

November 20, 2008

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RE: Comments on the Draft Environmental Impact Statement for the Proposed Issuance of an Incidental Take Permit for the Elliott State Forest Habitat Conservation Plan (DEIS)

Thank you for the opportunity to comment on the Oregon Department of Forestry (“ODF”) Elliott State Forest draft Habitat Conservation Plan (“HCP”), and the U.S. Fish and Wildlife (“FWS”) and National Marine Fisheries Service (“NMFS”) draft Environmental Impact Statement (“DEIS”).

Please consider these comments from Umpqua Watersheds, Cascadia Wildlands Project, Center for Biological Diversity, Coast Range Association, Klamath Siskiyou Wildlands Center, Oregon Chapter Sierra Club, and Oregon Wild in your final decision. Contact information for the organizations is on the last page.

The 90-day comment period was not sufficient for the public to review the draft HCP and the DEIS. The agencies have been working on this HCP for eight years. During that time, the public was offered only one public meeting on an early draft, 3 years ago in 2005. The public was denied access to all working drafts of the HCP over all those years. After the release of thousands of pages, it is unreasonable to expect the public to comprehensively understand and comment in just 90 days. Some of the information is unclear, and we submitted questions to the FWS almost two weeks ago. But the comment time was so short, not even our questions could be answered in time.

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1. Failure to quantify Take for murrelets and spotted owls

32,000 acres of advanced structure will be harvested over the term of the HCP¹ under the preferred alternative, almost 1/3rd of the entire forest, and 2/3rds of the old, native forests that exist on the Elliott today. This level of old forest logging will result in a significant “take” of all endangered species on the Elliott, including coho salmon, marbled murrelets, and the spotted owl.

The DEIS failed to quantify the level of incidental take for the marbled murrelet and northern spotted owl. The HCP claims that: “The EIS contains detailed information on the effects of each alternative, including the amount of potential incidental take of northern spotted owls and marbled murrelets.”² However, there was no detailed information in the DEIS. This is an important piece of information that is required by law, and that the public must have the opportunity to comment on.

Section 10 of the Endangered Species Act (“ESA”) requires that the ODF specify the impact which will likely result³. The United States Court of Appeals for the Ninth Circuit interpreted a similar requirement in Section 7 and held that FWS had violated the ESA because it did not specify the impact of the take in terms of the number of spotted owls that would be taken.⁴ The failure to specify the amount of take in the HCP or in a proposed Incidental take Permit result in a failure to provide the public with a meaningful opportunity for comment on the permit application and HCP. Therefore, the public not able to fully participate in this federal agency action. The failure to specify the take in the HCP or in draft incidental take permits make it impossible for the FWS to demonstrate ODF will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.

2. Northern Spotted Owls

The Elliott State Forest is the only public land between the 209,000-acre Millicoma Tree Farm and the Pacific Ocean. This hole in public lands means the Elliott is of critical importance to the regional populations of owls in the coast range. Yet the HCP uses faulty data to develop owl protection and ignores the influx of barred owls on the Elliott.

Barred Owls: According to a 2003 survey of the Elliott, barred owls were detected at eight spotted owl sites including two sites that appear to have failed likely in part because of barred owls⁵. The FWS minimizes this threat and fails to present any information about the barred owl on the Elliott in the DEIS. Since the DEIS failed to discuss or consider this information, it is impossible to determine the fate of the spotted owl in the Elliott.

The FWS is using conflicting data and information on the barred owl. In the 2008

¹ HCP 9-31

² HCP 10-1

³ 16 U.S.C. § 1539(a)(2)(A)(i)

⁴ *Oregon Natural Resources Council v. Allen*, 476 F.3d 1031, 1037-38 (9 Cir. 2007).

⁵ Kingfisher Ecological 2003.

Recovery Plan, the FWS says that Barred Owls are a major threat to the spotted owl, and that “Based on the best available scientific information, competition from the barred owl (*S. varia*) poses a significant and complex threat to the spotted owl.”⁶

Yet only three months later, the FWS says the opposite in the Elliott HCP DEIS, claiming “substantial uncertainty is associated with the effect of the barred owl on the northern spotted owl.”⁷ Incredibly, just three months after documenting how the barred owl poses a significant threat to the spotted owl, the FWS claims that on the Elliott, “it is not possible to make a meaningful analysis of the influence of management on the relationship between barred owls and spotted owls in the study area.”⁸

The threat posed to the spotted owl by barred owl is part of the cumulative impacts that ODF must evaluate when considering the impacts of logging. The DEIS completely fails to discuss or disclose key information.

DEIS fails to consider Recovery Action 32 of the 2008 NSO Recovery Plan. Of the protection measures built into the Final Recovery Plan for the NSO, Recovery Action 32 is one of the most important recommendations for non-federal lands, especially non-federal lands that are coping with barred owls impacting spotted owls.

Recovery Action 32: “Maintain substantially all of the older and more structurally complex multi-layered conifer forests on Federal lands outside of MOCAs....
Encourage maintenance of forests with these conditions on non-Federal Lands.”

The Oregon Department of Forestry’s HCP does not even attempt to adhere to recovery action 32. The proposed action will clearcut log 12,488 acres of structurally complex, nesting, roosting and foraging habitat over the HCP’s 50-year duration⁹. This flatly fails to “encourage maintenance” of structurally complex multi-layered forests.

No current spotted owl surveys: The DEIS is flawed because it relies on outdated owl survey information. The last survey was 2003, 5 years ago. Because the survey in 2003 was the first time barred owls were found on the Elliott, and because there were suddenly so many barred owls, even though they were not the subjects of the survey, the FWS should have required a more recent survey. It is quite possible that additional barred owls are living on the Elliott, and additional spotted owl territories have been lost. The ODF did a spotted owl survey on all state forestlands in 2007, except for the Elliott. Those surveys should have been expanded to the Elliott, the only state lands applying for a spotted owl HCP ITP. The lack of current information ensures that the DEIS does not accurately predict impacts to owls and undermines mitigations in the HCP. For all the FWS knows, Conservation Areas are protecting barred owls.

Last owl survey miss-counted owl Sites. The 2003 survey information appended to the

⁶ Final Recovery Plan for the Northern Spotted Owl. FWS. May 2008

⁷ DEIS 3.6-6

⁸ DEIS 3.3-6

⁹ DEIS at 4.6-56

HCP was unclear on what sites the ODF was counting as the 13 occupied sites¹⁰. Table 4 lists dozens of sites, and never specifies which are the 12 pairs and one resident single considered occupied in the HCP. However, it appears that one owl pair was counted twice (Upper Mill and Tom Fool), and one pair was counted even though the site was vacant (Murphy Creek). Also, at least three of the sites listed in table 4 are on private land (Bickford Creek, Four-Mile and Lockhart Road) and one site is on BLM land (Tom Fool Creek¹¹). This vague and unclear information on the current states violates NEPA.

Most T&E Core areas are too small. Of the 93,000 acres covered by the Elliot State Forest, only 22,598 acres will be designated conservation areas¹², and only about 50% of those contain older forests. These conservation areas are too small to provide for conservation. The mean core use area for northern spotted owls is 214 acres¹³. Yet, 31 of the 48 T&E core areas contain less than this acreage. The majority of species are actually limited to core areas that are 50-60 acres in size.¹⁴ Moreover, the T&E core areas are not necessarily high quality habitat. As a result, the T&E core areas will not minimize the impact of the takings caused by logging their habitat.

The DEIS allows NSO nest trees to be cut down. The HCP says that “Known nest trees will be retained as part of the live tree retention in harvest units, unless prohibited by safety concerns or operational constraints.”¹⁵ This direct take of spotted owls is not allowed under the ESA. The DEIS never considered the impacts to a spotted owl nest in a retained tree in the middle of a clearcut. Clearly, the nest will fail. The DEIS is also allowing the ODF to build new roads (operational constraints) right over spotted owl nests, with impunity.

DEIS page 4.6-56, says “All suitable spotted owl habitat in the study area would be surveyed for spotted owls at intervals of approximately eight years, and nests discovered during these surveys would be protected as known nests.” This gives known nests virtually no protection. Any spotted owls that have been displaced (perhaps by barred owls) from the protected HCAs could be killed.

“... unknown nest trees outside designated habitat reserves could be unintentionally felled. These could be the nests of new (unknown) spotted owl pairs, or the relocated nests of known pairs that previously nested within reserve areas. Adults attending nests are highly mobile, and would be able to avoid being harmed in most cases. In contrast, eggs would be destroyed and young owls would have a high likelihood of being killed... the cumulative potential for at least one nest to be felled over the next 50 years would be at least moderate.”¹⁶

But the DEIS failed to consider that nests can be left to fail in a retention tree surrounded by a clearcut, or cut down if ODF deems a road is necessary. This violates NEPA and the ESA. There is currently 25,698 acres of NRF habitat on the Elliott, yet only 5,857 acres

¹⁰ See Appendix F, Table F-4

¹¹ DEIS 4.655 says that Tom Fool is on adjacent federal land.

¹² HCP at 3-9

¹³ HCP at 6-4.

¹⁴ Table 5-2 shows 15 core areas are less than 100 acres in size

¹⁵ HCP 6-11.

¹⁶ DEIS 4.6-48

are protected within T&E Core areas.¹⁷ Clearly, many NSO nests could be “known” and left out to hang in the middle of a clearcut.

