IV.10 Individual DEIR Mailed Comments P-186 to P-188

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.

P-186

Wayne Thorstrom
29601 Sherwood Road ~ Fort Bragg,California 95437
Home Phone (707) 961-0374 ~ Email ATREAD@INREACH.com

February 20, 2006

To whom it may concern:

The issue I wish to discuss is the Jackson State Forest Management Plan and possible solutions that could be beneficial to the State of California and the men and women who risk life and limb to keep the logging industry healthy for all Californians.

1 Being one of five generations who have worked in the timber industry all our lives and have depended on our work to support our families and our neighbors as well as all the spin-off industries such as the furniture businesses, the building of houses and stores and all the items that support those industries, I therefore feel that I have the right to express my anger **and dismay regarding the problems that have arisen from those persons fighting and creating controversial arguments involving clear-cutting and the logging of Jackson Forest. The very fact that those yelling the loudest are from out of our area, and who only know the timber industries issues from "book-learnin"** (rather than hands-on learning)**, This is an insult! My family has worked in the woods for over one hundred years. Ask our advise!**

2

3 The forest is like a garden. A garden produces beautiful fruits and vegetables only when it is cared for in certain ways. When you neglect to prune a garden, for instance, the garden will not produce properly , if vehicles and/or people or animals are allowed to tromp all over it, the fruits mold and die or are not up to ones expectations. *A forest is not unlike a garden. A forest needs to be clear cut and the land left fallow for ten or so years. After re-planting, being fertilized, cared for and then, if left undisturbed the new forest is the beautiful renewable life giving resource it was intended to be. When the trees are harvested the stumps and bark and leaves are left as natural compost for the new growth and are mulched into the soil then the area is burned which cracks the seedlings insuring the new growth.*

4 **FACT: Select-Cut forest areas means that the logging company takes a few trees here and there and leaves smaller or undesirable trees all over the hill being worked on to be harvested at a later time, however, when, in a few years theses left over trees are big enough, the company goes in to fall them at the expense of pulling big equipment over and through the just planted areas killing all the new growth of the just planted trees. All the points spelled out above can be proven. An educated person can easily see the folly of the Select verses Clear-cut issue.**

5 **All our local newspapers have stated over and over that health benefits, jobs and related services are going to increase in cost by five-billion dollars in the next few years *and* the Governors' financial advisers are asking "where that money is going to come from?" Timber dollars have re-built San Francisco, have built the railroads ,,paid for prisons, education, state workers, retirement, county taxes etc. TIMBER DOLLARS CAN SAVE CALIFORNIANS, AND SAVE THE BUDGET. Jackson State Forest if handled properly will save us for hundreds of years to come.**

Very sincerely yours,

Wayne E. Thorstrom

Wayne Thorstrom

Mailed Letter P-186

Response to Comment 1
The economic setting and the economic impacts of various levels of harvest, in terms of estimated employment and local revenues, are discussed in Section III.6.2 of the DEIR.

Response to Comment 2
CEQA requires that the EIR process allow for public comment, without regard to the area which they live. Many of the comments which express opposition to the proposed management are from the local area.

Response to Comment 3
The Board concurs that active management can result in increased productivity and a healthy forest. The Board recognizes that clear-cutting and other even-aged management systems have important economic and silvicultural advantages in many instances, and therefore they need to be retained as a management tool, but does not agree that all areas of JDSF require even-aged management to retain a healthy forest.

Response to Comment 4
The Board does not agree that (single tree) selection cuts are simply “high grading” with the result being a few trees that are small or undesirable left on the landscape. One of the guiding principles of forestry with regards to selection harvests is to leave the area well stocked, with the best growing stock retained, so that the resultant stand is highly productive and comprised of the best trees in all size classes (with the possible exception of leaving some lesser quality, broken topped or poorly formed trees due to their wildlife value). When properly applied, selection silviculture will not result in a first cut to remove the best timber, followed by planting, and a final cut to remove the remaining timber. Rather it is a continuous process of removing trees in all size classes, allowing for natural regeneration in the newly created openings, and for the remaining trees to utilize the newly created space.

The Board recognizes that selection harvesting, when compared to even-aged management, can require more frequent entries into a given stand and that damage to the residual stand and regeneration can be a problem. Also, for a given harvest level, the area affected by harvesting activities will be increased when utilizing uneven-aged management. However, much of the logging on JDSF will utilize cable harvesting systems which reduce the use of heavy equipment on the landscape.

Response to Comment 5
The Board agrees that it would be highly beneficial for the JDSF to fully resume management activities, so the Board is working actively to certify the DEIR and approve a management plan. The Board agrees that a resumption of timber production will have a positive impact for local, regional and the State economies. The Board supports a balanced, multiple use concept and sustained production of high quality timber products.

P-187

March 15, 2004

Mr. George Gentry, Executive Officer
State Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, Ca 94244-2460
Fax: (916) 653-0989

Resubmission
Jackson Forest scoping comments

Dear Mr. Gentry:

Thank you for the opportunity to comment on management at Jackson Demonstration State Forest. As we are in a scoping phase at this time, my comments will not be footnoted to voluminous supporting documentation. However, I will attempt to identify some of the sources for ideas I will present.

I also incorporate herein by reference the comments and materials I presented on February 27 in Ft. Bragg, and my comments regarding the previous draft Environmental Impact Report (DEIR) and the Final EIR (FEIR). My comments on the draft included substantial supporting documentation and I will
01 refer to it in this letter. Please note there is no reference to my comment letter in the Table of Contents of the Final EIR. However, the comments themselves may be found beginning at IV-359 and are cataloged as KB-255.

Additionally, the comments of Jim Strittholt, Director of the Conservation Biology Institute in Corvallis, Oregon are not included in the Table of Contents of the FEIR. Also, his comment letter is not included in the FEIR but rather only the cover page to the comments. CDF's response to
02 comments is included however. I am attaching the text of Dr. Strittholt's letter, which is an important one. But I do not have the supporting materials. I suggest you search through the files and find the original letter, which is catalogued as JS-239.

I recommend that, in addition to the above, you also particularly review submissions on the DEIR by:
Salmon and Steelhead Recovery Coalition SSRC-254
Save-the-Redwoods League RH-240
Mendocino Coast Audubon Society WW-237
S. Kim Nelson SN-200
Mad River Biologists RL-238
California Native Plant Society GJ-236
Patrick Higgins PH-250
Roger Sternberg RS-249

Regional Context

In my comments at the public scoping on February 27 in Ft. Bragg, I presented a brief version of the comments I made regarding the previous DEIR in relation to the immediate surroundings of Jackson Forest. In brief, these include:

Reply to: PO Box 256, Philo, CA 95466 707-895-3716 kb@pacific.net

Kathy Bailey, Sierra Club
JDSF scoping comments

03 Compared to other regions in the state, there is an extreme dearth of public forestland in the redwood region between San Francisco Bay and Humboldt County and in particular in Mendocino County. Jackson Forest is the only opportunity to protect and restore the region's depleted biological heritage and provide forest-based recreation for the public.

04 Jackson is surrounded north and south by the largest industrial timberland ownerships in the County, where intensive management has left these lands virtually stripped of trees in excess of about 40 years old. The land to the east of JDSF is in even worse shape. Stocking volumes and yield table comparisons were provided in KB-255. *Whatever one believes about the silviculture practiced on these adjacent timberlands, one must acknowledge they will not be late seral forests any time soon. Logging, agriculture, and development have virtually eliminated late seral forests in the region. KB-255 and JS-239 explain some of the reasons why late seral forests are ecologically important.*

05 The California Department of Forestry (CDF) has been intimately involved with enabling the loss of late seral habitat and other cumulative impacts that have occurred on the landscape. Jackson's management is rightfully proud to point out that Jackson's stocking levels are quadruple or more of what exists on the surrounding lands. But every one of the Timber Harvest Plans (THPs) that resulted in the low level of stocking on the surrounding lands, not to mention a radical change in the region's environment, have been approved by another part of CDF. In every instance, CDF approved the Registered Professional Forester's (RPF's) certification that the THP "will not have a significant adverse impact on the environment."

06 We can argue forever about the rules, CDF's application of them, and the causes that have led to the multiple federal and state species and water quality listings in the region. However, it boils down to this: Virtually everyone except CDF and the timber industry believes there has been an adverse cumulative impact on the environment in this region from the intensity of timber harvesting that has occurred here in the distant past, in the last twenty years, the last ten years, and yesterday. When the

07 public asks that management measures at Jackson make up for some of this by preserving and developing habitat, CDF prefers not to consider the regional context even though CDF is directly responsible for it being the way it is. This is one of the central disconnects between the environmentally oriented public and CDF managers.

08 Jackson is not only a unique opportunity. We believe CDF has a responsibility at Jackson to provide strong protection and consideration for wildlife, fish, plants, water quality, old forest characteristics, and native species diversity to provide some sort of mitigation for the immensely impaired condition of our region's forests. Additionally, as the largest publicly-owned forest in the area, Jackson also has a

09 responsibility to accommodate the public's desire for recreational opportunities.

10 To further clarify the legal underpinnings for management at Jackson, we are working with Senator Wes Chesbro on SB 1648 to update the management mandate and clarify further that research should be one of the most important functions at Jackson.

The Previous Plan

The previous draft management plan made a good first step when it stated that "equal consideration" would be given to non-logging concerns. We supported the Department in that statement. However, we think the plan itself was less than successful in implementing that intention because:

Kathy Bailey, Sierra Club
JDSF scoping comments

11 • Relatively small late seral development areas were designed as isolated islands rather than provided with the kind of connectivity that is important for biological functioning and resiliency.

12 • Watercourse zones were too narrow to function as late seral habitat while being counted as providing such habitat.

13 • Late seral targets for watercourse zones were vague.

14 • Class II and Class III watercourses received particularly low levels of protection, much less than federal standards for this region.

15 • The 80-120 year old stands, a rare resource in the region, received no consideration other than as timber production zones.

16 • Although some additional protection was afforded to the marbled murrelets nesting adjacent to JDSF, no real effort was made to implement the recommendations of the federal Recovery Plan and other murrelet experts to develop large-scale suitable habitat on the west side of the forest as soon as possible.

17 • The Resources Agency attempt to shift the focus for late seral development away from Jackson and onto its 2002 designated "Old Growth Development Area" was particularly inappropriate as the majority of this area had been recently clear-cut.

18 • Clearcutting under the guise of variable retention was a significant part of the logging program in spite of long-standing recommendations that it be eliminated except under very limited circumstances.

19 • The Plan characterized the concern about even-aged management and clearcutting as coming from "some people" rather than acknowledging that former CDF Director Richard Wilson's Citizens Advisory Committee for Jackson had recommended the timber program be conducted using unevenaged management except in rare circumstances.

20 • Key features such as the Camp One, Camp Three, Brandon Gulch area, West Chamberlain, James Creek, and the Road 408-409 intersection area did not receive effective protection from a diminishment of recreational values.

21 • Recreation planning was deferred to a future time in spite of copious existing information and interest.

22 • The old growth policy was not flexible or site sensitive enough to ensure that old growth in high elevations, dry locations, on the eastern side, or of Douglas fir was assured protection.

23 • The old growth aggragation policy did not include residual old growth.

24 • The commitment to protecting individual old growth residual trees except for those posing a safety problem was uncertain.

25 • The "small group selection" system (patch clearcuts generally 2.5 acres, but up to 5 acres in the older, larger forest stands) was a major component of the logging program (roughly one third) and characerized as "uneven-aged management" even though it is experimental and results in wildlife habitat that cannot even be classified under the Wildlife Habitat Relationship system.

26 • The snag and down wood recruitment policy did not establish clear and robust standards.

27 • The salvage logging program did not seem to be coordinated with snag and down wood recruitment considerations.

28 • There was no systematic monitoring program established to enable a forest-wide management feedback loop.

29 • No ongoing inter-agency input mechanism was established.

30 • No citizens advisory committee was re-established.

I regret if these remarks appear to be overly harsh, but it seems prudent to be direct. In spite of the concerns articulated, we recognize that the 2001 draft management plan was a major improvement

3

over the previous plan and was the product of thousands of hours of effort on the part of many people. The plan also had the strength of being relatively easy to comprehend by the educated layperson and not overly voluminous.

Two Separate Research and Demonstration Programs

There are two distinct sorts of research and demonstration occurring at Jackson:

31

1. *The overall, forest-wide demonstration of sustained yield logging and various silviculture techniques.* Aside from determining where to cut and how much, there is no scientific component to this demonstration. The money generated, roughly $14 million per year prior to the onset of litigation, was used for a variety of purposes including an insufficient level of funding for the operations and maintenance of the forest and an occasional burst of funding for research. I believe it is correct to say that a total of $600,142 was granted in fiscal year 1999-2000 for research in five of the state forests. As far as I know, this was the first round of state forest-generated research funding since at least 1992. So while there has been a glimmer of hope that logging could generate research funding, that funding has been the exception rather than the rule for most of the last decade. It is the logging program that has caused the controversy. Along with many others, we wholeheartedly support using money generated by logging to increase funding for forest operations and true scientific research. The total amount the forest is required to generate should be reduced.

32

2. *Specific research projects that are independent of the logging program.* Although these projects occur on Jackson and many of the other state forests, they are mostly independent of the logging program. The landscape of the state forest is the setting for this research but the research does not occur in conjunction with logging. Funding for the research comes from a variety of sources including, recently, the logging program at Jackson. There is virtually no controversy about most of these research projects. One exception was when large-scale logging and research combined at the Caspar Creek clearcutting trials. Another was the Railroad Gulch Uneven-Age management in the Woodlands Special Treatment Area. Again, when research requires commercial-scale logging *of mature forest*, controversy follows. Otherwise the public is supportive.

What is Being Demonstrated?

33

It seems worthwhile to discuss the logging demonstrations (that is 1, above) at greater depth because they are at the center of the controversy. CDF demonstrates various silviculture techniques that result in sustained timber production as defined by Board rules including a balance of growth and harvest over time. Logged units may be visited and one can search through the records to determine the silviculture treatments that resulted in the remaining stand. As far as we know, there is virtually no research function to most of the timber harvests. There is no process of: question asked, create a hypothesis, collect data, validate hypothesis. I do not know whether there is an attempt to predict growth of the stand for a period of time. I do not know whether someone ever checks whether, indeed, the predicted growth did occur. If these actions are taken, they are not reflected anywhere in the THP. The only validation I know of occurs at the forest-wide level when inventory is checked at specific inventory plots.

34

The principal demonstration for these THPs is that logging makes money. For instance, typical is the statement in the Brandon Gulch THP 99-483M, page 21:

> "The proposed timber harvest is expected to yield about 10-12 million board feet of timber and will contribute between $5,000,000 and $6,000,000 to the total timber sale revenue needs. [sic]

Kathy Bailey, Sierra Club
JDSF scoping comments

34 ctd

It will play a role in demonstrating the economic benefits of timber management and allow JDSF to meet the timber management objective of implementation of uneven-aged management to increase site productivity and realize maximum sustained production of high quality timber. The harvest will play a role in demonstrating the economic benefits of timber management in general while specifically demonstrating conversion of an even-aged stand to an unevenaged stand through single tree selection method while retaining the biological integrity of the stand.

"The specific timber management objective of this harvest is to begin the conversion of the stand from evenaged to unevenaged by establishing a regeneration age class while retaining sufficient stocking to support future regeneration entries."

I have included the entire section from the THP regarding the demonstration of the harvest lest I seem to be quoting selectively.

35

While I have no reason to believe the cut will not achieve these expectations, as far as I know there is no attempt to revisit the assumptions over time to see if the objectives have been met. The items that seem to matter most are the $5-6 million dollars and the forest-wide balance of growth and harvest.

36

There is nothing particularly wrong with this demonstration, but it seems to be demonstrating something long since accepted: Logging mature trees generates a significant amount of money. Sadly, these particular trees are among the few remaining stands of old second-growth in the County. According to the THP, page 19,

"Nearly all of the old growth timber in the plan area was harvested by steam donkey in the 1910s. Very few residual old growth trees remain (probably less than one tree per acre). There has been no harvesting to date in the second growth stand."

37

We can demonstrate that we can make money by cutting these trees. But isn't there some more "cutting-edge" [sic] way to utilize this stand? For instance, this area would seem to be one of the very few opportunities available to study natural regeneration after logging of the original old growth stand. What plant and animal communities rebounded by themselves? Which were lost? *Besides the opportunity for research that logging would foreclose, this THP is in the middle of the highest visitor use area at Jackson and has a high value left just as it is for recreation purposes.*

38

Some members of the public may object to any timber harvest in any location at Jackson. However, it is my observation that operation of selected THPs in specific places with high value to the public for recreation purposes cause the kind of outrage that leads to litigation. If CDF were willing to be flexible on the location and silviculture it uses in its timber production program, many of the serious controversies would evaporate. This may require not fully utilizing the immediate timber production capacity of the forest in the short term because one is "giving consideration to" recreation, wildlife, etc. The resource will still be there however. At the end of the10 year life of this plan, the decisions made today can be revisited. Meanwhile, the forest will continue to grow.

To Whom is the Demonstration Targeted?

At the February scoping event, a number of industry representatives said that the research done at Jackson is important to industry and is put to good use. Given the condition of local industrial timberlands, I have to assume they are referring to the scientific research done at Jackson, the specific

5

projects involving sediment production, etc. (type 2, above). If they were paying attention to the overall demonstration of sustained yield logging (type 1, above) local timberlands would more closely approach the stocking levels at Jackson instead of the 25% of that they actually have. This is not surprising as industrial timberland owners have a plethora of demands driving their timber production: debt service, mill utilization, stockholder expectations. Many of industry's financial imperatives do not drive timber production at Jackson. *It is when Jackson is made by Sacramento to emulate the industrial producers, when it is expected to produce $14 million a year for instance, that Jackson gets into trouble with the public.*

39

There is no point in continuing to hope that if Jackson demonstrates sustained yield silviculture the industry will follow. Their constraints make it unlikely, and it's too late already anyway. Additionally, they have in-house staff to design their timber management programs. However, Jackson might still be of service to the industry by experimenting with developing understocked or suppressed stands, hardwood utilization, and invasive weed abatement. Some stands at Jackson are already suitable for these demonstrations.

40

There is another audience that could benefit from logging and sustained yield demonstrations. Non-industrial timberland owners own half of the region's timberland. Some of those lands are stocked a lot better than industry lands and are capable of producing a significant yield of timber. These owners could sustain some of the region's timber production capacity and bridge the timber supply gap on industrial land. Non-industrials for the most part do not have staff resource management professionals so they need to turn to outside guidance. *Jackson could be a resource for non-industrials and the RPFs that work with them.* For the most part, non-industrials manage their timberlands for a variety of values: In addition to timber income generation, the land may serve as a first home, a second home, a recreation area for the family, or a business that provides recreation opportunities for the public. We believe that many non-industrials are likely to prefer uneven-aged management because it is more compatible to a multiple use situation. For a number of reasons, former CDF Director Wilson's Citizens Advisory Committee strongly recommended managing the entire forest using unevenaged management. Demonstrations on unobtrusive slash disposal, thorough post-operations clean up, and managing watercourses immediately come to mind. Unevenaged management (*not widespread group selection!*) (I have no complaint about cluster selection) would help alleviate many of the concerns about timber operations at Jackson.

41

Old Forest and Watershed Recovery
Research and Recreation Area (R & R Area)

Attached is a map of Jackson Forest in both a large 2 x 3-foot format and a smaller 14 x 17-inch format. It is built from the State Forest GIS with three additions. These are:

1. Recovery Research and Recreation Area (very light blue outline)
2. Marbled Murrelet Recovery Demonstration (turquoise outline)
3. Thompson Gulch Woodlands Special Treatment Area (STA) addition

42

Also indicated are vegetation by tree type, the existing old growth groves, the late seral management areas already designated by CDF in the most recent draft management plan, watercourses, conservation camps, selected roads, sub-watershed boundaries, adjacent state parks, previously designated research areas, campgrounds, and the enjoined THPs. The map expresses topography in shaded relief.

Kathy Bailey, Sierra Club
JDSF scoping comments

Recovery Research and Recreation Area

43 You need not faint. This is not intended as a no-logging zone although some features within it should certainly not be logged. The purpose of this area is to direct management toward:

- maintaining and developing older forest stands, including existing old growth and residual old growth
- strong protection for all watercourses and salmonid habitat
- careful planning to avoid diminishing values that are important for maintaining the enjoyment of low-impact recreational activities

44 The outline of this area builds on an area designated for uneven-aged management in the 1999 draft Habitat Conservation Plan (dHCP) (see dHCP map 14, Special Concern Areas). I removed a section on the west and added an area to the east in West Chamberlain that includes an old growth grove and old growth residuals.

45 The concept behind this R&R Area is to attempt to rebuild some contiguous older forest habitat, linking the existing old growth groves, some of the old second-growth, and including the Camp One area that is already a high use recreation area. Within the area is every old growth grove (459 acres total in 11 groves), much of the old growth residual, the already-designated late seral management areas, a significant chunk of the 100 year old second growth, much of the North Fork South Fork Noyo, West Chamberlain Creek, and North James Creek. These latter two are both tributaries to Big River, the other large watershed in Jackson along with the Noyo.

46 The idea is to *designate key features within this R&R Area as core protection areas that receive the highest level of protection.* Then, build out from them in a way that they are linked as soon as possible by developing older forest stands, particularly along watercourses, but also up and over watershed divides to link the three sub-watersheds. Rather than the island effect that occurs with the existing designated late seral management areas, contiguity would be established among these features that are so rare in this region. Although from the environmental perspective it would be great to see this entire area become an old growth development area, another approach would result in more modest, but still significant habitat improvement: Establish a watercourse-based core that links all the key areas. As one moves away from the key areas and watercourses, less stringent protection would be provided.

