating whether application of these practices will be effective in the future. Comparative evaluations of practices have to be based on current conditions resulting from past actions. There is no way to redesign past actions to achieve the perfect experimental design conditions that appear to be advocated by the commenter.

Response to Comment 17
The suggestion that management under the plan will be conducted so as to only meet the minimum requirements of the FPRs is erroneous. Instead, the plan has incorporated a large number of management goals and additional management measures that maintain, enhance, and protect key environmental resources. Examples include protection of old growth forest stands, key habitat elements in other stands, application of riparian management prescriptions, and many others. This approach balances the desire to evaluate proposed management practices, protect resource values, and maintain options for future research and demonstration. The DEIR and RDEIR evaluate the potential environmental impacts of implementing all plan measures as a whole and do not rely solely on an assumption that the Forest Practice Rules adequately mitigate all impacts. Further, the commenter's line of reasoning ignores that fact the timber management is only one of the management activities encompassed in the management plan. Potential impacts of other program elements--such as recreation and improvement of the road system to reduce sediment inputs—also are addressed in the DEIR and RDEIR. Finally, the plan will evaluate the effectiveness of practices through monitoring and adaptive management, as recommended in this comment.

Response to Comment 18
Available inventory, monitoring, and research data were used in designing the plan alternatives. For example, the commenter overlooks the substantial Caspar Creek watershed research that was utilized in the DEIR (see also response to comment 13). The DEIR does not "assume" adequacy, but rather makes a determination based on available information, modeling results, public input and professional judgment. Where the evaluation determined that additional measures were needed or beneficial, they were identified as mitigation measures.

Response to Comment 19
The discussion of monitoring and adaptive management does provide information on the circumstance under which monitoring will be performed. Specific schedules and locations for monitoring cannot be specified now, as the program needs to respond adaptively to management actions. Such a level of specificity also is not appropriate for a program-level document, and an attempt to provide a specific monitoring program would increase the size of a document that has been criticized for being too lengthy.

Substantive decisions regarding monitoring and mitigation are explicitly the responsibility of the department professionals that are charged with managing JDSF. Other agency professionals have substantive roles in the THP process and in ensuring compliance with other laws and regulations, and

such involvement may lead to agency reporting or agency review of monitoring reports. Similar to other resource management agencies, the department and the Board have not established a scientific review panel to oversee all monitoring and adaptive management efforts on the JDSF.

Response to Comment 20
See response to comment 17. Also, the cited phrases do not appear in the referenced section of the mitigation and monitoring plan for aquatic resources. Rather, the description uses terms such as “will be monitored…every two years as part of a formal monitoring program”, and “completed THPs that have over-wintered for 1 to 4 years will be monitored”. Detailed monitoring plans will be developed for specific sites, areas, and management programs as required to meet the monitoring commitments in the EIR. These will be available for public review upon request.

Response to Comment 21
Grouping of all mitigation and monitoring requirements (MMRs) in a single section may have been preferable for those people desiring to review all provisions. The approach taken in the DEIR, of placing MMRs in the same area of each resource section, was done to allow those with specific interests to readily access this information. While this placement approach may be inconvenient for some readers, it hardly “precludes meaningful review” as this letter demonstrates. See also the response to comment 9.

The ADFFMP includes a compilation of most mitigation requirements and management measures (Appendix IX).

Response to Comment 22
See response to comments 9, 20 and 21. To narrowly define monitoring parameters in a program-level document is inherently contrary to the philosophy of adaptive management, which seeks to adapt management (in this case monitoring requirements) to fit the needs of specific situations and to respond to ongoing monitoring efforts to improve their performance over time. In addition, mitigation monitoring must evaluate the effectiveness of mitigation measures.

Response to Comment 23
Program EIR project descriptions describe a future series of activities or actions that are proposed. Individual projects proposed at a later date will provide the specificity necessary to ensure that project-specific potential impacts are addressed in accordance with the guidance provided in the Program EIR or at the project level. CEQA case law establishes that the alternatives need only relate to the proposed project as a whole and are not required to address all phases or project parts [Big Rock Mesa Property Owners Association v. Board of Supervisors (2d Dist. 1977) 73 Cal.App.3d 218 [139Cal.Rptr.445]]; and alternatives analysis for a plan level EIR do not need to contain the level of detail and specificity found in the project level EIRs [Larson Boat Shop, Inc. v. Board of Harbor Commissioners (2d Dist. 1993) 18 Cal.App. 4th 729, 741-746[22 Cal.Rpt.2d 618]].

Section VI of the DEIR presents a brief description of each alternative and provides a 38-page detailed comparison of the alternatives in Table VI.1 (matrix approach suggested in CCR 15126.6(d)). Analogous information is provided in the RDEIR (pages II-1 to II-17 and Table II.4). Within each resource area analyzed in sections VII and VIII (for cumulative impacts), the EIR also presents tables that provide an impact comparison and impact significance call for each alternative. The alternatives comparison table for wildlife resources is 29 pages in length. In addition to the check boxes to provide a general indication of impact levels, the brief text provides more fine-grained information. It is the Board's opinion that the specificity and detail provided is appropriate for a program EIR.

The commenters conclusion that the "failure to identify substantial differences in impact significance among the alternatives” is due to the alternative descriptions being "vague and indefinite" is incorrect. The impacts are often (not always) similar because the activities undertaken in each alternative are similar; restricted by the limitations imposed by the Board Policy and Public Resources Code intent. JDSF use is limited to research and demonstration resulting in a limited number of ways

to accomplish that mandate. The Board did not have the flexibility to propose alternatives that radically diverged from the management proposed under the DFMP. Alternatives that described establishing a state park or developing home sites might have revealed significant differences in terms of potential impacts, but would have been wholly infeasible and therefore not appropriate for consideration in this EIR. Instead the DEIR and RDEIR present 7 similar means for managing a demonstration and research forest, with minor adjustments in harvest levels, allocations of silvicultural prescriptions and protection measures. Consequently, it is difficult to detect significant differences in the resultant environmental impacts.

Response to Comment 24
See response to comment 1. The claim that the public is unable to evaluate and comment on the EIR is belied by the fact that the BOF received several thousand comments, many of which were substantive. Many comments were submitted by qualified professionals from other agencies. As a Lead Agency, the Board of Forestry as preparer of the EIR, assembled a team consisting of professionals with expertise in the disciplines covered by the documents. Convening scientific peer review panels to review EIRs has not been a standard or even infrequent practice in implementing CEQA.

Response to Comment 25
The plan did incorporate extensive watershed analyses conducted by both the department and Stillwater Sciences (CDF, 1999). Contrary to the comment, much of the DEIR incorporates substantial elements that are based on a watershed level of analysis and incorporate many of the elements for a watershed analysis as discussed in the Scientific Review Panel report (pp. 29 – 30) cited by commenter. This includes a watershed wide assessment of: peak flow impacts (Appendix 10), road related sediment impacts (Appendix 11), summary of timber harvesting activities by watershed unit (section VIII and Appendix 14), and management impacts to water quality (Appendix 12). The plan also has identified a large number of management measures (including both FPRs and substantial additional protection measures) and additional mitigation measures based on a Forest-wide analysis of resource conditions and requirements to achieve resource goals. These measures (including analysis of local resource conditions and appropriate management measures) will be implemented on a site-specific basis, as any sound management program would do.

California Department of Forestry and Fire Protection (CDF). 1999. Draft Habitat Conservation Plan/Sustained Yield Plan for Jackson Demonstration State Forest. Administrative Review Draft prepared by Stillwater Sciences, Berkeley, California, dated June 1999. Sacramento, CA.

Response to Comment 26
The decline of federally-listed salmonids has resulted at least partly as a result of past forest management actions that occurred under various sets of previous FPRs. Sediment related impacts related from past management activities are acknowledged in the DEIR to pose substantial and long lasting impacts. Sediment budgets conducted by JDSF and in support of the Noyo and Big River TMDL both clearly highlight road issues as a primary sediment source. The road management plan follows a widely accepted watershed-wide approach to inventory and prioritize roads repairs and road decommissioning. In addition to implementation of the current FPRs (which have been refined in response to recent aquatic habitat concerns), the proposed JDSF management plan alternative adopts a number of protection measures, including protection of all existing stands of old growth forest, recruitment of substantial amounts of late successional forest, protection of riparian areas through designation of late successional prescriptions for Watercourse and Lake Protection Zones; a management measure for large woody debris survey, recruitment, and placement; requiring maintenance of stream canopies at levels above the FPRs, and a commitment to address roads that are contributing to aquatic habitat degradation. Finally, extensive watershed analysis was incorporated in the management program in the proposed plan and its environmental analysis In short, past consequences created under very different management conditions does not serve as strong evidence of likely future conditions of aquatic habitat.

Response to Comment 27
The fine level of detail for the field based stream habitat data makes it somewhat impractical to present on forest wide maps. However, the stream habitat data, representing current conditions, is presented and discussed under section 6.1.3 Aquatic Habitat Conditions (DEIR pages VII.6.1-18 to VII.6.1-25). Further, two GIS-based watershed analyses similar to that which is discussed by the commenter are presented in the Cumulative Effects section (DEIR pages VIII-66 to VIII-75).

Response to Comment 28
The importance of JDSF and surrounding watershed lands to coho salmon is identified on page DEIR VII.6.1-37 and VII.6.1-54 to VII.6.1-56.

Response to Comment 29
The Board, the department, and JDSF all recognize and acknowledge the importance of coho stocks that use stream habitats on the Forest as a significant part of the regional metapopulation and recognize the importance of the population component to species conservation and recovery (See summary in DEIR Section 6.1.6, on pages VII.6.1-53 to VII.6.1-71). The extensive management practices proposed in the plan to protect and enhance aquatic habitats demonstrate this awareness and commitment to contribute to species recovery. It also seems appropriate to acknowledge that important stocks remain on JDSF because suitable habitat conditions have been maintained as a result of past and recent management practices, which have been more protective than on many surrounding lands.

The management goals for JDSF expressed in the ADFFMP make clear the concern of the Board and the department for protecting and restoring watersheds and fisheries. The Forest Restoration Goal has an objective to “Focus on restoring the more productive river and stream systems from the low gradient floodplains to intermittent streams in the upper reaches to improve the habitat conditions and populations of salmonids, other fish species, amphibians, and other plants and animals dependent upon riparian ecosystems.” The Plan’s Watershed and Ecological Processes Goal is to “Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities.”

Response to Comment 30
The DIEIR text was not intended to suggest that JDSF was no more important to coho than other surrounding lands. Rather, the statement simply intended to convey for purposes of cumulative evaluation that the populations are likely to have declined within the assessment area (which includes JDSF and adjacent lands within the same watersheds), and to acknowledge that populations within JDSF also have likely declined. It also does not intend to convey that JDSF lands are not important to recovery. In fact, they are recognized as among the highest value habitat for coho and other species, due to past management practices, and are treated to protect and enhance habitat value. One could just as easily argue that presentation of this information would generate public concern rather than “suppressing” public comment.

Response to Comment 31
The proposed management plan seeks to “minimize impacts of activities contributing to direct and indirect stream habitat degradation, and focus restoration efforts to benefit salmonid recovery” throughout the Forest. DEIR analyses, such as the GIS-based model (DEIR pages VIII-66 to VIII-72) that was developed to evaluate the recovery potential for planning watersheds that include JDSF and the larger assessment area, will provide an important source of information to further guide future management and restoration actions. For example, prioritizing road segments to be treated under the ADFFMP’s Road Management Program. The approach of the management plan is to avoid take of listed species, thus a Habitat Conservation Plan (HCP) approach is not directly relevant. However, the watershed assessment approach utilized in the DEIR and RDEIR and the ADFFMP’s designation of management measures to contribute to recovery are similar to typical HCPs.

Response to Comment 32
The commenter assumes incorrectly that comments provided by NOAA Fisheries on the 2002 DEIR were not addressed in the plan and DEIR. The Board agrees with the commenter and NOAA Fisheries that if take would occur under the plan, it would require authorization under Section 10 of the federal ESA.

Previously, the Department initiated preparation of an HCP to address potential for take on JDSF, but during its preparation, the Department recognized that it had the obligation and the opportunity to implement actions that would avoid take of coho salmon and encourage recovery of aquatic habitats. Therefore, it initiated preparation of the revised JDSF Management Plan that would incorporate these recovery-focused management measures.

During preparation of the 2005 DEIR, the Board incorporated a number of management and mitigation measures that respond specifically to comments received from the public and agencies (including NOAA Fisheries) on the previous versions of the DEIR. The following measures were included: The plan outlines an aggressive road management program intended to protect and enhance riparian and aquatic habitats over time. Riparian zones are either not harvested or are lightly harvested, primarily by cable skyline systems, using prescriptions designed to encourage development of late successional habitat conditions. Stream channels are protected, and shade canopy is retained at or near pre-harvest levels. An additional management measure for large woody debris (LWD) survey, recruitment, and placement, provides a process and standards for increasing the quantity of LWD in streams or available for recruitment. Additionally, instream and hillslope monitoring, as described in Chapter 5 of the DFMP, will provide further evidence of stream condition and attainment of water quality objectives.

In summary, the Board did not propose to mitigate for take that would occur under the plan as suggested by the commenter. Instead, it identified management and mitigation measures that would avoid take and would benefit coho salmon habitat, including habitat protection, enhancement, and restoration. Therefore, the Board does not consider it necessary to request authorization for incidental take of coho salmon under the ESA.

Although NOAA fisheries referenced it's 2002 letter based on the previous plan formulation and DEIR management and mitigation measures, which stated that the plan and EIR "do not support the assertion that JDSF timber harvest will avoid take of Federally listed salmonids", it did not include a similar comment in its 2006 letter.

Response to Comment 33
See response to above comments. As discussed in the Cumulative Effects and Aquatics section of the DEIR, a conservation planning framework was developed to evaluate the restoration potential of planning watersheds within JDSF and throughout the larger assessment area. A conservation and planning framework that guides management actions is a process that will evolve over time, and as the methodologies mature it will become integrated into future planning documents that guide management actions.

Response to Comment 34
The DEIR provides programmatic direction for vegetation management. Appendix 13 lists the aquatic toxicity of the herbicides proposed for use. Water monitoring of forestry use has constantly shown little water contamination by the herbicides proposed for use. The issue of listed salmonids and herbicides has received substantial attention as a result of the lawsuit regarding endangered salmonids - Washington Toxics Coalition v. EPA. The following findings resulted; Four of the five herbicides proposed for use by JDSF were reviewed. Imazapyr and Sulfometuron methyl were found to have "not-likely-to-adversely-affect the salmon and steelhead or their habitat". Tryclopyr TEA (amine form) was fond to have "no direct or indirect adverse effects" on ESUs (Evolutionary Significant Units) relevant to JDSF. For Glyphosate: "the use of glyphosate at label limits may affect the species of concern, but is unlikely to adversely affect" for the Coho ESU relevant to JDSF. Note that uses that would approach the label limit of 5 lbs. of active ingredient per acre are not anticipated

at JDSF. Forestry use Triclopyr BBE (ester form) was found to “May Affect, not likely to adversely affect” for some ESUs relevant to JDSF. There are additional buffering measures in effect for Triclopyr BBE near salmon supporting waters.