The DEIS discloses that the current HCP is inadequate, and that the 1995 HCP EA and ITP were in error. Under Alternative 1, the “no-action” alternative and the current management under the 1995 HCP, only three activity centers would have “sufficient suitable habitat under Alternative 1 to give resident owls a high potential for persistence”¹⁸. This contrasts sharply with the conclusions of the biological opinion for the HCP issued in 1995, which predicted that 13 activity centers would be maintained for the life of the permit¹⁹. This new information means that the FWS should reconult on the biological opinion for the original HCP before ODF exceeds their take allowance.

The DEIS table 4.6-2 shows us that, of the 13 OWL activity centers (and 4 historic centers), only *three* have a high potential for persistence under the 1995 HCP over the next 50 years-- just three. And one of those is the Alder Creek Owl, found to have a barred owl lurking near it's cite in the 2003 surveys. Thus, one of the best activity centers could not be protecting a barred owl.

What is also alarming is that the two owl pairs that were identified in the 5-year review as the most productive owls in the Elliott, that should receive the most protection, Roberts Creek and Salander Creek owls, BOTH are predicted to have a LOW potential for persistence under the 1995 HCP over the next 50 years, even without taking into account barred owls. This lack of protection for the existing HCP must be addressed immediately by the FWS.

The 2008 HCP, Alternative 2, will also leave few owls with sufficient habitat to have a high likelihood of persistence, although according to the DEIS, more than under Alternative 1:

Overall, Alternative 2 would increase the potential for persistence of known resident spotted owls when compared to Alternative 1. Four activity centers would have high potential for persistence and another four would have a moderate to high potential for persistence under Alternative 2, as opposed to three with high potential and two with moderate potential under Alternative 1 (DEIS 5.6-55).

Incredibly, Alternative 2 will allow for greater persistence of owl activity centers, even though more logging of habitat will be allowed, along with greater decreases in owl habitat:

Compared to Alternative 1, Alternative 2 would result in 1,450 fewer acres of suitable habitat in the study area at the lowest point (36,572 acres versus 35,122 acres), 6,149 fewer acres of habitat in the study area at Year 50 (47,869 acres versus 41,720 acres), more years in which the study area is below 40 percent suitable

¹⁷ HCP 6-14.

¹⁸ DEIS 4.6-46

¹⁹ U.S. Fish and Wildlife Service, October 2, 1995, Biological Opinion on the incidental take permit for northern spotted owls and marbled murrelets, to Oregon Department of Forestry on the Elliott State Forest.

habitat (5 years versus 25 years), and a smaller percentage of suitable habitat consisting of NRF habitat at Year 50 (68 percent for Alternative 1 versus 61 percent for Alternative 2).

This relentless assault on spotted owl habitat will cause the loss of most owl sites on the Elliott, from 24 sites in 1995 to in all likelihood 4 or fewer spotted owl sites under the new HCP. This magnitude of decline places the spotted owl at increased risk of extinction, and increased risk of extirpation in the coast range, where there are no MOCAs or designated critical habitat.

The DEIS fails to consider the best available science on impacts to the spotted owl from logging. One example we gave earlier was where the Recovery Plan considered barred owls a significant threat, and the DEIS dismisses barred owls as a threat. Another example is when the DEIS concludes: “Resident spotted owls were considered to have a high potential for persistence if an activity center had at least 200 acres of suitable habitat in reserve areas within 0.5 mile at least 500 acres in reserve areas within 0.7 mile, and at least 40 percent suitable habitat within the surrounding management basin.”²⁰ It is unclear why only 0.5 mile was used, when the final recovery plan for the spotted owl uses 1.5 miles as in the Coast Range for analyzing whether there is sufficient habitat to maintain survival and productivity of owl sites. The DEIS is allowing weaker standards for the Elliott State Forest, an important area for the spotted owl, without disclosing the reasons to the public.

0.5 or 0.7 miles are 502 acres and 985 acres respectively, both of which are considerably smaller than home ranges found on the Elliott in Anthony et al. (2000). The median home range size on the Elliott was 2,537 acres, which is a radius of 1.1 to 1.2 miles.²¹ None of the owl sites on the Elliott would be considered likely to persist if the DEIS had analyzed the amount of habitat in a 1.2-mile radius.

Suitable Habitat: The DEIS uses an inappropriate definition of suitable habitat. The HCP states that advanced structure (suitable habitat) is defined as

Twenty or more trees per acre of 18 inches or larger DBH and 100 feet or more in height, of which at least ten overstory trees per acre are at least 24 inches DBH. The quadratic mean diameter is 15 inches or more based on trees of at least 8 inches DBH (HCP 5-6).

However, Anthony et al. (2000) found that on average, stands used by owl for nesting and foraging had 50-55 trees per acre with an average DBH of 24 inches. This definition has more large trees than stands designated as suitable habitat in the Elliott HCP.

The HCP and DEIS requires some of suitable habitat to have 8 of trees 32 inches DBH or larger, known as “high-quality habitat for northern spotted owls and marbled

²⁰ DEIS 4.6-4 and 4.6-5

²¹ Anthony et al. 2000

murrelets²². But that means that the smaller kind of advanced structure is not providing high quality habitat for the owl. The conclusions in the DEIS failed to discuss this.

See sections 4 and 5 below for more problems with Advanced Structure and Ingrowth.

Finally, it is important to note that advanced structure in conservation areas set aside for both the spotted owl and murrelet, only contains 50% advanced structure, and the other 50% is less, either early or intermediate structure. In spite of the, the FWS considered all conservation areas as advanced in their assessments.

The combination of these problems on the analysis of the spotted owl in the Elliott, the FWS must not issue a new ITP, and must reconsult on the existing HCP.

3. Marbled Murrelets

The status review report for the Marbled Murrelet was completed in March 2004.²³ Released to the public in early May, it finds that the murrelet population is still in decline and continues to need federal protection. The report predicts continued murrelet population declines in Oregon due to loss of nesting habitat from logging and urbanization. Population trend models cited in the report predict that marbled murrelets may disappear from all of their native Pacific Northwest range, including the Elliott, within 100 years.

The DEIS fails to protect adequate nesting habitat for the marbled murrelet. The HCPs preferred alternative increases logging by 75% in mature forests (including murrelet suitable and potential habitat) and increase clearcutting by 60%. The 1995 HCP definition of murrelet habitat results in **42,683** acres murrelet habitat that currently exists in the Elliott²⁴. The new, 2008 HCP definition of mapped murrelet habitat results in only **16,680** acres, a huge decrease in murrelet habitat.²⁵

This drastic reduction and fragmentation of older forests will be detrimental to the murrelet. Because of the continued decline of murrelets and murrelet habitat, all remaining occupied and unsurveyed, suitable habitat on the Elliott State Forest is critical to the survival and recovery of the marbled murrelets and should not be logged. Every attempt should be made to retain and buffer this habitat to create large, contiguous blocks of habitat in the future to improve habitat conditions for this species in the Oregon Coast Range. Created murrelet habitat will not be valuable to murrelets if it is not adjacent to and contiguous with current occupied sites as these birds have high site fidelity. Just because new habitat has been created, murrelets will not necessarily move in.

²² HCP 5-7.

²³ Evaluation Report for the 5-Year Status Review of the Marbled Murrelet in Washing, Oregon, and California. Prepared for U.S. Fish and Wildlife Service, Region 1. March 2004. See complete report at: www.earthjustice.org/backgroundunder/display.html?=yes&ID=100

²⁴ DEIS 3.6-18

²⁵ HCP 3.6-19

Clearcutting occupied murrelet sites is not quantified and should not be allowed.

The DEIS fails to quantify the number of occupied murrelet sites that will be taken. All murrelet sites found since 2006 will receive no protection²⁶. How many sites is this? This part of the murrelet take should have been disclosed in the DEIS. We asked the FWS how many sites have been found since 2006, but we have received no response in time for these comments. We also asked about the DEIS statement on page 4.6-67 that says surveys conducted through 2007 have found 85 murrelet sites, while the HCP (page 97) says 85 sites were discovered in surveys conducted since 2006. Which is it? The FWS never responded to our clarifying question.

The DEIS failed to give us the locations of all the occupied sites that will not receive long-term protection in the DEIS. We asked the FWS for a map of the 9 occupied sites and the post 2006 sites, but the FWS failed to respond to our clarifying questions before the end of the too-short public comment period. Where these occupied sites are located is important information that should be disclosed to help determine the impacts on murrelet habitat.

Clearcutting occupied murrelet sites, at a time when the murrelets are struggling to survive, was never justified by the HCP or DEIS. No sound scientific reason was offered to justify clearcutting occupied sites, especially the unquantified number of occupied sites found since 2006. Since murrelets have a high site fidelity, clearcutting recently discovered occupied sites should not be allowed.

The ODF is proposing to clearcut the best murrelet habitat left on the Elliott. The DEIS failed to consider that the poorest murrelet habitat was clearcut first, under the terms of the 1995 HCP. That HCP required the ODF to only put timber sales in the lowest quality murrelet habitat²⁷. When the ODF began to survey for murrelets in 2001, as required before logging, the occupied sites discovered were still in the lower quality habitat. ODF wrote that "... the Elliott is a murrelet-rich environment and murrelets are found even on about 25 percent of timber sales proposed in "poor" murrelet habitat."²⁸

MMMAs were created out of this poor habitat, and remain protected under the new HCP. But when the ODF started to run out of lower quality habitat, they started to discover more murrelets in the timber sale surveys. These newer MMMAs, discovered since 2006, are in the better murrelet habitat.