R & R Management Principles

47 Certain management principles should be in effect throughout the area:

- Maintain all old growth and old growth residuals except for safety concerns
- Use all old growth features as anchors for old forest development that create linkages
- Provide large watercourse zones that are at least equivalent to federal standards for this region
- Measure watercourse zones horizontally to automatically adjust for slope
- Enhance recruitment of snags and down wood
- Abandon timber operations at the Camp Three and Brandon Gulch THPs
- Maintain a component of the oldest, largest trees available during any timber harvesting, including healthy green trees
- The closer to the key features, the more old, large trees should be maintained and developed
- Provide visual buffers that emphasize large trees and enhanced post-operation clean-up on designated roads and trails including Roads 360, 361, 200, and 100, Trestle Trail, Waterfall Trail and others as appropriate

7

- Maintain and enhance appearance of ridgeline forest stands
- Use uneven-aged management and cluster selection
- Limit small group selection to specific research projects
- Encourage research on natural recovery processes

Key Features

For those who are not overly familiar with the forest, I am including a narrative that hopefully explains some of the rationale for designating something as a "key feature." Starting on the west, here are the key features and some of their attributes:

North Fork South Fork (NFSF) Noyo Core: Camp One, Camp Three, Brandon Gulch, designated late seral development area with old growth core, NFSF Noyo River, Roads 360 and 361, Trestle Trail.

48 Beginning at Camp One at the confluence of the South Fork Noyo and the NFSF Noyo is an area of 100 year old second growth that includes numerous long-established camps and campsites, the Department of Fish and Game egg taking station, Road 300 to Road 361 along the NFSF Noyo, and Road 360 along Brandon Gulch. This is one of the highest visitor use areas at the forest. The entire area is currently characterized by closed canopy redwood forest (regionally rare) and appears to be relatively stable. *Road 361 along the NFSF Noyo is an extremely rare resource in this region as it travels along a flat to low gradient stream reach with major year-round stream flows. Being deeply in the forest there is no highway traffic and the surrounding redwood forest is peaceful and well-healed from the historic logging. Roads with these sorts of attributes are close to non-existent elsewhere in the region.* It is regularly used by hikers and equestrians. The much shorter Road 360 along Brandon Gulch, tributary to the NFSF Noyo is more trail-like with more of a gradient along a lesser watercourse. It is nevertheless a favorite forest walk from the nearby campsites.

49 Within the Camp Three THP is one of the highest peaks in this section of JDSF at 900 feet. It is poised over steep terrain leading to Road 360. A review of dHCP map 6b, Slope Class, indicates that this ridge overlooking Road 360, as well as part of the Brandon Gulch plan across from the Camp Three THP are within the steepest slope category mapped: over 50% slope, relatively unusual in this part of the forest. *The designated late seral development area is adjacent on the west of Camp Three THP and is also shown to be over 50% slope.* Standing near the tractor unit at the top of the Brandon Gulch THP that was partially operated, one can look east along the NFSF Noyo valley to a vista that includes the Camp Three THP and the designated late seral development area. The hillsides and ridge tops are, for the most part, closed canopy and lush green. The recreation experience at Jackson would be better maintained if they stayed that way.

50 The Trestle Trail takes off from Road 360 uphill toward the late seral development area at the headwaters of the NFSF Noyo (see next section). The Hi-Lo Trestle THP, completed around 2000, is adjacent on two sides to that late seral area and also adjacent to the Waterfall Grove area. Trail attributes will take some time to recover and logging has made the late seral development area into something of a peninsula.

NFSF Noyo to West Chamberlain Core: Designated late seral development area with two old growth groves at the headwaters of NFSF Noyo; adjacent designated late seral development area including Eric Swanson Memorial Waterfall (old growth) Grove; West Chamberlain residual old growth: Road 200, Waterfall Grove trail, Camp 20 old growth.

Kathy Bailey, Sierra Club
JDSF scoping comments

These two adjacent late seral development areas encompassing three old growth groves span the divide between the NFSF Noyo and West Chamberlain Creek, tributary to Big River. North of the Noyo-side late seral area is an area that was logged prior to 1986. The Hi-Lo Trestle plan logged directly adjacent to the northeast and south of that late seral development area. The north forest boundary is nearby, as is Road 1000, a major forest roadway that in many places forms the north boundary. Depending on the east-west location, the other side of the boundary is either Hawthorne/Campbell (toward the west) or Mendocino Redwood Company (toward the east). One generally does not need a map to discern the boundary line. A few large trees, including some old growth are scattered along Road 1000. S1

The Eric Swanson Memorial Waterfall Grove is the highest use feature within the forest according to CDF and has a small late seral development area designated around it. It is a fairly steep climb along the Waterfall Trail down to the multiple tier waterfall. A brass plaque recalls the late timber reform advocate Eric Swanson. The grove, at a fairly high elevation, is notable for its very small diameter, yet tall redwood trees. The grove exhibits distinctive features that are not generally seen in more lowland old growth. Road 200 descends at a noticeable slope along West Chamberlain Creek toward mainstem Chamberlain and Highway 20. The roadside is characterized by rock outcroppings, delicate understory plants, and scattered residual old growth, for the most part Douglas fir. It has been quite some time since timber operations in West Chamberlain, well prior to 1986. The road is heavily traveled both because of traffic to the waterfall and Road 1000, but it is also the only road used to access the Boy Scout Camp along the mainstem Noyo River to the north of Jackson. Campers, adult volunteers, and staff regularly travel up and down Road 200. Naturally, traffic is heavier in the summer, but staff accesses the camp year around. Road 200 is also a conduit for those accessing this part of Road 1000 for firewood collection or other purposes. S2

Road 200 travels down past the junction with Road 250 and then travels along the mainstem of Chamberlain Creek, crosses it and passes the Conservation Camp just before hitting Highway 20. There is a modest loop trail along the hillside in a modest old growth grove. Camp 20 is a major wayside stop for those traveling from Ft. Bragg to Willits. Across Highway 20 is Jackson's new Forest Learning Center. Chamberlain Creek meets Big River here. S3

James Creek Core: Road 231 Ridge, James Creek, North Fork (NF) James Creek, Road 100, NF James Creek old growth and designated late seral development area.

Rather than connecting the R & R Area along Highway 20, the large power line right-of-way and Big River in a steep and twisting gorge, I have set the linkage from Chamberlain east to James Creek over the ridge transected by Road 231 to the south of Park Gulch, a tributary to Chamberlain Creek. James Creek, a tributary to Big River, is the most easterly watershed on the forest. It has not been logged for a long time, but the stand is very spotty. Coming into the drainage, Highway 20 follows James Creek. It is less than 10 miles to Willits from this point. Road 100 takes off at an acute angle. The terrain is very steep (mapped as greater than 50% slope) and appears to be quite unstable. For a time, road 100, James Creek, an old growth grove and Highway 20 share a very compressed horizontal plane with a big elevation change. Highway 20 would have likely dropped directly into James Creek if the old trees had been removed. Gradually, Road 100 moves away from Highway 20. At the fork, it follows North James Creek (to the west of the mainstem) and becomes separated from the highway by a ridge. In several places the very scattered dominant trees are old growth residual redwood and Douglas fir. The mid-canopy tends toward hardwoods, and conifer regeneration is evident. There is a very large slide on the east side of the creek. S4

9

55 Eventually, Road 100 follows along North James and crosses it at a parking area where an unnamed tributary joins it. There has been a lot of riparian salvage logging in this area and the stream is backed up and more or less buried in a number of places.

56 Those who fail to proceed uphill again miss what is perhaps the most spectacular old growth grove on the forest, near the headwaters of James Creek. Old growth residuals appear and eventually merge into a very quiet, relatively large old growth grove of very tall, medium diameter redwood, with some Douglas fir. With the exception of Montgomery Woods State Reserve about 10 air miles to the south-southeast, this grove is the most easterly old growth coast redwood grove in the County. [Incredibly, much farther east there is a small grove of old growth redwoods in a gulch at the tiny Las Posadas State Forest near Angwin in Napa County. The forester there told me that as far as he knew the grove there is the most easterly old growth coast redwood grove known. The trees there are very small diameter, but old growth nonetheless.]

57 Continuing uphill on Road 100, one comes to the edge of the forest and a private gate that looks like it is often locked. Passing through it one joins Road 1000 again with a big view into the mainstem Noyo, MRC land, and distant meadow covered hills. Those attempting to follow Road 1000 west back onto Jackson again, can quickly become bogged down unless driving a serious four-wheel drive vehicle, even on a warm spring day with no rain for a couple of weeks. The absence of drainage is a typical situation on many stretches of Road 1000. Eventually it would be nice if Road 1000 could link the areas described, but it will take serious investment in road work to make that feasible.

Marbled Murrelets

58 The marbled murrelet (Brachyramphus marmoratus) is a small diving seabird that nests on the limbs of old-growth trees within, in California, approximately 25 miles of the sea. In early 1992, it was listed as endangered by the California Fish and Game Commission pursuant to the California Endangered Species Act (CESA). In late 1992 it was listed as threatened by the U.S. Fish and Wildlife Service in pursuant to the federal Endangered Species Act (ESA). Federal Critical Habitat was designated in 1996. The final federal Recovery Plan was published in 1997. Under the federal listing, Jackson Demonstration State Forest is designated as critical habitat for the marbled murrelet.

59 State agencies like CDF and the Board appear to have specific duties in relation to the California Endangered Species Act (CESA) that are more stringent than what would be applied to private ownerships.

> 2055. The Legislature further finds and declares that it is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species and shall utilize their authority in furtherance of the purposes of this chapter.
>
> 2061. "Conserve," "conserving," and "conservation" mean to use, and *the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.* [emphasis added] These methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition, restoration and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Kathy Bailey, Sierra Club
JDSF scoping comments

60 The federal Recovery Plan is the best available science regarding how best to conserve marbled murrelets. Its recommendations to develop new murrelet habitat should be applied at Jackson.

Marbled Murrelet Recovery Demonstration

61 On the map I have provided, two areas are outlined on the west side of the forest as a Marbled Murrelet Recovery Demonstration. Noted murrelet expert S. Kim Nelson commented during the previous EIR process that it is important to provide strong protection for existing murrelet sites and recruit habitat on the west side of the forest where access to the ocean is good. These Recovery Demonstrations are proposed to address her concerns and the recommendations in the federal Recovery Plan.

62 In addition to the outlined areas described below, potentially suitable recruitment habitat appears to exist on the eastern segment of the Woodlands STA adjacent to habitat on the Mendocino Woodlands State Park directly to the south as well as in Thompson Gulch (discussed below). We recommend consultation with State Parks and the Department of Fish and Game regarding management in these areas.

Russian Gulch Watershed

63 One demonstration is proposed for the headwaters of the Russian Gulch watershed, upstream from Russian Gulch State Park, the location of one of only four confirmed nesting sites for marbled murrelets in the region extending from the north Mendocino County line to San Francisco Bay. This area was targeted for two special treatments under the Old Growth Development Area designated by the Resources Agency in 2002. Most of it was designated as "JDSF old growth development." The remainder was designated "unevenaged management with structure retention." There is a potentially significant difference between managing forestland to produce big, old trees, and to produce suitable murrelet nesting habitat. We propose that this entire area be specifically designated for recruitment *as marbled murrelet habitat*. As forest openings are potentially very negative for murrelet nesting success, the entire outlined area should be recruited rather than simply a portion of it.

64 The current forest cover includes a variety of species, ages and size classes. The most southerly portion of this proposed demonstration area is adjacent to the new Big River Estuary State Park that was also designated by the Resources Agency for old growth development, although as I pointed out in February, most of the new acquisition has been recently logged. This most southerly edge of Jackson is within around a quarter mile of Big River in some locations, an important consideration for murrelet nesting.

65 Some of the land within this demonstration area supports pygmy forest that is obviously unsuitable for murrelet nesting. However, it will be important to manage the pygmy area in a way that supports nesting in the adjacent forest. For instance, avoiding garbage and other human-caused problems is necessary to minimize predation of murrelet nests by corvids.

Jughandle Creek Watershed

66 A second murrelet demonstration is proposed for the headwaters of Jughandle Creek, adjacent upstream to the Jughandle State Reserve, which was also designated by the Resources Agency as part of its 2002 Old Growth Development Area. The purpose would be to develop suitable nesting habitat

in a location that has favorable characteristics, in this instance, less than a 1.5 mile run to the ocean, all of which is already protected by State Reserve. Importantly, the headwaters area on Jackson is already forested mostly with older trees. A review of dHCP Map 12, Goshawk and Marbled Murrelet Surveys, indicates no murrelet surveys have been done in this watershed, at least on the Jackson part. When funding allows, undertaking such a survey may be advisable as this watershed has similar characteristics to the Russian Gulch drainage. Jughandle is separated from Russian Gulch by the Caspar Creek watershed.

Pygmy is also included in this area raising the same concerns as those noted above.

Marbled Murrelet Management Principles

Neither of these watersheds is ideal for murrelet habitat development but they appear to be the best choices among the available options. Ideally one would prefer a large intact watershed away from all roads and human activities. That murrelets are already nesting in Russian Gulch suggests they can tolerate something less than the ideal. Lessons learned from the Jackson demonstrations can be applied in other locations, for instance the new Mill Creek acquisition in Del Norte County. The murrelet demonstration should be managed according to the following principles:

67

- Collaborate with State and Federal wildlife agencies and other experts
- Maintain and develop closed canopy
- Avoid corvid perches that overlook nesting habitat
- Avoid garbage and activities that draw corvids
- Avoid firearms activity
- Experiment elsewhere with nest limb development
- Apply nest limb development techniques when perfected

Thompson Gulch Addition

68

An area directly north of the Woodlands STA is outlined on the enclosed map in pink. This is Thompson Gulch, a tributary to the Little North Fork Big River that flows through Mendocino Woodlands State Park. In the Resources Agency 2002 designated Old Growth Development Area, Thompson Gulch was slated for "unevenaged management with structure retention." We suggest that it should be designated the same way as the Woodlands STA and Mendocino Woodlands State Park i.e. Old Growth Development. Further, the area should be scrutinized for possible inclusion in the murrelet habitat demonstration. It has good access to Big River, already has some mature timber, and is relatively isolated from human activity. These characteristics make it attractive for potential murrelet habitat development although ocean access is more indirect compared to Russian Gulch and Jughandle.

Additional Recreation Concerns

69

Even though we haven't included the area in the mapped R & R Area, it must be acknowledged that Little Lake Road (Road 408) and Caspar Little Lake Road (Road 409) are conduits to Jackson for many recreational users, predominantly neighbors, bicyclists, walkers, and mushroom hunters. Some sort of balance among timber production, aesthetics, and fungi habitat will need to be struck if harmonious relations are to be maintained.

70

There also appears to be significant use of side roads around South Caspar Creek by bicyclists and hikers. Again, unevenaged management, increased

attention to clean-up, and perhaps some sacrifice in timber yield to maintain aesthetics could be the formula that allows competing interests to co-exist in these areas.

Fisheries

71 Although we have not gone into fisheries and watershed issues in detail here, one effect of the R & R Area would be to provide strong protection in the included area. The forest is operating on a "no-take" basis, and should consider the informed opinions of fisheries specialists who believe standard Board rules are not adequate to protect watercourses. The watercourse standards recently adopted by the California Department of Fish and Game are "incidental take" standards. "No-take" standards must be more protective.

72 In the previously approved plan, protection for Class II and Class III watercourses was particularly disappointing. It should be recalled that the National Marine Fisheries Service guidelines provide protection for Class II *equal to* Class I. This is a reasonable approach that should be adopted at Jackson. Class III protection is one of those places that Jackson could do some serious research, research not driven by the desire to prove that current Board rules are just wonderful. This goes back to the question of who we are demonstrating for. Let us admit that Board rules are greatly influenced by the economic constraints of the timber industry. If Jackson is to demonstrate management techniques for non-industrial owners, as we believe it should, then you are liberated to work on standards that are more multi-purpose. Sure, Mom and Pop want a decent return, but they may want to fish again someday too.

Old Growth Policy

We make the following recommendations regarding further strengthening measures that should be taken:

73
- Retention standards: A review of presumed old growth trees should be undertaken to determine whether the 48" dbh default standard is appropriate, particularly for Douglas fir old growth, and particularly on the east side, in the higher elevations, or on poorer soil sites on the forest. The point should be to determine a standard that is the most inclusive practicable, even if it is necessary to distinguish standards among species or sites. The 48" standard may be too high in some common circumstances.

74
- Aggregations: If taken literally, the aggregation policy would exclude the aggregation of scattered residual old growth because the standard requires "an obvious, intact, undisturbed remnant of the original stand...." By far and away the most common occurrence of scattered old growth for potential aggregation is among residual trees that were left after a stand was logged. These would not be either "intact" or "undisturbed." For instance there are many scattered residual old growth trees along West Chamberlain Creek, but the stand has obviously been logged in its history. Besides changing the language of the aggregation policy, I strongly suggest that specifically you designate the West Chamberlain area as an old growth aggregation. There are, no doubt, many other areas of scattered residuals that should be aggregated as well. These should be designated as soon as possible, and mapped.

75
- Single Old Growth Trees: Recent research by M.J. Mazurek of the Pacific Southwest Research Station, US Forest Service, confirms that even single old growth trees provide important habitat.

Kathy Bailey, Sierra Club
JDSF scoping comments

Except for imminent threat to human life that cannot be mitigated, every old growth tree should be retained at Jackson. Considering this plan is likely to be in effect approximately 10 years, we should err on the conservation side when it comes to virtually irreplaceable old growth trees, regardless of their size and location.

Information Requests

76 It would be helpful to have the location of the 80-120 year old stands mapped. These are unusual resources and whatever is decided about their management should be done with a conscious knowledge of their whereabouts. Mapping would also help facilitate research on the range of responses these stands exhibit after a century without much human interference.

77 It would also be helpful to have the location of concentrations of residual old growth mapped. This would not have to be overly precise. A shaded area indicating general location would be sufficient. Although I have identified at least two concentrations of residuals, others may exist that I have overlooked.

Previously Adopted Mitigations that Have Been Withdrawn

State Forest Director Chris Rowney indicated in late February that one effect of the court order setting aside the FEIR was to undo mitigation measures that had been adopted as part of the EIR process. In looking over the mitigations that were included in Section VII of the FEIR, I see that I am making
78 recommendations that partially overlap and expand on Mitigation 11, Russian Gulch. Additionally, as a bare minimum, we support continued inclusion of Mitigation 6, Snags and recommend that it be
79 strengthened. Our failure to comment on other of the previously proposed mitigations should not be construed as lack of support, but rather lack of expertise. We will defer on these to those with greater knowledge.

Reinvestment in Forest Resources

80 Working under the assumption that a Management Plan and FEIR will eventually be adopted and implemented, we presume that at some point some amount of money will again flow from the forest. We hope that there is some way that there will be a very significant increase over past practice in allocating that income toward supporting the needs of the forest for personnel, maintenance, and improvements. For instance, the road inventory should be completed as soon as possible and maintenance and repair projects undertaken in an expedited fashion. The forest should be allowed to hold on to enough money to make up for the years when money has been tight to nonexistent until the program has recovered its strength.

Research

81 Again, assuming some money begins coming into the system, research should be the next priority after forest reinvestment. We would like to see some sort of research advisory committee convened that includes experts in a variety of fields, including fisheries, wildlife, botany, and ecosystem processes. Such a committee could advise CDF and the Board about priorities for research and demonstration.

Kathy Bailey, Sierra Club
JDSF scoping comments

Now is the Time

I am optimistic that the new lead agency situation provides a great opportunity to resolve this long-standing conflict. Now is the time to resolve controversies and to establish a mechanism that allows for the kind of on-going meaningful communication that can avoid the development of crises in the future. We hope to work cooperatively on these issues.

Sincerely,

Kathy Bailey
Forest Conservation Advocate

15

Mailed Letter P-187

Response to Comment 1
This is a procedural note associated with the EIR process of 2004.

Response to Comment 2
This is a procedural note associated with the EIR process of 2004.

Response to Comment 3
The DEIR provides substantial documentation of the public owned redwood lands throughout the entire redwood region. The comment somewhat arbitrarily identifies a portion of the range of redwood within California (San Francisco Bay to Humboldt County), stating that Jackson Demonstration State Forest (JDSF) is the only opportunity to protect and restore the region's depleted biological heritage and provide forest-based recreation for the public. While JDSF represents a relatively large piece of public land within this geographical region, it is small relative to the range of redwood within this area and within the greater range of redwood. In addition, all redwood forest within the region represents an opportunity to protect and restore the region's biological resources. Within Mendocino County alone, there are over 20,000 acres of redwood forest in public parks and reserves. These areas, in addition to the many public coastal beach areas and JDSF, offer significant recreational opportunities for the public.

Response to Comment 4
The assertion that the surrounding private forestlands have been left virtually stripped of trees in excess of 40 years old is not supported. The Board agrees that there are many acres of timberland surrounding JDSF that will not be late seral forests in the near future, due to past management activity. There has been no inventory of regional forests by seral stage, but available data derived from remote sensing indicates that there is a considerable acreage of habitat for many species available on the surrounding lands, including habitat for the northern spotted owl. The northern spotted owl is known to roost and nest in stands greater than 40 years of age. However, relatively little old growth redwood forest is known to exist in Mendocino County.