The DEIR does not establish a total herbicide or surfactant stream load. The RDEIR adds further restrictions on herbicide use. Individual projects will vary in the potential to deliver herbicides to water; requiring site-specific measures such as increasing buffer width or changing surfactants to reduce this risk. This document does not preclude site-specific projects from future CEQA analysis. Projects must comply not only with the management plan, but also with other regulatory requirements, the product label, county rules, and the site specific pesticide use recommendation. Protection of aquatic resources is recognized at many points.

The future quantity or timing of herbicide use is speculative at this point in time. Site-specific mitigation is developed to prevent significant impacts.

See also the responses to DEIR comment letter E-28 from Californians Against Toxic Substances.

Response to Comment 35
The DEIR and Appendix 13 included review of both scientific literature and relevant synthesis of literature such as risk assessments. Given the range of objectives, conditions, and options for treatment, the DEIR provides general level of analysis, recognizing that specific projects will require detailed analysis. From the programmatic perspective, impacts to salmonids will be prevented by using herbicides in a manner consistent with the project-level analysis and with legal requirements, utilizing relevant approaches including the appropriate concentration, formulation, application technique, and set-back from water sources. Until a specific project is proposed, mitigation for future herbicide use is speculative. Once a project proposes herbicide use, the use will be analyzed and mitigation will be required to address potential impacts.

When specific information on herbicide effects was presented to the Board, including information related to salmonids, it was reviewed in detail (see the response to DEIR comment letter E-28, received from Californians for Alternatives to Toxics) and no significant new information was identified.

Response to Comment 36
Detailed information on the distribution and abundance of aquatic amphibians is not available. Therefore, the impact assessment is based on known on-site information from nonsystematic surveys, known habitat relationships information, and predicted effects of actions on habitats. This is a widely-used approach for programmatic impact evaluation for many management plans (including many regional HCPs) and other projects, as the cost of acquiring comprehensive site-specific information is prohibitive.

Response to Comment 37
The discussion of impacts to the red-legged frog clearly states that that the species is found “in the vicinity” of aquatic habitats, and that they “can be found away from permanent water”. The terrestrial habitats used by the red-legged frog, western pond turtle, and foothill yellow legged frog, however, are well-documented to be located primarily in close association with aquatic habitats. Proposed protection of WLPZs will protect aquatic habitat as well as the primary upland habitat used by sensitive amphibian species. For example, the Management Plan contains specific standards for the retention of snags and downed logs that are operative on both riparian and upland areas.

Response to Comment 38
The JDSF plan specifies that springs and seeps that provide habitat for non-fish aquatic species will receive the same protections as are provided to Class II streams. In addition, the FPRs (Title 14 CCR 916.5) specifically require the identification and protection of springs, seeps and other isolated wetland features during timber harvest planning. These measures include provisions for buffer

zones, canopy retention, equipment exclusion, and protection of the soil surface, among others. The JDSF plan also specifies protection of wetland areas by restricting activities.

Response to Comment 39
The need for landscape-level analysis of amphibian impacts depends on the likelihood of impacts that would result from multiple actions in different locations. The EIR evaluated the adequacy of site-specific management measures applied throughout the Forest, including WLPZ protection, maintenance and recruitment of late-successional habitats in WLPZs, implementation of a 25-foot no-harvest inner protection zone adjacent to all Class I and Class II watercourses, protection of old growth forests, recruitment of late successional forest in upland areas, and protection of isolated wetland areas and concluded that little or no impact would occur to amphibians. The cumulative analysis also looked at water temperature and other habitat conditions on surrounding lands and their effects on aquatic resources within JDSF, with the actions proposed in the plan, and concluded that habitats would be maintained and enhanced for amphibian species. There is no reason to believe that a more intensive analysis of landscape conditions under the plan would detect a different effect on amphibian species.

Response to Comment 40
This comment assumes that “potentially significant large-scale indirect spatial impacts” would occur to amphibian species. No evidence is provided, however, to support this contention. The EIR preparers documented in detail a rationale for why amphibian habitats would improve through implementation of the proposed plan and many of the plan alternatives. See response to comment 39.

Response to Comment 41
Comment noted.

Response to Comment 42
Lost Lake occurs within JDSF. McGuire’s Pond is located within private lands adjacent to and upstream of JDSF. The assessment reflected in the DEIR focuses on plants exhibiting the highest potential for impact, which are those that would be found within project areas. The DEIR notes that the lists do not include minor vegetation communities (page VII.6.2-13). Project-specific plant survey would include survey for species of concern associated with aquatic ecosystems. Many of the plants that favor aquatic environments were evaluated in Appendix 7B-3, but not included in the list found at VII.6.2-14.

JDSF has benefited immensely in working with Department of Fish and Game botanist Clare Golec in developing relevant plant lists used in the DEIR. The lists are intended to be dynamic, as knowledge of rare plant biology improves.

Response to Comment 43
The analysis considers the factors with potential to impact aquatic plants. The evaluation process (DEIR Appendix 7B-3) found that aquatic plants were “unlikely” to be found in areas disturbed by timber management. The document provides planning and programmatic analysis and direction for plant survey. Salmonid protection measures will reduce the risk of direct or indirect impacts to rare aquatic plants. The watercourse protection zone will minimize direct disturbance and indirect effects such as sediment delivery or canopy reduction. The DEIR does not eliminate the need to conduct site-specific analysis for unique aquatic resources such as Lost Lake, or other projects near habitat for aquatic plants. The cumulative effects analysis (VII-88) includes a definition and discussion of potential impacts to rare and endangered aquatic plants.

Response to Comment 44
The commenter assumes that survey for rare plants will not be conducted. In fact, scoping and survey are proposed (DEIR VII.6.2.23). For Alternative G, the provision for survey will be clarified as follows; “For timber harvest plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000)." This will result in

floristic surveys for the effected areas. On smaller scale projects, the survey effort will be appropriate for the level of analysis and the risk of impact to rare plants. This provision is included in the ADFFMP.

Response to Comment 45
In discussing "CDF practices," the commenter seems to be referring to the Department's role in review of THPs. The DEIR is not a Timber Harvesting Plan but a planning document that provides programmatic focus for vegetation management. Please see DEIR II8-15 for a discussion of the role of the Forest Practice Rules relative to the Management Plan for JDSF.

JDSF staff have found the CNDDB and CNPS databases useful for initial scoping, but not as a substitute for survey. Reporting by local timber management firms, consultants, and DFG personnel provide useful information on habitat attributes that is not available in the literature. Since 2002, JDSF has submitted all new CNPS list 1 and 2 rare plant occurrences to CNDDB to help support this resource. See the response to comment 44 above for the language regarding conduct of DFG 2000 protocol surveys.

Response to Comment 46
The commenter is apparently referring to Appendix 7B-2. The species descriptions were based primarily on the references cited. The characterization of the state of knowledge and of potential threats is based on the cited references, primary the CNDDB and CNPS databases. Where local knowledge was used to supplement the reference material, the risk to unprotected occurrences was described. The DEIR incorporates appropriate protection measures.

Environmental analysis typically includes multiple steps, including the identification of resources that could be affected, an assessment of potential effects, and implementation of measures or mitigation to reduce the level of impact. This process is generally followed by monitoring and adaptive management, in consideration of the effectiveness of the mitigation. The descriptions of threats to species listed in appendix 7B-2 are one aspect the first step. The DIER includes provision for survey and the establishment of protection measures. These are listed in the Specific Management Actions section. The ADFFMP specifies the use of DFG survey protocol as the standard for THPs and other large projects with the potential for negative effects on rare plants. Significant impacts are not expected to occur.

Response to Comment 47
See response 44 for clarification of the plant survey protocol. The guidelines include items listed in the comment letter, with the exception of DFG review and consultation. The THP review process includes participation by DFG. Surveys will be conducted and the resulting reports provided to DFG. JDSF staff intend to consult with DFG on appropriate protection measures, and DFG, as a member of the review team, may make recommendations for the protection of plant species.

Response to Comment 48
The finalized plan specifies pre-harvest but not routine post harvest surveys. The commenter states the objectives for post harvest surveys should be to determine if the protection measures failed either directly or indirectly. The Board generally agrees with this statement. Harvest areas are generally inspected by reviewing agencies following completion of logging activity. One of the purposes of the inspections is to evaluate the protection that was provided to resources of concern within the area. JDSF staff has conducted informal monitoring and problems associated with shade tolerant species have not been noted. The most common form of mitigation applied in project areas is complete avoidance of rare plant occurrences. As an example, JDSF staff work directly with DFG botanical staff to develop protection measures for *Astragalus agnicidus* (a shade intolerant species) that occurs within the Forest. The DFMP includes direction regarding plant monitoring. The DEIR (Section 6.2.7, Additional Management Measure 1) states ".... planning continued monitoring for rare plant occurrences in areas at risk for invasive plant infestations."

Response to Comment 49
The DFMP includes provision for monitoring and adaptive management. Please see response to comment 48 above. The finalized plan includes for Periodic Monitoring and Adaptive Management (Chapter 5), "Floristic surveys in some area to gain a better understanding of the relationships between local plants their distribution and their habitats."

Response to Comment 50
The State CNDDB and CNPS plant lists include many species at the edge of their range that are more abundant elsewhere (example *Lycopodium clavatum*). This phenomenon is well recognized by the CNDDB – NatureServe system that includes a state and global rating for species. Conversely there are species recognized as locally common but globally limited. CNPS rating "2" refers to plants that are rare in California but more common elsewhere. The CNPS also includes ratings of "3" and "4" for plants with more uncertainty or of limited distribution. The concerns the commenter listed have been recognized and included in plant conservation efforts. The DEIR recognizes these efforts and utilizes their evaluation of specific species status. Regarding the concern for monotrophic plants, please see the lengthy response to California Department of Fish and Game comment 30 (DEIR agency comment letter A-5) for proposed special concern area for mature Douglas-fir/hardwood stands on gentle slopes.

Lomolino and Channell's 1998 paper cited by the comment was a commentary responding to an earlier review of their work on range collapse of endangered mammals. It does not provide specific information on plant species in the JDSF region.

Pacific yew was harvested elsewhere within its range when the species was the sole known source of taxol, a cancer treatment substance. At JDSF, this species is uncommon, and found primarily near watercourses and within the protection zone for those watercourses. The species is not considered to have commercial value, and is not listed. Potential impacts to the species would be minor and incidental in nature.

The DIER recognizes both listed plants and the habitats where they are found. The change in habitat based on functional plants group analysis (DEIR VII.6.2-30 to -36) uses special concern species as a basis. It is flexible enough to incorporate plants without a specific listing status. There is considerable scientific literature review on pages VII.6.2-37 to -40.

The legal status and listing of plants is based on known science concerning the species. The commenter provides no new information to support the stated premise. The DIER states that the special concern list is dynamic, and species will be added and removed as knowledge rare plants improves. The DFG survey protocol will be utilized for botanical surveys conducted for THPs and certain other projects on JDSF (see response to comment 44). This approach will help contribute to knowledge of rare plants over time.

We also note that the ADFFMP proposes very low levels of even-aged management, particularly clearcutting. The ADFFMP limits even-aged management of all forms to a maximum of 2,700 acres (or 5.5 percent of the Forest area) per decade. Within this total, clearcutting is limited to 100 acres (0.2 percent of the Forest area) per decade where strictly necessary for purposes of research, demonstration, forest health, difficult regeneration situations. Up to an additional 400 acres may be clearcut per decade, but only for specific research purposes that cannot reasonably be met through any other method. The comments regarding even-aged management will be further discussed in context in the following response.

Response to Comment 51
The commenter speculates that several impacts may occur, based upon the following eroneous assumptions: herbicide operations conducted after even-age harvest would be broadcast in nature; all plants with the exception of conifer crop trees would be killed; and that existing rare plant occurrences would not be protected and new occurrences of disturbance-following rare plants not be detected or protected.

The DEIR provides a brief list of situations were herbicides may be used. One of these is to enable successful reforestation, when the control of hardwoods may be desirable to improve the level of conifer site occupancy. This section also describes how broadcast burning of harvest units has declined. Broadcast burning commonly results in a dense growth of ceanothus, manzanita and hardwood sprouts. This brushy growth can be reduced by selected treatment of competing vegetation, which reduces the necessity of broadcast burning, and the subsequent potential need for wide-spread herbicide use. Regionally, broadcast burning has declined, retaining more woody material on site for resource concerns, and reducing the amount of vegetation that would impede successful conifer regeneration. No broadcast burning has been conducted in JDSF for over a decade. In the eastern, drier parts of the forest, hardwoods are present at higher than normal densities as a result of past management practices and the historic occurrence of repeated fires.

Alternative G (see RDEIR pages II-10 to -11) and the ADFFMP (see Chapter 3) place additional restrictions on herbicide use. The ADFFMP includes the following in Chapter 3: "Adjusting imbalance in conifer/hardwood stocking levels by utilizing herbicides will be limited to specific reforestation situations on the east side of the Forest. In specific areas toward the east end of the forest, high tanoak stocking levels are capable of preventing native conifer establishment and growth. Herbicides may be used to decrease native hardwood stocking levels only when other options: are prohibitively expensive, dramatically increase fuel loading, are overly damaging to conifer regeneration, or are not likely to be successful." This direction makes it clear that selective treatment of hardwoods by herbicides would be limited in scope and highly unlikely to result in the effects postulated by the commenter.

Rare plant occurrences will be identified by botanical surveys conducted during project planning, and will be protected during conduct of harvesting and reforestation efforts. Selective treatment of one or two hardwood species would not result in the equivalent of a broadcast application of herbicides. Rare plants would not be treated with herbicides or otherwise removed.

Response to Comment 52
The commenter's premise that there would be off-target effects of herbicides in water is speculative. Please see the response to comment 34 for more detail. The DEIR discussion of impacts to rare plants (VII.6.2-26 to -29) focuses on the measures needed to prevent significant effects. This section recognizes that surveys are key to protecting rare plants. The RDEIR Alternative G and the ADFFMP include this direction: "For timber harvesting plans and other large projects with the potential for negative effects on rare plants, JDSF shall follow the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (California Department of Fish and Game 2000)." The Board recognizes that surveys are key to detection and finds the determinations of significance for plants to be well supported.

Response to Comment 53
The list of species of special concern does not ignore epiphytic plants. An epiphytic lichen, *Usnea longissima*, is included on the special concern list (VII.6.2-14). With regard to old tree canopies, the management plan measures to protect old growth trees, aggregations, and stands will benefit the epiphytic plants found in this habitat. In addition, the 6,803-acre Older Forest Structure Zone described in the ADFFMP, in addition to the late seral forest development in Class I and II WLPZs, will provide spatial continuity for these and other species.