This new HCP will continue protect those older occupied sites as Conservation Areas, while clearcutting the newest occupied sites found since 2006 in the better murrelet habitat, as well as clearcutting the remaining murrelet habitat outside of conservation areas. It doesn't make sense to protect the poorer habitat, while clearcutting the best habitat. It is not a good conservation strategy to protect the poorest habitat while allowing

²⁶ HCP 7-8: "occupied sites located after 2006 will not be included in new T&E core areas.

²⁷ 1995 HCP, page IV-41. "Harvest scheduling will defer stands that meet the following criteria as long as suitable substitute areas are available. ... — Stands in the 100 year age class or older that meet medium to high quality habitat standards for marbled murrelet nesting habitat. — Stands closest to high quality marbled murrelet potential nesting habitat, northern spotted owl activity centers, and HCAs.

²⁸ Oregon CSF Lands Management Status Update. John H. Beuter Umpqua-Tualatin, Inc. 3-31-03.

the best habitat to be clearcut. The FWS failed to fully consider the quality of murrelet habitat being protected, vs. the quality of habitat allowed to be logged.

“Occupied Site” acres are not adequate. Under the current HCP and FMP, a MMMA must be at least 120 acres in size.²⁹ However, the DEIS only assigned 72 acres to the 9 occupied sites that will be allowed to be logged in alternative 2³⁰. Instead, this should have been considered a loss of 1,080 acres (9x120). Also, some of the current MMMA's in the Elliott are less than 120 acres. The DEIS should have disclosed that existing MMMA's do not meet the minimum acre requirement, and how many of these will be carried over to the new HCP.

There appears to be no permanent T&E Core for murrelets. If, after 5 years of surveys of occupied murrelet sites, and no more murrelets show up, it appears the DEIS allows the T&E core area to lose protective status and eventually be clearcut. The DEIS says:

“Periodic surveys of marbled murrelet in T&E Core Areas would be conducted to determine the proportion that remains in occupied status. Surveys would be discontinued when marbled murrelet occupancy is confirmed, **or after a period of 5 consecutive years of surveying.**”³¹

The DEIS failed to disclose what happens then. Does surveying stop and the core is still protected, or does the core lose its protection? If the core would lose its protection, the DEIS failed to document that this habitat would not be available to murrelets at a later time.

Predation on protected murrelet sites must be fully considered. The DEIS fails to quantify the acres of interior, non-fragmented murrelet habitat that would be protected on the Elliott. The DEIS also fails to fully consider predation as a threat to murrelet nests.

The DEIS concludes that alternative 2 would allow more nest predation due to edge effects, “if” edges promote predation, and claims that “scientific literature on this is conflicting”³². Actually, there is no scientific controversy.

“Marbled murrelet nest success seems to be relatively low. In a summary of nest success from 77 nests with known outcome, Manley and Nelson (1999) reported that most (more than 65 percent of) nests failed, and that the leading cause of failure was nest predation (accounting for more than 60 percent of losses).”³³

The DEIS considers all habitat within 164 feet of an edge to be most susceptible to predation, and more than 492 feet into the interior to be immune from predation³⁴. However, the DEIS failed to quantify the acres of interior habitat in each alternative. (We

²⁹ 1995 FMP pg V-19 - “Murrelet cores would include 120 acres of the best available habitat contiguous to the location where occupied behavior was observed.”

³⁰ DEIS 4.6-79

³¹ HCP 7-18, and DEIS 2-43

³² DEIS 4.6-83

³³ HCP 4-13

³⁴ DEIS 4.6-76

asked the FWS if we missed it in the DEIS, but they failed to respond to our question). The DEIS analysis that there is adequate intermittent forest to reduce edge effects³⁵ is not as good an analysis as the actual acres of murrelet habitat that is interior habitat, especially in protected areas. With current aerial photography, it would be fairly simple to estimate interior acres on the current MMMA's. The DEIS uses aerial photography to estimate acres of Murrelet Suitable Habitat, so it can also be used to estimate acres of interior habitat.

The DEIS also failed to properly cite their claim that the scientific literature is conflicting on murrelet predation in forest edges. We asked for these studies, but the FWS was not able to respond to our timely request due to the very short public commenting period. The cite given in the DEIS was Nelson and Hamer 1995a, Manley and Nelson 1999, Raphael et al. 2002b. But these cites were also given on page 4.6-76 for the Alternative 1, finding that predation IS "a leading cause marbled murrelet nest failure".

Road building continues to be allowed through T&E Core and MMMA's, increasing edge effects even more. There are virtually no restrictions on road building, severing conservation areas. In our scoping comments, we sent FWS an example of what this kind of road building does to MMMA's, concerning the Bowl Bound Beaver timber sale's logging road through the trout Mouth MMMA. We wrote:

"Several acres were cut off from the MMMA by the road. Those acres, in addition to the edge effects of the new road, degraded dozens of acres in the MMMA so severely that marbled murrelets can never use them for nesting again. The new road also extended edge effects into the mature forest so that corvid predators can have easier access to nesting platforms in the center of the MMMA....

If roads through conservation areas will be allowed, the EIS must consider the environmental effects of new roads, such as increased predation, increased disturbance, increased harassment, increased soil erosion, less trees, etc. If new roads are allowed in conservation areas on very steep slopes, as is the case in the Trout Head MMMA, the EIS should consider the additional effects of pushing soil, stumps and rocks over the edge, damaging trees down hill, and increasing the edge effect into the MMMA, as well as the permanent effects of tall cutbanks, over steepened benches and all other environmental problems caused by roads on steep sidehills.

In general, we were surprised that the ODF interpreted the 1995 HCP and FMP to allow new road building through the MMMA's, especially when it was never disclosed in the pre-operations report for the sale, and no murrelet surveys were done on the part of the MMMA being degraded. The new EIS/HCP should correct this interpretation of the old HCP."³⁶

Unfortunately, the new EIS/HCP ignored public scoping and did not mention this problem. This oversight must be corrected.

³⁵ DEIS 4.6-84)

³⁶ Scoping comments on Elliott HCP. January 8, 2007.

About 50% of T&E Core areas could be managed plantations. 50% of the T&E Core areas in Alternative 2 are not advanced structure (they do not contain at least 10 TPA over 24" DBH). Page 3-9, table 3-4 shows that 22,598 acres are in Conservation Areas, but only 13,159 acres are advanced structure. In spite of the clear data on the amount of advanced structure, the DEIS assumes all Conservation Area acres are all advanced structure.³⁷

There was no clear reason given in the DEIS on why over 9,000 acres of early and intermediate structure forests were counted as Advanced Structure. Using this method of analysis severely skews the data.

The DEIS Data failed to reflect increased MMMAs established under alternative 1. The DEIS page 4.6-67 describes how additional MMMAs will continue to be established over the next 50 years in Alternative 1. The DEIS even calculates how much revenue will be lost by the continual expansion of reserved MMMAs. (4.7-5).

But the DEIS never considers reduced harvests for alternative 1 to account for the additional MMMAs. It even concludes that clearcutting will be an astounding 733 acres annually near the end of the current HCP (DEIS 4.2-8). Using this incredibly high harvest for the current HCP, assuming no further MMMAs is inaccurate, thus giving a distorted picture of the changes in the harvest levels for alternative 2. Increases in alternative 2 harvest levels, over the no-action alternative, are greater than the DEIS found.

4. Advanced Structure problems in the HCP

The Elliott HCPs structure definitions are vague and confusing. The ODF uses only 3 stages of structure for the Elliott, as opposed to 5 stages for the rest of Oregon. Perhaps to compensate for this, the definition of *Advanced Structure* for the Elliott includes several sub-definitions, all called by one name, *Advanced Structure*. Whenever the HCP talks about advanced structure, one can only assume it is talking about the smallest type of advanced structure, -- the definition of which is not given to us until we get almost 150 pages into the HCP.

Advanced Structure definition would apply to 30-50 year old forests.

Advanced Structure is defined as 10 trees per acre (TPA) over 24" DBH, and 20 TPA over 18" DBH. For the coast range, that describes a 50-year-old tree plantation. There is no requirement for any number of understory trees or snags to be present. The understory must average 30 feet tall, but there is no requirement to actually have any understory trees at all. Just if there are any, they must be 30 feet tall. There could one understory tree 30 feet in height every 100 or 200 acres, and meet the definition of Advanced Structure.

Advanced Structure has an overstory 100 feet or more tall.³⁸ But the average Douglas fir

³⁷ HCP 5-6

³⁸ HCP page 5-6.

on the Elliott is 115 feet tall when the tree is only 50 years old³⁹. A 100' tall tree is small for a mature forest in the Coast Range.

Advanced Structure must have a basal area needs to be 150 square feet per acre, which means that if most trees were 12" DBH, that would be 150 trees per acre. That is also common in a 30-year-old forest.

Most of the stand could be a virtual pole forest of 18" trees with a few 24" DBH, virtually no understory, no snags, no thick bark, no deep moss, no down wood -- nothing is required that makes a pacific northwest forest support a diversity of wildlife dependent on mature forests, nothing for a prey base to live in and no nesting habitat for owls or murrelets.

The HCP brags that 40 to 60 percent⁴⁰ "advanced structure" will be maintained across the forest. But there is never any requirement to have 50 or 60% advanced structure. Only 40% is actually required, which is far, far below the range of natural variability, especially if that 40% just averages 18" DBH.