Response to Comment 5
The comment is a general one on the effectiveness of the THP review and approval process as well as the effectiveness of the Forest Practice Rules at protecting late seral forest conditions. The comment is not directly related to the DEIR. The DEIR and RDEIR include sections that addresses cumulative effects (see DEIR Section VIII, RDEIR Section IV).

Response to Comment 6
The current DEIR/RDEIR includes an extensive analysis of the cumulative effects of land and forest management practices. That analysis concludes that environmental conditions on JDSF and adjacent ownerships within the analysis area have improved over time and are expected to continue to do so.

Response to Comment 7
The regional setting and the areas designated for assessment of impacts have been expanded since this letter was written in 2004.

Response to Comment 8
The Board believes that the Administrative Draft Final Forest Management Plan (ADFFMP) does provide the protections the comment identifies. The role of JDSF with respect to recreation is spelled out in the Public Resources Code (Sections 4631 et seq.) and Board Policy number 0351.5.

Response to Comment 9
JDSF offers abundant recreational opportunities and has plans to expand these opportunities (see ADFFMP, Recreation, Aesthetics and Public Use, and Appendix VII). In addition, please see General Response 14.

Response to Comment 10
SB 1648 was approved by the Legislature and subsequently vetoed by the Governor. Alternative F includes some provisions that are similar to elements of the proposed legislation.

Response to Comment 11
The effects of proposed management upon connectivity have been considered. The ADFFMP identifies forest stands to be managed in order to develop late seral forest conditions and older forest structure conditions in the future. This will represent an increase in this type of forest relative to what exists today, and represents a relatively new management proposal for the Forest that has not been included in prior management plans. See Spatial Pattern Analysis for Species of Concern, DEIR Pages VII.6.6-216-240.

Response to Comment 12
The ADFFMP proposes to develop late seral forest characteristics within the watercourse and lake protection zone (WLPZ), which represents a potential future increase in these forms of forest characteristics. It is likely to take additional decades or centuries for some of this area to fully develop into late seral forest. The functionality of the habitat that is created will vary by species that utilizes the habitat that is created in conjunction with other adjoining and nearby habitats.

Response to Comment 13
The goal is to retain and recruit large trees, native hardwoods, snags, and down logs, while also retaining a high level of overstory canopy and basal area. Due to the fact that a single unique definition of late seral forest does not exist, the characteristics of the forest habitat that develops will be quite variable. It is expected that future research projects and management planning efforts will help to define habitat targets in the future as conditions change and more is known about these forms of habitat.

Response to Comment 14
The level of protection that is specified in the ADFFMP is considerable, but represents a programmatic minimum that may be exceeded in individual projects. The planned protection measures will protect against sedimentation, while retaining and recruiting large trees, a high level of canopy and basal area, and a significant level of ground cover. Class III watercourses are those that generally flow seasonally in response to rainfall. The protection specified for these watercourse channels primarily consists of measures to limit or avoid slope instability and sediment introduction. As projects are planned in the future, the need for additional protection will be assessed.

The federal government has established interim watercourse protection standards for federal lands until site specific requirements are identified through watershed analysis. Watershed analysis has been conducted on JDSF.

Response to Comment 15
No regional inventory exists of young stands by age class. Stands of young-growth forest between 80 and 120 years-of-age are not considered a rare resource in this region, nor identified as such by the Department of Fish and Game. The potential impacts to forest species have been considered in detail (see DEIR section VII.6). The analytical approach of the DEIR was to use known stand characteristics (species composition, mean stand diameter, canopy closure, multi-layered structure) to describe stands rather than less certain and less descriptive information on stand age. These stand characteristics can be used in standard models of wildlife habitat and wildlife habitat quality (i.e., the California Wildlife Habitat Relationships System or CWHR). Stand age information does not provide a meaningful model input.

Response to Comment 16
JDSF has been classified as critical habitat for the species (see DEIR page VII6.6-88 for description of the designation). The ADFFMP has been formulated to prevent significant impacts to the species. The Department proposes to increase future habitat availability for the marbled murrelet, while recognizing that it may take decades to centuries for the habitat to develop. The ADFFMP proposes to designate 3,700 acres on the western side of the Forest for the development of late seral forest conditions that could provide potential murrelet habitat.

Response to Comment 17
The statement is not sufficiently clear to enable a reasoned response. The location of the area being referred to is unclear. Very little contiguous area of JDSF has been "recently clear-cut".

Response to Comment 18
The variable retention and clearcutting prescriptions are not the same. To-date, although the system has been in used periodically since the 1990s, the use of the variable retention system has not been wide-spread on JDSF. Most of the area that is harvested on an annual basis is managed on an uneven-aged basis that uses forms of the selection system. Variable retention is utilized to provide an improvement over the clearcutting system relative to habitat retention and recruitment. The ADFFMP includes very specific limitations on the use of clearcutting and other even-aged silvicultural methods.

Response to Comment 19
The Department did not imply that the term "some people" excludes the former Citizen's Advisory Committee, nor any other group or individual.

Response to Comment 20
In addition to the programmatic assessment provided in the DEIR, all proposed projects will be evaluated and their potential impacts upon recreation will be assessed at the project level. Plans will be mitigated to prevent significant impacts upon recreational users. Areas with concentrated recreational use, such as Camp One, Camp Three, Brandon Gulch, and West Chamberlain Creek, include visual buffers and restrictions upon silvicultural treatment, the timing of timber operations, and other activities.

Response to Comment 21
The timing of recreational planning is not a significant environmental issue. The existing recreational resources will be maintained and protected, and future improvements or additions will be considered. See General Response 14.

Response to Comment 22
The concern is not stated with sufficient clarity to enable a reasoned response. The policies proposed in the ADFFMP for protection of old-growth trees, aggregations, and groves apply in all areas of the Forest, and include individual old-growth trees with specified structural elements, regardless of tree size, conifer species, or diameter. See ADFFMP Appendix IX.

Response to Comment 23
The plan includes protection of individual old trees that meet the specifications outlined in the ADFFMP. Areas that have been logged previously do not meet the definition of an old growth aggregation. However, groups of old trees that meet the specifications for protection of the individual trees will be retained. Individual old growth trees will be retained as described in ADFFMP Appendix IX.

Response to Comment 24
The concern is unclear. The Board will not speculate as to why the policy is uncertain, nor can the Board speculate as to each potential situation where a public safety issue may arise.

Response to Comment 25
The group selection system is not an experimental system. The system has been in use for decades and is a widely recognized form of uneven-aged management. The system is well described in the literature (David M. Smith, The Practice of Silviculture, Eighth Edition, John Wiley & Sons, 1986). Limitations of the California Wildlife Habitat Relationships System (CWHR) in characterizing group selection does not invalidate the silvicultural method, which has been in existence for a much longer period of time than the habitat evaluation model. The Forest Practice Rules limit group selection openings to 2.5 acres [14 CCR 913.2(a)].

Response to Comment 26
The snag and down wood policies established by the ADFFMP provide clear standards for both numbers and sizes of snag and down log targets (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure and Appendix IX). Recruitment is augmented by mitigation specified in the DEIR (Section VII6.6.7) requiring that all snags be retained until the standards are met.

Response to Comment 27
As stated in the ADFFMP, salvage operations are generally limited to areas near roads, and other site-specific measures that are established by the forest manager, based upon observed conditions. The snag and down wood targets are to be averaged over a 160-acre area, leaving ample opportunity for recruitment, while taking into account variability in recruitment potential based upon stand age and silvicultural treatment. Snags may not be removed by salvage operations until targets have been met (ADFFMP Chapter 2, Salvage Sawlogs and DEIR Section VII.6.6.7). Also, please see ADFFMP management provisions for species of concern (Chapter 3).

Response to Comment 28
Please see the ADFFMP for a general list of research projects that may include monitoring, and a discussion of current and proposed monitoring practices (Chapter 5 and Appendix IX). These plan elements will enable a feedback loop directly to the forest management staff, since the forest management staff plays a key role in both planning and collection of monitoring data.

Response to Comment 29
The concern being expressed is not clear. Most of the major projects conducted on the Forest, including all THPs, are subject to interdisciplinary review, primarily by the Department of Forestry and Fire Protection, the Department of Fish and Game, and the Regional Water Quality Control Board. In addition, JDSF staff and staff of various agencies consult on potential research and monitoring projects.

Response to Comment 30
The Department has established an advisory committee for the state forest system independent of the JDSF management planning process. The committee has been conducting meetings, and has most recently provided comments to the Board regarding the JDSF EIR. Ms. Bailey is a member of the committee. The Director and Board will soon establish new a JDSF advisory committee, and the Board will re-establish a research advisory committee for the State forest system. Both the State-wide and JDSF advisory committees are expected to advise the Board and the Department on implementation and policy issues relative to the management of JDSF.

Response to Comment 31
Although not every forest operation contains a unique scientific component, all include preharvest forest inventories and written timber harvest plans that document stand treatments and logging operations. These management operations help to create the widely varied stand conditions found within JDSF that are sought out by researchers, often years after the actual operations have taken place.

The Board recognizes that the level of research that can be conducted is partially controlled by the level of funding and scientific staffing that is made available, and that an increase in this level of funding will result in a higher level of research and demonstration. The Board also recognizes that

the timber harvest program conducted at JDSF has been a periodic source of controversy. The level of revenue generated by timber sales at JDSF will ultimately depend upon the level of annual allowable cut and long term sustained yield (LTSY) and current market value. The harvest operations are capable of creating a highly variable set of forest conditions available for study, including conditions that are in common existence or considered desirable by owners of private forestland.

The Board also notes that legislation enacted in 2006 restricts the use of timber harvest revenues from the State Forests to support of the Demonstration State Forest Program.

Response to Comment 32
Virtually all research projects that have been conducted within JDSF have occurred in a managed landscape. While not always conducted simultaneously with logging operations, each research project is directly related to past or current forest management.

It is precisely the sustainable management of forest resources that the State Forest is intended to demonstrate. The level of potential sustainable production generally increases with stand age, up to a point. Very few of the forest stands on JDSF have reached the level of maximum productive potential. While some of the research and demonstration projects have invoked controversy, they have value and contribute to the mission and legislative intent of the state forest system. The Caspar Creek Watershed Study is unique and world class, and has produced multiple research papers of high value that are widely reviewed and cited by land owners, scientists, regulatory agencies, rule-making boards, and the public. The Railroad Gulch study is a demonstration of sustainable uneven-aged management that has been reviewed and cited by many private landowners and members of the public. Large numbers of tours have occurred in both of these study areas, and the scientific study is continuing. Both of these studies offer an opportunity for the Department to cooperate with the Department of Parks and Recreation to offer forest management, conservation, and ecology-based education to children, which is the primary legislative intent for the nearby Mendocino Woodlands Center (PRC 5821, SB 1063, 1976).

Response to Comment 33
See responses 31 and 32. Some harvest operations have included intensive permanent inventory plot systems that are periodically monitored, while others are not monitored and include no permanent inventory provisions. Due to many factors, installation of an intensive inventory system in all harvest areas is not possible or practical. However, each harvest area produces stand conditions that are available for future research and demonstration.

Response to Comment 34
It is broadly understood that one of the principle purposes of conducting forest management operations is to produce revenue, forest products, jobs, and tax revenue. The Board's policies encourage JDSF to make a significant contribution to the local economy (Section 351.1, Board of Forestry and Fire Protection Policies). JDSF serves as perhaps the best regional example of the productive potential associated with high levels of standing forest inventory. While quoting the text, the comment seems to overlook the THP purpose of “demonstrating conversion of an even-aged stand to an unevenaged stand through single tree selection method while retaining the biological integrity of the stand.” This kind of transitional harvest has significant demonstration value to private forestland owners who want to continue to economically manage their forest stands—many of which are even-aged stands created through earlier clearcuts—while avoiding the aesthetic effects of even-aged management.

Response to Comment 35
The level of follow-up and documentation is highly variable after forested areas are harvested. Some harvests are part of a planned research project, and intensive data occurs on a periodic basis. Others are not as well documented; however, the Forest staff visits these sites frequently to observe changes and conditions. The sites are also available to the public, landowners, scientists, and educators, and are occasionally visited and observed.

Response to Comment 36
See response to comment 34. The Forest manages timber stands to reach a high level of productivity, which tends to occur as stand age increases. This is appropriate forest management, and has often been encouraged by many. As the forest has been managed over the past several decades, the area of developing second-growth (established following cutting of the original old growth forest) forest has remained a significant and growing proportion of the total forest area. Stands that have been managed on a selective basis are dominated by second-growth trees, and contribute to the value of the forest for both habitat and production purposes.

Response to Comment 37
See response to comment 34. The vast majority of JDSF consists of second-growth forest that is either in an even-aged or uneven-aged condition, where regeneration and other processes can be studied and evaluated. Ample opportunities for the study of leaving stands as they are are available within JDSF, the county, and the region. There are now approximately 200,000 acres of young forest within the park system.

Response to Comment 38
The Board agrees that controversy tends to arise when harvests are proposed in specific areas, or when certain forms of silvicultural practice are proposed. The Board also believes that the existence or potential for controversy should not be the sole determinant of how and where JDSF is managed. The ADFFMP takes potential public concern into account. This was a factor in designation of certain special concern areas, management practices, and timber management areas. The ADFFMP proposes to harvest less than half of the current annual growth on the forest, and forest values other than production have clearly been given a significant level of consideration. The ADFFMP's provisions for a JDSF advisory body will help to provide additional opportunities for public comment on proposed harvests.

Response to Comment 39
Landowners may find JDSF research of value, and may apply some of what they learn without imitating the conditions at JDSF. The Board recognizes that land managers are subject to various pressures and have differing management objectives. JDSF is capable of producing a substantial level of revenue and forest products, while remaining sustainable, building timber inventory, and protecting public trust resources. JDSF has been managed according to management plans approved by the Board, and in compliance with applicable regulation.

Response to Comment 40
The level of potential productivity in this region is extremely high. As forest landowners apply intensive forest management methods, make substantial investments, and work to protect and restore the area's resources, a substantial increase in productivity is likely. The Board agrees that JDSF can provide a valuable research and demonstration purpose by demonstrating an increase in productivity associated with understocked or suppressed stands, hardwood utilization, and invasive weed abatement. Some stands at JDSF are suitable for these demonstrations, and the ADFFMP incorporates a management proposal capable of producing this type of demonstration.

Response to Comment 41
Both the Board and the Department agree that the non-industrial timberland owner represents an audience that could benefit from demonstrations at JDSF. Board policy section 351.3(A) clearly identifies the potential beneficiaries of these demonstrations, and Board policy is reflected in Goal #1 (ADFFMP Appendix II). It is the Department's intention to manage a significant portion of JDSF on an uneven-aged basis, utilizing many forms of selection silviculture. The Board also recognizes that some of the non-industrial timberland owners also utilize forms of even-aged management. Demonstrations of slash abatement, clean-up, and watercourse management would be of value, and are a current or planned form of demonstration at JDSF.

Response to Comment 42
The comment consists of a map description. The map was produced and submitted to the Board by Ms. Bailey, and is represented as DEIR Map Figure AA (Spatial Allocation Plan for Alternative F).

Response to Comment 43
The stated purpose of the map is to maintain and develop older forest stands, to provide strong protection of all watercourses and salmonid habitat, and to avoid diminishing values that are important for maintaining the enjoyment of low-impact recreational activities (see letter for exact wording). This represents a partial JDSF management proposal by Ms. Bailey.

The potential impacts upon terrestrial and aquatic species of wildlife have been thoroughly considered (see DEIR Section VII.6). In addition, potential impacts upon recreation have been thoroughly considered (Sections VII.14 and VIII.8). Please review the environmental assessment conducted for Alternative F in the various sections of the DEIR.

Response to Comment 44
Statement noted. What is presented by commenter is an alternative management proposal that does not include an expressed concern.

Response to Comment 45
This comment explains the reasoning behind designations on DEIR Map Figure AA. The proposal appears to include about 30 to 40 percent of JDSF in a contiguous area designated as a "Recovery Research and Recreation area" (R&R area).

Response to Comment 46
The basis for this comment is that the designation of the Recovery Research and Recreation area would link features that the comment characterizes as core protection areas by developing older forest stands to link the sub watersheds depicted within the R&R area. The stated benefit is to prevent the regionally rare core areas from becoming islands, to achieve significant habitat improvement, and establish a watercourse-based core that links the areas. Specific "management principles" are proposed in concern 47, and are discussed below in response 47.

A number of the concepts proposed in the comment can be found to a degree in the ADFFMP, in particular the Older Forest Structure Zone.

Response to Comment 47
The Board cannot infer specific environmental concerns represented by the brief management principles proposed by the commenter. These are similar to features of Alternative F, which was considered and evaluated. Many of the "R&R Management Principles proposed are similar to the measures proposed in Alternatives C1, C2, D, E, F, and G. For example, while not every old tree is proposed to be maintained in the adopted alternative G, all large old growth trees and trees with structural elements of value to wildlife will be retained. The old growth groves will be preserved, and most are augmented with additional area designated for development of late seral features. Alternative G will provide for the development of and older forest structure linkage between the old growth groves and augmentation areas, though the linking habitats will not be late seral development areas, except in the case of the watercourse zones. Alternative F includes the specification of protection standards that would include more than 50 percent of the entire JDSF forest area in watercourse protection zones. The commenter does not specify how snag and down wood would be enhanced; yet, an increase in snags and down logs is a shared objective in most of the alternatives.

The commenter proposes to abandon the existing approved THPs in the Camp 3 and Brandon Gulch areas. As approved by the Department, these THPs propose selection silviculture, retaining most of the larger and older second-growth trees, while promoting development of multiple canopy layers and a level of watercourse protection recommended by a NMFS biologist and geologist who evaluated

both THPs. The disposition of these harvests is subject to a court settlement agreement and existing contracts between the State and two private mill owners.

As practiced in the field, selective timber operations maintain a component of the oldest, largest trees available. In fact, this is also true of most of the even-aged harvests that have taken place over the past decade, but at a much lower retention density. Areas in close proximity to old growth groves, augmentation areas, and Class I and II watercourses include specifications for a high degree of retention. This is true of all alternatives except Alternative B. Visual buffers are also included along designated roads and trails, including most of the ones identified by the commenter.

While the management proposal in Alternatives C1, C2, D, F, and G share many specified management measures, the magnitude of many of the measures varies (e.g. silvicultural restriction, late seral development, watercourse protection zone width).

Response to Comment 48
Comments 48 to 57 represent the commenter's opinion as to key features present in the R&R area.

The area from Camp One, extending along Roads 360 and 361 is described as 100 year old second growth. It is also described as one of the highest visitor use areas at the Forest. Based upon an examination of the area, in conjunction with a knowledge of logging history, the watershed areas that bound these two roads include second-growth forest that varies in age, having been regenerated predominantly between 1905 and 1929. There are four small old growth groves in this watershed area as well, which total approximately 60 acres. Selective timber operations, including group selection, have occurred in approximately thirty percent of this watershed area, while retaining effective aesthetic buffers adjacent to trails and campgrounds. Most of the watershed area is covered by forest with a high degree of canopy closure, but the entire watershed area is not considered to be closed-canopy forest.

While the campgrounds in the Camp One area receive moderate use, and day use occurs in the Camp One area, the areas beyond the camp sites and immediate Camp One area do not receive a high level of use. JDSF recreation management staff characterize the public use level of the Brandon Gulch area trails as light-moderate use and the Trestle Trail as very light use, relative to most coastal and park trails, although small group hikes and rides do occur on both trails on occasion (Tess Albin-Smith, personal communication). The Brandon area trails, particularly the loop to Road 1000 and Road 380, is relatively popular with the equestrians who utilize the Camp One area, and to a lesser extent with the bicyclists.

Response to Comment 49
The characterization of an area within the Camp Three THP as a "peak" is subjective. There is a rounded high point along a segment of ridge of nearly uniform elevation that originates near Camp One and eventually surrounds the NFSF watershed, reaching an elevation of approximately 1500 feet at the head of the watershed. The forest is dense in the Camp Three THP, and no vistas are available from the high points, with the exception of those from existing roads along the ridges. This area is seldom visited by the public.

The steepness of slope within the THP areas is not unusual for this part of the forest. In fact, slopes greater than 50% are common in this area, and most of JDSF aside from ridges and valley bottoms.

The Board agrees that most recreational users may prefer to see uncut forest than logged forest area. However, the potential effects upon aesthetic resources as a result of operations in the two THP areas were thoroughly considered and the plans include a significant level of mitigation intended to prevent significant impacts to aesthetics and recreation. No significant impacts are expected to occur. The Board wishes to note, however, that the presence of vistas mentioned in the comment have been in part facilitated by the selective removal of trees associated with the timber operations.

Response to Comment 50
The Trestle Trail runs along the NFSF Noyo River for several miles. This trail receives very little public use. Upslope from the trail, two selective timber operations have taken place since 1999 (Bob Woods and HiLow Trestle THPs). Both operations included provisions to buffer the river, a Class I watercourse, and included provisions to protect the recreational experience from the trail. Similar mitigation is contemplated by the ADFFMP for any future timber operations in this area, and the entire sub-watershed has been designated as an uneven-aged management, late seral development, or older forest structure zone area. The late seral development area adjacent to the HiLow THP does not appear as an "peninsula" as characterized by the comment. Rather, it is a dense stand of second-growth forest adjacent to a stand of selectively harvested second-growth of the same general size and age. As the harvested stand develops, the level of canopy will approach a closed-canopy condition, similar to that for most of the late seral development area.