Response to Comment 54
Plants become reestablished rapidly following harvest. The DEIR and RDEIR recognize the role that disturbance plays in invasive weed management. Most local occurrences of invasive plants are associated with temporary soil disturbance and coincident shade canopy reduction. These can occur in relation to both even-aged and uneven-aged management, though canopy reduction tends to be more accentuated with even-aged management techniques. As the canopy becomes re-established invasives tend to decline.

The Integrate Weed Management (IWM) Program that is included in the ADFFMP provides measures for addressing invasive species issues. Many measures are available on a site-specific basis to reduce the level of introduction and to prevent the spread of invasives. These measures include the retention of shade canopy in areas where soil is disturbed, rapid re-establishment of native species, cable yarding to reduce or prevent the occurrence of bare soil surfaces, and target removal of invasive plants by pulling or through the use of other treatment measures.

See also the response to comment 50 regarding the low level of even-aged management that will be allowed on JDSF.

Response to Comment 55
IWM is an ecologically-based approach capable of addressing the interactions between weeds and harvest-related disturbance. For example, two of the three species listed by the commenter have propagules spread by animals or wind. Managing to prevent the spread of those species cannot be accomplished by simply cleaning equipment. A superior method of control is to alter conditions favorable to establishment and spread, so that infestations are less likely to occur and are more easily controlled.

Timber harvests will vary in their potential to increase invasive weeds based on existing conditions and proposed actions. The measures developed must be project specific. The ADFFMP Planned Actions for invasive weeds Chapter 3 include the following “Staff will consider the impacts of exotic weeds to native vegetation during the normal course of project development. If there is a high likelihood of weed spread due to a nearby infestation, mitigations will be considered where appropriate and consentient with IWM to minimize the spread of invasive weeds.”

A focus upon managing for environmental conditions that limit invasive weed habitat is a principle that can be applied to harvest proposals. For example, WLPZ protection measures for Class I streams call for 85% overstory canopy cover in the inner 75 feet and 70% in the next 125 feet, making these areas less conducive to Himalayan berry infestation. Other adaptive management strategies can be used to avoid expanding invasive weed populations along roads and in recently disturbed areas, such as harvest units.

The DEIR and REIR recognized that rare plants can be affected by invasives, primarily due to competition for growing space and needed resources. DEIR Additional Management Measure 1 recognizes that protection of rare plants (candidate, sensitive, or special concern species) from invasive plants is a high priority for Integrated Weed Management activities.

See also the response to comment 50 regarding the amount of even-aged management that will be allowed on JDSF.

Response to Comment 56
The DEIR is programmatic with respect to vegetation management. The exact scope of future projects cannot be estimated in detail, so precise quantities of herbicide utilized cannot be predicted or specified. The DEIR identifies the specific herbicides most likely to be used on the Forest (see Appendix 13). By implementing IWM principles, the Department will manage more efficiently and with less potential for negative effects by invasive plants or control measures as time passes. The comment speculates with respect to the utility of minimization of herbicide use. The use of fire or heavy equipment for vegetation management can result in negative effects that exceed those of herbicide use. The consideration of site-specific projects with varying environmental conditions and treatment options are speculative and beyond the scope of this document. The potential for impacts associated with these projects will be considered in detail as the projects are planned and assessed.

Response to Comment 57
The comment provides no basis for the supposition that herbicide use could result in a potential significant effect. In evaluating herbicides for potential use, the Department considered both product labels and physical characteristics to understand which herbicides would be appropriate to use at

JDSF. The ADFFMP includes limitations and requires planning prior to any use. Herbicide use is a management technique with inherent advantages and disadvantages, as are other techniques like burning or mechanical treatments. Vegetation management must consider the variations in site conditions, species, and management actions

With regard to the suggested programmatic measures, see response 44 above. Early treatment of invasives may be beneficial in some situations.

Response to Comment 58
The DEIR (Section VII.6.3.-16) includes this information on fertilizer use: "Soil fertilization may be used to increase the growth of desired forest tree species. Fertilization generally involves aerial or ground-based dispersal of granular fertilizers. Fertilization will not be used as a stand improvement practice on JDSF except in conjunction with a specific research project. One fertilization trial was completed in the 1970s with inconclusive results. No fertilization research projects are currently under consideration." This section states that fertilization would only be used as part of a research project. The document does not provide for wide-spread fertilization. If fertilization were to be proposed as part of a research study, project-specific analysis would be needed to determine the potential for impacts to sensitive areas or rare plants. The ADFFMP includes guidance to maintain the current distribution and species composition for the pygmy plant community and protect it from human disturbance. Given this direction, projects that could affect the Pygmy community would be restricted. If a research project were to be undertaken, careful study of invasive and native species response would be of value.

Response to Comment 59
See response to comment 58. Currently, fertilization studies are not under consideration. The text discloses past use and does not prohibit research in the future. Restricting research options on a public forest may not only limit knowledge of the main effect of fertilization, changes in crop tree growth, but also indirect effects such as changes in flora. Actual fertilization rates and locations would be dependent upon future research proposals, if any. The DEIR is intended to provide programmatic direction, and analysis of fertilization studies would be most appropriate at a project level.

Response to Comment 60
The comment letter speculates that future fertilization would follow logging related nutrient fluxes with results that may be potentially significant. In general nutrients are considered to be a possible limiting factor when trees fully occupy the site, not immediately after harvest. Any future harvests that are associated with fertilizer study would consider the timing and mitigate appropriately to prevent cumulative effects. As stated in response 58 above, the DEIR recognizes the importance of protecting the pygmy community.

Response to Comment 61
The level of detail that the comment requests is beyond the scope of the EIR. The DEIR provides programmatic direction with respect to vegetation management. The IWM goals and actions are broad-scale measures that emphasize management with a sound ecological basis and prevention orientation. Given the scope of conditions, projects, and species, analysis must be site-specific. The DEIR does not relieve the department from conducting the appropriate site-specific analysis before undertaking any weed management activities. The ADFFMP includes the Monitoring and Adaptive Management Goal to protect and restore the diversity of plant species across the forest. The Plan includes as a planned action, the consideration of project development and mitigation to minimize the spread of invasive weeds. If the project has a potential for resource impacts from invasive weeds, management requirements and mitigations can be developed. The measures will vary with the project and could range from establishment of undisturbed buffers, to retention of shade, or treatment of newly-established invasive plants. The various types of measures available for application are identified in the DEIR and ADFFMP.

Response to Comment 62
Regarding impacts to plants of special concern, the DFMP states; “Upon determination that a proposed action is likely to result in a significant adverse effect, mitigation measures proposed to substantially lessen or avoid the impact will be included in project-associated documentation.”

The DIER recognizes the threat of invasive plants. Additional Supplemental Mitigation 1 (Section VII.6.2.7) provides for “...planning continued monitoring for rare plant occurrences in areas at risk for invasive plant infestations.” The document provides appropriate protection measures for plants of special concern .

Both species specific and site-specific mitigation measures should be based on state of the art knowledge of plant biology, the specific situation at a given occurrence, and the types of effects anticipated. The comment letter lists four variables that would be relevant when determining buffer size; slope, soil, population structure, community type. Add to that list; the nature of the surrounding disturbance, the expected post project conditions, the shade tolerance of the plant species, the individual species requirements (for example, pendant lichen, a monotrophic plant). Fixed buffer requirements may be found to be inadequate or even counter productive in specific situations. Project-specific mitigation measures for individual species can use the most recent information on rare plants to ensure mitigation and protection measures are effective. Given the range of plants involved, the most effective protection measures will be site-specific.

The commenter speculates that buffer provisions should address retention of pollinators or seed dispersal vectors. This is a complex and little understood area, subject to speculation. The cumulative effects assessment (DEIR Section VII.6.2-37 to -40) includes a discussion of these issues. Significant effects are not expected, based upon protection measures and the range of forest conditions, patch sizes, and the level of connectivity.

Consultation with DFG is part of the scoping process, and will occur during the planning phase of individual projects, including THPs. Consulting with DFG and others will provide JDSF with an opportunity to improve knowledge of effective plant protection measures from beyond JDSF.

The commenter's supposition that there would be no enforcement of protection measures is without basis. Protection measures and other forms of mitigation become part of the THP for which they are designed. A supposition that there will be a failure of protection measures is speculative. Site-specific problems cannot be anticipated, so creation of specific programmatic remedies beyond those addressed in the DEIR and management plan would not be appropriate.

JDSF staff has conducted informal monitoring subsequent to timber operations associated with THPs. Problems associated with site-specific protection measures have not been noted, regardless of shade tolerance. JDSF staff is actively working with DFG botanists to develop measures to protect the *Astragalus agnicidus* (shade intolerant species) that occurs within potential operating areas and along roads.

Response to Comment 63
The assumption that any failures of protection measures would result in local extinction is poorly supported. To date, CNPS 1 & 2 rare plants found within JDSF are known to more than one location, and the intent of protection measures is to avoid or limit the extent of potential damage to individual plants or local populations. The conduct of botanical surveys using the DFG protocol before timber harvests and other large projects with the potential for negative effects on rare plants, will help to ensure that rare plants are identified and addressed before ground-disturbing activities commence.

The comment assumes that even-age management will take place at a large scale. Alternative G provides for even-aged management on no more than 26% of the forest. Planned rotation ages range from 60 to 150 years, which tends to disperse even-aged cutting in terms of both space and time. Even-aged management is further restricted in terms of the area that may be treated each decade, as detailed in the response to comment 50.

The letter notes the value of large forest patches as refugia for rare plants. Other areas will provide that function as well, including the watercourse protection zones, old growth groves, late seral development areas, older forest structure zone, retained patches of trees in areas managed on an even-aged basis, and areas managed on an uneven-aged basis. One-third of the Forest will be managed for late seral habitat development, older forest structure, and old growth. Many rare plants are associated with disturbance and fire as well. The reference to “hot spots” is not specific. Pygmy forest is fully protected. Please see response to California Department of Fish and Game comment 30 (DEIR agency comment letter A-5) for a discussion of the plans spatial and temporal attributes that will provide habitat for a range of plants.

Response to Comment 64
The comment makes reference to a “critical omission” of “botanical inventory or reconnaissance-level original contemporary baseline data on the flora of JDSF.” The analysis conducted for the EIR makes use of the best data that is readily available. Future surveys will build upon the level of species-specific data available to the department and other agencies. Areas of the Forest have been surveyed for rare plant occurrences over the past several years. In the future, the level of survey would increase as the ADFFMP is implemented.

Significant impacts are not expected to occur, based upon the proposal to conduct plant surveys and apply management measures and mitigations to protect plant species.

Response to Comment 65
Consideration of issues closely related to wetlands can be found in the section specifically dealing with wetlands (DEIR section VII.6.5), and in other areas of the DEIR, including; Aquatic Resources, Botanical Resources, Wildlife and Wildlife Habitat, Geology and Soils, Hydrology and Water Quality. Wetlands generally lie at the interface between aquatic and terrestrial environments.

The wildlife section includes descriptions of habitat for wildlife analysis purposes. An exhaustive discussion of wetlands in this context is not necessary.

Regarding the citation from the wildlife analysis section of the DEIR (page VII.6.6-21), this section refers to regional conditions. The discussion makes no claim that the four habitat types are found on JDSF.

The regional setting subsection of the wildlife section lists habitats, not wildlife species. The remaining subsections include habitat information for specific amphibians, including the red-legged frog. Given the fact that wetland issues overlap several resource areas, the information provided is adequate.

Response to Comment 66
The commenter appears to be referring to the wildlife regional setting section. Wetland sedge and rush areas, and riparian backwater marsh patches, are frequently included in riparian lands. This fact is noted in the DEIR Aquatic Resources section (page VII.6.1-5). The DEIR Botanical section notes that pygmy forest can meet wetland criteria (VII6.6.2-7), and includes recognition of Sphagnum Bogs. The DEIR Botanical section also includes species that can inhabit wetlands in both the special concern species section and in the cumulative effects analysis of wet areas.

The commenter notes that small-scale features, such as springs and seeps and sedge-juncus wetland patches are likely to be found in potential timber harvest areas. The premise that these areas will be directly impacted is not valid. Hillslope springs and seeps are recognized as wetland areas and afforded the same protection as Class II watercourses under the Forest Practice Rules. Watercourse protection zones are typically extended to include adjacent sedge-juncus wetlands. Sedge or juncus occurrence is not limited to wetlands. A complete, mapped inventory of small wetland features has not been produced, and is not be feasible at the present time. Seeps and springs are noted and mapped during THP preparation, a well as the development of other projects. Sedge-juncus wetland would be appropriately and separately mapped when independent of watercourse protection zones.

Regarding Table VII6.2.3, the purpose of the table is to aid in the evaluation of potential cumulative effects to plant functional groups. The botanical section contains a list of communities, some of which are not found at JDSF, but which are appropriately listed under the Regional Setting section. As noted in the response to comment 65, this is the same situation in the wildlife section.

Response to Comment 67
The comment postulates that adverse effects will occur, based on several assumptions. The first is that the DEIR contains no "mitigation survey protocols for advance identification of wetlands", so wetland areas will not be recognized. No forest-wide survey of wetlands currently exists, but a thorough examination of project areas will occur during the planning phase. Wetlands will be identified and properly located and protected as the result of the planning effort. The identification and mapping of aquatic features is a key THP preparation process. The second premise is that surveys would not recognize rare plants in wet areas. Given the fact that DFG protocol surveys will be conducted by individuals familiar with the identification of rare plans, this is unlikely.

Response to Comment 68
The ADFFMP includes recognition that rare plant protection includes consideration of altered hydrologic conditions as a result of project implementation. In the previous response, the quality of mapping is addressed. During THP review, the evaluation of aquatic protection is subject to review and mitigation by CAL FIRE, DFG, and the Regional Water Quality Control Board. The potential to alter hydrologic conditions is a consideration addressed by the Forest Practice Rules (Title 14CCR 912 and 916). Complex hydrology that presents a potential instability risk is evaluated by a Certified Engineering Geologist. Watercourse protection zones are established for watercourses, springs, and seeps. Other wetland areas would be evaluated for aquatic species and the need for buffer zones. These measures will ensure that impacts to wetlands and associated vegetation are less than significant.

Response to Comment 69
The intent and presentation of this section could have been clearer. The paragraph referred to by the commenter is an introduction to the impacts section. It is not intended as a declarative statement of the impacts of the plan. Rather, it was intended to identify effects that would be considered significant impacts, if they were to occur. The habitat and species impacts analysis continues on DEIR Pp. pagesVII.6.6-121 to VII.6.6-130.