Also, the HCP requires that advanced structure must be maintained at 50% or greater within each basin in order to insure sufficient distribution of habitat for these species, but of the 13 basins on the Elliott, the HCP only requires 30% advanced structure in 2 basins, and 40% advanced structure in 2 basins. Six of the basins have a target of 50% advanced structure, and only 3 required 60% advanced structure. HCP at Table 5-1.

Another problem is that "Advanced Structure", as defined in the HCP, can't provide the quality of natural snags and cavity nests that marbled murrelets and spotted owls are dependent on,⁴¹ or the same thickness of bark that other species (like bats) are dependent on. A number of studies have found both size and density of snags as well as amount of down woody debris to be an important component of spotted owl habitat.⁴²

As the older FMP draft made clear, advanced structure will lack old-growth components: "decay and decadence required for old growth characteristics are generally lacking, successional trees required by old growth may be lacking, and dead and down material required by old growth is lacking."⁴³ This admission was removed from the final FMP.

Acres of Advanced Structure given are inconsistent. The 2008 proposed HCP says: "The advanced structure currently covers **45** percent, or 41,716 acres of the contiguous Elliott State Forest."⁴⁴ The 2005 draft HCP said: "The Advanced Structure currently covers **53** percent or 49,439 acres."⁴⁵

³⁹ HCP. Page 3-8. "The Elliott's average 50-year site index for Douglas fir is 115 feet...."

⁴⁰ HCP 5-2.

⁴¹ Northern Spotted Owl Research on ODF Lands (including the Elliott) in the Coast Range. 7/18/00. pg 24. "Number of snags and size of snags were larger in nest areas than in forage or low use areas at ESF.."

⁴² Northern Spotted Owl Research on ODF Lands (including Elliott SF) in Coast Range. 7/18/00. page 31.

⁴³ Elliott State FMP Draft Plan May 2004. Page E-5

⁴⁴ HCP C-23

⁴⁵ 2005 Draft HCP D-21

The two different statements give the exact same definition for Advanced Structure: 20 trees per acre of 18 inches DBH 100 feet or more in height and 10 TPA 24 inches DBH. The FWS should disclose why there is a 8% difference in advanced structure. Were 7,723 acres clearcut between 2005 and 2008?

Advanced Structure definition can change every 10 years, perhaps without FWS or public notification. The HCP page 5-6 says that definitions for the structure stages “have been developed for use during the first HCP implementation period, and will be re-evaluated thereafter.” There was no definition in either the HCP or DEIS of “first HCP implementation period”. We submitted a request for a definition to the FWS on November 12, but they were not able to respond to us in time for these comments. There is a discussion in the HCP of 10-year “implementation plans”, but no assurances this is the same as the undefined “implementation period”. More importantly, there is nothing in the HCP on **how are changes made in 10-years** if definitions for structure types need to be changed. There is also no assurance that the changes will go through public input and NEPA, or if there will be reconsultation on the “implementation period” re-evaluations.

Elliott’s Advanced Structure vs. the rest of Oregon state forests: The ODF will implement only three structure definitions for the Elliott: Early, Intermediate, and Advanced. All the other Oregon state forests implement five structures: Regeneration, Closed Single Canopy, Understory, Layered, and Older Forest Structure⁴⁶. Simplifying ‘structure’ definitions simplify forests and reduce protections for older forests and the wildlife that depend on them.

In the rest of Oregon state forests, “Stand Type 4 – Layered”, in the middle of the stand trajectories, has the same definitions as the Elliott’s loftiest structure, “advanced structure”, dominated by trees only 18” DBH. The Elliott’s does not have a defined the next step, “Stand Type 5 Older Forest Structure” with at least 8 TPA 32” DBH and measurable specifications for snags and down wood⁴⁷. Instead, trees 32” DBH are included in a sub-section of Advanced Structure, also called “Advanced Structure”. Whenever Advanced Structure is talked about in the HCP, we can only assume it is the type that is called intermediate in other forests.

Advanced Structure should be as good for murrelets as it is for coho.

There is no scientific basis for having a weaker definition of advanced structure for murrelets and owls to nest in, than that designated for coho protection. The best that the owls and murrelets can get is Conservation Measure 5.1: 10 trees over 24” DBH. (50% of Advanced Structure has to have 8 trees over 32”)⁴⁸. Compare that to the “Mature Forest” required for 100’ along all fish-bearing streams: “40 to 45 conifer trees of 32 inches DBH per acre.”⁴⁹

⁴⁶ Northwest Or. St Forests Management Plan (NW Oregon FMP). Final Plan. 1/2001. Pgs 4-13 - 4-17.

⁴⁷ Final Plan Jan. 2001 Resource Management Concepts and Strategies. Page 4-17

⁴⁸ HCP page 5-6.

⁴⁹ HCP 5-35

The DEIS fails to explain why the Advanced Structure definition is so much weaker than the mature forest definition. Fish get 40 to 45 trees over 32" DBH, while owls and murrelets only get 8 trees over 32" DBH over only half their habitat!

Historical Range of Variability: The HCP claims:

“Advanced structure will be maintained on 40 to 60 percent of the landscape, intermediate structure on 25 to 55 percent, and early structure on 5 to 15 percent. The site-specific or prescriptive strategies are designed to protect key resource elements or provide for specific functional elements not necessarily addressed by the forest landscape strategies. This blended approach is intended to more closely emulate the historical conditions maintained by the natural disturbance regimes under which native species evolved.”⁵⁰

We disagree that this is historical condition maintained by the natural disturbance regimes under which native species evolved. The FEIS must back up this unsubstantiated claim. We asked for the ODF and the FWS to cite this claim in the draft documents, but still, no scientific reference is offered.

There was one reference in the HCP that could be used:

“**Wimberly, M.C., T.A. Spies, C.J. Long, and C. Whitlock.** 2000. Simulating Historical Variability in the Amount of Old Forest in the Oregon Coast Range. *Conservation Biology* 14(1) (February 2000): 167-180.”

But this research doesn't support the contention that 40 to 60 percent of the forest averaged 18" DBH with a few trees over 32", with few or no understory and no snags and down wood, is within the historical range of variability. Wimberly and Whitlock say that “old-growth percentages were generally between 35% and 75%”⁵¹ in forests over 200 years old with “a high density of >100 cm dbh Douglas fir, a broad range of tree sizes, a high percentage of trees with broken tops, high densities of shade-tolerant trees, and high levels of snags and down wood.”⁵² Clearly there is no structure definition on the Elliott that comes close to this, much less 40 to 60% of the forest, or even 35 to 75% of the forest.

The HCP claims that “stand structure types are designed to emulate the diversity of stands historically associated with conifer forests in the Coast Range. ... individual stands will move in and out of the various developmental stages at a relatively consistent rate.”⁵³ Again, there is no scientific justification given. Historical diversity moves stands in and out of stand ages at the rate of hundreds of years, or thousands of years across a landscape. The OFD failed to note they will speed this up dramatically. Advanced structure stands out of reserves will not be allowed to get older than 160 years old, and

⁵⁰ HCP 8-3. Historic conditions were also claimed on page ES 7, and makes the claim for alternative 1 on page 10-4: “The application of the landscape strategies would be intended to create forest conditions that would emulate historical conditions...”

⁵¹ <http://www.treeseearch.fs.fed.us/pubs/4756>

⁵² Wimberly, M.C., T.A. Spies. 2000. Page 168.

⁵³ HCP 5-6

most will be harvested at less than 100 years old.⁵⁴

The Coos Bay BLM estimated the historical amount of old forests in the Oregon Coast Range Province, including the area of the Elliott State Forest. They say:

“At the watershed-scale, the historic mean covers of late-successional and old-growth forest were estimated as 70% and 45%, respectively (Wimberly *et al.* 2000). ... Cover by late-successional forest was estimated to be weighted towards much higher cover, > 45% >75% of the time.”⁵⁵

In other words, about 45% was old growth. It will never be more than a small percent on the Elliott. The BLM analysis also says 45% of the Coast Range was covered with late-successional forests more than 75% of the time. This could equate to the Elliott’s Advanced Structure definition, but that will kept at no less then 40%, nowhere close to 75%.

The BLM cites another study: “Cover by late-successional forests at the province-scale was estimated at 66-77% over the last 3000 years; cover by old-growth, a subset of late-successional forest, was estimated at 39-55%.”⁵⁶ The ODFs should emulate this historical structure instead.

While the Elliott purports to emulate historical conditions with small 100-acre patches of older forests,

“Historic late-successional patch size was large. Mean patch size for late-successional forest in 1936 forest type map was almost 10,000 acres (Table H-2) at the watershed-scale; mean late-successional patch size at the province-scale was similar. ... Virtually all late-successional patches functioned as interior habitat, historically.”⁵⁷

In contrast, virtually all of the Elliott’s late-successional patches are influenced by edge effects.

“There are no differences between late-successional interior area cover and total cover by late successional forests in 1936 cover maps.... Edge habitats made up a small part of the landscape. Late-successional habitat was clumped (> 0.76), as were young structural types (Table H-2), due to the high intensity/low frequency disturbance regime.”⁵⁸

On the Elliott, the ODF strategy forces old-growth dependent wildlife to live in forests much younger than they have traditionally, in forests that have recently (within 100 years) been clearcut and lack structural legacy material, and in forest patches that have virtually no interior habitat. The next draft of the plans should not claim to emulate historical structure.