Response to Comment 51
The description of this general area appears to be accurate, except that the property line is not always easily discerned. There are many areas along Road 1000 where the adjoining properties are covered by larger second-growth trees or forest, and many acres have been harvested with partial cutting or selective methods (DEIR Map Figures G- J).

Response to Comment 52
The Waterfall Grove Trail receives a significant level of recreational use. The old trees within the grove vary in diameter, up to approximately 10 feet. As is the case with most of the remaining small groves of old growth on JDSF, this grove can be characterized as being in a general upland location, rather than a river bottom position, although a Class II watercourse flows through the area.

As described by the comment, Road 200 passes above the grove as it takes traffic from Highway 20 up the drainage to Three Chop Ridge, where it connects with Road 1000. Visitors and neighboring property owners utilize Road 200 for both commercial and recreational purposes. The Road eventually leads to a Boy Scout camp, a youth camp, industrial timberland, and non-industrial timberland. JDSF and surrounding timberland owners have utilized this road system to haul logs from multiple timber operations over the past 40 years.

Road 200, upstream of the Chamberlain Creek confluence, was constructed many decades ago, being built across very steep slopes immediately upslope of Chamberlain Creek. Bank sloughs are common during the winter, and this road is in constant need of maintenance to protect the slopes and the stream. The ADFFMP proposes to institute a road management plan that will provide for an inventory of road conditions, improved maintenance, and possibly consideration of a more environmentally suitable route.

Response to Comment 53
The paragraph appropriately describes some of the features in this section of the forest. The trail and grove mentioned appear to refer to the Camp 20 grove. Road 200 passes through an area of the forest that has been managed on a periodic basis, beginning in the 1920s, and most recently in the 1980s. The forest stands within the watershed include even-aged second-growth and stands of uneven-aged second and third-growth with scattered residual old-growth trees that were retained due to either their relatively small size or high level of defect.

Response to Comment 54
The paragraph describes some of the features in this section of the forest. The forest is quite variable in this area, being primarily a mixture of young conifer and hardwood trees regenerated by successive operations conducted to remove old growth and residual old growth prior to 1985. There are scattered residual old growth trees that were retained due to either their small relative size or high level of defect. Also in the James Creek watershed are some designated old-growth groves. The location of the "parking area" identified by the commenter is not known. There are no designated parking areas in the James Creek watershed. This may be reference to a road junction or old log landing location.

Response to Comment 55
The location of the "parking area" is not known. This may refer to an old log landing or wide spot at a road junction. There is an area in James Creek where the water table has risen due to an obstruction in the creek bed that may be either naturally-caused or a man-made feature. Some young redwood trees have died in this area, due to the high water table. The area that the comment refers to as having evidence of "a lot of riparian salvage logging" is not known. Most of the riparian areas in James Creek were badly damaged by repeated historic logging operations that utilized heavy equipment in or near streams, prior to the advent of stream protection regulations and management provisions.

Response to Comment 56
As stated by the comment, a small old-growth grove is located in the upper area of James Creek. Part of this grove has been selectively logged in the past, while some of it has not been logged in the past.

Response to Comment 57
The roads beyond the gate on Road 100 are on adjoining private timberlands, and are not open to public assess. Road 1000 is generally open to public travel east of the junction with Road 200, though it passes through private lands that are subject to closure. There is no public access from Road 1000 directly to Road 100 without using JDSF connector roads that are locked on a seasonal basis.

Response to Comment 58
The statement regarding the marbled murrelet is not an expression of concern. No response is warranted.

Response to Comment 59
The Board and CAL FIRE are aware of their responsibilities toward endangered species as described in CESA and Fish and Game Code Sections 2055 and 2061.

Response to Comment 60
The federal Marbled Murrelet Recovery plan, other more current scientific literature, input from the Department of Fish and Game and US Fish and Wildlife Service, and other sources of marbled murrelet expertise provided guidance to the development of the Contribution to Recovery of Marbled Murrelet Habitat additional management measure (DEIR Pages VII.6.6-118-119.).

Response to Comment 61
The issue of future habitat development for the murrelet is considered in Section VII.6.6.4 and 6, and the various alternatives are considered in Section VII.6.6.8. Alternative G includes a provision to study the issue in detail, in consultation with the state and federal wildlife agencies, and to consider establishment of supplemental habitat development areas. These areas would be in addition to the potential future habitat represented by the late seral development areas (RDEIR Map Figure 1).

Response to Comment 62
The Board agrees that these areas have potential for the development of future habitat for the marbled murrelet. Most of the Woodlands STA is designated as a late seral development area, a form of management that will create a habitat dominated by larger older trees (RDEIR Map Figure 1, and Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). Part of Thompson Gulch has been identified as an area where a late-seral Development prescription will be applied (RDEIR Map Figure 1). Upper Russian Gulch and lower Big River areas have also been designated for late-seral habitat development, with the intention of developing future habitat for the marbled murrelet (RDEIR Alternative G and ADFFMP).

Response to Comment 63
The Board agrees that many forms of older or late seral forest may not represent suitable marbled murrelet habitat. The Department has identified four areas on the west side of JDSF, two of which are adjacent to or in the upper watershed of Russian Gulch. See DEIR Page VII.6.6-78-82 and Figure VII.6.6.8b as well as the Contribution to Recovery of Marbled Murrelet Habitat management measure DEIR Page VII.6.6-118-119. The RDEIR designates the area of upper Russian Gulch and lower Big River to be managed to recruit late seral forest as habitat for the murrelet.

Response to Comment 64
The RDEIR specifies that Lower Big River will be managed to develop late seral habitat for the murrelet. This was one of 4 areas on the west side of JDSF identified in the DEIR as a potential Marbled Murrelet habitat recruitment area. See Response to Comment 63.

Response to Comment 65
The ADFFMP proposes to manage the pygmy forest in a manner that prevents damage. Most of the forest roads in the area are closed to public vehicle traffic, and JDSF maintains security patrol and refuse abatement program. The level of illegal dumping makes it difficult to maintain a refuse-free environment with the current level of staffing and funding.

This general area contains a number of rural residential inholdings, and as stated by the comment, is adjacent to state parks and other recreational use areas, and located only a few miles inland from the town the Mendocino.

Response to Comment 66
The Jughandle Creek area consists primarily of selectively harvested second-growth forest, along with some cypress groves and pygmy forest. No murrelet habitat is known to exist within this watershed, though a complete survey has not been conducted.

Response to Comment 67
This comment suggests some reasonable principles that can be applied to management for recruitment of marbled murrelet. While many of the measures have validity, not all are necessarily immediate considerations, and others may actually delay recruitment of murrelet habitat. For example, potential corvid perches overlooking murrelet nesting habitat cannot be avoided, since murrelets tend to nest below the top of the canopy, and corvids readily perch in the upper branches of large trees. Maintaining closed canopy in a dense stand of second or third-growth forest may actually delay the development of suitable habitat by a substantial degree, by reducing the rate of tree growth, though little is actually known about forms of management necessary to produce suitable habitat. In the years or decades prior to development of suitable habitat, there would be little justification for a ban upon firearms. The management principles offered in the comment are discussed in detail in the Marbled Murrelet species account DEIR Pages VII.6.6-52-90.

Response to Comment 68
A portion of the Thompson Gulch watershed is located within the state park and in the Woodlands STA. The remainder is scheduled for a habitat development management prescription following review by advisory entities. While designation of the area has some potential to increase the future habitat availability for the marbled murrelet, no significant adverse impacts to the species are expected to occur as the result of the ADFFMP. If the area is determined to be potential habitat for the murrelet, a survey will be conducted for the species and management operations altered to avoid take of the species.

Response to Comment 69
County Roads 408 and 409 are designated as a Road and Trail Corridor. This designation provides these roads with an aesthetic buffer and restricts the forms of silviculture that can be applied. The use of these roads by forest travelers and recreationalists is recognized, and individual projects will

be planned and mitigated to avoid significant impacts associated with aesthetics and recreation. The Forest area adjacent to these roads has a long and varied history of forest management operations.

Response to Comment 70
The Board agrees that planned management activities will need to consider recreational uses, in addition to the aesthetic and recreation-related mitigation measures specified in the ADFFMP (Chapter 3, Recreation, Aesthetics, and Public Use) and DEIR (Section VII.14). These measures may include uneven-aged management, slash abatement, and silvicultural prescriptions that consider and balance concerns for recreation and timber production.

Response to Comment 71
The Forest is managed to avoid take of endangered species, including the coho salmon. The measures applied in the field for the protection of aquatic resources have generally exceeded the minimum specifications of the Forest Practice Rules. The measures proposed in the ADFFMP exceed the minimum specifications of the Rules, and these measures themselves may be exceeded as deemed necessary and prudent for individual projects. For example, the two existing THPs that have been approved by the Department and have been partially completed, include a no-harvest measure for both Class I and Class II watercourses, along with a no-cut buffer along Class III watercourses. These provisions exceed the minimum level of protection provided by both the Forest Practice Rules and the ADFFMP.

Response to Comment 72
It is not clear from the comment which National Marine Fisheries Service guidelines are being referred to. In most cases, however, fisheries agencies and experts recognize that a greater degree of protection is needed for most fish-bearing streams (Class I) than for Class II streams, which vary from large perennial streams to small intermittent streams. The Department and the Board agree that JDSF is a viable location for research and demonstration associated with protection of watercourses of all classifications. The ADFFMP designates three areas of the Forest as Riparian Restoration Demonstration Areas, where the kinds of research questions posed in the comment can be pursued by researchers, preferably in collaboration with relevant state and federal agencies.

Response to Comment 73
The comment represents a miss-characterization of the old-growth retention standards proposed in the DFMP. All old growth conifer trees that exhibit unique structural characteristics will be retained, regardless of tree diameter (DFMP Chapter 3, Old- growth Stands and Trees). Old trees less than 48 inches in diameter that do not possess unique structural characteristics are not structurally unique as components of a forested habitat, though it is recognized that trees of any size are a component of all forested habitats and should be considered as such. The Department recognizes the fact that lower sites and various species tend to exhibit smaller diameters. However, it is also true that defect is prevalent in these sites and many, if not most of these smaller old trees will be retained, due to presence of characteristics specified in the ADFFMP (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). The retention guidelines also do not preclude the possibility that some or all of these trees would be retained in order to satisfy the management objectives of a planned timber harvest. There are many trees growing in the forest that may be classified as "old", yet they may be virtually indistinguishable from second-growth trees, and have no unique habitat value. Most of these trees were historically not harvested due to small size or a high level of defect. Many of these trees with a high level of defect from a commercial perspective are likely to possess characteristics that are of value to wildlife and will be retained.

Response to Comment 74
The term "aggregation", as applied to the retention of old trees, is defined in the ADFFMP (Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure). All old trees that meet the specifications for retention in the guidelines, regardless of their existence as individuals or in groups, will be retained according to the guidelines. The purpose of the aggregation protection policy is to preserve unmanaged remnant patches of old forest. Groups of old trees outside of identified groves and aggregations have been managed in the past, and are not intact remnants of old forest.

The commenter suggests that West Chamberlain be identified and protected as an aggregation. It is unclear what management restrictions she is proposing in the area. The West Chamberlain Creek watershed consists primarily of second-growth forest and mixed second and third-growth forest stands with scattered residual old growth trees. Similar conditions can be found within the entire eastern third of JDSF.

Response to Comment 75
M. J. Mazurek conducted a research project that included study sites on JDSF. The study involved the monitoring of singular old trees and nearby second-growth trees for evidence of use by terrestrial species (M.J. Mazurek, The Importance of the Individual Legacy Old-growth Tree in the Maintenance of Biodiversity in Commercial Redwood Forests, FINAL REPORT, April29, 2003, Pacific Southwest Research Station,US Forest Service). The author found that old trees with basal hollows and other structural characteristics were utilized more frequently than nearby younger trees without unique structural characteristics. This study supports the retention standards proposed by CAL FIRE.

Response to Comment 76
The location of these stands can be roughly estimated from harvest history maps kept at JDSF. The maps have been shared with the commenter in the past. However, the results should be considered only as an estimate, because some relatively historic harvest operations were not mapped, and other non-harvest events that impact stand development (e.g. stand replacement fires) have not been recorded. See also the response to Comment 15. JDSF staff have developed a roughly estimated harvest map as described here and provided it to the commenter and other members of the public, along with an acreage summary derived from the map.

Response to Comment 77
Inventory information at JDSF indicates that there are residual old growth trees throughout most of JDSF, depending upon historic harvest operations. The old trees in the eastern third of the forest are more easily observed because they extend above the tops of the much younger forest in the understory. Further to the west, older trees do not differ much in height from the second-growth. No estimate of relative residual old growth tree concentration exists. The results of the inventory may not reflect actual numbers, due to the difficulty that can exist in differentiating old trees from young trees, particularly those that do not possess structural characteristics associated with old growth. JDSF does not currently have the information needed to produce the suggested map.

Response to Comment 78
The mitigation measures specified in the FEIR are a part of Alternative C2, which was considered by the Board.

Response to Comment 79
The commenter states that she supports Mitigation 6 from the FEIR, related to snag retention and recruitment.

Response to Comment 80
The Board is in general agreement with this statement. An increase in funding for forest management, including road inventory and maintenance, is a desirable goal that will be supported by the Board. The legislature in 2006 authorized a higher budget level for the Demonstration State Forest Program that would support much of what is recommended here. However, timber harvesting revenues must be generated on JDSF or other Demonstration State Forests to achieve that budget level.

Response to Comment 81
The Board agrees. The Board will re-establish its Committee on Forest Research. As designated in the ADFFMP, a JDSF advisory committee will be formed by the Department and the Board about a range of matters, including research.

Fax:707-576-2608 Apr 10 '06 7:47 P.01

P-188

Kathy Bailey
February 28, 2006
1

RECEIVED BY
MAR 1 - 2006
BOARD OF FORESTRY
AND FIRE PROTECTION

PO Box
Philo, CA
707-895-3716
February 27, 2006

Chairman Stan Dixon
Members
California Board of Forestry
1416 – 9th Street
PO Box 944246
Sacramento, CA 94244

Draft EIR for Jackson Forest Management Plan

Dear Chairman Dixon and Members of the Board:

Thank you for the opportunity to review and comment on the draft Environmental Impact Report (dEIR) for the Jackson Forest Management Plan (FMP). These documents are milestones on the long and pot-holed road toward our common goal of the rejuvenation of management at Jackson Demonstration State Forest. By taking to heart the information provided by the public's comments you will be in a position to move forward with removing the large landslides that have been blocking the way forward all these years. And with luck, the actual roads at Jackson will also get the much-needed rehabilitation work all parties believe they need. O1

As several Board members have no way of knowing who I am, I offer the following by way of introduction. These comments are made from the backdrop of my experience in Mendocino County where Jackson Forest is located. I have lived here since 1971 and have been active on forest related issues off and on since 1976. In response to my concern about the unsustainable pace of logging in my area, in 1988 I helped found the organization Forests Forever. In 1990 I was on the state steering committee for Proposition 130, the Forests Forever voter initiative, which proposed a major reform of forest practice rules to provide sustained production of timber while protecting the environment. The initiative also proposed a multi-million dollar bond for purchase of Headwaters Forest and other ancient forests throughout California. Unfortunately, in the face of a multi-million dollar campaign by the timber industry, the measure failed with a 48.7% yes vote.

In 1992, I began representing Sierra Club California regarding state-regulated forestry issues, and was until my "retirement" in 2001, the Forest Conservation Chair for California. In that position I was Sierra Club California's principle spokesperson regarding Headwaters Forest. I also represented Sierra Club at the Board of Forestry regarding Forest Practice Rules and other matters, and was appointed by former Resources Secretary Douglas Wheeler to the Coastal Salmon Initiative Policy Panel. I have presented testimony to the California Legislature on a number of occasions and have been the Sierra Club liaison regarding forest-related

litigation. I have reviewed and commented on numerous Timber Harvest Plans (THPs), including the two JDSF plans that are currently enjoined from operation by the court pending approval of the new FMP, and the other Jackson THP that has completed the review process but has not yet been approved. 02

In 1996, I began following management at Jackson when a series of protests and arrests brought the public's concerns to my attention. I advocated with former CDF Director Richard Wilson for the creation of the Citizens Advisory Committee that ultimately met for more than a year and produced a report and recommendations that are now being considered as Alternative D in the dEIR, an alternative that is not the preferred alternative. I was not a member of the CAC, but did attend many of its meetings. After the Davis administration failed to implement those recommendations and additional THPs continued to be proposed, in 1999 I sent a letter to CDF Director Andrea Tuttle on behalf of Sierra Club asking that THP approval be put on hold until a new management plan update was completed. I also raised this issue with the Board of Forestry. Director Tuttle created a State Forest Advisory Committee and appointed me as a member. However it was not until the newly formed Campaign to Restore Jackson Redwood Forest took CDF to court in 2001 that the draft Management Plan was released. The Campaign subsequently won an injunction prohibiting operation of any THP prior to approval of the new FMP. Although Sierra Club is not part of the Campaign organization, I believe their litigation was a key factor in CDF releasing the new management plan. Of course, in subsequent litigation, the court ruled that the previous EIR was inadequate and that you, the Board, rather than CDF, is the Lead Agency. Somehow it's gotten to be 2006, ten years since I first began seriously considering management at Jackson. 03

Throughout the course of my forest conservation activities I have been, and remain, a volunteer.

Because I believe this Board is serious about resolving the long-standing issues at Jackson, I expected to be really happy with the dEIR. However, I found this dEIR very, very difficult to review. I have to believe I am on the more skilled end of the spectrum when it comes to reviewing an EIR. I was Sierra Club's lead person in organizing the review of the Pacific Lumber Habitat Conservation Plan/Sustained Yield Plan Environmental Impact Statement/Environmental Impact Report (PL HCP/SYP EIS/EIR), a joint federal and state document that covered a complicated set of land management proposals for a 210,000-acre property. I reviewed and commented on the EIS for President Clinton's Northwest Forest Plan, which covered all National Forests in the coastal regions of California, Oregon, and Washington. I have reviewed and commented on numerous other EIS and EIR documents. I don't believe I have ever had a harder time wading through a document. Although size is definitely one issue, it is not the whole issue because the PL EIS/EIR was also voluminous. The best I can make out, the document suffered from a deadly combination of fear of the court and the desire to be thorough combined with ready 04

access to a ton of miscellaneous relevant and irrelevant information compounded by an in-house staff with serious computers who are used to churning out data-loaded documents using multiple modeling scenarios, some of which make sense, and some of which don't. Please don't get me wrong. I like it that the Fire and Resource Assessment Program (Is that what we call FRAP these days?) and CDF have technologically competent people on staff. But I think they may have forgotten that there's only so much that the layperson brain can absorb in 1400+ pages and an EIR is not supposed to be an exercise in the survival of the wonkiest.

05 That being said as general context, I was also troubled that the Alternatives were not spelled out in detail in text. I know staff believed that the charts were the most user-friendly way to present information, but I'd much rather read a few pages about the management proposed by each alternative than try to patch together a whole from multiple charts across a huge document. Even though staff was willing to work with us to improve the brief description of Alternative F, I continued to feel that the size constraints on how long the description could be were very limiting. This over-brevity on Alternative descriptions extended to all the alternatives, not just F. It was also depressing to discover that the improved description of
06 Alternative F was not used in the Executive Summary. Given the size of the document, the Executive Summary was probably the one section most people actually looked at. It was irritating to have to say to everyone that they should not rely on the Executive Summary, but rather look at Section VI for the Alternative descriptions. I am also attaching a copy of my scoping comments and Senator Chesbro's SB 1648 on which Alternative F is based. Without reviewing these
07 documents, I don't believe a reader can understand from the dEIR what was proposed as Alternative F.

Another disappointing feature of the dEIR was the information that was missing.
08 Missing particularly was specific stand-level timber information and visualizations of stand change over time under the various alternatives.

And overall particularly missing was any sense that the welter of information, much of which was both relevant and interesting, actually supported the conclusion that Alternative C1 (or even C2) really causes no significant impact, either short or long
09 term, at small scale or large. Nor did the information presented lead me to
10 understand why Alternative C1 is the preferred alternative. I do not believe that the dEIR demonstrated that Alternative C1 is the best way to implement the legislative
11 mandate, board policies, or the goals of the Forest Management Plan.

All that being said, I truly recognize the enormous undertaking that this dEIR represents, and the tremendous effort of the many, many people who contributed to it. Just because my role is to point out holes, does not mean that I don't appreciate how much work went into the document.

Following are specific issues that the final EIR should address:

12 **Map K "Vegetation Habitat Classes" and its Source Database are so Muddled they Cause Map R and the Spatial Pattern Analysis to be Wrong.**

- Map Figure K, "Vegetation Habitat Classes," or, more properly, the information on which it is based, is explained, barely, on pages VII.6.6-2 and VII.6.6-6. Unfortunately, in the dEIR text, the database on which Map K is built is called the "JDSF 2004 vegetation layer" while the map itself is titled "Vegetation Habitat Classes." Thus, no amount of Adobe searching for "Vegetation Habitat Classes" came up with the two sentences that refer to the "JDSF 2004 vegetation layer" in the text, nor the Tables on VII.6.6-6 that outline WHR vegetation codes in general. As far as I can tell, the text does not ever overtly refer to Map K. Having puzzled extensively over the information in Map K, I was happy to finally stumble onto the "JDSF 2004 vegetation layer" reference many weeks into the comment period. Pieces of the puzzle finally began to fall into place.

13
- Map Figure K, "Vegetation Habitat Classes," conglomerates two very dissimilar types of habitat as Redwood 6, leading to a lot of confusion.

14
- The Map K problems muddle the project baseline, the current habitat.