In reviewing this section, the Board also recognizes that it does not convey the different standards that were used in determining significance for the two groups: (1) rare or endangered species and (2) candidate, sensitive, or special-status species. To clarify this section, the first sentence of the paragraph under "Habitat Modification Impacts" (DEIR page VII.6.6-121) is deleted and replaced with the following:

> **For determination of impact significance to listed threatened, endangered, and rare wildlife species, impacts would be considered significant if they were to result in direct mortality, permanent habitat loss, habitat modification that reduces its suitability, reduced reproductive success, or a "take" as defined under FESA or CESA. Populations of candidate, sensitive, or special-status species generally are more secure than for listed species, and therefore can tolerate somewhat greater impacts. Therefore, impacts to candidate, sensitive and special-status species are considered significant if they would result in population or habitat loss, detrimental habitat modification, or impairment of reproduction that would apply to a substantial portion of the population on JDSF lands or in the surrounding region.**

Response to Comment 70
The lack of reference in this section to the comparison of alternatives is intentional. As noted in response to comment 69, the commenter understandably misunderstood the intent of this section. The evaluations for individual listed and other sensitive species in the subsequent section "Species Specific Impacts" (pages VII.6.6-122 to -130) and in the 24-page analysis of alternatives ("Spatial Pattern Analysis for Species of Concern" (pages VII.6.6-216 through -240) explicitly includes information on habitat abundance and suitability, habitat distribution, species life history, special-habitat element requirements, and other biological dimensions in the effects evaluation.

A non-spatial analysis of changes in habitat suitability was performed for general non-sensitive species, using the Department of Fish and Game's CWHR system which is considered an appropriate coarse-grain assessment tool for this purpose in a programmatic EIR. Contrary to comment, the CWHR system, although non-spatial, incorporates life history and expected population levels into model predictions. The limitations, benefits, and assumptions inherent in a variety of wildlife habitat relationship modeling tools were considered prior to application to alternative analysis. The CWHR was judged to be the best modeling system available to examine trend in habitat capability for as many terrestrial vertebrates as were likely to occur within the project area. CWHR is the most comprehensive wildlife information system for vertebrates in California today -- containing life history, geographic range, habitat relationships, and management information on 692 species of amphibians, reptiles, birds, and mammals known to occur in the state. There are currently approximately 900 professional users of the CWHR System, representing biologists, environmental scientists, researchers, and land managers from public and private organizations throughout California. The System represents nearly 30 years of work by wildlife biologists, vegetation ecologists, geographers, land managers and planners, computer programmers, Geographic Information Systems (GIS) analysts, statisticians, modelers, database managers, research writers, and wildlife artists working in a wide array of public and private organizations devoted to resource protection.

Response to Comment 71
Contrary to the commenter's assertion, a spatial analysis was conducted for listed and other sensitive wildlife species and incorporated information on habitat area, area of suitable habitat, number of patches of habitat, mean patch area, edge, and distance to other suitable patches. This analysis also incorporated specific information on future timber harvest locations and harvest treatments. See "Spatial Pattern Analysis for Species of Concern" (DEIR pages VII.6.6-216 through -240) which explicitly includes information on habitat area and suitability, habitat distribution, species life history, special-habitat element requirements, and other biological measures.

Two GIS analytical tools were used to produce the DEIR spatial habitat assessment. Bioview3 is a modeling tool added to the California Wildlife Habitat Relationships (CWHR) System4 Version 8.0 software in 2002 and was originally produced by the United States Forest Service Pacific Southwest Research Station, Redding, California. In Bioview, vegetation maps of potential future landscapes were created based on expected land use change under each of the alternatives. Reproduction, cover and feeding values for each polygon of habitat and stage of forest development were used to develop each habitat suitability map for each of the selected species by alternative.

In order to evaluate and report the relative magnitude of differences between DEIR alternatives over time, several common landscape measures available from the FRAGSTATS® software program were applied to the BioView mapping products. These measures included total class area, number of patches, mean patch area, mean nearest neighbor, and total edge index. The models are validated in each case with a GIS data set of occurrences of the species. Each of these spatial landscape measures, considered separately, has limitations relative to assessing the biological needs of a species and are described in the DEIR. However, when considered together they provide one means of DEIR alternative evaluation and spatial quantification of habitat heterogeneity and trajectory over time.

The modeling approach was presented as a poster at the annual meeting of the Western Section of The Wildlife Society in February of 2007 and was well received (Demonstration of a Wildlife Modeling Tool for Predicting Species Presence and Viewing Habitat Suitability across a Landscape (Monica D. Parisi, Marcia D. Scavone-Tansey, Chris Keithley, Robert Motroni, Ronald D. Rogers).

Response to Comment 72
Relatively few mitigation measures were identified because most large-scale measures to maintain, protect, and recruit desirable wildlife habitat were incorporated up–front as management measures in the plan. These measures include the late seral development area in the Russian Gulch/Lower Big River area and the Woodlands Special Treatment area, the late seral development areas along Class I and II WLPZs, the Older Forest Structure Zone, protection of all old growth groves and aggregations, limitations on the areas of the Forest available for even-aged management, and the rate at which even-aged management may be applied. The Board believes that this approach is superior in fully addressing all resources. A conceptual model of late seral forest succession following the selective harvest of an even aged stand on JDSF is provided in DEIR Section 6.3.5. Specifically, expected changes in forest stand structure in the near term (15 years) (Table VII.6.3.5) and the longer term (100 years) (Table VII.6.3.6) (DEIR pages VII.6.3-34 through -38) are described. Similarly, silvicultural methods that may occur in special concern areas are addressed on DEIR pages VII.6.3-7 through -9. The DEIR and RDEIR do not support the commenter's apparent position that large-scale habitat impacts are expected.

Response to Comment 73
See responses to comments 70 through 72.

Response to Comment 74
All of this information is prominently presented in the setting section on the marbled murrelet (see DEIR pages VII.6.6-88 through VII.6.6-90).

Response to Comment 75
In addition to the referenced project-level mitigations, several programmatic measures are provided for the Murrelet, including designation of the Russian Gulch/Lower Big River area for development of late seral forest specifically to support potential Murrelet habitat, the late seral habitat development designation for the Woodlands Special Treatment Area, designation of Class I and II WLPZs for the development of late seral habitat, and the Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat. The finalized plan's addition of the older forest structure zone will provide additional buffering and linkages to these areas.
The BOF agrees that the proposed management for the marbled murrelet offers a substantial and significant contribution to the species recovery. The Board considers its commitment to the management program and the specified area of management in the management plan and its incorporation into the EIR as enforceable commitments.

Response to Comment 76
The proposal for murrelet conservation is spelled out in specific detail in the plan and DEIR (pages VII.6.6-78 to -82 and VII.6.6-118 to -119). The CEQA process has encouraged extensive coordination among agency personal (from the Department of Fish and Game and the Department of Parks and Recreation, for example) and the Board and the department. The contributions to recovery of marbled murrelet habitat specifically requires coordination with other wildlife agencies and interests (DEIR page VII.6.6-119). Additional coordination will be achieved during plan implementation during the individual THP process.

Response to Comment 77
The Board considers the habitat suitability classification process used for murrelet habitat designation as adequate for the programmatic, management-plan-level context. The DEIR explicitly acknowledges that some areas of suitable murrelet habitat (primarily isolated residual old growth trees within younger stands) have not been mapped on a site specific basis (page VII.6.6-79), because such an effort would be highly expensive and unnecessary on a forest-wide basis. The plan

and DEIR commit to specific protection measures that include project-level surveys to identify suitable nesting habitat during plan implementation. Such identified habitat would be protected. Therefore, it is highly unlikely that the JDSF management plan would result in any unanticipated significant impacts, considering that the program emphasizes substantial efforts to protect existing habitat and to create significant amounts of late-successional habitat that may reach suitable conditions over the long term for the murrelet.

Response to Comment 78
NSO habitat requirements were spatially analyzed in the Spatial Pattern Analysis for Species of Concern (DEIR pages VII.6.6-216 to -240) and summarized in the DEIR on page VII.6.6-239. Non-spatial analysis of net change in great-horned owl habitat capability (Tables VII.6.6-19, 21, 23, 25, 27, 29, and 31) showed no marked increase in habitat capability under any alternative (range of -15 to +4%) within JDSF or for the analysis area outside JDSF. Barred owls do not occur with sufficient frequency to allow measurement of habitat selection effects on NSO, but such effects appear to be limited at this location.

Response to Comment 79
JDSF is actively working with the National Council for Air and Stream Improvement to examine NSO habitat requirements on JDSF and relationships to the managed landscape. The Board considers the level of habitat suitability modeling and spatial analysis adequate to characterize effects of management on the NSO, particularly since the management measures are expected to maintain and enhance habitat. Protection of old growth habitat, recruitment of additional late-seral and older forest structure habitat, protection and enhancement of late-seral conditions in WLPZs, the use of even-aged management to create a viable prey base, and project-level protection of owl habitats, all support the conclusion that NSO habitat and populations would be protected and enhanced as a result of implementation of the proposed action and that the analysis of other alternatives depicts a reasonable expectation of effects. JDSF will not take NSO or the Murrelet during implementation of its plan; therefore, an HCP and issuance of an incidental take permit under FESA is not currently considered necessary.

Response to Comment 80
The comment provides no meaningful evidence that the proposed management plan would reduce NSO habitat or populations, or that take would occur. Contrary to the commenter's assertion, timber harvest activities that occur under the FPRs have not been determined by the U.S. Fish and Wildlife Service's project survey and planning protocol to result in take of the NSO. Given that JDSF management will adhere to these regulations and implement additional measures that will protect and enhance NSO habitat (see response to comment 79), there is no reasonable basis to conclude that the plan will lead to unauthorized take of the NSO. In addition, spatial modeling of habitat capability showed that net changes were stable or positive for all alternatives over the 2000-2060 timeframe.

Response to Comment 81
The EIR adequately analyzes the long-term effects of management alternatives on NSO habitat suitability. It identifies a number of management measures that go beyond the requirements of the FPRs to protect and enhance NSO habitat. Thus, the analysis is not deferred to the THP stage. However, the management strategy and impact evaluation appropriately incorporates the required FPRs and the THP process into its management program and the assessment of effects.

Response to Comment 82
The BOF does not agree with the commenter's broad characterization of the analysis of biological values in the DEIR and RDEIR. As noted in responses to specific comments, the commenter has not supported these generalizations. Most importantly, the commenter has not presented a convincing and supportable demonstration of specific impacts that differ with those presented in the DEIR and RDEIR.

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Delivered @ BOF hearing 2/9/2002
Letter read into record by Kathy Bailey

Statement to the California Board of Forestry Regarding Jackson Demonstration State Forest

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February 9, 2002

Good morning. My name is Kathy Bailey and for around a decade more or less I was Forest Conservation Chair for Sierra Club California. I retired from my volunteer position a few years ago, but I just can't quite let go of Jackson Forest, so here I am. Previous to my work with Sierra Club I had been engaged in issues regarding state-regulated forests off and on since 1976. I've lived in Anderson Valley, in Mendocino County, since 1971. The Valley is virtually surrounded by state-regulated forestland, including tens of thousands of acres now held by the Mendocino Redwood Company, which previously was owned by Louisiana-Pacific, and prior to that, at the time I moved to the area, by the Masonite Corporation. I'm going to try to provide some background information from the public perspective on the issues surrounding management of Jackson Demonstration State Forest.

The key to why Jackson is so controversial is the old real estate maxim: Location, Location, Location.

Jackson is, by far, the largest public redwood forest in the region. Jackson is in the middle section of the Coast Redwood region, a relatively narrow strip of land that runs barely into Oregon and down into Monterey County in Big Sur. The bulk of the region is within about 30 miles of the coast. As one moves toward the east, Douglas fir begins to become a larger proportion of the forest.

Except for a few hundred acres up in Humboldt County, there is no coast redwood in the National Forest system. Of course there are some state and federal parks. But these are not evenly distributed. According to a study published by the Save-the-Redwoods League in 2000, in the central redwood region around Jackson, including Mendocino, Sonoma, and Marin Counties, redwoods are preserved at the lowest rate of their entire range. In that area, only 1.36 percent of redwoods are protected in parks and reserves. If this were not the case, the discussion about Jackson would be completely different. From both the public use and the ecological perspective Jackson is a unique and irreplaceable publicly-owned resource. It is our area's only large public redwood forest. 1

2. The ecological importance of Jackson in the region is greatly magnified by the diminished condition of the region's forestland. Going back to the European settlement of California, the redwood stands north of San Francisco, were the first to be harvested for timber because they were close and there were coves on the coast that allowed for boat transport. Later in the 20th Century, taxes on standing timber provided a tremendous disincentive to maintain valuable old growth redwoods. This taxation situation did not change until the 1970s. The result is a region that not only doesn't have much old redwood in parks, the region has very little old redwood anywhere. In my community we have two of the largest old growth stands in Mendocino County at Hendy Woods State Park. One grove is 20 acres, the other is somewhat less than 40 acres. As far as I can tell, Jackson's 11 groves of old growth, totaling 459 acres, is probably the largest concentration of old growth redwood groves in the County.

3 Directly around Jackson, both north and south, are broad swaths of land formerly owned by Georgia Pacific and Louisiana-Pacific. On the east are more commercial timber holdings. Combined, these properties total around half a million acres of Mendocino County's redwood region. The old growth has long been gone, so the primary timber base for a commercial company in the County would have to be second-growth forest. It probably won't come as a surprise when I say that overwhelmingly, the older, larger second growth trees on those industrial timberlands have been virtually logged out already.

What are some of the ecological consequences of this history?

Older redwood forests have unique characteristics that develop over time. They are moist and cool and support mosses, lichens, banana slugs, incredible mushrooms, and brilliantly colored frogs and salamanders. Along with the loss of the big, old trees themselves, some of the more obvious losses have been:

Marbled murrelets: - Experts believe that today the population of this highly old-growth dependent small seabird is, at most, 300 individual birds in the region from the north Mendocino County line to San Francisco Bay. Some of those few murrelets nest directly adjacent to Jackson.

Pacific fisher – This low-to-the-ground dark brown fur bearer that can range up to 13 pounds once roamed the region eating everything from porcupines to truffles. Except fish, which they don't eat. The elimination of the wide swaths of old growth they need eliminated the fisher. They struggle to survive in a few isolated populations in other parts of the state.

Humboldt marten – This small furry mammal has not been seen in Mendocino County since the 1950s. It too needs large swaths of older forest.

Salmon – Coho and King salmon once were plentiful but now are in dire straits for a number of reasons including loss of the old forest habitat that keeps streams cool and clear.

Steelhead trout – Not quite so fussy about water temperature and water speed, their populations have nevertheless plummeted to the point where the limited fishing allowed in Mendocino County is catch-and-release.

Water quality – Most of the streams in coastal Mendocino County are listed as impaired under Section 303d of the Clean Water Act because of sediment, temperature or both, with logging being a significant factor identified by the listing.

These are just a few specifics to remind us once again that the rich natural resources associated with forested areas of the region have suffered dramatic people-induced declines.

4 It is in this environment that you have to make decisions about management at Jackson Demonstration State Forest. Particularly you must decide how to interpret the legislative mandate for "maximum sustained production of high quality forest products while giving consideration to values related to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment." You, the Board, have the authority, in fact, the duty to interpret how you want to apply this mandate.

There has been so much controversy, particularly in the last ten years, about Jackson's management that we occasionally forget to acknowledge that the reason people worry about Jackson is there is still something there to care about. We recognize that. But because of the historical diminishment of forest resources in the region, and the lack of access to other public redwood forests, the non-regulated public has become adamant over time that Jackson should be maintained as a place that looks like and functions as much like a natural system as possible given the understanding that a significant level of timber harvest will happen because of the legislative mandate.