⁵⁴ Draft Elliott FMP. May 2005. Page C-12: “Stands on a pathway toward advanced structure will be harvested on longer cycles ranging from 100-160 years.” 2008 HCP DEIS page 4.6-105.

⁵⁵ East Fork Coquille Environmental Analysis. Coos Bay BLM. Page 105-106.

⁵⁶ Wimberly *et al.* 2000 as cited in the East Fork Coquille EA. Coos Bay BLM. Page 105-106.

⁵⁷ East Fork Coquille Environmental Analysis. Coos Bay BLM. Page 105-106.

⁵⁸ East Fork Coquille Environmental Analysis. Coos Bay BLM. Page 105-106.

5. Ingrowth problems

There is currently 41,716 acres of advanced structure, and in 50 years there will be 42,538 acres of advanced structure, including 13,136 acres of ingrowth and 11,518 acres of native forests being maintained.⁵⁹

Creating endangered species habitat is still experimental. The HCP uses the 13,136 acres of ingrowth to support endangered species habitat that has been clearcut. This is a dangerous thing to do. No one has ever produced endangered species habitat from old clearcuts yet. The federal agencies have been trying to re-construct advanced structure from old clearcuts by density management thinning. But it is still experimental. We do not yet know if we can actually recreate all the diversity in habitat that owls and murrelets need. We've only been doing density management for 30 years.

Yet the HCP depends heavily on ingrowth, on old clearcuts getting older, to supplement nesting habitat, so existing native forests can be clearcut earlier. For instance, 13,136 acres of ingrowth will substitute for native forests and an additional 2,800 of mapped murrelet habitat can be clearcut if enough ingrowth is established⁶⁰.

The HCP claims that "Through the term of the permit, additional advanced structure will be developed on the landscape⁶¹, with the assumption that owls and murrelets can nest there. But no one knows if that is possible. It has never been done before, in the history of humanity. Yet the FWS is going to bet the future of murrelet and owl habitat in the Elliott on this feat.

Ingrowth (13,136 acres at year 50, or 14% of the Elliott) is counted as suitable habitat when 50% of the stand has at least 8 TPA over 32" DBH, and 50% will have smaller trees⁶², with only 24" the top diameter. The DEIS failed to explain, why, when surveyed murrelet nesting habitat has trees over 35" DBH, ingrowth can be counted as habitat when only 50% of it has trees over 32" and the other 50% has trees over 24" DBH? Clearly, ingrowth should not be counted as murrelet nesting habitat until it reaches the same size as what murrelets use currently.

Conflicting information between HCP and DEIS: The DEIS says: "it is likely that growth of potentially suitable habitat would offset harvest of occupied and mapped habitat because: (1) the overall amount of the potentially suitable habitat with at least 4 trees per acre at least 38 inches dbh would increase substantially over the 50 years"⁶³. That's not what the HCP says. The HCP says that only 50% of the ingrowth have 8 trees per acre over 32"⁶⁴, not 4 TPA over 38". Which is it?

⁵⁹ HCP 6-15, table 6-5

⁶⁰ HCP 7-16.

⁶¹ HCP 7-17

⁶² HCP 7-17, The advanced structure that develops will provide some additional nesting habitat, because at least 50 percent of it will have eight or more live trees per acre at least 32 inches in diameter.

⁶³ HCP DEIS 4.6-83

⁶⁴ HCP 7-17, The advanced structure that develops will provide some additional nesting habitat, because at least 50 percent of it will have eight or more live trees per acre at least 32 inches in diameter.

The DEIS also says that ingrowth of murrelet habitat would offset harvest of occupied habitat because: “(2) ODF would be required to demonstrate the suitability of the new habitat prior to the harvest of more than 4,000 acres of occupied or mapped habitat.”⁶⁵ That’s not what the HCP says. The HCP says ODF is not required to even survey ingrowth to test if it really supports nesting murrelets, or to test if the computer models estimated growth correctly.⁶⁶

Monitoring is inadequate: Monitoring of the murrelet ingrowth this also problematic. Even though we have never before created ingrowth that murrelets have nested in, ingrowth will be counted as sufficient without any surveys to see if murrelets are nesting there.⁶⁷

In one of the FOIAed documents we received on the HCP meeting notes, we see the FWS concerns over the small DBH being used for ingrowth. While this document expressed a concern that 35” was too small, the final HCP went even smaller, down to 32” DBH.

The FOIAed doc says:

“I’ve been concerned all along that the tree dbh size keeps being reduced the more we discuss the matter. Originally, we were discussing use of 40” trees to describe murrelet habitat. That was based on murrelet stand data you generated showing an average of approx. 4 tpa over 40” dbh. Then the number reduced to 38” dbh based on the study comparing occupied to mapped stands. That seemed reasonable - I could support that figure. Now the number has reduced again to 35.2 by use of lower 95% CI. I don’t have a good sense whether the lower 95% CI achieves adequate murrelet habitat.”⁶⁸

If the FWS did not have a good sense that 35.2 inches was adequate for mapped murrelet habitat, why did the FWS allow ingrowth of murrelet habitat to be much smaller, with only 50% of it required to be 32” DBH, and 50% even smaller?

But even with ingrowth: “Overall, Alternative 2 would represent a substantial increase in the harvest of potentially occupied habitat compared to Alternative 1.

Alternative 2 would result in 19 percent fewer total acres of potentially suitable habitat and percent fewer acres of the higher-quality portion than Alternative 1 by Year 50.”⁶⁹ Can we really afford this when both the owl and murrelet are circling the drain?

⁶⁵ HCP DEIS 4.6-83

⁶⁶ HCP 7-19. Surveys for marbled murrelets may be used to demonstrate suitability of habitat; however, marbled murrelet surveys are not required.

⁶⁷ HCP 7-19 “Surveys for marbled murrelets may be used to demonstrate suitability of habitat; however, marbled murrelet surveys are not required.”

⁶⁸ FWS and ODF HCP Meeting Notes, 4-12-06. Pg 9. FOIA file name is “40-04-12-06mtg notes.pdf”

⁶⁹ DEIS 4.6-80

6. Riparian protection is inadequate:

With respect to protection of riparian areas and aquatic species, the HCP has inadequate protections for riparian areas and watershed health. Logging next to streams decreases woody debris in streams and increases temperature. Broadcast burning and clearcut harvesting is allowed on steep, unstable slopes, which increases the risk of landslides.

There is too wide a range on required retention trees. The HCP claims the extra trees retained on Debris Flow Stream will protect streams from excess landslide sediment. However, the variance for the requirement to retain trees varies between 15 to 25 trees⁷⁰. There is never any requirement to leave 25 trees and nothing to prevent ODF from always leaving the lowest number possible. The same problem is on the out management zone (100 to 160 feet from type F stream). The required retention is 10 to 45 TPA, a huge difference that only requires ODF to leave 10 TPA.

Stream Buffers are too small. Since the outer RMA zone, 100 to 160 feet from the water's edge, requires only 10 conifer trees or snags left per acre, the 25-foot no harvest stream bank zone proposed in the Draft HCP is insufficient to properly protect aquatic and terrestrial wildlife. Scientific literature shows that effective stream buffer zones need to be wider than 25 feet, regardless of whether they are protecting for temperature, debris, or species, all of which contribute to the overall health of the riparian system. The HCP claims this riparian strategy "will emulate historic conditions and processes"⁷¹. We disagree. See section 4 above. The 25-foot stream bank zone proposed in the Draft HCP will be insufficient in maintaining preharvest stream temperatures.

Large Wood in streams is reduced. The analysis provided in the HCP, in regards to recruitment of large wood into streams seems, is contradictory. The best available science indicates the majority of wood falls into the stream from within 100ft of the stream. The HCP mentions it has the potential to reduce large wood recruitment (p. 8-22) but then claims it is unlikely on almost all of the streams on Elliot. "Forest management under the HCP has the potential for decreasing *near stream and upstream sources* of large wood recruitment. The potential for decreased large wood recruitment is low for all fish-bearing streams, and for large and medium non-fish-bearing streams." This isn't supported by science. It is also not supported by the discussion provided on thinning, where the HCP claims the time it will take for trees (once thinning occurs) to fall into the streams is decades. The watershed assessment also indicated the lack of large wood is a problem on the Elliot.

The obvious conclusion, that the DEIS failed to make is that the riparian management will decrease large wood from the historical range.

Stream temperature will increase. Stream temperature is important because aquatic species are sensitive to temperature changes. Species composition can change dramatically in response to even a slight change. Water temperature rises in response to

⁷⁰ HCP 5-38.

⁷¹ HCP 8-3.

less shade, a result of logging. Higher water temperatures also reduce oxygen solubility, which in turn harms many organisms and changes the availability of nutrients.⁷² In order to maintain pre-harvest stream temperature, a buffer zone of a minimum of 33 feet is required in all places and at all times. *Id.* Certain streams may require a buffer zone of as wide as 98 feet to maintain pre-harvest temperatures. *Id.* Based on the scientific research, the drastic reduction in no harvest stream buffer zone in the Draft HCP may cause a detrimental change in water temperature that will adversely effect the health of the wetlands in Elliott State Forest.

Amphibians, reptiles, and birds will also be significantly impacted by the reduction in the protected no harvest stream bank zone. In addition to reptiles and amphibians, birds depend upon no harvest habitats surrounding streams for survival.