15
- Map K, and presumably the "JDSF 2004 vegetation layer" from which it seems to be built, characterizes an old stand of *closed overstory canopy* redwood with canopy layers *underneath it* as Redwood 6, multi-layered. It also calls a stand of *closed understory canopy* young regeneration redwood 3 with widely spaced residual old growth scattered around in something that can barely be considered an overstory as Redwood 6, multi-layered. These two stand types neither look like nor function like each other as either a timber stand or habitat. Yet they are called the same thing on Map K and presumably the JDSF 2004 vegetation layer.

16
- The conglomeration of distinctly different habitat types as Redwood 6 on Map K leads to incorrect assumptions about the extent and location of potential old forest habitat.

17
- This incorrect information is then used as the basis for the "Spatial Pattern Analysis for Species of Concern," VII.6.6-216-240.

18
- Neither the information generated from the "Spatial Pattern Analysis," nor map Figures N-T can be relied on to be correct at a minimum to the extent they rely on the Redwood 6 habitat category.

19
- In the spatial analysis and Map Figure R, Marbled Murrelets, the information is definitely wrong, identifying "fully suitable" marbled murrelet habitat where none exists.

20 • The Spatial Pattern Analysis then uses this incorrect information to extrapolate the effects of the various alternatives over time.

21 • This strikes me as an unfortunate example of the aphorism, "Garbage In, Garbage Out."

It took me a while to figure out what was going on here. That's my understatement for the year. I have spent a fair amount of time on the ground at Jackson and have spent a lot of time looking at various maps and satellite photos of the forest. I am also very familiar with the habitat needs of the marbled murrelet from my long years
22 of work on Pacific Lumber-related issues. The minute I looked at the Spatial Analysis map regarding marbled murrelets, Map R, I knew it was wrong. There is simply no possibility that the area to the west of Road 100 along North James Creek is fully suitable marbled murrelet habitat. It's a stand of fairly dense young regeneration with widely spaced old growth residuals and a significant hardwood
23 component. But Map K, built apparently from the "JDSF 2004 vegetation layer" characterizes this stand as Redwood 6, which one discovers back in the text of the dEIR, means "multi-layered." (The map key is not self-explanatory.) This stand is multi-layered but not in any way that murrelets can use because *the closed canopy is in the understory,* leaving the scattered residuals up there in the wind and open to any corvid predator that swoops by. Murrelets prefer a closed canopy of very old conifers to nest successfully, as your EIR correctly indicates: *"According to Ralph and Miller (1995), the most important factor in indicating occupied stands was density*
24 *of the old-growth canopy cover."* (Page VII.6.6-75) There is no distinct roosting and foraging habitat with this bird as they live at sea when not nesting, and they forage at sea for food daily during nesting season. So nesting habitat is the habitat that matters for murrelets. The Redwood 6 to the west of North James Creek will not do, yet your "spatial analysis" calls this area "fully suitable" murrelet habitat.

Along with personal knowledge, there are several other pieces of evidence that demonstrate the erroneous nature of Map R ("Marbled Murrelet"), which seems to be based on Map K, Vegetation Habitat Classes. An inspection of JDSF Forest
25 Management Plan (FMP) Map Figure 8, "Forest Vegetation" contradicts the information on Map K. Using the area west of Road 100 in the North James Creek area as an example, compare dEIR Map K and FMP Map Figure 8. Map Figure 8 clearly shows this area as "Mixed conifer/hardwoods size <18" dbh, density D" (i.e. mixed conifer/hardwoods size less than 18" diameter at breast height, density: dense). There is no way that trees less than 18" dbh in 2002 when the FMP was
26 published will be murrelet nesting trees in 2005. Eighteen inch dbh limbs might be suitable, but not 18" tree diameters! I'm not sure whether or not the JDSF 2004 vegetation layer is meant to supplant the FMP Forest Vegetation Map Figure 8, but regardless, there is no way this area became murrelet habitat in the few short years between the data that led to Map Figure 8 and that which led to Map K.

The dEIR Photo Sequences also contradicts Map R. Although it only captures a corner of the James Creek area I have been using as an example, the dEIR Photo Sequence 6, page V-23, helps verify the absurdity of calling the James Creek area "fully suitable" for murrelets. This photo sequence is located on dEIR Map Figure C, "Aerial Photo Sequence Locator Map." Map Figure K (Habitat) calls out the central
27 portion of this photo sequence as Redwood 6. Both the 1959 and the 1981 photo clearly show intensive recent logging. The logging definitely appears to continue north out of the frame of the photos. Although the regeneration is "multi-layered" because of the widely scattered residual old growth that was retained, there is no way one can remove most of the canopy in 1981 and, at the same location, have fully suitable murrelet habitat in 2006.

The muddled information on Map K has led to the mistaken spatial analysis represented on Map R. It is disappointing that CDF managers familiar with the forest either did not notice these errors, or were not listened to when they did. If
28 anyone needed an example of why the public is skeptical that CDF is serious about managing for habitat, this is it.

The JDSF 2004 vegetation layer that muddles two completely different stand types as Redwood 6 brings to light a whole other problem. **A multi-layer stand with a closed canopy of dominant and co-dominant trees in the overstory is**
29 **completely different from a multi-layer stand with a few residual dominants over a closed canopy of younger trees in the understory.** The former is often how a natural forest matures; the latter is how a managed stand sometimes ends
30 up. With the advent of more and more variable retention and other sorts of logging that leaves some structure in the overstory, the continued used of Redwood 6 (or Doug fir 6) to represent both sorts of habitat can lead only toward more and more
31 confusion. At a minimum, as a quick and dirty fix, we need to create a new WHR category: Redwood 7, to denote a stand with a closed understory and scattered residual trees in the overstory. In the long term, we need to get serious about a
32 better habitat typing system, one that actually makes sense in the redwood region. [See additional discussion of WHR later.]

To illustrate the problem with Map K, the faulty "fully suitable" for murrelets problem, and the general problem of Redwood 6, attached as Exhibit A, please find two photos along with a copy of the eastern portion of dEIR Map K. Photo 1 shows a
33 stand at Camp 20 designated by Map K as Redwood 6 with large old trees in the closed canopy overstory. Photo 2 shows a stand at James Creek near Highway 20 designated by Map K as Redwood 6 with a few residual overstory trees scattered above a closed-canopy stand of younger understory. The photos obviously depict significantly different habitat conditions that should not be clumped together if we wish to have a rational discussion of habitat at Jackson or anywhere else. (Photos by KB, taken February 23, 2006.)

Kathy Bailey
February 28, 2006
7

Map K and the JDSF 2004 Vegetation Layer Contradict Other Information in the dEIR at Numerous Locations, Most Profoundly in the WHR Analysis by Alternative that Begins on VII.6.6-149 of Section VII.6.6, "Wildlife and Wildlife Habitat." 34

35 • The WHR Alternatives Analysis Uses a Different WHR Database than the JDSF 2004 Vegetation Layer, and Presents Information that Contradicts the Introduction to Section VII.6.6, Wildlife and Wildlife Habitat.

36 • There is completely contradictory WHR information from one section to the next that leads one to be dubious about the validity of the entire WHR Alternatives Analysis. This is in addition to the separate problem with the Spatial Pattern Analysis.

37 • The WHR analysis is a fundamental part of the dEIR and its questionable validity jeopardizes the validity of the entire dEIR.

At the beginning of the "Wildlife and Wildlife Habitat" section, Page VII.6.6-2 it says: ***"All of the analyses involving vegetation found on the JDSF were done using the JDSF vegetation layer,*** whereas vegetation outside JDSF is derived from the FRAPVEG multi-source vegetation coverage.... ***The JDSF vegetation layer also uses a CWHR classification scheme....*** " [emphasis added] I strongly believe this statement is in error. A second WHR database is also in use. 38

Table VII.6.6.1 beginning on page VII.6.6-3 presents, among other information, how many acres of each vegetation type exists at Jackson based on the JDSF 2004 vegetation layer. Tabulating the presented information, **it shows:**
all Doug fir: 13,996 acres
all Montane Hardwood Conifer: 1,887 acres
all Redwood: 31,305 acres

39 Yet, **Table VII.6.6.18** on Page VII.6.6-150 shows the ***"Estimated CWHR (California Wildlife Habitat Relationship) acres on Jackson Demonstration State Forest. Alternative A" to have completely different information.*** Alternative A is identified in many locations within the dEIR as the "baseline" against which the other alternatives are compared. This table breaks down habitat acres by WHR type. It shows that in 2004 (baseline) Jackson had a total of
all Doug fir: 3,579 acres,
all Montane Hardwood Conifer: 14,551 acres
all Redwood: 29,490 acres
In relation to Doug fir, just for example, that's a difference of 10,417 acres between the two tables. Considering the entire forest is only 49,000 acres, that's quite a significant difference.

Every alternative is then analyzed regarding the effect on habitat through time with, in addition to the baseline, charts with data presented for 2030 and 2060. Verbiage and charts galore from page VII.6.6-149-216. These analyses would certainly have been different if the starting point was the 1,887 acres of Montane Hardwood Conifer from the JDSF 2004 Vegetation Layer, as reflected in Map K and Table VII.6.6.1, instead of the 14,551 acres of Montane Hardwood Conifer listed on Table VII.6.6.18 (and Tables VII.6.6.20; 22; 24; 26; 28; and 30), a difference of 12,664 acres between databases. The database used for the Alternatives Analysis that yielded Table VII.6.6.18 and the other Tables in this section seems to correspond with the information from the never-released 1999 draft Habitat Conservation Plan, for which I still have the maps, thanks to a Public Records Act request. The WHR acreage presented in the alternatives analysis closely corresponds to the dHCP WHR maps, but is wildly dissimilar to the acreage presented in dEIR Table VII.6.6.1.

40

41

In addition to the internal problems with the JDSF 2004 vegetation layer, the undisclosed use of two separate WHR-type data sets within the dEIR without disclosing the significant material differences between the two data sets is impermissibly confusing. One or the other of these data sets is likely to be more accurate. Or worse still, each may be more accurate about some aspects of forest habitat at Jackson and less accurate about others. In any event, even a fairly experienced document reviewer such as myself was left completely bewildered. The average layperson reviewer would be completely flummoxed. This level of confusion is impermissible in an EIR.

42

The Relationship Between Timber Stands and Habitat Never Comes Together

43

- ***The timber is the keystone species of the habitat*** but timber and habitat are classified using different systems and these systems significantly contradict each other regarding how to characterize significant swaths of the forest.

44

- Within Section VII.6.3, the "Timber Resources" section, under the heading Forest Vegetation Classification on JDSF (page VII.6.3-13) it says: "Three general vegetation classification systems have been used to describe and map the vegetation and habitat types on JDSF. The timber sections of this analysis use the **JDSF Vegetation Classification System**, the wildlife section (VII.6.6 Wildlife and Wildlife Habitat) uses the California Wildlife Habitat Relationship (CWHR) system and the botanical section (VII.6.2 Botanical Resources) uses a system based on the series and associations developed by Sawyer and Keeler-Wolf (1995) and Holland (1986). Each system has been used for a specific purpose based on the strengths of the system. [For the purposes of this discussion, I am skipping altogether the series and associations developed by Sawyer and Keeler-Wolf (1995) and Holland (1986) used to analyze "botanical resources."]

45

- The character of the existing forest stands and their spatial relationship to one another are a fundamental starting point to understanding how Jackson

currently functions as habitat or in analyzing recreation potential. Or in understanding the timber production capability there.

46 • It is necessary to start from a relatively accurate characterization of current forest stand conditions to extrapolate the effects over time of the alternatives.

47 • Although it is not strictly necessary to use identical stand characterizing systems when analyzing timber and habitat, it would be a tremendous boon to the discussion to do so. ***The timber defines the habitat.*** And at a bare minimum, the timber stand and habitat classification systems must be consistent within themselves and with each other. In this dEIR, they are not.

48 • In the dEIR of FMP, there is no visualization of habitat or timber stand changes over time

Thanks to a Public Records Act request dating from 2000, I have in my possession the maps from CDF's unreleased draft Habitat Conservation Plan dated April 13, 1999. Map 11 is captioned "California Wildlife Habitat Relationships System (CWHR), Current Habitat Types." This information is at least as current as other information used in the dEIR, including the inventory information provided in the Appendix. A comparison of this map with both dEIR Map K and FMP Figure 8, "Forest Vegetation" show major differences in how vast swaths of forestland are characterized. Comparing, just for example, the area that stretches from the

49 northern corner of the forest where the North Fork Noyo exits north and proceeding east from there to the headwaters of Brandon Gulch, one finds that the dHCP WHR map characterizes the habitat differently than does dEIR Map K; and both are different from, and materially inconsistent with, FMP Figure 8. The WHR map, except for tiny pockets of Doug fir 4.2P and D, characterizes this whole area as Redwood 6 (Multistory). DEIR Vegetation Habitat Classes Map K calls this area a complex mix of Redwood 2, 3, 6, Doug fir 3 and 6, with a little Montane Hardwood Conifer 3 thrown in for good measure. FMP Figure 8 characterizes one stand within this area as Redwood 18" density S (sparse), while Figure K calls it Redwood 6. Another stand within this same area that is called Redwood 18" S in FMP Figure 8 is called Doug fir 4 on the Figure K map. To make it even more confusing, the differences among these maps is not at all consistent. For instance on the far northeast part of the forest, the dHCP WHR map is at least somewhat consistent

50 with FMP Figure 8, small Mixed Hardwood Conifer, but the darn Map K calls this whole area Redwood 4 and 6.

51 As noted above, even what the authors intend to portray by dEIR Map K is a matter of conjecture, as it is not explained anywhere in the entire EIR. Is this meant to supplant the old WHR map? How does it relate to the FMP Map Figure 8, Forest

52 Vegetation? Who knows! Even if one ignores the dHCP maps, certainly the maps in

53 the Forest Management Plan (FMP) should be consistent with, and not outright

contradictory to, the map provided in the dEIR, the document that is supposed analyze the FMP and compared it with other alternatives.

S4 And what has Map K been used for? Every statement in the dEIR indicates that the extensive wildlife analyses were done using WHR. Is this WHR as represented by dHCP Map 11? I have come to the conclusion that the Alternatives Comparison S5 used standard WHR as expressed in dHCP Map 11. And the Spatial Pattern Analysis used the Map Figure K data set. The Spatial Pattern Analysis starts in the middle of the same page that the WHR Alternative Comparison ends. No mention anywhere that two very different data sets were used to make these analyses. Only someone such as myself who has been deeply immersed in this stuff for a decade S5 and is familiar with the forest would ever pick up on this mid-page shift in methodology. This lack of clarity is a significant failing.

S6 Finally, there is no attempt to visualize the changes in timber stand and habitat over time. The old dHCP maps do this for WHR, and they very effectively convey how little of the forest will be maintained in old stands under CDF's preferred alternative C1, which is virtually identical to the never-released 1999 draft HCP. Even if the shortcomings of WHR mean it should not be used to map habitat changes over time, there should be some system in place to accomplish this. Otherwise it's very difficult to grasp how the effects of our actions will play out over time.

What does WHR tell us about the redwood forest anyway?

S7 • **From Limitations of the Modeling Approach (VII.6.6-134):**
"Vegetation typing for forest management often includes a more detailed classification scheme than is found in CWHR. [emphasis added] In order to utilize CWHR as a habitat evaluation and planning tool, forest vegetation typing systems must be converted to CWHR habitat types. The conversion process to CWHR tends to simplify the vegetation typing into the three criteria of forest type, average tree diameter, and average canopy cover. The amount of information lost in this process is largely unknown.

"The CWHR habitat classification system was designed primarily for single-storied stands, i.e. stands that had one dominant canopy layer. The vast majority of forest types are categorized as single stored stands with all tree canopy contributing to a single level of canopy density. The CWHR habitat classification system includes only limited consideration of stands with multiple canopy layers, i.e., forest stands composed of large sized trees with small or pole sized trees in the understory (CWHR 6).

"Projections of CWHR habitat classes over time are based on rule-based algorithms that tier off projections from growth and yield models. These CWHR projections have not been validated against independent data in the same way as the underlying

growth models. While projections of CWHR habitat class distribution and changes over time is a widely accepted tool for scientific and applied analysis, it is important to temper interpretations of results with a recognition of the appropriate level of accuracy (landscape level, not stand level) and context (comparisons of trends for different management alternatives, not absolute magnitude, point-in-time estimates). **Making projections for the complex structures of CWHR 6 are particularly difficult."**

58 • According to Table VII.6.6.18, "Estimated CWHR acres on [JDSF], Alternative A" there are currently 25,873 acres classified as Redwood 6 on the Forest. That is almost 53% of the forest. It also happens to be the 53% of the forest that generally includes the stands the public cares most about—the older ones. (If one uses the information provided by Table VII.6.6.1, Redwood 6 totals 11,833 acres or 24% of the forest.) Yet, according to the EIR, "The CWHR habitat classification system includes only limited consideration of stands with multiple canopy layers, i.e., forest stands composed of large sized trees with small or pole sized trees in the understory (CWHR 6)."

59 The state's premier research forest can't do better than WHR when analyzing the effect of the proposed management plan? I believe it's true to say that Mendocino Redwood Company has managed to develop a system that more accurately reflects on the ground habitat and stand conditions. They've existed as a company since 1998. CDF's been around how long? If understanding and planning for habitat was really a priority equal to timber harvesting at Jackson, wouldn't we have a habitat typing system that actually works for redwood? Wouldn't someone be out there ground-truthing the habitat information in the same way the timber inventory is checked? Can we please make this a demonstration priority if the forest ever gets operational?

60 On the upside, at least this problem of WHR applied to multiple canopy stands was disclosed in the dEIR. However, the problem leaves the analysis within the dEIR too imprecise to be meaningful on key issues.

Missing Information on Forest Stands Not Logged Since 1925 or Earlier

61 • Sierra Club has repeatedly asked that a map be produced showing the location of the forest stands at Jackson that have not been logged since 1925 or earlier, in some cases much earlier. This was done both orally and in writing in our scoping comments. The dEIR provides no information about the extent or location of these stands, which range in age from approximately 80 to 120 years old. Jackson staff has verbally indicated in the past that there is between 10,000 to 12,000 acres at Jackson that fits into this category.

62 • The pre-1925 stands are of interest because they are likely to be much further along the way to becoming "late seral," that is older forest stands, than are younger stands.

63 • Additionally, there are some very old stands that were thinned at some point in the past, and are now robust, very old second growth. The location of these stands can only be surmised, yet they too may be much further along to being "late seral" than the younger forest stands.

64 • These old stands should be the first place to look for possible recruitment of marbled murrelet habitat.

65 • Although the dEIR discusses at length the importance of "late seral" forests as unique and regionally rare habitat, and makes a big show of identifying "late seral development areas" it fails to identify either the existence or the location of the oldest second-growth stands currently on the forest, some of which may already be exhibiting late seral characteristics.

66 • Based on personal knowledge, it appears that the 5-year Timber Harvest Projection Estimate printed in the draft Forest Management Plan as Map Figure 6, projects logging entries in the overwhelming majority of the old, Pre-1925 stands.

67 • Both of the enjoined Timber Harvest Plans are in these areas of old forest, and the characteristics of this old forest have led people to be interested in protecting the area around the main campgrounds at Camp One that includes the enjoined THPs for both recreation and habitat purposes.

68 • One of these enjoined THPs is adjacent to a CDF-designated late-seral "development" area but there is no acknowledgment of this or analysis of the effect on the designated late seral development area of logging adjacent to it in the old forest stand. Loss of existing old forest contiguity is one easily identifiable impact that the dEIR ignores.

69 • The dEIR should identify "fragmentation of existing older forest stands" as a potential impact to be analyzed. Alternatives B, C1, and C2, all would result in fragmentation. Neither Alternative E nor F would.

70 • Failure to identify the location and consider the short and long-term effects of logging in the old forest stands is a significant omission of information in the dEIR.

71 • The Impact analysis for Impact 2, "Protection of Late Seral/Successional Forest Characteristics" for the Preferred Alternative C1 as "Less than Significant and Beneficial" is in error because there has been no consideration of the effects of the plan on the forest stands most likely to develop late seral (old forest) characteristics soonest. There is no consideration of the effects of the 5-year Timber Harvest Schedule on these stands.

72 What does it take to get this information officially acknowledged? We've politely and not so politely asked for it for several years. SB 1648, the Chesbro bill that is a component of Alternative F, focuses extensively on these stands, calling for a separate inventory for them. In the comparison charts in VI 16-53, these stands are referred to several times under the Alternative F column. Yet, there is no reference to them or discussion of the importance or extent of these stands in the narrative text of the EIR. There is no analysis of the effects of the alternatives in relation to them. Alternative F is designed largely around these stands both in the proposed "Recovery, Research and Recreation Area" and the "Marbled Murrelet Recovery Demonstration."

73 Failure to disclose the existence of these older stands also makes a mockery of the study used to back up the assertion (VII.6.3-33) that "Trees with late seral characteristics cannot be recruited during the life of the Management Plan." On Page VII.6.3-34-38 there is a lengthy discussion about a theoretical study published in the Appendix of the previous EIR regarding development of late seral conditions over time. At first glance, this study seems to support the contention that late seral conditions cannot be achieved in the 100-year life of the plan. However, a careful review indicates on Page VII.6.3-36 that after 100 years the oldest trees will be 150 years old. Simple math suggests that the model started with 50-year old trees. However, we know that there are, in fact, second growth stands well in excess of 100 years old at Jackson. Put another 100 years on them and by any standard currently applied, they would be considered "old growth," the older component of "late seral." Failure to do the late seral development analysis using the oldest available age classes as a starting point makes the whole exercise bogus for purposes of determining impacts at Jackson.