I want to give you just the briefest of reminders about some of the ways the Jackson controversy has manifested in the last ten years:

1996: Long-simmering concerns regarding management at Jackson erupted. Flash points included: 1. A Timber Harvest Plan in the Mushroom Corners area, an often-used recreation site near Mendocino Village and rural residential parcels; 2. A plan to spray 70 miles of Jackson's roadsides with herbicides; and 3. The cutting of some isolated and relatively smaller diameter old growth trees. There were several large demonstrations, and a few people were arrested.

1997: CDF Director Richard Wilson appointed a Citizen's Advisory Committee (CAC) that included broad representation of community interests, including a lumber mill owner, two foresters, several small timberland owners, representatives from several communities, and environmentally oriented participants. This CAC met regularly for around 18 months.

1998: In December, the CAC issued a Report and made recommendations to Director Wilson that were approved by near-unanimous vote but most of the recommendations were not implemented.

1999: Three Timber Harvest Plans (THPs) were submitted for Jackson Forest that were not consistent with the recommendations of the CAC. Although the CAC had recommended increased consideration for the recreation potential at Jackson, the new THPs included two selection harvests in an area of old second growth immediately adjacent to the principle campgrounds. A third THP was a plan for clearcutting, a technique the CAC specifically recommended be eliminated at Jackson.

2000: The 1999 THPs were approved, and Vince Taylor's group sought and received a preliminary injunction to halt their implementation until a current Management Plan was in place. The forest had been operating under a Management Plan approved in 1983 prior to the endangered species and water quality listings. The injunction halted logging at Jackson.

2001: A new draft Management Plan was published that was virtually identical to a 1999 draft Habitat Conservation Plan that had never been released for public review. Neither the old draft HCP nor the new draft Management Plan was consistent with the CAC recommendations in spite of the fact that the CAC made its recommendations at the same time the HCP was being put together.

2002: The Management Plan was released for public comment, along with a draft Environmental Impact Report (EIR). CDF received approximately 100 comments against adoption of the Plan for every comment received in favor of it. Nevertheless, in November 2002, CDF Director Andrea Tuttle certified the EIR and the Board of Forestry adopted the new

Management Plan. The 2002 Management Plan, which is virtually the same as the current EIR Preferred Alternative C1, did not include most of the provisions recommended by the CAC.

2003: In July, the Court ruled that the EIR was deficient and further, that the lead agency regarding the EIR should properly be the Board of Forestry (congratulations) rather than CDF. Except for a very brief period, logging continues to have been enjoined since 2000.

2004: The Board of Forestry rescinded the approval of the 2002 Management Plan and contracted with CDF to prepare a new EIR, pursuant to the Board's authority as lead agency.

2005: In December 2005, the Board of Forestry published a Notice of Availability of the new EIR and set the comment period to close on February 14, 2006 at 5 PM, since extended to March 1 (Thank you very much). The EIR established seven alternatives: A, B, C1, C2, D, E, and F. Alternative C1 is the 2002 draft Management Plan and is characterized by the EIR as the "preferred alternative." Alternative C2 is the 2002 Management Plan plus mitigations that the previous EIR identified as necessary to reduce any impacts of the plan to insignificance. Alternative A is "No Project – Minimal Management Activity" which is used as the "baseline" against which the other alternatives are analyzed. Alternative B is "Management Consistent with the 1983 Management Plan." Alternative D is "Citizen Advisory Committee," the recommendations of former CDF Director Wilson's CAC. Alternative E is "Late Seral Emphasis." Finally, Alternative F is "Older Forest Emphasis." Sierra Club has been deeply involved in the development of Alternative F.

2006: On February 7, in a 3-2 vote, the Mendocino County Board of Supervisors passed a motion to support Alternative D, the recommendations of the CAC, first proposed in December 1998, roughly seven years ago. The three *yes* votes are the three Supervisors who have Jackson Forest in their Districts.

And here we are two days later.

There are three key points I hope to convey about the EIR:

6 1. **The EIR has still not acknowledged or mapped the 10,000-12,000 acres of old second growth forest at Jackson that has not been logged since 1925 or earlier.** As I have mentioned, this is a regionally scarce resource. In spite of incessant lip-service about the ecological importance of older forest and a supposed commitment to having 20-29% of the forest in so-called late-seral development areas, (for you new people, "late-seral" is forestry-wonk speak for "older forests") the key piece of knowledge about the location and extent of these forest stands at Jackson remains un-mapped and unacknowledged. I care about how much of the forest will eventually be allowed to grow into older age classes over some hypothetical 100-year planning horizon. But given the context of Mendocino County, people care more about maintaining as many of the few remaining stands of 100-year-old second-growth as possible, and doing so in a way that maximizes contiguous old forest habitat to help recover some of what we have so thoroughly lost.

7 2. The EIR states that the Jackson Management Plan, Alternative C1, proposes to put the non-timber considerations outlined in the legislative mandate on an equal footing with sustained production of timber. This is a terrific goal, one that we support. However, if you look at the spatial allocation of the CDF-designated "late-seral" that is, "older forest" development areas

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and then also look at the 10 year timber harvest schedule, you will see that logging in the first decade is going to make those old forest development areas into islands. This contradicts the basic tenets of conservation biology and seems to contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest.

8 Additionally, in spite of the fact that it is a no-brainer to identify key areas of public interest in recreation on the forest, the EIR defers identifying these places or making significant accommodation for them beyond the barest of buffer zones—generally speaking, a couple hundred feet. The injunctions on the THPs that have brought us here today occurred because Mr. Taylor, along with a lot of other people, had a deep love for the peaceful and beautiful forested area around the main campgrounds, and the lovely walks along the river there. These were not the worst THPs in the world, but they would have greatly compromised people's enjoyment of the area. These THPs were simply located in an area that should have been set aside for recreation use if the plan truly did consider recreation on an equal footing with timber production. That this area is part of that existing old forest not logged since 1925 or earlier is also an issue. And one of the enjoined THPs in the campground area is also adjacent to a designated "old forest" development area to its east. Operating the THP will cut into the existing contiguous older forest. Forest planners could get a two-fer out of this area if they acknowledged the existence of the older forest stands, and then tried to design a management plan that maintained old forest stands for both recreation and habitat purposes. It would not be that difficult, if one just decided to do it. In fact, that is what we have attempted to do with Alternative F.

9 3. We talk a lot about the coming crisis in forest ownership where more and more people move into the forested countryside and have conflicts with forest managers. That is exactly the situation you have on your hands right now at Jackson. Big chunks of Jackson are adjacent to a whole bunch of people, by country standards, at Mendocino Village, Caspar, and Ft. Bragg, in addition to the tens of thousands of visitors we see each year. If you are truly dedicated to avoiding the continued fragmentation of forestland ownerships, it is important to figure out how to do logging in a way that does not diminish public trust resources like wildlife and water quality, and does not make people gasp when they see it. Jackson is the perfect laboratory to figure out how to do this. You have a pre-existing skeptical neighbor-base, the best forest inventory in the County, and a current opportunity to think this through forced on you.

I urge you to take this opportunity and run with it. You're not there yet, but you have the elements of a solution laid out in the various EIR alternatives. While we have always supported Alternative D, the CAC recommendations, we have applied the information we have learned about the forest subsequent to the era of the CAC to create Alternative F. We view the portions
10 of Alternative F that were encompassed in our EIR scoping comments as consistent with current law, and believe that Alternative F is a creative way to meld the habitat, recreation, and timber harvest needs of the Forest. Remember: Location, Location, Location. From the timber production point of view, Alternative D, the CAC recommendations yield 80% of the C1 preferred alternative, and Alternative F yields about 60% according to your EIR. These reductions in yield do not seem like an unreasonable price to pay for taking Jackson off the hot-potato list and making it what it ought to be: the beloved crown jewel asset of the state forest system. Thank you very much.

5

BOF Hearing Written Testimony P-220

See also Kathy Bailey Oral Testimony 2/9/2006 in section VI.

Response to Comment 1
The Board agrees that JDSF has both ecological and public use values that are substantial. In addition, given the forest resources, size, and location of JDSF, it is a unique resource. Within the redwood region, there are approximately 300,000 acres in parks and reserves. JDSF is the largest area of public forest available for research and demonstration.

Response to Comment 2
The old growth forest within JDSF will be preserved, and many of the groves will be augmented by late seral development areas. The Board is aware of the regional availability of old forest, and has provided a detailed description of the assessment area within the DEIR (Sections III and V).

Response to Comment 3
The Board agrees that there has been a substantial level of timber harvest in much of the area surrounding JDSF within the past several decades (DEIR Map Figure G). Please see DEIR Section VII.6 and Map Figures J and K for the estimated vegetative habitat distribution, which serves as an estimate of habitat values and is used in the wildlife analysis. No regional or assessment area inventory of young trees exists, especially one that would include detail as to the age of second-growth trees. The DEIR assesses the potential for impacts to wildlife primarily by examining current and future habitat quality and availability. The age of trees is but one of many factors that contribute to habitat.

While JSDF can and will contribute to the continued survival or recovery of species, it is incapable of providing for full recovery in and of itself. Species populations rely upon a vast area in most instances, and JDSF comprises a relatively small portion of the range of most listed species or species of concern.

Response to Comment 4
The Board agrees that historic timber management has contributed to the decline in population levels of some species within the region.

The Board is aware of a responsibility to interpret legislative, regulatory, and policy direction for the state forest management planning process.

Response to Comment 5
The ADFMP provides for sustainable forest management while maintaining or producing a forest that also maintains proper ecological function.

Response to Comment 6
While the general logging history of JDSF is known, there is no complete historic cutting record for the Forest, since harvesting began decades before detailed records were kept. Staff have made unofficial estimates in the past, but these have not been used for habitat assessment purposes.

While the commenter has stated that "older second-growth" is a regionally scarce resource, there is no such resource that is either quantified or officially recognized.

The Board has approved the plan to manage a significant area of JDSF toward a late seral or older forest structure. Habitat value and ecological function depend upon a host of factors, including tree size distribution, crown density and crown characteristics, mortality rates, canopy diversity, species diversity, unique structural elements, understory vegetation, and others. Stands have been identified

for late seral or older forest management based largely upon proximity and connectivity to existing old growth groves, watercourse zones, and occupied murrelet habitat, recognizing that it may require many decades or even centuries for late seral forest to develop.

Response to Comment 7
The Short-term Harvest Schedule has been amended for Alternative G. Neither the harvest outlined in Alternative C1 nor Alternative G would create islands of the late seral or older forest development areas. In fact, most of the proposed harvest in the short-term in these areas would be selective in nature, producing a thinned, yet continuous forest canopy contiguous to late seral development areas. Ms. Bailey does not explain the assertion that the islands will be created, nor how the proposed harvest contradicts the basic tenets of conservation biology, not how it may contradict the notion that fisheries and wildlife are being elevated to equal status with timber harvest. Please see DEIR Section VII.6 for the assessment of potential impacts to wildlife and fishery resources.

Response to Comment 8
The Board's policy for JDSF establishes recreation as an important, but secondary use. The DEIR includes an assessment of potential impacts upon recreational values (DEIR Section VII.2, 12, and 14). The management plan involves a much greater level of mitigation to protect recreational resources than Ms. Bailey suggests. Included in this consideration is the location of recreational resources, surrounding forms of forest management, adjacent buffer zones, noise production, aesthetics, and other factors. It is the intent of the Board to prevent significant impacts to recreational resources. The Board believes that timber harvesting can be compatible with recreation in the Forest, and should not be precluded in order to produce zero effect. In fact, the demonstration of the compatibility between timber harvesting and recreational use is encouraged by the Board.

Response to Comment 9
Comments noted.

Response to Comment 10
Support for Alternative F noted.

-221
P-221

RECEIVED BY
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BOARD OF FORESTRY
AND FIRE PROTECTION

PAUL V. CARROLL
Attorney at Law
5 Manor Place
Menlo Park, California 94025
telephone (650) 322-5652
facsimile (same)

February 4, 2006

Via facsimile and mail

George Gentry, Executive Director
California Board of Forestry
1416 9th Street
Sacramento, CA 95814

Dear Mr. Gentry:

Re: Draft EIR for Jackson Demonstration State Forest Draft Management Plan

Dear Mr. Gentry:

I write on behalf of Dharma Cloud Charitable Trust Foundation, The Campaign to Restore Jackson Redwood State Forest, and the public they represent in regard to the draft EIR for the Jackson Demonstration State Forest Management Plan. We ask that you extend the period for public comment by 30 days. It has come to our attention that the print shops responsible for providing copies to the public have not been able to fulfill their orders in a timely fashion.

The public comment period commenced on December 16, 2005. The notice informed the public that it could purchase copies from three printing shops in Mendocino County. We are aware that at least two of the shops were not able to make copies available until late January 2006.

For example, according to Grace Sharples of Mendo Litho in Fort Bragg, the disc from which copies were made did not arrive until the last week of December during the store's holiday break. She returned to work on January 3, 2006. The store could not look at the EIR until January 9, because of follow-up work from the holidays. Once it turned its attention to the disc, it ran into problems. It took most of the week to get the first copy prepared because it had to assemble the chapters on the computer. Then it compared what it produced with the sample hard copy that it had been provided. There were differences that had to be ironed

out with Sacramento. Mendo Litho was unable to send out the first copy until January 23, 2006.

This was not just a theoretical problem. For example, on January 5, 2006, the Campaign placed an order with Mendo Litho for a copy of the draft EIR for Dr. James Strittholt. It could not be prepared for several weeks.

We are informed that the print shop in Ukiah has experienced similar problems.

The fact that the EIR was available at libraries or on line does not lessen the problem. Many members of the public, experts in particular, need to possess a hard copy so that they can conduct a thorough review in an expeditious manner.

In light of the foregoing, we respectfully request that you extend the public comment period for 30 days. This is the approximate amount of time that passed before the public could as a practical matter obtain a purchased copy of the draft EIR.

Your immediate response would be greatly appreciated.

Very truly yours,

Paul V. Carroll

cc: Bruce Reeves, Deputy Attorney General

2

Mailed Letter P-221

Response to Comment
The comment period was extended. Detailed comments were received from Dr. James Strittholt.

r-222

P-222

Campaign to Restore Jackson State Redwood Forest
43151 Little Lake Road
Mendocino, CA 95460

Remarks to the Board of Forestry

Vince Taylor, October 4, 2006

Dear Chairman Dixon and Member of the Board,

Thank you for the opportunity to address you on the issue of Jackson State Forest.

Those of you who have been on the board for a while know that Jackson Forest has been a source of controversy for over ten years. For the last five, all harvesting in the forest has been stopped by order of the court.

1 I believe that all parties of interest in this forest have now come to a point where there is far more agreement than disagreement about the appropriate mission for the forest.