Landslides degrade aquatic systems. Logging and road building on areas at high risk for both shallow-rapid and deep-seated landslides increases the frequency of slides and changes their natural timing and characteristics, causing significant degradation of aquatic ecosystems. Landslides degrade aquatic habitat by increasing sedimentation and changing stream structure, thereby disrupting and impairing essential behavioral patterns of native fishes, such as spawning, rearing, feeding, and sheltering. Injury and mortality of fish also are likely.

The DEIS failed to consider impacts to riparian systems from unregulated OHV and ATV abuse. Our scoping comments in the past have sent in picture of OHV use and terrible abuse in riparian areas, including in the campground near Elk Ranch, and in the West Fork Millicoma River.⁷³ In June of 2008, we witnessed OHV users driving up and down the Millicoma River. The teenage boys were from the area, had modified pick-ups, and knew what they were doing. This was not a one-time event. The impacts to aquatic systems from this kind of OHV abuse should have been considered in the HCP and DEIS. Unfortunately, the ODF and FWS simply refuse to believe OHV abuse exists on the Elliott, in spite of clear pictures and other indisputable evidence. This violation of the ESA and NEPA to ignore this impact.

Other problems with the Riparian Management is that it depends heavily on the Watershed Analysis completed on the Elliott in 2000, but it never requires the watershed analysis to be updated with new information, or require the conclusions of the watershed analysis to be peer reviewed or even be accepted scientific conclusions.

7. Road building is excessive

New road data is inconsistent. The HCP tells us it proposes to build 75 miles of new roads on the Elliott under this plan.⁷⁴ The DEIS says “103.9 miles of new roads under

⁷² See Wenger, Seth. 5 March 1999. “A Review of the Scientific Literature on Riparian Buffer Width, Extent, and Vegetation.” Office of Public Service & Outreach, Institute of Ecology, University of Georgia.

⁷³ See scoping comments dated June 9, 2008 with pictures attached and pictures posted at www.photodump.com/feather/a148544/,

⁷⁴ HCP 8-15, “The HCP proposes... new road construction (1.5 miles per year over the life of the HCP).

Alternative 2⁷⁵ will be built. Somebody is wrong. Either number is excessive. New roads harm fish, and the wildlife whose habitat it is built through, such as when a new road is built through a MMMA, T&E Core Area, Conservation Area, or riparian area. Roads increase landslide frequencies, even new roads. Roads increase sediment to streams. The HCP claims that each of these impacts is too small to measure. However, the cumulative impacts of all roads and road impacts are large.

The HCP failed to identify which areas will be subject to further road building and which areas will benefit from road closures and restoration activities. A lack of specificity in this regard makes it impossible to conduct an adequate assessment of the impacts of management under the Plan across such the entire Elliott. The NMFS regulations state that HCPs must describe the proposed activity, including the anticipated dates, duration, and specific locations.⁷⁶

Adverse impacts from the existing road system, including old roads, and including old roads through existing and propose conservation areas, must be evaluated in order to establish the environmental baseline. The HCP states at 8-31: “The greatest risks for increased drainage network are associated with the existing road system. Older roads are more likely to have greater connectivity with streams than newly constructed roads, a characteristic believed to increase the drainage network. The vast majority of the Elliott State Forest road system is (and will continue to be) composed of old roads.”. The HCP and DEIS failed to fully account for the impacts of the old roads.

8 Adaptive Management and monitoring

The DEIS use of Adaptive Management and monitoring is inadequate. A whole slate of species depends on adequate monitoring and adaptive management. The DEIS finds that “Monitoring and adaptive management provide the essential information and approaches that will guide implementation of all strategies in the HCP”.⁷⁷ Yet, the monitoring and Adaptive Management under the old HCP was virtually non-existent. Over the 13 years of the old HCP, not one cycle of adaptive management was ever completed, in spite of urgent opportunities.

Adaptive Management is also weak under the new plan. For instance, there is no requirement to do adaptive management within any period of time after monitoring finds a problem. If adaptive management would result in lower harvests, the ODF could just put it off forever, and still be in compliance with the terms of the HCP.

The HCP says: “Timely changes in strategies, approaches, and prescriptions in accordance with new knowledge provide the cornerstone for a successful HCP.”⁷⁸ If the changes must be “timely”, there must be time constraints built into the HCP for ODF to

⁷⁵ ES-21 and DEIS 4.2-3

⁷⁶ 50 CFR 222.22(b)(4)).

⁷⁷ HCP 5-1.

⁷⁸ HCP 11-23

complete the circle of adaptive management, and actually get to the step that adapts management.

Even though the implementing plan allows the USFWS to require adaptive management⁷⁹, there is no guarantee that the Service will act in a timely way. In examples given below, the Service was notified there was problem, yet did nothing.

At the September 2005 public meeting in Roseburg, the Coos District wildlife biologist admitted that in the last decade of implementing Adaptive Management on the Elliott, the circle had ever been completed. In scoping comments, we asked for an example of one time the 6 steps of the Adaptive Management circle has ever been completed. None was provided.

Examples of miss-opportunities for adaptive management include:

- The 2003 HCP 5-year review recommended protections for oldest forests, and in particular protections for the home range of the Salander Creek Owl. The only adaptive management we could see was increased clearcutting in the Salander Creek area.
- The 1998 owl study on the Elliott showed a drastic and unexpected drop in owl populations. Adaptive Management didn't kick in.
- Two different species of fish were listed under the ESA during the implementation of the current FMP/HCP. There was no adaptive management. It was years before there was a change in riparian buffers that was promised in the FMP if fish were listed.
- The Coos District ODF study on the Marbled Murrelets found that ODF should consider "... maintaining all occupied sites and other older-aged forests for recruitment habitat, and creating new habitat in areas adjacent to existing murrelet nesting habitat. This would not only allow for the creation of larger blocks of murrelet habitat but also provide buffers to existing nesting areas and potentially allow murrelets to expand into the newly create habitat."⁸⁰ This recommendation was not considered and no one thought about Adaptive Management. Instead, future MMAs became smaller, had roads built through them, and are entirely eliminated in the proposed 2008 HCP.

Since none of this new information caused the ODF to use Adaptive Management, how can the public expect any changes in the new HCP's Adaptive Management?

The HCP provides for inadequate monitoring. Under the proposed HCP, monitoring of suitable spotted owl habitat will occur on a sub-sample of stands at 10-year intervals⁸¹. Monitoring of owl population will occur every 8 years and murrelet occupancy will be monitored every 10 years⁸².

⁷⁹ Implementing Agreement page 15

⁸⁰ Final Report. Marbled Murrelet Habitat Characteristics on State Lands in Western Oregon. Nelson and Wilson. OSU, 2002. Submitted to ODF and ODFW. Page vii.

⁸¹ HCP at 6-20

⁸² HCP at 7-18

An interval of 10 years is a very long time for short-lived species. It is possible that this schedule could allow for local extirpation of some species before impacts could be detected, and before the slow adaptive management process kicks in. Monitoring every ten years is insufficient to ensure that the proposed measures really are working to minimize and mitigate the take of owls. If the proposed measures do not effectively minimize the take of protected species, by the time monitoring occurs it may be too late to avoid excessive take.

It is also unclear where exactly monitoring will occur and how the results will be put to use. Additionally, the baseline number for spotted owls is based on a 2003 survey, which does not provide a current and accurate estimate. (See section 2 above).

According to the Plan, timber harvesting in mapped marbled murrelet habitat will be at its highest level during the first ten years of the permit, decreasing each decade thereafter.⁸³ If the greatest amount of harvesting is done in the first ten years before any monitoring is done, there will be no way of knowing the effects until after excessive take has occurred. If, upon monitoring, unforeseen circumstances are found to have negatively affected a species, the monitoring efforts will essentially have no purpose because, under the proposed HCP, no new requirements can be made as a result of unforeseen circumstances. For monitoring measures to carry any weight, their results should be useful to the Agency as a way to guide adaptive management

9. Wildland Fire:

Adaptive Management is being used in the HCP to reevaluate conservation areas in the event of large-scale disturbance⁸⁴. This should be eliminated – the conservation areas must be permanently protected in order to provide the necessary habitat. If a conservation area burns, the snags will continue to be valuable wildlife habitat. While the HCP restricts logging of down trees in Conservation Areas “to facilitate the maintenance or development of advanced structure”, it says nothing about salvaging standing dead or live trees, and appears to freely allow it.

If there is a large-scale disturbance, salvage should be restricted and a new conservation area should be designated. The science is undisputed that there is no ecological justification for salvage⁸⁵ – only economic justifications. If a goal of the HCP is to maintain and incorporate habitat components into the forest, salvage should not be allowed because it only functions to damage wildlife habitat.

⁸³ HCP 7-16.

⁸⁴ See HCP page 5-18

⁸⁵ *Post fire Management on Forested Public Lands of the Western United States*. Robert L. Beschta, Rhodes, Kauffman, Gresswell, Minshall, Karr, Perry, Hauer, and Frissell. Conservation Biology, Pages 963. Vol 18, No. 4, August 2004. Also see Dominick Dellasala et al. Conservation Biology, Vol. 18 August 2004: Post fire Management of Public Forests
DellaSala, D.A., D.M. Olson, S.E. Barth, S.L. Crane and S.A. Primm. 1995. Forest health: moving beyond rhetoric to restore healthy landscapes in the inland northwest. *Wildlife Society Bulletin* 23(3): 346-356.
Ingalsbee, T. 1997. Fires burn hotter in tree farms. *Headwaters Forest News* 7(2): 10-11

However, just the opposite is suggested in the HCP, which considers target volume more important than anything else – harvest volume is more important than wildlife, acres of advanced structure, even more important than the ITP:

“If a temporary loss of forest cover is of such magnitude that the timber harvest volume objectives (40MMBF annual average over ten years) established by the State Land Board cannot be met for each subsequent ten-year period for the entire duration of the ITP, without a reduction in advanced structure below the basin target for advanced structure for an individual management basin, or take the forest outside of the forestwide structure ranges for advanced or early structure, in any decade subsequent to the initial loss of forest cover, good faith discussions will be entered into for the purpose of adjusting the forest structure objectives of the HCP to be consistent with new forest conditions and the timber harvest objectives. During those discussions, the ITP will remain in effect.”⁸⁶

Apparently “good faith discussions” mean the ODF will meet timber target objectives before forest structure objectives. The FWS should have clearly rejected this loophole.