74

75 Is this a deliberate mis-representation? Or just sloppy analysis based on a failure to acknowledge actual conditions on the ground? Either way, it is a significant defect in the dEIR.

Definition of Late Seral Needs Clarification

76 • Failure to adequately define and describe the key concept "late seral" (used interchangeably with "late successional") forest cripples the dEIR's ability to adequately describe the alternatives and analyze how each alternative affects the maintenance and development of late seral forest over the planning horizon.

77 • "Late Seral" forest is properly defined as being on a continuum that has two components that are distinguished as to age of stand and stand characteristics: mature and old growth. To get to old growth, the stand must pass through the mature phase. Without adequate planning to maintain and develop the "mature" phase, the "old growth" phase cannot be achieved.

78 • The dEIR fails to adequately address how each alternative provides for maintenance and recruitment of the "mature" phase of late seral because it fails to acknowledge the existence of the "mature" phase. This is a material defect in the dEIR.

79 • According to the 1993 Report of the multi-agency federal Forest Ecosystem Management Assessment Team, independent of old growth, the mature forest component of late seral is important in its own right as habitat for large numbers of species.

80 • Failure to acknowledge the importance of the "mature" component of late seral results in the dEIR's failure to consider the effects of each alternative on plant and wildlife species associated with the "mature" component of late seral as distinct from the "old growth" component of late seral.

81 • The Five-Year Timber Harvest Schedule includes numerous timber harvests in areas that would be deemed late seral if the definition were correct. The dEIR's failure to disclose these problems and address the effects of near-term logging on these stands is a significant omission.

82 What is meant by the term late seral forest (synonymous with late successional forest) is a key concept for the JDSF FMP and dEIR. It is imperative to acknowledge that this term is NOT synonymous with "old growth" forest. Rather, "old growth" is a subset of late seral. "Mature forest" is the component that arises before the old growth condition and is a necessary step along the succession to old growth conditions. Collectively, in every common useage except the California Forest Practice Rules, these two stages in forest development are called late seral forest. The previous EIR Glossary (Appendix) correctly recognized this when it defined this term: "The stage in forest development that includes mature and old-growth forest." The previous EIR Glossary then went on to adequately define both "mature" and "old growth." All three of these definitions are reasonable adaptations of the federal definition published jointly by the US Department of the Interior and the US Fish and Wildlife Service in December 1995 in the Environmental Analysis for a 4(d) Rule for the Conservation of the Northern Spotted Owl on Non-federal Lands. The EA for the Northern Spotted Owl 4(d) Rule was specifically about the region that includes Jackson Forest.

83 A close reader appreciates that the author(s) of the dEIR attempt to draw a distinction between "late seral" and "late seral as defined by the Forest Practice Rules." This distinction is made because the author(s) almost certainly understand that the definition within the Forest Practice Rules (FPRs) is essentially in error. The bad definition resulted from a political compromise back in 1992 that left the definition more or less correct only as it describes the "old growth" component. The FPR identifies the true stand characteristics of "old growth" and erroneously applies them as the definition of "late seral" thereby eliminating the unwanted (by the

industry) necessity for giving special consideration to the "mature" component of late seral when submitting a Timber Harvest Plan. However, obfuscating the definition does not change the environmental effects on the ground. Although we understand why this is such a pretzel for CDF, the wrong definition of late seral in the dEIR is a significant deficiency that leads to incorrect analyses of environmental effects.

84

For instance, on Page VII.6.3-14 we find: "Based on the definition of a late seral forest stand contained in the forest practice rules, functional characteristics of late seral forests include large decadent trees, snags and large down logs. Similarly, late seral forests are characterized in the forest practice rules as having large trees, multi-layered canopy and a large number of snags and downed logs that contribute to an increased level of stand decadence."

Contrast this with the federal definition in the EA for the NSO 4(d) Rule (page 53):
"Late –Successional: The stage in forest development that includes mature and old-growth forests.
"Mature: Forest for which the annual net rate of growth has peaked; stands are generally more than 80 to 100 years old and less than 180 to 220 years old; stand age, diameter of dominant trees, and stand structure at maturity vary by forest cover types and local site conditions; generally contain trees with a smaller average diameter, less age-class variation, and less structural complexity than old-growth stands of the same forest type.
"Old Growth: An older forest that differs significantly from a younger forest in structure, ecological function, and species composition; containing characteristics that become pronounced at 180 to 220 years of age, including: (1) a patchy, multilayered canopy with trees of several age classes; (2) a multispecies canopy…; (3) the presence of large living trees, some with broken tops and other indications of old and decaying wood (decadence); (4) the presence of snags (large standing dead trees) and heavy accumulations of wood, including large logs on the ground; (5) moderate to high canopy closure; and (6) the presence of species and functional processes that are representative of the potential natural community."

85

The FPR definition has taken characteristics like decadence and down wood, that the federal government uses in its definition of "old growth," and requires their presence in anything to be characterized as "late seral" or "late successional," thereby obliterating the earlier phase of late seral: the mature forest. Fourteen years after the political dog-fight that resulted in this definition being enshrined wrong in the FPRs, aren't we mature enough to get past it for purposes of analysis at Jackson Forest? The time to sue on the FPRs about this point is long past. CDF could restore a bit of credibility by acknowledging reality on the definition of late seral forest.

86

Without understanding the ecological importance of the "mature forest" component of late seral forest, the public's concern for Jackson's older second growth stands will be wrongly relegated to the spheres of aesthetics and recreation. Older forests younger than-old growth are a crucial biological resource well prior to their attaining true old-growth characteristics.

The federal FEMAT Report[1], which is specifically about the Pacific Coast region, says: [page IV-20]

> In the current assessment, we reviewed and updated the list of species associated with old forests. Criteria based on those developed by Thomas et al. (1993) were used for this effort.... The number of species identified is greater than that shown by Thomas et al. because of new information and because this report focuses on all federal late-successional forests within the range of the northern spotted owl rather than just the old-growth component on National Forests. A total of 1,098 terrestrial species (not counting arthropods) are identified as closely associated with late-successional forests on federal lands...."

87 No specific information is provided in the FMP, dEIR, or the maps regarding the total acreage or location of forest stands that are non-old-growth, but nevertheless, late successional stands. At least some of the stands that have not been logged since 1925 or earlier would be considered late seral if late seral were defined consistent with normal useage. This is a significant omission, especially in light of the purported emphasis on "late seral development" in the FMP and the dEIR.

88 One would think the information base on the state's premier research and demonstration forest would include information about the location and extent of existing late seral (used interchangeably with late successional) forest stands. If such information truly is not available, there is a critical need to develop it. This could be achieved by hiring on-staff experts in forest ecology or by contracting with recognized experts in the field to survey, catalog, and map these stands.

The Late Seral Development Areas are Minimal, Fragmented, and Soon to be Diminished by Operations Proposed in the Five-Year Timber Harvest Schedule

89 • Jackson's 11 old growth groves combined total 459 acres. Three of these locations have buffers designated for late seral development totaling an additional 780 acres. These areas combined total 1,239 acres, or 2.5% of Jackson. This 2.5% is the entirety of late seral development on the eastern two-thirds or more of the forest outside Watercourse and Lake Protection Zones.

90 • 2,224 acres of the Woodlands Special Treatment Area surrounding Mendocino Woodlands State Park is also designated for late seral development. This constitutes another 4.5% of Jackson.

91 • Therefore, outside watercourse and lake protection zones (WLPZs), **7% of Jackson is designated for "late seral development." This is the extent of**

[1] USDA Forest Service, USDOC National Marine Fisheries Service, USDOI Bureau of Land Management, USDOI Fish and Wildlife Service, USDOI National Park Service, Environmental Protection Agency. *Report of the Forest Ecosystem Management Assessment Team.* July 1993.

what will develop into "interior" old forest, the sort of habitat most beneficial to locally threatened terrestrial species. Given that these areas are at least dual purpose, likely to benefit both habitat and recreation potential, this figure seems less than what would be necessary to truly elevate non-timber production values to the equivalent of the timber program, which is the stated goal of the FMP. 92

- According to the dEIR VII.6.1-18, there are 97 miles of Class I streams. With 150 feet on each side allowed to develop into late seral forest, at most this constitutes 3,527 acres, not accounting for the loss of acreage due to the difference between the ground-measured WLPZ width and the horizontal plane measurement of acreage. 93

- Class II streams are an additional 186 miles. Although the dEIR does not acknowledge this, *the WLPZ for Class II in the Forest Management Plan (page 70) is 50-100 feet, not the 100 feet generally mentioned in the dEIR.* Thus, the acreage of Class II streams that will develop late seral characteristics is at most 4509 acres and at least, 2255 acres, again not accounting for the fact that the WLPZs are measured on the ground, and acres are measured on a flat plane. In steep terrain, as Class IIs are likely to be, this difference could be very signficant. 94

- So totally, the Class I and Class II WLPZs constitute strips of terrain that total at most, somewhere between 8036 and 5782 acres. Someone somewhere must have decided to shave the baby, because on page 149 of the FMP, it says the WLPZs will total 7440 acres. Again, this may significantly overstate the actual acreage. The steeper the slope next to the stream, the less acreage a ground-measured WLPZ will actually cover. The primary beneficiary of the WLPZ late seral will be aquatic species. 95

- There is also a discrepancy in the language regarding how the WLPZs will be managed. While there is general direction to manage for late seral, the specific standards the FMP and dEIR describe may not lead to the WLPZs becoming late seral as soon as would be feasible. Particularly, the significant logging allowed in the "outer band" of both the Class I and Class II WLPZs seem to contradict the general direction to manage for late seral conditions. The dEIR does not discuss this contradiction or propose mitigations to address the problem. This contradiction could possibly be solved by clarifying that the WLPZs should be managed for late seral conditions to be achieved as soon as possible. 96

- Putting aside for the moment the remarks in the previous paragraph, using the lower figure of 5782 acres to somewhat account for the slope problem, this added to the 459 acres of old growth, the 780 acres of late seral development, and the 2224 acres of Woodlands STA, totals 9245 acres total for late seral development in all forms. This comes to around 19% of Jackson's land base. While this is a significant commitment to developing older forest, it is certainly not an expansive 97

commitment, one that would seem to be consistent with "elevating wildlife, watersheds, and ecosystem processes to a level of importance equivalent to the timber management and the research, demonstration and education programs." (FMP, page 3)

98 • Perhaps most important, the five-year Timber Harvest Schedule (see FMP map Figure 6) including the enjoined THPs, proposes near-term timber operations in areas adjacent to the designated late seral development areas that provide the core habitat. These operations will reduce existing older forest habitat next to the late seral development areas and leave the protected areas more isolated as islands, reducing their habitat value. Recent heavy canopy removal timber operations adjacent to one of the late seral development areas has already started this island-creation process.

99 • Additionally, the five-year THP schedule proposes operations in other old forest areas that should be considered for habitat development. For instance, in the West Chamberlain Creek drainage, operations are scheduled in an area with a very significant component of large residual old growth trees, and is also adjacent to the late seral development area near the headwaters.

100 • The EIR does not discuss or analyze the effects of the five-year THP schedule on either existing old forest stands or the designated late-seral development areas. This is a significant omission.

Conclusion

101 Adoption of Alternatives C1 and C2 are likely to lead to significant adverse impacts at Jackson Forest on terrestrial, avian and aquatic species and in relation to the extent and fragmentation of old forest habitat. The Board has several good alternatives in front of it. Alternative E, which the DEIR identifies as the environmentally superior alternative is just that. Understanding that the Board may believe that Alternative E is not feasible given the legislative mandate for the forest, we have provided the scoping comments and legislation that have been combined to produce Alternative F. The scoping comments, which we are re-submitting along with this letter, were drawn up with an eye to the existing legislative mandate and I view them to be completely consistent with current law. There are elements within SB 1648, for instance the citizens' and technical advisory committees, that seem likely to be within your current authority. You may wish to consider forming these committees. Alternative F provides a flexible approach to managing for enhanced habitat that can serve the needs of wildlife and people. Additionally, there are abundant research and demonstration projects that the Alternative F approach could facilitate.

102

103

104

Kathy Bailey
February 28, 2006
19

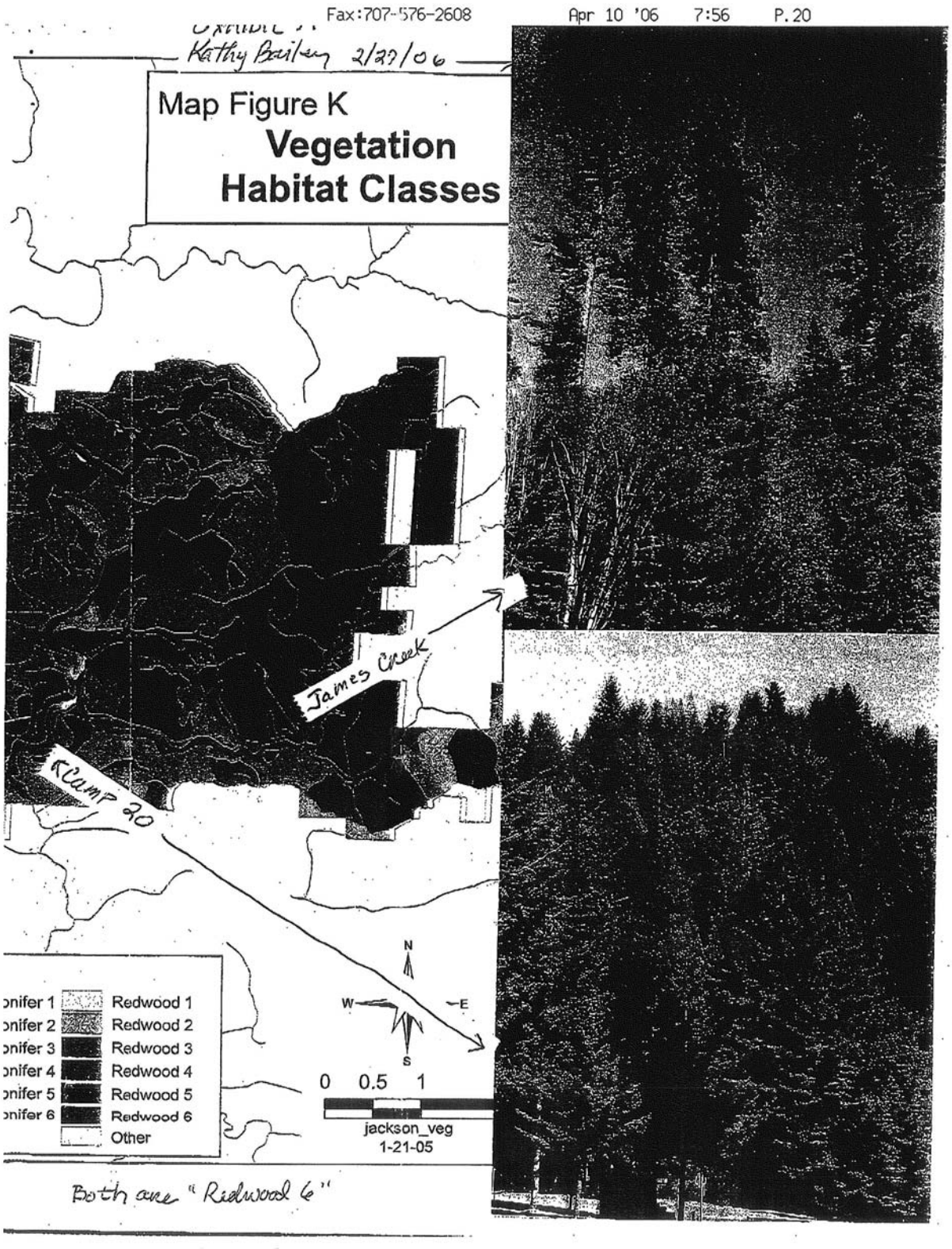
105 After reading Pat Higgins' letter to you regarding the dire need for the strongest possible protection for salmonids at Jackson, I want to re-emphasize the need to apply strong watercourse protection across the forest. This should be equivalent to federal standards for this region.

I truly hope the Board will take this opportunity to lay the controversy about Jackson's management to rest. It is possible that within a few years of improved management that Jackson could take the place it ought to have as a beloved state resource that everyone is proud of.

Sincerely,

Kathy Bailey
Forest Conservation Advocate
California Sierra Club

Attachments:
Map and photos - 4 copies
Scoping comments


Fax:707-576-2608
Apr 10 '06 7:56 P.20
Kathy Bailey 2/27/06
Map Figure K
Vegetation
Habitat Classes
James Creek
Ramp 20
onifer 1
onifer 2
onifer 3
onifer 4
onifer 5
onifer 6
Redwood 1
Redwood 2
Redwood 3
Redwood 4
Redwood 5
Redwood 6
Other
N
W
E
S
0 0.5 1
jackson_veg
1-21-05
Both are "Redwood 6"

Mailed Letter P-188

Response to Comment 1
The Administrative Draft Final Forest Management Plan (ADFFMP) proposes to establish an effective Road Management Plan. Due to recent reductions in staffing and budget, the Department's ability to maintain and improve the road system has been reduced. Since 2002, the staff of JDSF has lost a heavy equipment operator and a road management forester. In addition, operating funds dedicated to management of the road system have been cut, in the amount of $300,000 per year. It is anticipated that the staffing and budget associated with management of the road system will be restored and augmented after the management plan is approved and substantial revenue is produced. A second heavy equipment operator was added to the JDSF staff during 2007.

Response to Comment 2
Two timber harvest plans were approved by the Department's Forest Practice Program, and timber operations were initiated. These timber operations were halted at the order of the Superior Court, pending approval of the forest management plan. Two additional timber harvest plans for areas in Parlin Creek and Hare Creek, have been submitted to the CDF Forest Practice Program for review, but have not yet been approved. Review of these two timber harvest plans has been temporarily halted at the request of the Department, pending approval of the ADFFMP.

Response to Comment 3
The Citizen's Advisory Committee (CAC) was appointed by Director Richard Wilson in 1997, and produced a report in 1998 that included several recommended management measures. Several of the management measures recommended by the CAC were a matter of normal forest operations at the time that the recommendations were made. Others were implemented during or after the tenure of the CAC, while others were not implemented.

The court processes involving the issue of JDSF management plans and accompanying EIR is a matter of record. No timber operations within THP areas may be performed until a new management plan is approved by the Board.

Department staff began the preparation of a new management plan long before a suit was filed by the Campaign to Restore Jackson Redwood Forest.

Response to Comment 4
The comment is expressing a personal opinion as to the size of the DEIR ("voluminous") and reports to have found it difficult to review. The information contained within the DEIR is relevant to a consideration of potential impacts associated with the management of JDSF. Due to the complexity associated with analysis of several alternatives across an expansive assessment area, the document is necessarily large. In later comments, the commenter expresses the opinion that the document does not contain sufficient detail.

Response to Comment 5
The various alternatives are briefly described in the Executive Summary of the DEIR. More detailed descriptions are provided in text form in DEIR section VI. The greatest level of detail on the alternatives is provided in a comparative table in section VI (Table VI.1). A similar table is included in the RDEIR (Table II-4), adding detailed information about Alternative G. The comparative table facilitates the reader’s ability to easily compare the various features of the alternatives and to most easily understand the differences among them.

Response to Comment 6
The executive summary is intended to provide a brief overview or the document and review processes, but is not intended to provide sufficient detail to provide the reader with a full description of management proposals, alternatives considered, or impacts assessed. While details associated with Alternative F were expanded upon in section VI, the basic thrust of Alternative F was not changed.

Response to Comment 7
Alternative F is unique to the DEIR, and is one of seven alternatives that were considered. The alternative is self-explanatory, and does not rely upon external documents. The Chesbro bill (SB 1648) was specifically referenced in the discussion of Alternative F. This is a public document that is readily available to anyone wishing to refer to it.

Response to Comment 8
The DEIR utilizes information about the Forest that was reasonably available when the draft document was prepared. Reliable and tested timber information at the stand level was not available beyond that which is reported. Visual display of basic current forest characteristics was provided in Map Figures J and K. Visualizations of potential changes in forest stands over time under the various alternatives are not available, and represent a very complex and time-consuming exercise. However, the DEIR includes projections of habitat types over time throughout the assessment area. These are provided primarily in tabular form.

Response to Comment 9
The DEIR provides substantial information and analysis of potential environmental impacts and includes explanations of how the conclusions regarding potential environmental impacts were reached.

Response to Comment 10
Alternative C1 is presented as the proposed project by the DEIR, as this was the management plan that the Department brought forward for the Board's approval. Alternative G was subsequently formulated and proposed by the Board be to the preferred management direction for JDSF. Alternative G incorporates provisions from several of the other alternatives.

Response to Comment 11
The Public Resources Code (sections 740, 4645) gives the Board the responsibility to establish management direction for the Demonstration State Forests.

Response to Comment 12
As stated in the DEIR, Figure K presents habitat types that were developed by converting timber types into the habitat types described within the California Wildlife Habitat Relationships System (CWHR).

The JDSF 2004 vegetation is first discussed on the second page of the Wildlife and Wildlife Assessment section (VII.6.6-2). In this section, the tables beginning on the third page of the section are referenced. Those table report CWHR habitat types associated with JDSF vegetation, which is what is depicted on Map Figure K. Map Figure K is listed in the table of contents of the DEIR; however, the comment is correct in stating that Map Figure K is not directly reported in section VII6.6. While a comparison between the habitats reported in Tables VII.6.6.1 and VII.6.6.2 illustrates that the habitat types are the same, the reader must be somewhat familiar with the CWHR habitat typing system (cited on page VII.6.6-2 and further detailed in the tables on page VII.6.6-6) to make the most of the information.