There seems to be a consensus that the forest should become a world class research and demonstration forest devoted to increasing our understanding of the biological processes and habitat values of redwood forests, and improving our knowledge of how timber harvesting operations can be done compatibly with maintaining and restoring the health of the forest. Additionally, there appears to be agreement that because Jackson Forest is the sole large public redwood forest in a county where 90 percent of the forests have been heavily logged, it
2 should play and important role as a sanctuary for species dependent on mature redwood forest. All parties also agree that it should also be an important provider
3 of redwood-forest recreation opportunities.

This degree of agreement provides a remarkable opportunity to resolve the longstanding controversy that has tied up this forest for so long. The issue now seems not so much what to do, but how to do it. It would be a shame if we missed this opportunity by trying to acting hastily rather than deliberatively. There is a saying "Take the last step as carefully as the first." I urge us to heed this advice.

For several years, I have been recommending a two-step process to get Jackson Forest back into full operation:

> **Phase One.** Allow temporary timber harvesting in areas and in ways that all agree will not harm long-term values that would likely be preserved under a long-term management plan for the forest. The level of these temporary harvests would be sufficient to provide for operation of the forest, for development of a long-range plan for the forest and an operational management plan, and for beginning to build the infrastructure needed for a world class research forest. This phase might last for 3 to 4 years.

Tel: 707 937-3001 restore@jacksonforest.com www.jacksonforest.com

Phase Two. Resumption of full operation under the management plan developed in Phase One.

I want to, first, address why a two-step process is essential. Then I want to discuss how this might be done in the context of the legalities of the EIR process and the court order.

Why Two Steps?

We are all agreeing that there will be a **major** revision in the objectives of management in Jackson Forest. To incorporate these changes into a long-term landscape plan and management plan is a complex and politically difficult process. A hasty effort will give a defective result both objectively and politically.

A key question at this point in time is how and for what purposes the multitude of different sub-watersheds of the forest will be managed. This question cannot be answered in a responsible way quickly.

4 First, we do not now have a current timber inventory that is adequate for the type of landscape planning we are envisioning. There is no comprehensive inventory of botanicals or stream conditions. In short, the data required for to develop an adequate management plan does not exist.

5 Second, the Board needs to face squarely the legal prescriptions that govern management of the 5,000 acres of the Woodlands Transfer Area. To date, the department has maintained the legal fiction that timber harvesting is legally permissible. A continuation of this position risks further litigation. This issue should be resolved as part of the development of the new management plan. I would be happy to cooperate in this effort.

6 Third, the actual management prescriptions for areas of the forest, and the balance between habitat/restoration and timber management, are contentious issues. Resolving these issues in ways the that gain widespread support will require substantial outside input and time.

Are Two Steps Feasible?

My investigations indicate that it would be possible to conduct temporary timber harvesting in the context of the proposed EIR, given that <u>there is general agreement on the principles and process to be followed in developing the management plan.</u>

7 The Mendocino working group shows that there is now enough agreement that widely diverse interests are able to agree on management principles and objectives. The next step is for Board representatives and CDF staff to work with the Mendocino group to reach a broad consensus on management principles an process. Ultimately, this is going to be necessary to get the forest back in operation. Better to do this now, while the spirit of cooperation is high, than to wait and risk fatal disagreements later.

My investigations suggest that it temporary timber operations could be done legally. If the Board feels that it needs legal sanction for the temporary harvesting, there would be time to obtain enabling legislation. Senator Chesbro's office indicated that a request for new legislation, given that all parties supported it, could be introduced in December and signed by March, 2007 – well before harvesting activities could occur.

Legislation would also provide the opportunity to bring the legislative purpose for state forests into agreement with the revised mission for Jackson Forest. This would avoid future legal and operational problems.

Conclusion

We appear to have close agreement on the goals for Jackson State Forest. Transforming this agreement into resumed operation of the forest can best be done in two phases. While this may appear to some as more circuitous than a hasty effort to wrap up the process, it is the shortest route to a lasting resolution of the controversy over Jackson Forest.

I pledge to continue to cooperate wholeheartedly in reaching the goal of making Jackson Forest into a source of pride and satisfaction for all.

Thank you for your time.

Sincerely,

Vince Taylor

Vince Taylor

3

BOF Hearing Written Testimony P-222

Response to Comment 1
The Board shares the goal of JDSF becoming a world class research and demonstration forest. The Board developed Alternative G and the Administrative Draft Final Forest Management Plan (ADFFMP) with this goal in mind.

Response to Comment 2
The Board is aware of the harvest history within the assessment area, and ample information on this topic is provided in the DEIR.

The Board concurs that JDSF should play a role in support of the continued survival and recovery of wildlife species. However, it is unlikely that JDSF alone will not serve as an adequate sanctuary, due to the geographic scale at which most species populations occur. JDSF will provide a benefit for wildlife, and contribute to the recovery of species, but cannot alone provide for full recovery of listed species.

Response to Comment 3
Comments regarding recreational opportunities and management plan phasing process noted. The ADFFMP provides for a similar phasing process through an initial implementation period.

Response to Comment 4
The current level of information related to timber, botanical, and stream resources provides an adequate foundation for the management plan and its programmatic EIR. This information constitutes the best information readily available. In the future, an increase in the level of inventory information concerning a host of forest attributes is anticipated. A greater level of detailed information will be developed during the planning for individual projects.

Response to Comment 5
The Board believes that the Mendocino Woodlands area is being managed appropriately, and in compliance with provisions established with the transfer of the land from the Federal government and state statutes.

Response to Comment 6
The Board agrees that there are potentially contentious issues.

Response to Comment 7
Comments noted. The Board appreciates and has considered the suggestions made by the Mendocino Working Group and other members of the public. Some of the suggestions have been incorporated into the ADFFMP.

P-223

November 30, 2006

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan

Dear Members of the Board,

As you know our group has been meeting in Mendocino County for the past few months exploring ways to move the JDSF Management Plan process forward. Over the years our members have been involved in numerous forestry issues from the Grand Accord to County Rules to SB 1648. Historically we have been on opposing sides. This process has been unique in that we have reached consensus on an approach we believe has the potential to get JDSF back under management.

While we have reached consensus on numerous issues, the enjoined timber harvest plans were not among them. These plans were sold and operated, then stopped as a result of the lawsuit. An equitable resolution to this problem is still needed. In spite of their involvement in this process, the purchasers have not given up any of their legal rights to the two sales.

Our approach to moving the management plan process forward is comprised of two phases. Phase one incorporates the guiding principles we have been developing with the Research and Demonstration focus that Bill Stewart has been designing as the new Preferred Alternative 8. With the adoption of this first phase and the finalization and certification of the EIR, timber harvesting can resume on an interim basis. This interim resumption of harvesting will be guided by the principles in the management plan and the specific criteria developed by this group.

1 Phase two will be a concurrent and parallel process. This phase will be highlighted by the re-staffing of JDSF including personnel with a broad range of expertise in addition to silviculture, the appointment of a Jackson Advisory Group, the commencement of landscape-level planning on a broad array of issues and the establishment of a credible and verifiable inventory. Our group anticipates this process will result in a detailed and sustainable long term plan for JDSF. This second phase will develop a plan based on detailed specific information that provides for a consensus-based balancing of ecological values, education, research, recreation, timber production and regional economic stability.

1

This group realizes it has no authority to develop a management plan for JDSF and the Board has no mandate to follow the template provided. Logic however would suggest when a group as diverse as ours can come to consensus on this topic, it deserves some serious consideration.

Sincerely,

Bruce Burton	Art Harwood
Vince Taylor	Kathy Bailey
Mike Jani	Mike Anderson

Attachments:

1.) The guiding principles this group developed for management of JDSF.
2.) Interim harvesting criteria.
3.) A flow chart of the implementation process.

2

P-223 ATTACHMENT

P-223 Attachment

Principles for the Management of Jackson Demonstration State Forest

November 30, 2006

Research and Demonstration:

Research and demonstration (R&D) should be the driving force behind all harvest operations on JDSF. The forgoing does not preclude harvest operations designed for manipulation of stand structure for future research. Additional R&D emphasis needs to be directed towards small land owner needs. The following are specific research suggestions:

1. Research and demonstration geared toward small land owners interested in economically maintaining and improving the health, beauty, and recreational value of their holdings.
2. Exploring ways to make timber harvesting more acceptable to the general public should be an important part of the R&D program.
3. The R&D program should test the benefits and or problems associated with forest practice rules existing and under consideration.
4. R&D should explore the process and benefits to wildlife and the aquatic environment of turning even age stands into all aged stands.
5. A integral part of the R&D program should be a well developed economic analysis of these different approaches so land owners and regulators can make the cost to benefit analysis.

Silviculture:

All timber harvest activities on JDSF should preserve or improve the long term forest health. Selection silviculture should be maximized. Even aged management should only be allowed for well justified research projects and as necessary to promote stand health. The size and scope of these projects should be no larger than the minimum needed for scientific validity. Group selection plots will be the minimum size consistent with wildlife concerns and obtaining regeneration, they will only be used when justified as the most ecologically beneficial way to obtain needed regeneration and or habitat. Variable retention should be used sparingly. When used it should be associated with research, stand health, wildlife concerns, and have higher than average retention levels. None of the above should be construed to prohibit the entire spectrum of harvesting intensity and or frequency as long as it is tied to research.

Herbicides:

Herbicides would only be used as a last resort after demonstrating an exhaustive evaluation of all other alternatives in dealing with a specific forest problem. The evaluation of alternatives would also look at the consequences of taking action and of taking no action at all. If herbicides are then considered they would be used as part of scientifically designed study to answer specific research questions. Under such circumstances the smallest number of acres would be used to achieve the research answers. A maximum acreage cap would be established, and the research would be designed in such a way to minimize the need for future use of herbicides.

Old Growth and Mature Forest Stands:

The remnant stands of original forest that have not ever been harvested should be preserved so as to provide a baseline from which comparisons can be made. Using these areas as cores, logical corridors, buffers, and extensions should be developed, utilizing existing older second growth stands when possible, to provide habitat for species associated with the late seral stages of forest development and to provide opportunities for human enjoyment. When these habitat areas overlap an older second growth stand, at a minimum, a portion, or at a maximum, all of that stand should be considered for inclusion into designation for a "late seral" management alternative. Within this management unit, the old growth cores shall remain unharvested, while the second growth components may be subject to some harvest designed to accelerate development of late seral characteristics.

Scattered individual remnant old growth trees identified as such because of size, special characteristics, or known stand history, should be protected from harvest unless they pose a hazard to persons, property, or natural resource values. Additionally, at a minimum, immediately adjacent trees or trees which are close enough to influence growth and form of the retained old growth tree, shall be retained.

However, if after careful study including examination of the canopy, a known old growth tree is determined to be without any identifiable old growth characteristics, and other trees of the same species in the same height class will be retained, in conjunction with a research project to confirm the determination, the old growth tree may be harvested and utilized.

Old growth trees mistakenly cut due to misjudgment of age or absence of old growth characteristics shall be left in the woods to provide large wood on the forest floor and for wildlife refuge.

Threatened and Endangered Species:

Given that this is a publicly owned forest, sufficient acreage should be dedicated towards management alternatives that specifically contribute to the maintenance and recovery of the region's threatened and endangered species.

Wildlife and Riparian Management:

Recognizing the unique positive regional status of the wildlife and riparian habitats in JDSF, develop overall wildlife and riparian management strategies consistent with a balance of economic , environmental, and recreational goals and objectives. These strategies are to be implemented through all management activities (see also, principles for Old Growth and Mature Forest Stands and Threatened and endangered Species)

All management activities need to be evaluated as to how they impact or enhance fish and wildlife and their habitat.

JDSF should scientifically explore the benefits and problems associated with various riparian management strategies and their contributions to salmon recovery.

Until research results provide a scientific basis for estimating the effects of alternative riparian management regimes, JDSF should take a very conservative approach toward timber harvesting in riparian zones other than in conjunction with the research program.

Timber Revenues:

Harvest levels should be determined by the needs of the forest, the guiding principles, as reflected in the management plan, not a revenue target. All revenue from JDSF sales should be re-invested back into the forest first; excess can be put to use by the state forest system and, in infrequent emergency situations, by other natural resource programs. The top priority should be funding an on-going timber sale program which will help to generate revenue to fund other programs including, but not limited to: demonstration, research, recreation, and infrastructure improvements. JDSF timber revenue should be augmented through grant funding, or general fund dollars, depending upon the type of programs the forest is trying to support. If there is not sufficient funding for all identified programs, funding will be allocated on a priority basis.

Jackson Advisory Group:

Overarching Principle: The advisory Group should represent and consider a broad range of views, with emphasis on local input and resource expertise.

Purpose: Initially to participate in the development of the Phase II management plan and to review and field evaluate the implementation of the proposed 2007 and 2008 Timber Harvest Plans. Subsequent responsibilities would include field based evaluations (prospective and retrospective) which would provide information for future research and management activities.

Participation: Open nominations, appointed by the Board of Forestry. Members would represent the public interest and be drawn from a broad spectrum of backgrounds and resource expertise with an emphasis on appointments of local representatives. Professions represented should include forest ecologist, fisheries biologist, botanist, Registered Professional Forester, Licensed Timber Operator and recreational planner. Views represented should include local timber industry, environmental community, recreational users, local businesses and forest neighbors. 10-12 people.

Authority and reporting: Group would interact directly with JDSF staff and management team and report to the Board of Forestry in an advisory capacity. Decision making would preferably be consensus based.

Term: 2 years, staggered.

Support staff: Permanent position, CDF staff with an independent facilitator.

Education:

Part of the legislative mandate for JDSF has never been adequately fulfilled; education needs to become a high priority. The forest has a unique opportunity to reach out to and educate the general public on issues associated with ecology, biological diversity, forest processes, forest management etc.

Roads:

The inventory and improvement plan should be finalized as a matter of highest priority and work scheduled on an accelerated basis.

Budgeting:

JDSF should not load the forest maintenance and operational costs on the timber sales. These costs should be funded through a budgeting process for JDSF.

Staffing:

The staff of JDSF needs to be augmented with recognized professionals to protect all public trust resources. This needs to be a team approach commensurate with being a world class leader in demonstration forestry.

Recreation:

JDSF should identify, with citizen input, the recreational opportunities on the forest and develop a recreation action plan to advance such opportunities. This plan would be integrated with forest management and the ecological outcomes developed for the forest. This would include reaching out to recreational experts to help put this plan together. Trans-forest hiking and horse trails should be pursued, working with neighboring landowners. With public input, staff should explore ways to expand funding for the recreation program.

Data Collection:

High Quality research requires accurate baseline and ongoing data on all forest components. Sufficient staffing at JDSF is critical to insure valid data collection. The following are minimum data collection needs at JDSF:

1. Credible forest inventory and growth information easily understandable by the general public.
2. A forest wide wildlife and botanicals inventory, and monitoring program.

Hardwood:

As part of a research project, JDSF should work towards hardwood utilization as an alternative to herbicide use. This research should consist of: identifying what hardwood component is needed in the timber stand, how to manage hardwood for a high quality product, determine habitat contribution, economic return for the land owner, creation of employment opportunities and the development of a market for these hardwood products.