ODF is increasing risk of wildland fire. Salvage is especially problematic since the thousands of acres of tree plantations the ODF plans to create over the next 50 years will substantially increase the risk of fire on the Elliott. The DEIS says:

Regenerating forest plantations are at increased risk of wildfire just prior to thinning. In this stage of development, trees usually have canopies extending nearly to the ground, and canopies of adjacent trees are often in contact with each other. In turn, this continuous canopy may be in contact with the lower parts of canopies of adjacent, older stands. In this configuration, the pre-thinned plantation stands present a high level of ladder fuels, which can move a ground fire into a canopy fire.⁸⁷

Wildland fire could spill out of the plantations and into the surrounding mature forests and Conservation Areas. The ODF should not be able to reap the rewards of increasing this risk fire.

The ODF claims that in the Elliott: “the level of diversity should result in a resilient forest that will be resistant to large-scale damage from environmental or human-caused stresses.”⁸⁸ Considering the FWS found the ODF would be increasing the risk of wildlife, by increasing clearcuts, the ODF should remove their conflicting assumption they are creating a forest resistant to large-scale damage.

It is irresponsible for the ODF to be increasing the risk of wildlife on state lands at all. An alternative should have been considered to eliminate the increased risk – that is, thinning in the managed plantations and no more conversion of old growth to new plantations.

The HCP should not have allowed any salvage logging, especially in reserves. One peer reviewer for the Elliott’s FMP stated:

⁸⁶ HCP page 11-4:

⁸⁷ DEIS page 4.1-2

⁸⁸ HCP 5-1

“Although post fire salvage logging in reserves may provide some economic return, there is no evidence that it is ecologically justified.... Fires generally increase landscape heterogeneity, not reduce it. Intensive salvage harvest will decrease habitat complexity and remove many structural elements that provide post fire habitat for terrestrial and aquatic biota, and that may reduce negative consequences of fire in streams.”⁸⁹

Since the recovery of the 1868 fire, fire suppression has caused a decline of “early seral with snags” habitat in the south coast area. If the ODF wants to allow the full array of natural habitats to exist on the Elliott, some provision must be made for the wildlife friendly “early seral with snag” habitat.

For catastrophic disturbances affecting mature forests in conservation areas, the peer review said:

“an older complex-structure stand could be selected as a replacement for this reserve and allowed to develop into old growth. There also would be great ecological and research value in retaining the burned reserve in its natural state, without salvaging.”⁹⁰

What good is a peer review if the ODF doesn’t heed the findings?

Even if a natural disturbance occurred in an area of the forest not designated as a conservation area, salvage should be limited so that erosion and further damage of soils does not occur, as documented in scientific literature.⁹¹

It is also unreasonable and without merit to cut green trees that survived the natural disturbance event. The green trees are the legacy component that helps the early seral habitat recover with its full gene pool potential. The ODF cut 300 million board feet in response to the 1962 blowdown of the Columbus Day Storm, of which 200 mmbf was standing, green trees.⁹² This type of salvage is not supported by any science.

The ODF should recognize that the forest successfully recovered after the fire of 1868 (started by a settler, not a natural fire) with no salvage logging at all. Salvage logging is not necessary for healthy forest recovery.

10. Herbicides and Fertilizers

The DEIS failed to consider herbicide and fertilizer in cumulative impacts. Use of herbicides is not even a covered action in the HCP-DEIS⁹³, even though there is clear

⁸⁹ Scientific Review of the ESF Management Strategies. ODF.5-04. Dr. Robert Gresswell. pg 38.

⁹⁰ Scientific Review of the ESF Management Strategies. ODF. 5-04. Dr. Janet Ohmann. pg 50.

⁹¹ *Postfire Management on Forested Public Lands of the Western United States*. Robert L. Beschta, Rhodes, Kauffman, Gresswell, Minshall, Karr, Perry, Hauer, and Frissell. Conservation Biology, Pages 957-967. Vol 18, No. 4, August 2004. See also: *Wildfire and Salvage Logging* (Beschta, et al., OSU, 1995).

⁹² Draft Coos District Implementation Plan. August 2005. Page 7.

⁹³ HCP 1-6

evidence that herbicides are detrimental to salmon⁹⁴, wildlife and people. The ODF aerial sprays Aresenal, Garlon or Accord (glyphosate, Roundup), imazapyr, triclopyr and 2-4d herbicides on 85% of the clearcuts. Mixed with the herbicides are surfactants such as diesel and other unpronounceable chemicals.⁹⁵ When these chemicals are aerial sprayed during the wet season, they are sprayed right into the water flowing down small, unseen from the air, headwater streams that flow downstream to fish-bearing streams.

Even if label directions are followed, herbicides can kill species such as amphibians and butterflies, and degrade habitat for upland bird species, such as the olive flycatcher. Simply following the label is not enough to ensure herbicide safety for wildlife. Research has demonstrated that herbicides can have more insidious effects than previously thought. For instance, studies of farmers and other people exposed to glyphosate herbicides have shown that this exposure is linked with increased risks of the cancer non-Hodgkin's lymphoma, miscarriages, and attention deficit disorder and Parkinson's disease. Glyphosate herbicides caused genetic damage and damage to the immune system in fish. In frogs, glyphosate herbicides caused genetic damage and abnormal development.⁹⁶ Herbicides are meant to kill and cause nerve and hormonal damage.

The DEIS failed to discuss any of these herbicide impacts on the considered species and listed species, even though more herbicides are used on the Elliott State Forest than all the federal lands in Oregon combined. Herbicides are not even included in the DEIS, even though a significant amount of water could be withdrawn from fish-bearing streams, near the streams, to prepare the herbicide spray⁹⁷. The DEIS finds that "Silvicultural chemicals (e.g., herbicides, insecticides, and soil fumigants) could be used under all alternatives, which could require water drafting from local streams or ponds to facilitate chemical mixing." Then, incredibly, the DEIS says "However, an ITP issued for any of the alternatives evaluated in this EIS would not cover such use"⁹⁸, without further explanation.

Herbicides have been, and will continue to be used on over 500 acres of clearcuts annually on the Elliott, yet no studies have ever been conducted in the Elliott State Forest to monitor chemical concentrations in streams following treatments.⁹⁹ There is so basis for the DEIS to claim: "Any introduction of herbicides to streams would likely be minimal and below detectable levels."¹⁰⁰

The DEIS claims herbicides have no impacts to the olive-sided flycatcher, even though this rare bird uses early seral habitat, such as clearcuts. The DEIS only considers the impacts of the helicopter noise from spraying herbicides, but not on the herbicides themselves dousing flycatchers, their nests, or their young. "Forest management activities

⁹⁴ Diminishing Returns. Salmon Decline and Pesticides. Dr. Richard D. Ewing. February 1999.

www.ifrfish.org/salpest.htm

⁹⁵ DEIS 3-1-10

⁹⁶ Journal of Pesticide Reform. Winter 2004 Vol. 24, No. 4. www.pesticide.org/glyphosate.pdf

⁹⁷ HCP 1-7

⁹⁸ DEIS 2-4

⁹⁹ HCP C-25.

¹⁰⁰ DEIS ES-11

in or near early structure forest could disrupt olive-sided flycatcher nesting behavior and result in harm to adults and young if conducted during the nesting season (June to August). ...herbicide spraying could temporarily disturb olive-sided flycatchers... the presence of helicopters during application could result in localized disturbance for up to a few hours. This short-term disturbance would not likely lead to nest abandonment or harm to nestlings. ¹⁰¹ The FWS completely failed to consider the impacts of birds being directly sprayed with 2-4d, or some other nerve agent. There is no scientific basis to claim ingested poison would only be a “temporary” disturbance.

Considering potential impacts to wildlife and humans, the DEIS failed to explain why “although herbicides could be used under all alternatives, an incidental take permit (ITP) issued for any of the alternatives would not cover such use.”¹⁰² Why is that?

When we submitted these comments for consideration in the FMP, the ODF responded: “Research and experience indicate good results from appropriate use of herbicides and fertilizers in specific situations.” The ODF is just guessing at this because herbicide use on the Elliott has never been monitored or tested in any way. There is no research on the Elliott’s herbicide use. ODF continues: “Herbicide applications on the Elliott are at relatively low levels.” No, they are the highest of any government agency in Oregon. ODF claims: “Eliminating herbicide use would result in low survival and reduced growth of conifers, due to competition from brush. “ No, the adjoining BML and Forest Service do just fine without aerial application of herbicides on their regeneration harvests. Again, ODF is just making claims that are not based on any science or monitoring. ODF continues: “Replacing herbicide application with mechanical, labor intensive methods would significantly increase costs...” Again, not true for the adjoining federal lands, and ODF even has access to prisoners that make only about \$2.00 a day. It is even more cost effective for the Elliott to eliminate aerial herbicide applications than any other government agency in the area. ODF says: “The current restrictions, application standards, and monitoring program associated with herbicide and fertilizer applications are considered by ODF to be sufficient to provide resource protection.” The current restrictions have not kept up with the science on herbicide damage. There is virtually no effective monitoring program on the Elliott to look at both immediate and long-term damage to soils, fish, amphibians, human impacts, etc.