Response to Comment 13
A reading of the CWHR habitat typing system indicates that Redwood 6 is multi-layered with size class 5 trees over size class 4 or 3 trees, with total tree crown closure greater than 60 percent (see Table VII.6.6.1.3 in the DEIR). It is recognized that this is a very rough and broad description, and that many different stand forms may meet this criteria. The information presented in the DEIR is not in error, it simply illustrates the range of conditions that may fit the description of Redwood 6.

Response to Comment 14
Refer to response 15.

Response to Comment 15
Refer to response 13. The CWHR system and its characterization of habitats was used as the basis for converting the JDSF vegetation types into CWHR habitat types. The JDSF vegetation layer differentiates vegetation characteristics to a greater degree than the CWHR, but this information cannot be used within the CWHR system to estimate the value of the habitat for various species. This is why the JDSF vegetation types were converted to CWHR habitat types. Map Figure K is not in error, but this concern serves to point out potential limitations in current habitat relationship assessment models for certain species.

Response to Comment 16
Neither Redwood 6, nor Map Figure K are intended to represent the extent or location of potential old forest habitat. Rather, they are utilized as an assessment tool regarding current and potential habitat availability for wildlife. It is well understood that there are limitations to the accuracy of the modeling process for certain species. As more and better assessment tools become available, they will be utilized in future project assessments to the extent feasible.

Response to Comment 17
As explained above, the information is correct to the level of detail available in the data and models that were utilized for the assessment. This limitation is recognized and disclosed in DEIR section VII.6.6-1 and 2.

Response to Comment 18
The limitations of the CWHR typing system and model are known, and must be considered when reviewing the analysis.

Response to Comment 19
The following explanation can be found in Section VII.6.6-78 (Marbled Murrelet): "In addition to old-growth stands, other forest stands of various CWHR classes may provide suitable habitat in the form of single or small groups of large old-growth residuals. However, specific data are not currently available. Therefore, for purposes of this analysis, JDSF provides 459 acres of old-growth and numerous scattered residuals that are considered potential murrelet habitat (DFMP Appendix V, Table 2). Marbled Murrelet habitat suitability would depend on the specific characteristics of the stand, including the presence of mature trees with large branches, deformities, and other formations that provide nesting platforms. For this analysis, these habitat types are used to represent potential habitat for Marbled Murrelets, although it is important to recognize that many of these stands may not provide suitable habitat."

Recognizing the limitations of the CWHR system relative to Murrelet habitat requirements and limitations associated with available survey data for murrelets and other species, it is possible and even likely that some of the stands identified as being either suitable or unsuitable for any given species may not be correct. In the absence of field assessment and survey at the stand level, it is impossible to state with certainty that a given habitat area is suitable or not suitable. The Department is prohibited by law from a "take" of the Marbled Murrelet. Prior to the conduct of projects that propose to impact potential Marbled Murrelet habitat, an assessment of impacts must be conducted, including survey for the species. In the case of identifying potential future murrelet habitat for management purposes, it should be recognized that the assessment can serve only as a rough indication, and that further, more detailed analysis, is required at the project level.

Response to Comment 20
The analysis is a projection based upon the best information available.

Response to Comment 21
The limitations of the data and models to which it is applied is clearly explained in the various sections of the DEIR.

Response to Comment 22
See response 19 above.

Response to Comment 23
The key for Map Figure K must be reviewed in conjunction with knowledge of the CWHR habitat typing system. The necessary description is found early in the Wildlife section at Page VII.6.6-6. A full description of the CWHR system is not of a practical size for placement within a map key. See response 19 above.

Response to Comment 24
The ecology of the Marbled Murrelet is fully explained, including references to research information, beginning at Page VII.6.6-52. It is explained in the section, as the comment states, that a reduction in old forest throughout the range of the murrelet is the primary cause for decline of the species.

Response to Comment 25
The maps and figures are not intended to represent the same information. Map Figure K represents vegetation habitat classes that correspond to the CWHR habitat typing system. Map Figure R is a spatial representation of habitat suitability predicted as output of the model BioView developed by the California Department of Fish and Game and US Forest Service (CDFG http://www.dfg.ca.gov/biogeodata/by_program.asp), which is based upon components of the CWHR habitat relationships model. Figure 8 of the DFMP represents forest vegetation as interpreted from satellite imagery, and is not utilized in the DEIR for assessment of habitats and potential impacts to wildlife.

Response to Comment 26
While Map Figure K is a spatial representation of CWHR habitat types, Figure 8 of the DFMP does not take scattered residual old-growth trees into account. Figure 8 is based upon satellite imagery, which is not well suited to the identification of scattered old trees. Figure 8 is not intended to be utilized in the assessment of habitats or impacts to wildlife. It is not stated, nor is there any intent to portray murrelet habitat development over a few short years. This development may take additional decades or centuries.

Response to Comment 27
See response 19 above.

Response to Comment 28
The assessment conducted for the Marbled Murrelet, beginning at Page VII.6.6-52 clearly explains the current extent of known or potential Marbled Murrelet habitat within JDSF. While CWHR, as utilized for this assessment, describes some of the area of James Creek and elsewhere as fully suitable for the Marbled Murrelet, the DEIR explains at Page VII.6.6-78 and 79 that only 459 acres of JDSF is currently considered to be potential Marbled Murrelet habitat, while recognizing that other potential habitat may exist in the form of individual old-growth trees or small group of old-growth trees, such as those found in parts of the James Creek watershed.

Response to Comment 29
The Board agrees that the two types of forest stand potentially represent two different forms of habitat, while both may meet the definition of Redwood 6 in the CWHR system. The limitations of the system are recognized by the Department, DFG, the Board, and the authors of the CWHR system. A more detailed analysis will be performed at the project level, and survey will be conducted when potential habitat is encountered that may be impacted.

Response to Comment 30
Both of the stand conditions described can occur naturally or through stand management.

Response to Comment 31
A broad set of individual forest stand conditions will fit within the Redwood 6 CWHR category. Many stand management techniques may ultimately produce stands that either fit within the category or develop into Redwood 6. Future improvements in assessment techniques, combined with more detailed, site-specific examination, will lead to improved assessment at the project level, and eventually at the regional level.

Response to Comment 32
The DEIR uses appropriate assessment methods and available information. While the Board recognizes that certain improvements in assessment tools, such as the CWHR system, would be beneficial, modification of the system would be a very involved, time consuming, and expensive undertaking; such efforts are beyond the scope of the DEIR. The Department and the Board are unable at this time, to create and provide the supporting analysis for a new habitat type and habitat suitability ratings for species utilizing that habitat type within the CWHR system. The Board supports this form of effort, and will participate in these future efforts as budget and personnel limitations allow.

Response to Comment 33
Exhibit A of comment letter depicts a photocopy of a portion of Map Figure K. Also in the Exhibit are two photos. The top photo appears to depict scattered overstory trees, with an understory consisting of both conifers and hardwoods. The location from which the photo was taken cannot be identified, but it appears to represent a fairly common stand condition in portions of the Chamberlain and James Creek watersheds that may be characterized as Redwood 6 on Map Figure K. The lower photo appears to depict a stand of fairly dense conifer forest. Based upon the presence of the Chamberlain Creek Conservation Camp sign in the lower photo, the photo was apparently taken facing in a generally eastward direction toward more than one stand, but primarily a stand that is classified as Douglas fir 4 on Map Figure K, not Redwood 6 as the comment states.

However, the Board recognizes that multiple stand forms may be included in the Redwood 6 habitat type.

Response to Comment 34
See responses below.

Response to Comment 35
The comment is somewhat unclear. The JDSF 2004 vegetation layer is not a CWHR database, but rather a depiction of vegetation types (not CWHR habitat types) across the JDSF landscape. The analysis beginning on Page VII.6.6-149 is an assessment of habitat availability over time. This assessment included a projection of stand development by using available forest inventory information and projecting it forward with a growth model. The modeling approach is fully described in section VII.6.6.8. This analysis utilizes available analysis tools and information. Due to varying levels of existing information, the analysis was performed with the best information available for each particular area of concern (inside JDSF, outside JDSF, etc).

Response to Comment 36
The "contradictory" information is not described, so a reasoned response cannot be made.

Response to Comment 37
There is insufficient detail in the concern to enable a reasoned response. See responses above.

Response to Comments 38 through 41
It is unclear what the commenter believes is an error in this statement. The paragraph which the commenter quotes from the DEIR does in fact state very clearly that two WHR databases are being used.

The explanation for the differences between the numbers in the two tables lies in the fact that two different data sets were used, for two different analyses - a large landscape regional level analysis,

and an analysis for the much smaller area defined by the boundaries of JDSF. This approach is a standard analytical practice. Detailed vegetation data exist for the Forest. For the large landscape regional level analysis, such detailed data do not exist, and less detailed, remotely sensed imagery is used. To claim that one of these data sources is right and the other is wrong misconstrues the purposes of the two analyses. The two data sets were compiled for different types of analyses and are not directly comparable. They both constitute the best available data for the scope of their respective analyses.

The differences in total acreage of a particular CWHR type noted by the commenter are to be expected when comparing the results of two different mapping methodologies and assumptions applied at two different scales for two different purposes. The Department used those data that were most applicable to the scale of analysis. It is highly likely that the JDSF-specific mapping effort is more representative of actual conditions on JDSF than the regionally derived data given the associated field verification and sampling conducted in the former. It was the more detailed JDSF-specific information that was used in the modeling exercises to represent conditions on the Forest.

Table VII.6.6.1 is found in the Regional Setting section and uses the California Wildlife Habitat Relationships System (CWHR) to describe extent of habitat types in a large landscape, regional context. In order to provide a relative comparison of habitat types for JDSF and the region in general, a common and regionally derived vegetation coverage was necessary. FRAP Veg was utilized for this purpose and reference to the mapping methodology used is noted in the footnote DEIR Page VII.6.6-2.

Table VII.6.6.18 describes the extent of CWHR habitat types for a much smaller area, within the boundaries of JDSF derived from vegetation mapping and forest plot sampling. The habitat type mapping completed at the more detailed scale of JDSF was used for alternative analysis and wildlife habitat relationship modeling.

It is not surprising that the JDSF vegetation data used in this analysis corresponds closely with forest information that was developed in prior management planning efforts, such as the one performed for a draft HCP effort, which was abandoned in the late 1990s. It is also not surprising that the WHR acreage presented in the alternatives analysis is different from that presented in table VII.6.6.1; they represent different data sets used to support different analyses, at the regional and forest specific levels of resolution, respectively. See also response to comment 39.

Response to Comment 42
See response to comment 38-41. Vegetation data derived from plot sampling analysis and field verification for JDSF was considered the most accurate data and the best available information for CWHR analysis within JDSF. Remotely sensed satellite imagery was considered the most accurate data and the best available information for the large landscape regional analysis. To the developers of the DEIR, the separation of data sets used for regional context setting from that of the JDSF ownership and in clearly separate sections of the DEIR was considered sufficient distinction for DEIR reviewers.

Response to Comment 43
Timber may be the keystone species of habitat for some mid- and late seral dependent wildlife species, but hardwoods, brush, ground cover, characteristics of canopy openings and many other parameters play a central role in defining habitat for early seral dependent species.

The JDSF vegetation classification system and CWHR classification systems provide reasonably consistent results given the difference in focus of the two systems. The commenter does not provide substantiation of where and how she feels the two classifications systems contradict each other and what is meant by the term “significant,” making a reasoned response not possible.

The timber stand and habitat classification systems are in fact consistent with each other; the JDSF vegetation classification system can be cross-walked uniquely into CWHR. In this analysis, they were analyzed and reported separately.

Response to Comment 44
The quotation from the DEIR is accurate.

Response to Comment 45
As yet, a single vegetation typing scheme is not available that is capable of relating timber, habitat, and recreational values associated with the Forest. Timber, habitat, and recreation are each assessed in varying ways, but in a manner that provides for a full assessment of potential impacts. Map Figure K provides important information on the existing forest characteristics across the Forest and their spatial relationship.

Response to Comment 46
The Board agrees with this statement, and believes that it has been achieved.

Response to Comment 47
The Board does not share the commenter's view that it would be a tremendous boon to the discussion to use identical stand characterizing systems when analyzing timber and habitat. In this situation, the benefit of increased accuracy of the respective analyses was found to outweigh the benefits of ease of understanding the discussion.

Timber types and wildlife habitat types have traditionally utilized differing classification schemes, primarily because they are intended for different purposes. Timber inventories are generally used to quantify stands for potential production and to enable forest managers to predict future yields, assess potential stand management, and predict future stand growth. Habitat types and their classification include the trees that may constitute timber, but also take into account other vegetation characteristics such as structural elements and other ground and canopy-related features that are not normally considered in a timber inventory.

It is not clear what the commenter means by "the timber stand and habitat classification systems must be consistent within themselves", consequently a reasoned response is not possible. The timber stand and habitat classification systems are in fact consistent with each other; the JDSF vegetation classification system can be cross-walked uniquely into CWHR. In this analysis, they were analyzed and reported separately. See also the response to comment 43.

Response to Comment 48
The Board has provided visualization of the expected habitat changes over time in graph form, but the data do not support a spatial visualization. Please see the various graphs in Section VII.6.6.8. In addition, the types of habitats that are expected to develop over time have been characterized.

Response to Comment 49
It is incorrect to state that the CWHR map layers from the draft HCP are at least as current as the information used in the DEIR. The Department did not utilize the draft habitat maps that are depicted in the draft HCP for the DEIR. The newer 2004 JDSF vegetation layer was used, which was considered an incremental improvement over the 1999 HCP CWHR layers, based upon field comparisons made by JDSF staff. It is not surprising that data sets, including CWHR layers, change over time as methodology improves and additional data become available. It is quite understandable that these types vary from those depicted on Map Figure K. Map Figure K represents a conversion of 2004 JDSF vegetation typing to CWHR habitat types. Map Figure K and DFMP Figure 8 utilize two entirely different classification schemes, so should not be expected to be the same.

Response to Comment 50
See responses above.

Response to Comment 51
As explained above, Map Figure K depicts CWHR habitat types. It is unclear what the commenter is referring to as "the old CWHR map". If this is a reference to the draft HCP effort, Map Figure K is the appropriate map to consider in the context of the DEIR.

Response to Comment 52
Map Figure K does not relate well to Figure 8 of the DFMP, since the two maps were compiled in different ways, and with differing vegetation characterization (see map keys). We note that Figure 8 of the DFMP has been replaced in the ADFFMP with the Map Figure 7, which is equivalent to Map Figure K from the DEIR, thus bringing the EIR and Plan into greater consistency.

Response to Comment 53
The DEIR is intended to serve as an assessment of potential impacts associated with future management of JDSF. The DFMP represents a plan of management, not an environmental assessment. In order to review an assessment of potential effects, the reader is encouraged to gain an understanding of the management alternatives and to thoroughly review the EIR for the assessment of potential impacts. See also the response to Comment 52.

Response to Comment 54
See response to Comment 49. Map Figure K was included in the DEIR to provide the reader with a spatial representation of CWHR habitat type and size class at current conditions. Map K is the starting point (Current Condition) for the non-spatial CWHR analysis of habitat extent over time by Alternative as well as the spatial analysis conducted for selected species of concern. Canopy cover classes were also used in these analyses but were not included in Map Figure K due to concerns over map readability.

Response to Comment 55
See response to comment 49. The non-spatial Alternatives Comparison and the Spatial Pattern Analysis used the same data sets for current habitat conditions. There was no mid-page shift in methodology that is not clearly described (See DEIR Page VII.6.6-216). Total acreage for Current Conditions under Alternative Analysis will not equal total acreage under the Species Spatial Pattern Analysis since acreage in the latter must have at least a “low suitability” value before being tallied.

Response to Comment 56
See response 48.

Response to Comment 57
The entire bulleted item consists of quotes taken from the DEIR.

Response to Comment 58
See response to Comment 39. The CWHR habitat classification system was developed to capture those forest structural conditions important to wildlife. The quoted DEIR sentence refers to the fact that CWHR 6 is the only habitat stage that describes multiple canopy layers. The sentence refers to limitations in the number of categories in which multi-layered conditions can appear and not the habitat predictive ability of CWHR 6 as a representation of this level of forest structure.

Response to Comment 59
The commenter states the opinions that CAL FIRE can do better than the WHR system and that a neighboring landowner has a better vegetation classification system. The limitations, benefits, and assumptions inherent in a variety of wildlife habitat relationship modeling tools were considered prior to choosing the models to apply 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. Also, there are compelling arguments for using a standardized vegetation classification system that is commonly accepted throughout the State. 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.

CWHR is arguably the most supported, tested and maintained vegetation classification system currently in use in the State. Development of the CWHR System started in the late 1970s. The California Interagency Wildlife Task Group (CIWTG) was formed in 1981 to provide guidance for system development, with a final Memorandum of Understanding (MOU) signed by sixteen state and federal resource agencies and public universities in 1985. CIWTG continues to meet quarterly on scientific research and policy issues related to CWHR. 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.

The CWHR System is managed by professional biologists and GIS analysts in the Biogeographic Data Branch (BDB) within the California Department of Fish and Game (CDFG). BDB actively acquires, integrates, improves, and distributes biological resource data sets in support of conservation needs. CWHR represents its most analytical tool, predicting species presence based upon geographic location and habitat conditions. It complements data representing wildlife sightings, such as the California Natural Diversity Database (CNDDB), because it predicts the presence of species in locations or habitats where they are likely to occur but for many reasons have not been seen. Many species are difficult to detect and many places in the state have not been surveyed often for wildlife. A model such as CWHR can alert land managers to the potential presence of a species that may otherwise be missed in a resource assessment based solely upon wildlife surveys and databases of positive wildlife sightings.

Response to Comment 60
The DEIR utilizes the best tools and information that are readily available and applicable to the resources in question. The DEIR discloses potential limitations in the tools and information that was used in the analysis.

Response to Comment 61
Maps that depict the estimated timber harvest history are available at the Department offices in Fort Bragg. These maps were initially created decades ago, and have been periodically updated to reflect more recent timber harvest. However, the maps do not represent an intensive evaluation of the extent of all historic harvests, and the origin of the data used to produce many of the maps is unknown. The 1925 date is somewhat arbitrary from an environmental point of view. Stands originally regenerated prior to this date may be quite variable, due to growing site differences, impacts of past management activities other than logging, variations in regenerative success, and the effects of fire and weather. In the case of wildlife habitats, the date of last logging is not normally a criterion utilized in habitat characterization, whereas, the current structure of the forest is a key consideration. Current estimates indicate that approximately 11,000 acres of JDSF has not been logged since 1925. Another roughly 14,000 acres of stands originally regenerated prior to 1925 has been partially harvested since 1925. These are rough approximations that are not based upon detailed ground-truthing. Maps and acreage summaries depicting this information have been provided to the commenter and other members of the public.

Information from spatially accurate resource surveys of current stand characteristics is a better indicator of the nature of those stands and their wildlife habitat values (for example) today than is a rough compilation of how those stands may have been harvested up to 80 or more years ago.

Response to Comment 62
Given the amount of time normally considered necessary to develop late seral forest, the level of development of stands in this direction is both relative and subjective. Differences of a few decades in one direction or the other are likely to result in only slight variations in stand structure, other effects aside.

Information from spatially accurate resource surveys of current stand characteristics is a better indicator of the nature of those stands and their wildlife habitat values (for example) today than is a compilation (of uncertain accuracy) of how those stands may have been harvested up to 80 or more years ago. The latter information was used to develop Map Figure K in the DEIR and to support the wildlife habitat analyses contained in it.

Response to Comment 63
See response 61. The term "very old" is not defined. The earliest logging of the area which is now JDSF is unknown, but evidence suggests that it may have been approximately 1850 to 1860. Areas regenerated at that time may contain second-growth trees up to 145 or 155 years of age. However, subsequent logging of the remaining old-growth, in combination with subsequent burning has resulted in significant changes to earlier regeneration and stand development.

Response to Comment 64
Potential recruitment areas for the Marbled Murrelet are discussed beginning on page VII.6.6-78. The current and potential habitats are discussed relative to the ecology of the Marbled Murrelet, including habitat location, structure, and general management. The DEIR provides the Additional Management Measure for Contribution to Recovery of Marbled Murrelet Habitat. This additional management measure calls for a collaborative process (including DFG, State Parks, and others) to re-evaluate and potentially redistribute the marbled murrelet habitat recruitment areas established in the DFMP. If they can be identified, the older stands noted in comment 63 could be considered as a part of this process. Also, it should be noted that the ADFFMP provides for an additional area of 1,549 acres in the Russian Gulch/Lower Big River area to be designated for the development of late seral forest conditions to provide potential Murrelet habitat.

Response to Comment 65
Wildlife do not respond to the age of stands per se—stands of the same age in the same area can have significantly different habitat characteristics depending upon a number of factors (such as composition of the original stands, soils, aspect, intermediate treatments, fire, pests and diseases, etc.). Given this fact, information on actual current stand composition and structure are much more meaningful from a wildlife habitat perspective than stand age. Further, the available information on stand age at JDSF is of uncertain accuracy in terms of both stand establishment and stand modification over time, as well as spatial location. JDSF does have spatially accurate information on current stand composition and structure. This information can be classified for its habitat characteristics, and this classification information can be used in models to evaluate its value to various wildlife species. This is the approach that has been taken in the DEIR. Section VII.6.6, Wildlife and Wildlife Habitat, makes extensive use of the Department of Fish and Game's Wildlife Habitat Relationships System (CWHR) on both a spatial and nonspatial basis. Map Figures J and K provide CWHR habitat classification information for JDSF and the larger cumulative effects assessment area.