~~K-223 ATTACHMENT~~

P-223 Attachment

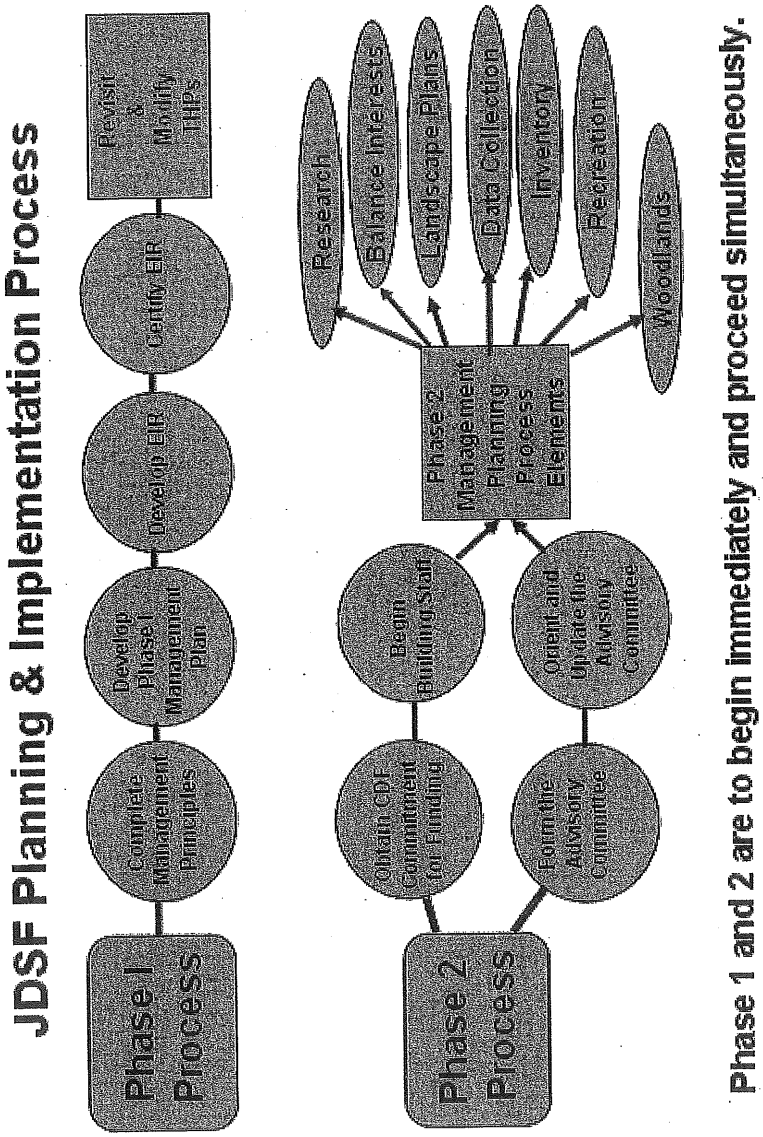
Interim Harvesting Criteria

We recognize the need for interim harvesting beginning in 2007 and for the duration of Phase I of the Management Plan development. This interim period should not exceed three years. During Phase I, Timber Harvest Plans (THPs) shall be submitted consistent with the following:

1. Utilize uneven aged management
2. Apply all silvicultural principles stated elsewhere in our recommendations.
3. Aim to generate sufficient revenue to fund the development of Phase II of the Management Plan, including rebuilding adequate staff at JDSF and implementing our recommendations for forest, wildlife and botanical inventories. In addition to financing routine operations, long term initiatives should be limited in Phase I to completion of the road inventory and rehabilitation plan, an expanded timber inventory and demonstration and research related expenditures.
4. THP locations should be chosen so they do not preclude future options for long-term landscape-level planning in Phase II.
5. To facilitate (4), every effort should be made to avoid harvesting areas that:
   (a) have not been logged since 1925 or
   (b) are mature second-growth stands contiguous with existing CDF-designated late seral development areas or adjacent to state park lands.
6. With the exception of the enjoined THPs, to assure harvesting in 2007 and 2008, emphasis should be placed on revising and finalizing harvest plans already in the system or those with the necessary field work completed.
7. If timely THP submission is not possible consistent with (5) the department may propose harvesting consistent with (1-4) using selection harvesting that removes no more than 30% of the conifer basal area of the stand, leaves at least 70% of the overstory stand canopy and maintains or increases the average stand diameter of the residual crop trees. Any such proposed plan shall be submitted to the Demonstration State Forest Advisory Group (DSFAG) for review. The DSFAG shall recommend to the director whether the plan should be submitted, modified or eliminated from consideration. At such time as the Jackson Advisory Group (JAG) informs the Director that it is willing to do so, JAG shall take over the Phase I THP review function from the DSFAG.
8. The enjoined THPs, Brandon Gulch and Camp 3, will be harvested, if at all, within the context of Phase II of the Management Plan.

P-223 ATTACHMENT

P-223- Attachment



Phase 1 and 2 are to begin immediately and proceed simultaneously. Phase 2 should be complete in 3 years.

Mailed Letter P-223

Joint letter by Bruce Burton, Vince Taylor, Mike Jani, Art Harwood, Kathy Bailey, and Mike Anderson
November 30, 2006

Response to Comment
The Board appreciates the effort of this group. The letter makes suggestions for the future management plan and planning process. The writers comment that a broad range of expertise is needed on the management staff of the Forest, that an advisory committee is needed, and that a credible and verifiable inventory should be established. The Board agrees that an increase in the range of management expertise would be beneficial, and that the appointment of an advisory committee would also be beneficial. While the Board agrees that a more detailed inventory of forest resources would be useful and beneficial, the existing timber inventory is accurate and state-of-the-art. This inventory is updated periodically in an appropriate manner.

Principles for the Management of Jackson Demonstration State Forest
Submitted by the group immediately above, November 30, 2006

Response to Comment
The Board notes these comments and suggestions for the future management of JDSF. The "Principles" are suggested by the authors in the absence of expressed specific environmental concerns that may result from management in the absence of these suggestions. The Board will not speculate as to specific environmental concerns that the authors jointly or individually may wish to convey, instead accepting these comments purely as a suggested management alternative for JDSF. Some of the suggestions made by the authors have been incorporated into the management plan.

P-224

WILLITS REDWOOD COMPANY

QUALITY REDWOOD TIMBERS

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December 1, 2006

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, California 94244-2460
Attention: George Gentry, Executive Director

Dear Sirs:

While affixing our signature to the consensus report of the Mendocino Working Group, Willits Redwood Company would like to make its position clear to the Board of Forestry. Willits Redwood Company has been witness to the bleeding of Mendocino County's timber industry during the past five years of inactivity on Jackson State Demonstration Forest. In our view, the inactivity has been directly responsible for environmental degradation on the State Forest, job losses in the lumber industry and logging industry, and the conversion of timber production lands of Mendocino County to non-timber purposes. We feel that in our contentious world, Jackson State Demonstration Forest needs to demonstrate to timberland owners in California that the timber production is predictable, sustainable, and the preferable land use alternative. It is with these concerns that we support the immediate resumption of timber harvest activities on Jackson State Forest that the Group's recommendations offer.

However, the adoption of the Group's recommendations appears to have grave consequences for the continued viability of the enjoined Camp 3 Timber Sale, which Willits Redwood Company has purchased. The planning horizon for harvest under Phase II of the recommendations could easily degenerate into more years of waiting. Additionally, the recommendations appear aimed to prohibit harvesting in mature second growth stands, or at a minimum would so alter the size class distribution of the sale as to render the original Camp 3 sale void.

Willits Redwood Company has steadfastly maintained its financial commitment to the Camp 3 timber sale, incurring significant financial loss in the process. The Board of Forestry should understand that acceptance of the committee's recommendations must be concurrent with a commitment by the Board to make Willits Redwood whole. Our preferable alternative is to harvest the Camp 3 sale as contracted by the State of California and utilize the logs in our facility. With any action by the Board in conflict with this alternative, we feel it is responsibility of the Board or its representative to open this dialogue at its earliest convenience.

We appreciate giving this matter your consideration.

Sincerely,

Bruce Burton, President

Chris Baldo, Secretary

Mailed Letter P-224

Response to Comment 1
The Board generally agrees that a shortage of revenue to the state forest has resulted in a reduction in road maintenance and restoration activity, which is likely to have increased the level of impact associated with state forest roads. A total elimination of timber sales has probably contributed to a reduction in employment within the timber industry. Support for a resumption of timber sales noted.

Response to Comment 2
Comments concerning the recommendations of the Mendocino Working Group noted.

Response to Comment 3
Support for the Camp 3 timber sale noted. The Board recognizes that this timber sale is subject to a civil suit that resides before the court. The this sale must be examined for consistency with the ADFFMP, and the Board notes that the sale is subject to a settlement agreement and a timber sale contract, in addition to unresolved to existing court proceedings

P-225

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December 8, 2006

William E. Snyder
Deputy Director, Resources Management
California Department of Forestry and
Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

George D. Gentry
Executive Officer
Board of Forestry & Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

RECEIVED
DEC 11 2006
BOARD OF FORESTRY

Re: My client, Willits Redwood Company, Inc.
Timber Sale Agreement, Camp 3 2003
Agreement No. 8CA02027
Jackson Demonstration State Forest (JDSF)

Dear Sirs:

I represent Willits Redwood Company, Inc. ("WRC"), which was the high bidder and entered into the above-referenced timber sale agreement with the State of California on May 6, 2003.

As you are aware, the timber sale was stopped in its tracks by an injunction issued by the Mendocino County Superior Court shortly after timber operations had commenced. The timber sale has been stalled in litigation while the Board of Forestry processes an EIR concerning the management plan for JDSF. Accordingly, WRC and the Department of Forestry entered into an agreement in December of 2005 to extend the timber sale agreement through April 1, 2008.

My client is concerned that its contractual rights under the timber sale agreement are being ignored by the Board of Forestry and CDF as the administrative process of revising

the management plan plays itself out. WRC does not wish to become a victim of bureaucratic inaction. It already has suffered significant loss as a result of the court injunction and the ensuing delay in getting the new management plan approved.

I am writing to request a written explanation of the Board's and the Department's position regarding WRC's contractual rights. Specifically, WRC wants to know whether the Board intends to give due consideration to WRC's contractual rights in the process of adopting a new management plan. Has the EIR even considered WRC's rights as an innocent purchaser? Does the Board intend to address this subject in the EIR?

If WRC's rights are going to be lost or impaired in the shuffle, I will advise WRC to file a claim with the State Board of Control and pursue whatever litigation is appropriate to make the company whole. However, I have advised WRC that it would be premature to do so until we have given your agencies an opportunity to provide us with a written explanation of the State of California's intentions and ability to honor the 2003 timber sale agreement.

Your prompt attention to this matter will be greatly appreciated. Thanks for your cooperation.

Sincerely yours,

James F. King

2

Mailed Letter P-225

Response to Comment
The Board and the Department are aware of contractual obligations concerning the timber sale. The management plan does not preclude the timber sale between Willits Redwood Company and the State of California. However, the timber sale is subject to existing court proceedings, a settlement agreement, and timber sale contracts.
.

Mailed Letter P-226
Note: Comment numbers inserted within text by the Board

February 21, 2007

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, Ca. 94244-2460
Attention: George Gentry, Executive Director

Re: Jackson Demonstration State Forest Management Plan

Dear Members of the Board,

Comment 1
The Mendocino Working Group (MWG) got together some time back in hopes of helping find a long term resolution to the Jackson Demonstration State Forest (JDSF) stalemate. Everyone in the group wants to see JDSF back in production in 2007. This desire is driven by numerous factors such as; regional economic stability, needed restoration work, augmenting the staff at JDSF, and maintaining existing infrastructure.

In response to our recommendations, CDF has proposed an initial implementation of the management plan and associated harvesting restrictions.[1] We have reviewed these recommendations and find that while staff included some of our recommendations they fail to capture adequately some key elements of our proposal that we feel are critical for successful resumption of operations in JDSF.

Comment 2
The MWG feels the key to long-term successful management of JDSF is meaningful local input. We feel strongly a well balanced advisory group structured similar to our suggestion is imperative. This portion of the management plan needs significant clarification and is not an issue that can be dealt with after the fact.

A compromise between CDF's and the MWG's position has been suggested, with appointments to the group being made by the director and ratified by the board; with the advisory group reporting to the director, and at its discretion, to the board. This is acceptable to the working group.

Below is our original recommendation amended to reflect the board's desired changes in language ("initial implementation period" rather than "Phase I") and the suggested compromise. We recommend that this amended recommendation be included in the DFMP:

> *Overarching Principle: The advisory Group should represent and consider a broad range of views, with emphasis on local input and resource expertise.*
>
> *Purpose: Initially to participate in the development of a long-term landscape and revised management plan during the initial implementation period; and to review and field evaluate the implementation of the Timber Harvest Plans proposed for the initial period. Subsequent*

[1] ***Potential Harvest Limitations to be Applied during Initial Implementation of the Proposed Jackson Demonstration State Forest Management Plan,*** Department of Forestry and Fire Protection February 7, 2007

responsibilities would include field based evaluations (prospective and retrospective) which would provide information for future research and management activities.

During the initial period of implementation of the Forest Management Plan this group will render advice on, but not limited to, the following topics to develop recommendations on modifying the contents of "Desired Future Forest Structure Conditions and Silvicultural Method" identified within the FMP:

> *The location and extent of recreation areas, corridors, trails, and designated access-ways that will be managed to enhance the full spectrum of recreational opportunities.*
>
> *The extent and general location of areas to be dedicated to late seral development where timber production will be secondary to habitat development.*
>
> *The extent and general location of areas to be dedicated to old forest structure zones. The OFSZs will maintain or develop key old forest features. The OFSZs will be available for timber harvest.*
>
> *The extent that it is necessary to create even-aged stands for potential future research needs.*
>
> *The need to revise the residual old growth policy, as articulated in our principles statement dated November 30,2006.*
>
> *The extent and conditions under which herbicides to control native hardwoods should be utilized.*

Participation: Open nominations, appointed by the Director of CDF, subject to ratification by the Board of Forestry. Members would represent the public interest and be drawn from a broad spectrum of backgrounds and resource expertise with an emphasis on appointments of local representatives. Professions represented should include forest ecologist, fisheries biologist, botanist, Registered Professional Forester, Licensed Timber Operator and recreational planner. Views represented should include local timber industry, environmental community, recreational users, local businesses and forest neighbors. 10-12 people.

Authority and reporting: Group would interact directly with JDSF staff and management team and report to the Director of CDF and, at its discretion, to the Board of Forestry in an advisory capacity on matters related to forest management policies and changes in the forest management plan. Decision making would preferably be consensus based.