The late seral development areas were designated primarily due to their relationship with other forest attributes. For example, the riparian zones are so designated, due to the widely recognized value of riparian zones as habitat and corridors for many species of wildlife, as well as their value to aquatic habitat and water quality. Other late seral development areas were designated to form larger patches of late seral forest adjacent to existing old growth forest. The Mendocino Woodlands STA is designated due to a combination of factors, including proximity to state parks and the coast, as well as the fact that it represents a large contiguous patch of even-aged young forest that has not been significantly developed. The Russian Gulch/Lower Big River Marbled Murrelet habitat recruitment area was designated (in the ADFFMP) due to its proximity to areas know to be actively used by Murrelets and adjacent to State Park land. It is widely recognized that forest stands tend to develop characteristics of old forest as they age, including the development of unique structural elements, such as snags, down logs, cavities, large limbs, and broken tops.

Response to Comment 66
Some of the area included in the short-term harvest schedule has not been logged since 1925. Most of the proposed harvest in this area is selective in nature, although even-aged management also is proposed. The ADFFMP provides for a 3-year initial implementation period for the new plan, during which time there will be no even-aged management, except potentially as part of an experiment on the Caspar Creek watershed.

Response to Comment 67
The Board and the Department recognize the fact that recreationalists enjoy the view of these stands, and enjoy recreating in and near them. For this reason, a number of management constraints have been applied in these areas, including the establishment of buffers, limitations on the forms of silviculture to be applied, and specific management limitations near Class I and Class II watercourses. Some of the area in proximity of Camp One has been selectively harvested in the past, taking aesthetics and recreation into account. Recreation is a secondary, but recognized use of JDSF, and demonstrations of the compatibility between timber production and recreation are encouraged by the Board's policies. Final disposition of these two plans is subject to satisfaction of an existing settlement agreement and potential negotiations regarding the existing timber sale contracts.

Response to Comment 68
The late seral development areas have been identified as areas that will be managed to achieve late seral characteristics in the future. These areas are comprised primarily of second-growth forest that is not yet late seral in character. Selective harvest is proposed adjacent to most of these areas, but will not preclude the development of late seral characteristics within them. Habitat connectivity has been considered in detail within the DEIR analysis (see section VII.6.6, Wildlife and Wildlife Habitat). There is very little forest within JDSF that is currently classified as old forest. The second-growth forest exists in large patches that are well connected throughout the forest by riparian zones and other habitat types.

Response to Comment 69
The potential fragmentation of habitat for species has been considered in detail in the DEIR (see section VII.6.6, Wildlife and Wildlife Habitat). Results of the analysis indicate that significant impacts associated with fragmentation are not expected to occur. Alternative F does not entirely prohibit even-aged management; thus some minor fragmentation could occur under this alternative.

Response to Comment 70
The incremental and cumulative effects of logging on forest stands and watersheds have been considered in detail in multiple sections of the DEIR, including the individual resource analysis sections (see, e.g., VII.6.1, VII.10, and VIII..

Response to Comment 71
The analysis in DEIR section VII.6.6 considers the effect of harvesting on all forest stand types spatially within JDSF to the end of the first decade and non-spatially both within and outside JDSF to 2060. The analysis includes second-growth stands that, due to their current average tree diameter, composition, and structural conditions, might have the potential to develop late seral forest characteristics earlier than other stands. The analysis did not find that Alternative C1, including the effects of the short-term harvest schedule and the inclusion of the identified mitigation measures and additional management measures, would have a significant adverse impact on wildlife species or habitat.

It should be noted that the term “likely to develop late seral characteristics the soonest” is ill defined. For example, the term is not always synonymous with “oldest”. A stand of free to grow middle aged trees on a good site can easily achieve late seral characteristics sooner than a densely stocked stand of older trees on a low site. The commenter’s frustration over what she interprets as a lack of willingness to recruit late seral conditions from second growth stands on an oldest-first basis is

ultimately a reflection of a difference in management approach to cultivating late seral stands on the Forest.

Response to Comment 72
The tabular information on CWHR classification of forest area (found in section VII.6.6 of the DEIR) and Map Figures J and K in the DEIR present the best available information on the presence of these stand types on JDSF and within the larger cumulative effects assessment area used in the DEIR. This information was used as a key part of the impact assessment in the DEIR.

Response to Comments 73 and 74
See response to comment 72.

The commenter makes a key misinterpretation of the term “life of the Management Plan” used in the DEIR on page VII.6.3-33... The life of the management Plan is the next 10-15 years. Page 18 of the DFMP states: “The Forest Management Plan directs the management of Jackson Demonstration State Forest for the next 10 to fifteen years, or until a subsequent plan or major revision is approved.” In general, the anticipated life of a management plan for a Demonstration State Forest is 5-10 years. This lifespan is based, in part, on Board policy that requires management plans to be reviewed at least every five years (Board Policy 0351.10).

There is solid commitment in the ADFFMP and the DEIR/RDEIR to create and maintain late seral forest conditions on JDSF. Contrary to the commenter’s claim, the discussion on pages VII.6.3.34-38 clearly concludes that late seral stands will develop over substantial portions of the Forest. This result is backed up by the 100-year long term sustained yield analysis. Table 1 in the ADFFMP shows the desired future forest conditions, the overarching goals for all management of the Forest. Table 1 shows that the goal is to cultivate 45 percent of the Forest acreage in late seral or old growth, older forest structure, and mature and large trees.

Response to Comment 75
There is no intent on the part of the Board or Department to deliberately misrepresent information in the DEIR. See responses to comments 71-74.

Response to Comment 76
The definition and description of “late seral or “late successional” are sufficiently defined in the DEIR. Both terms are briefly defined in the glossary of the DEIR (see Appendix 2).
The commenter appears to request those defining characteristics of two stages of forest development that occur along a continuum. While stages at the extremes of that continuum and their characteristics are readily observed, those defining characteristics of closely related stages are not.

The US Forest Service sought to identify ecological characteristics for a number of forest types in the early 1990s (USDA Forest Service Old Growth Definitions—Characteristics for Eleven Forest Cover Types. Pacific Southwest Region, California, San Francisco.). “Successional stages are most often recognized by structural characteristics such as size of trees, distribution of tree sizes, presence and size of snags and logs, understory composition and heterogeneity, and horizontal diversity in structure. Late successional forests in general contain trees that are large for their species and the site, often a variety of tree sizes, large snags and logs, and a developed and often patchy understory. While the structural features of late successional forests, or old-growth, are generally recognizable, a myriad of community and ecosystem interactions (or functions) may also be diagnostic but are more difficult to measure and describe.... Stand age is often considered less important than structure in describing late successional forests because the rate of stand development depends more on environment and stand history rather than age alone.”

Response to Comment 77
The terms denote a segment of the stand development continuum, as noted by the comment. Depending upon the source of reference, this may include the concepts of mature and old-growth forest. To avoid conflict and confusion, the DFMP and ADFFMP specifically identify stands that are

described as old growth and specifically identify stands that will be managed to develop into late seral and older forest conditions. The names applied to the phases of stand development bear less importance than the characteristics that are being managed for. As stated in the material quoted in the response to comment 76, stand age is considered less important than stand structure in describing late successional forests.

Response to Comment 78
As stated above, habitats have been projected independently of nomenclature associated with phases of stand development. The point at which any particular stand can be characterized as "mature phase" late seral forest is not distinct, and cannot be predicted with any certainty. Section VII.6.6 of the DEIR provides detailed CWHR classification projections for all alternatives over a period from 2004 to 2060. Readers can make their own conclusions as to how those classifications meet their conception of the vague concept of "mature phase" late seral forest.

Response to Comment 79
The Board recognizes that older forms of forest have value to many species of wildlife, depending upon the habitats represented and the range within which the forest type is found. This recognition is embodied in the ADFFMP's designation of one-third of JDSF for the development of late seral and older forest characteristics.

Response to Comment 80
The assessment of potential impacts to plant and animal species considered forest type, habitat type, presence of special habitat elements (such as snags and large woody debris), as well as potential future habitat development. This approach takes into account the characteristics of the forest to a greater level of detail than can be considered by using the term relatively less defined term "mature", which is a concept that potentially spans multiple habitat types.

Response to Comment 81
The short-term harvest schedule does not propose to harvest in forest stands that are late seral or late successional, based upon current information. If stands are found within potential harvest areas that meet the definition of late successional forest as described in the Forest Practice Rules, the potential impacts to species normally associated with this type of forest will be considered as the project is planned (Title 14 CCR 919.16). Other management limitations apply as well, including provision to retain old-growth trees, stands, and aggregations (ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure).

Response to Comment 82
Current "old-growth" forest stands are identified and mapped in the DEIR (see Map Figure D). In addition, individual old-growth tree characteristics are defined. "Late successional" or "late seral" as used in the DEIR and when referring to late-successional development or recruitment areas is meant to identify those forest stands that will be managed toward "mature" or "old-growth" conditions. The intent of the language used was to avoid confusion with current "old-growth" on JDSF that is recognized by the public. It is not determinable what proportion of late seral (successional) would be considered "mature", "over-mature", or "old-growth" over the planning period and within the designated recruitment areas given the forest structure underpinnings of the terms' definitions and their related positions along the continuum of forest development—although all of these forest conditions can be represented in the more general "late successional stage" of forest development.

A variety of management objective and ecological considerations (Marbled Murrelet habitat recruitment areas, Special Concern Areas for late successional development, rate of attainment of late successional conditions) went into the identification of late successional recruitment areas. It is highly likely that these areas currently contain stands that may be considered "mature" or individual "old-growth" trees.

Response to Comment 83
The Board defines terms in the Forest Practice Rules to make their meaning understood and a matter of law. It is incorrect to state that any single definition is either correct or in error. The terms late seral, late successional, and old growth have been defined in many ways. The reader is referred to DEIR Appendix 2. Also, see response to Comment #76.

Response to Comment 84
The Department defined late-seral and late successional in DEIR Appendix 2 page 5 for the purposes of environmental analysis on JDSF. The definitions provided, when considered with the definition's reference to the Forest Practice Rules would include forest conditions that the commenter considers "mature" and "old-growth". The phrase, "having biological characteristics and functions similar to old-growth forests," should denote forest conditions that are "mature" but have not yet attained those of "old-growth" but that can still be categorized under the more general term "late successional" or "late seral". See response to comment 82.

Response to Comment 85
This comment appears to be primarily about the Forest Practice Rules, not the DEIR or DFMP. The California Board of Forestry and Fire Protection defined the term "late succession forest stands" in the Forest Practice Rules for regulatory purposes. The definition should not be characterized as inherently incorrect for all circumstances. Mature forest is another concept that has been the subject of multiple definitions in the literature. The Board's definition of late successional forest stands does not include the concept of mature forest, nor does it need to do so to convey the regulatory requirement that was intended by the rules that accompany the definition (Title 14 CCR 919.16). The NSO 4(d) rule, cited in the comment, is another definition that accompanies regulation. A quick reading of the definition indicates that it is not precise and is intended only to generalize a very broad spectrum of potential forest conditions associated only with stand age. Neither definition is either correct or incorrect, but each has some regulatory significance.

Response to Comment 86
The relative biological value of forest conditions using species richness as a measure are described on DEIR Page VII.6.6-2 and Figure VII.6.6.2. DEIR Pages VII.6.6.17-22 also summarizes the relationship of species use to forest structure for meeting reproduction, foraging and cover requirements. Regardless of differing definitions of "mature" or "late seral" forest, the focus on late seral forest or older forest development on JDSF necessarily implies that current young growth stands will be required to transition through various stages of growth before attaining "mature," "older forest," "late seral," or "old growth" conditions.

Response to Comment 87
Acreage and location of "late successional" forest other than known "old-growth" stands is reported as stands with a CWHR habitat typing designation of 5M, 5D, or 6 (DEIR Section VII.6.3-13-15, VII.6.3-26, and VII.6.3-33-38). These CWHR labels are DBH- and canopy-closure based and are reported throughout the Wildlife and Wildlife Habitat Section 6.6.8 Comparison of Alternatives, beginning on DEIR Page VII.6.6-131. See also response to Comment #61.

Response to Comment 88
Comment noted. See responses to Comment #61 and #87.

Response to Comment 89
The statement correctly characterizes the DFMP. Also, under the now-proposed ADFFMP, substantially more area of the Forest is designated for the development of late seral and older forest characteristics (a total of one-third of the Forest area). Under the ADFFMP, the area of JDSF dedicated to preservation and development of late seral forest conditions includes the identified old-growth groves, identified augmentation areas around selected groves, watercourse and lake protection zones, the area of upper Russian Gulch and lower Big River, and most of the Mendocino Woodlands STA. In total, these areas comprise about 22 percent of JDSF.

Response to Comment 90
The statement is correct.

Response to Comment 91
Under the ADFFMP, out side of the Class I and II watercourse and lake protection zones, about 5,000 acres of JDSF, or 10 percent, is designated for late seral development or old growth. Additional area will be managed for the development of older forest structure conditions. In total, about one-third of the Forest will be managed for late seral, older forest structure, or old growth conditions.

Under the ADFFMP, even-aged management is permitted on only 26 percent of the forest area. Thus, most of the stream zone is located immediately adjacent to forest stands that will be managed on an uneven-aged basis. The designation of the contiguous 6,800-acre Older Forest Structure Zone, which encompasses most of the old growth groves and old growth augmentation areas, will help to increase the interior forest quality of these late seral forest areas see Map Figure 1 in the RDEIR or Map Figure 5 in the ADFFMP). The term “interior” is somewhat subjective, but tends to exclude forest near distinct stand edges, including area adjacent to residential neighborhoods, openings, or other forms of vegetation.

Response to Comment 92
As indicated in the response to the previous comment, the ADFFMP substantially increases the amount of the Forest designated for the development of late seral and older forest conditions. The ADFFMP also recognizes the recreation value of these areas. However, elevating the management-related importance of habitat and recreation is not exclusively synonymous with the concept of area dedicated to development of late seral or older forest structure. We note, nonetheless, that, dedication of area to preservation of old growth forest and development of late seral forest has not been represented in prior management plans.

Response to Comment 93
A complete survey of Class I watercourses has not been made on JDSF. The length of Class I watercourse is an estimate based upon past surveys, with the length of waterway taken from the geographic information system (GIS). As such, this length of waterway can be expected to be an under-estimate of stream length, since waterways tend to be much more sinuous than represented on maps.

The minimum width of watercourse protection zones is based upon slope distances specified in the Forest Practice Rules (Title 14 CCR 916.5). For JDSF, the minimum zone width for Class I watercourses is 150 on either side of the stream, beginning at the watercourse transition line, which may be many feet from the center of the stream. Zone widths are often expanded for individual projects, but may not be less than specified in the Forest Practice Rules or the management plan. Class II watercourse protection zones on JDSF may vary between 50 and 100 feet in width, depending upon side-slope and characteristics associated with individual streams and timber harvest proposals. It is quite common for zone widths to be wider than the minimums required by the Forest Practice Rules or specified in the management plan. As such, the representation of acreage associated with watercourse protection zones should be treated as an approximation, not an exact figure.

Response to Comment 94
See response 93.

Response to Comment 95
See response to comment 93.

As stated in response 93, the zone widths required by the Forest Practice Rules, and as specified in the DFMP should be considered minimums. The actual width of zones, as applied in the field, will vary on the high side from the specified minimums, due to many potential site-specific factors. The estimates of total potential zone acreage for JDSF come from estimates of current watercourse extent

and classification, and take into consideration adjustments where Class II watercourses join Class I watercourses or otherwise overlap.

The Forest Practice Rules specify generally wider watercourse protection zones in areas with steeper slopes, specified by a range of slope class (Table 1, Title 14 CCR 916.5). It is incorrect to state that steeper slopes result in lower protection zone acreage. For example, Table 1 specifies a Class II watercourse protection zone width of 75 feet where the sideslope above the stream is 30 to 50 percent, but a zone width of 100 feet where the sideslope exceeds 50 percent. Zone widths, as applied in the field, will vary depending upon site-specific conditions and other management considerations. While it is mathematically possible for an individual zone width to be narrower for a steeper slope under specific circumstances, in general, the widths specified in the rules and applied in the field tend to be wider for steeper slopes.

Response to Comment 96
No one can state with any certainty how long, and under what exact set of circumstances, a forest stand will develop late seral characteristics. Forest stands are dynamic and subject to many forms of natural disturbance. The management plan specifies measures to retain and recruit large trees within the watercourse protection zone, while maintaining native hardwoods, developing multiple canopy layers, and retaining a high level of basal area and overstory canopy. These measures, along retention of snags and down logs, and selective cutting within the zone, will move stands toward development of late seral characteristics. It is not known how long it will take for individual stands to achieve late seral characteristics.

Response to Comment 97
See responses 92 and 93. Under the proposed ADFFMP, one-third of JDSF would be designated for the development of late seral and older forest conditions.

Response to Comment 98
The ADFFMP dedicates specific forest areas to development of late seral characteristics. A speculative future demarcation between a late seral development area and managed stands that surround it is not a significant environmental issue. The ADFFMP proposes to increase the amount of late seral forest within JDSF to the benefit of species normally associated with this type of forest, resulting in a positive cumulative effect. Areas designated for development of late seral or older forest structure conditions have most of their adjacent JDSF areas designated for uneven-aged management, which will substantially reduce the potential for an “island effect” due to relatively continuous forest canopy. The late seral development areas designated for the Mendocino Woodlands STA and the Russian Gulch/Lower Big River areas are bordered to the outside in large part by State Park land.

Response to Comment 99
The forested areas of JDSF represent habitat for aquatic and terrestrial species. Management, combined with natural stand development and growth, produces habitats that vary and are preferred and utilized by a variety of different species. Forest management is appropriately proposed in stands that have achieved a high level of growth and potential production.

The stands in the West Chamberlain Creek watershed that are included in the short-term harvest schedule will be partially cut, utilizing a prescription called commercial thinning. Old trees will be retained as specified in ADFFMP Chapter 3, Protection and Enhancement of Wildlife Species, Habitat, and Forest Structure. Further, the initial implementation period harvesting constraints specified in the ADFFMP would apply. Based upon preliminary project planning in the field, the proposed harvest area will not adjoin the late seral development area, but will be located partially within the older forest structure zone. Partial harvest in this area has potential to accelerate the development of wildlife habitat structure normally associated with older forests.

Response to Comment 100
All harvesting proposed in the short-term harvest schedule was included in the wildlife habitat impact modeling conducted in section VII.6.6, Wildlife and Wildlife Habitat. This modeling included the use of the FRAGSTATS model, which is a spatially-based model that considers the adjacency of habitat types and their changes over time. This modeling did not indicate a potential significant effect.

In addition to the programmatic level assessment done in the DEIR and RDEIR, each timber harvest proposal listed in the short-term harvest schedule will eventually be developed as a timber harvesting plan (THP). During the planning process, operational specifics will be developed, including more refined estimates of the extent of the project area, the stand treatments to be applied, and timber yarding and log hauling specifics. In addition, survey will be conducted as necessary for plant and animal species of concern, and potential habitat-related impacts will be addressed. In addition, each project will include a cumulative impacts assessment that includes the immediate project area and the surrounding assessment area(s). This assessment will include a consideration of the habitats that are present. Without knowledge of these project specifics, an evaluation of the potential effects upon the individual old growth groves would be speculative.

The identified short-term harvests adjacent to areas designated for development of late seral conditions will not alter the designation of the latter areas. Areas designated for development of late seral or older forest structure conditions have most of their adjacent JDSF areas designated for uneven-aged management, which will substantially reduce the potential for an adjacency effect, due to the relatively continuous forest canopy that will be maintained (see Map Figure 5 in the RDEIR). The development strategy to be applied in each late seral development area has not yet been specified, and may involve adding or omitting a number of individual management actions. It is therefore speculative to suggest that a complete assessment of impacts can be performed at this time.

See also the above response to comment 81.

Response to Comment 101
The potential for cumulative impacts to occur has been thoroughly considered. The potential for adverse impacts due to the extent and fragmentation of habitat has been considered in detail in DEIR section VII.6.6, Wildlife and Wildlife Habitat. The comment does not provide sufficient detail to develop a specific response. Alternative and impact analysis with the implementation of mitigation and management measures identified indicates that significant adverse impacts will not occur, and some beneficial effects will result. The proposed ADFFMP designates substantially more of the area of JDSF for the development of late seral and older forest structure conditions than the DFMP.

Response to Comment 102
Comment noted. This comment is not an environmental issue.

Response to Comment 103
Comment noted. This comment is not an environmental issue.

Response to Comment 104
The Board agrees that each of the alternatives (excluding Alternative A) would facilitate abundant research and demonstration projects. However, as the breadth of potential forest management options is reduced, so is the number and variety of potential research and demonstration projects. The Board directed the development of Alternative G, which is embodied in the ADFFMP, specifically to strengthen the research and demonstration mission of JDSF.

Response to Comment 105
See the response to the referenced comment letter by Patrick Higgins (DEIR electronic comment letter E-26). The Federal government has not established watercourse protection standards for this region, beyond those that have been recommended as guidance for habitat conservation plans. The potential for cumulative impacts to salmonids has been thoroughly considered (see DEIR sections

VII.6.1 and VIII). Significant cumulative effects are not expected to occur. Also, note that the ADFFMP provides for the establishment of three riparian restoration research and demonstration areas.