Comment 3

The MWG is concerned with the language suggesting the initial period will sunset no more than 36 months after approval of the Forest Management Plan by the Board. We agree that 3 years should be more than adequate to bring this to resolution, but we don't feel a specific ending time for the initial period should be set. During the initial period, JDSF will be re-staffed with personnel with a broad range of expertise in addition to silviculture, landscape-level planning will be undertaken on a broad array of issues in cooperation with the Jackson Advisory Group, and a credible and verifiable inventory will be established. We envision that a detailed and sustainable long term plan for JDSF will be produced in cooperation with the advisory group, based on detailed specific information that provides for a consensus-based balancing of ecological values, education, research, recreation, timber production and regional economic stability. The initial period should continue until the revised plan is submitted to and approved by the Board of Forestry.

Comment 4

Our proposal for this initial period envisioned low impact harvesting in non-controversial areas. The intent was to generate revenue to restore and enhance staffing, remedy the more significant environmental problems on the forest, initiate a wildlife inventory, a botanical inventory and generate a reviewed and verifiable forest inventory, during the time that CDF was working with the advisory group to develop a long-term landscape and management plan. Our group would enjoy better understanding the decision making process that generated the initial list of plans for 2007 as outlined in the February 7th paper titled *"Potential Harvest Limitations to be applied during Initial Implementation of Proposed JDSF Management Plan".* Often disagreements of this nature are a result of insufficient information we would appreciate a response. Our group is very interested in seeing harvesting resume this year and needs to understand why these plans are favored over others that seem less controversial and lower impact.

Comment 5

Another concept that our group came to consensus on was that in the long run harvest levels should be the result of scientific and biological justification, within the context of a long-term landscape plan that addresses habitat, ecological, recreational/spiritual, education, and research values, rather than what seems to be a politically derived number.

Comment 6

Augmenting the existing staff at JDSF is critical to final development and implementation of the management plan. The resumption of harvesting is critical to existing infrastructure, restoration, and regional economic stability. The MWG appreciates the cooperation both the Board of Forestry and the Department have shown by assimilating many of our ideas into the management plan. Our group is hopeful that all involved understand the short timeline and are committed to moving this process forward.

Mike Anderson
Kathy Bailey
Art Harwood
Mike Jani
Vince Taylor

Mailed Letter P-226

Response to Comment 1
Comments noted.

Response to Comment 2
The Board has made the creation of a JDSF-specific advisory committee a provision of the management plan. The committee charter and membership will be determined by the Department with approval by the Board.

Response to Comment 3
The Board believes that the management for JDSF is viable, workable, and in compliance with existing legislation and Board policy. The management plan has been subject to an extensive period of public and agency review, and reflects a substantial level of input. However, the Board believes that an interim period will provide the public and the various advisory entities with an opportunity to make recommendations for potential improvement of the plan. The Board firmly believes that an additional period of up to 3 years is ample in order for a full review of management policies forest implementation plans.

Response to Comment 4
The short-term harvest schedule has been amended to reflect a desire on the part of the Board, the MWG, and others, that harvest during the interim period maintain future management options and flexibility while avoiding some of the areas of controversy as suggested by Mendocino Working Group and others. However, it is not the intent of the Board to avoid all areas that may be considered controversial to some members of the public. The primary purpose of the state forest is to demonstrate forest management, and to produce a range of conditions for future research and demonstration, while also producing a sustainable level of timber production.

Response to Comment 5
The Board concurs with this statement. Allowable cut is determined largely by an assessment of growth, yield, and stand management over the long-term. There is, however, some level of discretion in the determination of annual cutting levels in the short term. In addition, the setting of interim harvest restrictions has potential to alter the short-term planning capability of the Forest staff, which can in turn alter the short-term harvest level and the potential for revenue generation. The Board expects the short-term average annual harvest level to vary between 20 and 25 million board feet per year.

Response to Comment 6
The Board concurs with these comments.

Mailed Letter P-228

Note: Comment numbers inserted within text by the Board

July 25, 2007

Ruben Grijalva, Director
California Department of Forestry and Fire Protection
1416 9th Street
PO Box 944246
Sacramento, CA 94244-2460

Dear Mr. Grijalva:

We unanimously support the following candidates for appointment to the advisory committee for Jackson Demonstration State Forest. In choosing these candidates, we strived to provide expertise in relevant areas and a balance among different interests. We hope that these candidate recommendations will be considered as a whole.

We have not yet identified a person to represent recreation interests on the committee. We will continue to look for the appropriate person.

The advisory committee plays a crucial role in our consensus recommendations for Jackson Forest. We hope that you will be able to establish this committee in the near future, so that it will be available to assist the department in ensuring that near-term harvests are designed and implemented so as to avoid unnecessary controversy.

We have proposed that your appointments to the advisory committee be ratified by the Board of Forestry. To allow the committee to begin functioning as soon as possible, your appointments could immediately sit on the committee, subject to approval by the Board within some reasonable period, for example, three months.

- Greg Giusti – Forest Advisor, RPF, University of California Cooperative Extension. He has been actively involved with Jackson Forest, served on the Citizens Advisory Committee to JDSF, and acts as staff consultant to the Forest Council of the Mendocino Board of Supervisors.
- Doug Albin – Department of Fish and Game, Mendocino County. Doug is considered to be a very knowledgeable Mendocino person on issues related to salmon and salmon habitat.
- Teresa Sholars – Botanist, faculty member of College of the Redwoods in Fort Bragg. Teresa has broad and specific knowledge of the botanicals, including mushrooms, in Jackson Forest.
- Chris Baldo – Co-owner of Willits Redwood Company sawmill; degree in Forestry, University of California Berkley; Registered Professional Forester; and President of Roots of Motive Power.
- Mike Anderson – Owner of Anderson Logging Company, Fort Bragg, the largest logging contractor in Mendocino County. RPF. Formerly a member of the Board of Forestry.
- Mike Jani – Chief Executive Officer of Mendocino Redwood Company. RPF.
- Kathy Bailey –Active in forest-related issues since 1976. Was California Sierra Club's principal spokesperson on state-regulated forest issues for more than a decade until her "retirement" from that volunteer position in 2003. She has continued to be involved with Jackson Forest.

- Linda Perkins – Long-time dedicated forest activist, Chair of the Mendocino Group of Sierra Club's Redwood Chapter, former member of the board of the Redwood Forest Foundation, Inc., whose mission is to purchase timberlands and manage them as community forests.
- Vince Taylor – Founder and head of the Campaign to Restore Jackson State Redwood Forest. Vince has a professional background in public policy economics.
- Jere Melo – Member of the Fort Bragg City Council, RPF, and former chief forester of the Georgia Pacific Fort Bragg operation.
- Joe McBride – Professor and Division Chair, Division of Forestry, and Professor of Landscape Ecology, Landscape Architecture and Environmental Planning, UC Berkeley; current member of the Demonstration State Forest Advisory Group.
- *Recreation Representative – Recommendation in process.*.

We appreciate your efforts to ensure that Jackson Demonstration State Forest will serve as a model of excellence in forest management and forest research. We believe all of the recommended advisory committee members would contribute to reaching this goal.

Sincerely,

Mike Anderson

Kathy Bailey

Bruce Burton

Art Harwood

Mike Jani

Vince Taylor

Mailed Letter P-228

General Response
The Board appreciates the recommendations for committee membership. The committee charter and membership will eventually be a decision made by the Department and the Board, but will include consideration of recommendations made by others.

The letter above deals exclusively with the process of appointing an advisory committee for JDSF, and does not represent an expression of environmental concern.

P-229

from 2/2/2006 public hearing @ Ukiah

James D. Smith
P. O. Box 1101
Willits, Ca. 95490

This document is made in response to the Draft EIR/EIS for Jackson State Forest, of 10/12/2005. This main position of this response is that this draft EIR/EIS should be amended for the following reasons:

1. The forest management plan for Jackson State Forest should be amended because of the lack of protections for fire. This forest is at very high fire risk, and should be managed with fire protection as its highest priority. The proposed timber harvesting plans are totally inappropriate, because they will do nothing to reduce the great fire danger, which is an ever-increasing problem because of the huge amount of undergrowth, and this fire danger threatens perhaps 80% of the forest. Instead, better fire protection plans should be developed that would lower the fire hazards for the entire forest.

1

One possible fire protection plan would provide for the thinning of the forest using modern equipment for tree thinning, along with the removal of undergrowth and other fire combustible materials, which are currently present in the forest. Currently, about 25,000 to 45,000 acres of this forest needs to be thinned, and cleaned of undergrowth, old logs, dried woody debris, trash, and all other combustible materials, immediately, in order to prevent forest fires. Timber harvesting is inappropriate and could increase the risk of forest fires, as proposed in this EIR/EIS.

Plans for timber harvesting should be changed to plans for fire protections, in terms of reducing the fire hazards and combustible materials. Most of Jackson Forest is second growth, and there are a great amount of trees fewer than two feet in diameter. These smaller trees need to be thinned, chipped and mulched into pulp, to prevent fire. This material should then be removed and utilized as new forest products, which could be sold and use to raise revenue.

2

Such plans could also include the development of additional forest materials, like pulp, mulch, wood chips, redwood bark, and poles for telephones and other types of uses, that would utilize trees that are smaller in diameter than are currently used by logging, but would still raise revenue.

2. The forest management plan for Jackson State Forest should be amended because of the lack of a comprehensive plan for the development, management and reconstruction of habitat for coho salmon and other endangered species, including marbled murrelet and the northern spotted owl.

3

3. The forest management plan for Jackson State Forest should be amended because of the loss of acreage -- about 2,000 acres are missing. The CDFs documents from 2004, and other documents published previously to those documents list the forest as being 50,200 acres, or larger. The public has been told that plans for forest management include the acquisition of additional lands, yet these reports indicate the actual size of the forest is decreasing. Why is that?

4

4. The forest management plan for Jackson State Forest should be amended because of the need for better maps and establishment of boundaries for the state forest. This forest should be utilized for research, and therefore, better maps should be produced. Additionally, the forest's boundaries need to be better defined, and marked, to prevent

5

mistakes. Mapping could become an area for research, and GIS systems could be innovated for mapping and forest management.

Additional maps should include details of the forest management plan, including more detailed information concerning the 23 special concern areas, or (SCAs). Stands of Old Growth should be located and identified on these maps, along with habitat areas of endangered species. Mapping could also help to develop a better system of fire management plans.

6

5. The forest management plan for Jackson State Forest should be amended because of disputes about the number of acres of Old Growth, which need to be resolved. This dispute is caused by insufficient mapping and a lack of details on critical areas of great concern to the public, and to the environmental health of the region. When the forest was acquired in the 1940's and 50's, there were only about 400 acres of old growth remaining. However, because the forest has grown for several decades, and because the definition of "Old Growth" could include both "mature seral" and "late mature seral" trees, there is much more Old Growth within this forest, than listed in the EIR/EIS. There are approximately 9,000 acres of Old Growth, including large tracts of residual Old Growth along James Creek, and in other places throughout the state forest. Therefore, the draft EIR EIS is in error. Because of this error, more research should be conducted by the makers of this forest management plan, to determine the exact amount of mature seral, and late mature seral (or Old Growth) trees, within the forest.

7

6. The forest management plan for Jackson State Forest should be amended because of the need for more research in other areas besides timber harvesting. Research plans should include silvaculture research, along with endangered species and corresponding habitat research. Silvaculture research should include all types of environmental science research, with the goal being to expand our knowledge about the environment, and how it functions.

8

7. The forest management plan for Jackson State Forest should be amended because of the need for more consideration for a rapidly changing viewpoint by both state legislature and the public, as to what the main purpose of our public lands should be. Many people in both the California legislature and the public sector believe that the CDF should develop more uses for the forest than timber harvesting. These uses include education and research, conservation, fire prevention, habitat protection and recreation. For this reason, the comprehensive EIR/EIS should be developed slowly, over a time span of several years, to allow time for appropriate response by both the public and the state legislature.

9

In conclusion, the draft EIR/EIS could cause disasters, in terms of short-sighted exploitation of our forest. Everyone could become big losers, and this proposed management plan could result in the destruction and/or degradation of this vitally important coastal rainforest. An example of the sort of disaster warned of could include a major forest fire, perhaps in conjunction with environmentally destructive logging operations. Jackson State Forest has been growing for five decades, and is now in critical danger of burning, in a flash forest fire, which could burn tens of thousands of acres, due to the large amounts of young trees and underbrush, that are extremely combustible during the late summer months.

10

BOF Hearing Written Testimony P-229

Response to Comments 1 and 2
Significant impacts related to fire hazard are not expected to occur. Please see DEIR Section VII.8 for the assessment of hazards. Numerous factors will contribute to help prevent significant wildfires within JDSF, including maintenance of access for fire control apparatus, proximity to fire protection resources, and continued thinning and natural development of forest stands. The management plan includes provisions to consider biomass thinnings and controlled understory burns in the future, in an effort to demonstrate and better understand the role that these stand manipulations have upon wildfire occurrence and behavior. However, the Board does not agree that the entire Forest should be thinned over a very short period of time, due to the potential for this form of stand manipulation, on a vast scale, to result in significant impacts to watershed, fishery, recreation, timber, and wildlife resources.

Response to Comment 3
The Draft Forest Management Plan (DFMP) and the Administrative Draft Final Forest Management Plan provide numerous measures that will contribute to the protection and recovery of listed species. these include measures for protecting and recruiting snags and large woody debris, protection of riparian areas, development of late seral forest and older forest structure, and an accelerated road management plan to reduce sediment inputs to streams.

Response to Comment 4
The acreage accounting in the 2005 DEIR accurately describes JDSF as being approximately 48,650 acres in size. The difference with earlier reported figures is the result of a more accurate acreage measurement approach.

Response to Comment 5
The Board believes that the maps utilized in the DEIR and RDEIR are adequate for the information and analysis required in a programmatic EIR. The Board concurs regarding the research role of JDSF. Improvement of the quality of mapping or the forest for administrative, assessment, and research purposes will be ongoing.

Response to Comment 6
Map Figures are provided in the DEIR and RDEIR to indicate the special concern areas, including old growth groves (see Map Figure D in the DEIR or Map Figure 1 in the RDEIR. Species habitat is addressed in Map Figures J and K in the DEIR. CAL FIRE's Fire and Resource Assessment Program has produced various kinds of fuels and fire risk maps for the state, including the JDSF area. Results of these maps were used in the DEIR (see section VII.8 Hazards and Hazardous Materials).

Response to Comment 7
The DEIR accurately accounts for the approximately 459 acres of old growth stands remaining on JDSF. Old growth is considered a subset of late seral of late successional forest.

Response to Comment 8]
The DFMP and ADFFMP both embrace a wide range of forest-related research. They are not limited to timber harvesting by any means. All types of research identified in the comment are appropriate to JDSF.

Response to Comment 9
The propose of JDSF is more than just timber harvesting, and includes the range of interests identified in the comment. The creation of a JDSF Advisory Group, as provided for in the ADFFMP, will provide additional opportunity for ongoing public input on the management of the Forest.

Response to Comment 10
See response to comments 1 and 2. As indicated by the analysis in the DEIR, the Board believes that the management plan adequately addresses the risks of catastrophic fire. The analysis in the DEIR and RDEIR indicate the implementation of the ADFFMP, with the application of the various management measures and mitigations, will not result in significant adverse environmental impacts.