Fertilizers effects must also be considered, including adding nitrogen into the watersheds, possibly causing increased algae growth in creeks and streams. Loon Lake could be affected by excessive nitrogen caused by fertilizers. Fertilizer additives can also be toxic.

The DEIS failed consider the herbicide and fertilizer program on the Elliott, in with cumulative impacts for all other silviculture practices. The DEIS also failed to look at watersheds sprayed with herbicides and fertilizers where **people obtain their household drinking water**. Impacts to all kinds of people must be considered in the DEIS, including the elderly with compromised immune systems and pregnant women and their developing fetuses.

¹⁰¹ DEIS ES-20.

¹⁰² DEIS 2-3

11. Global Warming and Climate Change

The Elliott HCP DEIS failed to consider the impacts of global warming and climate change. Instead, the DEIS gives just one small paragraph to this important and complex problem: “The causes of a long-term change in forest cover could include but are not limited to climate change, global warming...”¹⁰³

The DEIS should have considered not only the impacts of climate change on the forests of the Elliott, but also how the forests of the Elliott can impact climate change and the world. The DEIS could also have consider the potential revenue from carbon offsets.

The Elliott State Forest’s impact on the Climate

Under the preferred alternative, the HCP would allow ODF to clearcut 670 acres/year¹⁰⁴, or 33,500 acres¹⁰⁵ over the life of the HCP. Most of that are clearcutting mature, carbon-rich forests that are the biggest asset to carbon storage. The preferred alternative would also contribute to global warming through slash burning, vehicle emissions and soil disturbance. The milled wood is typically short-lived in our throw-away culture, instead of living for centuries in what would become the old growth forests on the Elliott.

A recent Australian study found that “untouched natural forests store three times more carbon dioxide than previously estimated and **60 percent more than plantation forests**” and that first-time “logging resulted in more than a 40 percent reduction in long-term carbon compared with unlogged forests.”¹⁰⁶ Converting 33,500 acres of the Elliott to tree plantations has a significant contribution to Global Warming.

That was an Australian study. The Elliott State Forest stores even more carbon because of its location in the pacific northwest. More carbon is stored per acre in the moist “Westside” portions of the Pacific Northwest than any other forests in the world¹⁰⁷. Though the forests in Washington, Oregon, and California comprise only 19% of the forested area of the United States¹⁰⁸, they contain 39% of the United States’ total forest carbon¹⁰⁹. Logging mature forests on the Elliott releases this carbon into the atmosphere. And these carbon emissions will not be absorbed by younger, managed stands, for centuries to come¹¹⁰.

Older forests, like those on the Elliott, are important because they store more carbon than any other terrestrial ecosystem on earth (including tropical rainforests) and therefore play

¹⁰³ DEIS page 11-4

¹⁰⁴ DEIS 4.1-18

¹⁰⁵ DEIS 4.6-140

¹⁰⁶ Green Carbon: The role of natural forests in carbon storage. Brendan G. Mackey, Heather Keith, Sandra L. Berry and David B. Lindenmayer. August, 2008.

http://cos.anu.edu.au/News/2008/GreenCarbonBook_d3.pdf

¹⁰⁷ Smithwick et al. 2002, Franklin and Waring 1980

¹⁰⁸ USDA ERS 2002

¹⁰⁹ Birdsey 1992

¹¹⁰ Janisch 2001. Also see Randi Spivak testimony to Congress, March 13, 2008.

a pivotal role in long-term carbon sequestration and climate change mitigation. Carbon storage in western Pacific Northwest forests is higher per acre than other forests in the United States¹¹¹ and is in fact the highest in the world¹¹² because:

- * Favorable climate conditions promote growth during all seasons, not just during the normal summer growing season.
- * The dominant tree species of the region grow in diameter and height throughout their lives and produce large amounts of decay-resistant litter.
- * Infrequent natural disturbances such as wildfires and windstorms allow trees to grow very old (Wayburn et al. 2000).

Birdsey (1992) found that forests in Washington, Oregon, and California contain 39% of the United States' total forest carbon. The U.S. net forest carbon sink offsets over 10% of all annual U.S. CO₂ emissions (EPA 2007).

The coastal, Douglas fir forests of the Elliott State Forest are a rich contribution to stabilizing our climate, especially if the half that has been logged is allowed to return to a mature forest condition.

Carbon stored in forests is carbon that has been removed from the atmosphere. In fact, forests are the most significant terrestrial stores of living carbon, and forest destruction and mismanagement over the last century has contributed significantly to the carbon dioxide (CO₂) pollution that threatens our climate. The Elliott HCP DEIS must consider how the management of the Elliott State Forest can help mitigate climate change by allowing forests to fulfill their full potential for storing carbon in living systems, as well as making the Elliott more resilient to the anticipated changes brought by climate change.

The UN Environment Program says that concern for climate change must be “urgently mainstreamed” especially in sectors such as forestry.¹¹³ As a result of widespread clearcutting and slash burning, like that proposed on the Elliott, the Pacific Northwest has contributed huge quantities of carbon to the atmosphere. “Mass balance calculations indicate that the conversion of 5 x 10⁶ hectares of old growth forests to younger plantations in western Oregon and Washington in the last 100 years has added 1.5 x 10⁹ to 1.8 x 10⁹ megagrams of carbon to the atmosphere.”¹¹⁴

A study from Antwerp University published in *Nature*¹¹⁵ determined that 15% of the world's old forests, like the old forests in the Elliott today (and tomorrow if they are not clearcut) provide at least 10% of the global terrestrial carbon sink. Disturbing these forests would release huge amounts of carbon into the atmosphere and seriously

¹¹¹ Smith et al. 2006; EPA 2007; Woodbury et al. 2007

¹¹² Smithwick et al. 2002, Franklin and Waring 1980

¹¹³ Global Environment Outlook (GEO4) <http://www.unep.org/geo/geo4/media/> Chapter 2 – Atmosphere http://www.unep.org/geo/geo4/report/02_Atmosphere.pdf

¹¹⁴ Harmon, M., Ferrell, W., and J. Franklin. 1990. Effects on Carbon Storage of Conversion of Old-Growth to Young Forests. *Science*. 9 February 1990. See also Warren B. Cohen, Mark E. Harmon, David O. Wallin, and Maria Fiorella. 1996. Two Decades of Carbon Flux from Forests of the Pacific Northwest - Estimates from a new modeling strategy. *BioScience* 46(11):836-844. <http://www.humboldt.edu/~storage/pdfmill/Batch%203/carbonflux.pdf>

¹¹⁵ <http://environmentalresearchweb.org/cws/article/research/36084>

contribute to climate change.

The study found old forests continue to store carbon over time periods of centuries, mainly in live woody tissues and decomposing leaf litter and soil. Although young forests could take up more carbon each year, they contain less biomass. As a result, the total amount of carbon captured from the atmosphere in these younger forests is lower.

ODFs past and current logging in the Elliott has contributed to the existing CO₂ enrichment of the atmosphere and the “committed warming” that scientists say is on the way. In order to mitigate for past emissions on the Elliott, and help avoid the global, regional, and local consequences of climate change, ODF must use the full productive capacity of our state public lands for carbon sequestration. Any forgone opportunity to store carbon essentially imposes real economic costs on communities, industries, watersheds, and ecosystems.

In the past decades, the regional climate in Oregon has become warmer and wetter with reduced snowpack¹¹⁶. Current climate conditions have changed from the climate conditions when the old-growth stands were developing¹¹⁷ near the Elliott, and have even changed since the current forest on the Elliott was established in 1864.

SEI’s 2004 Evaluation Report on the Spotted Owl said:

Finally, we note that if weather affects prey and owl interactions, it is possible that systematic changes in weather, brought on by climate change (both long-term warming and cycling changes in temperature and precipitation characteristic of the Pacific coast), may affect Spotted Owls’ survival and reproduction. ...¹¹⁸

ODF and FWS failed to consider carbon storage in revenue sources. The DEIS should have considered the potential revenue from carbon offsets. Instead, the revenue estimate was based on a completely unrealistic estimate that the future will be like 2006. Since 2006, the market has crashed, no one is building houses, and timber sales on the Elliott are being sold at 50% discounts.

An alternative should be developed that considers the ecosystem services of a healthier climate, as well as potential revenue from carbon offsets.

A report from Simon Fraser University in British Columbia, Canada has determine that protecting old forests, like those on the Elliott, makes the most economic sense when considering the value of endangered species habitat and carbon storage. In most scenarios assessed by the authors, forest protection delivered a better economic return than could be obtained through logging and timber revenues. In 72 of the 81 scenarios considered, the

¹¹⁶ Scientific Consensus Statement 2004

¹¹⁷ Franklin et al. 2006.

¹¹⁸ S P Courtney, J A Blakesley, R E Bigley, M L Cody, J P Dumbacher, R C Fleischer, A B Franklin, J F Franklin, R J Gutiérrez, J M Marzluff, L Sztukowski. 2004. Scientific evaluation of the status of the Northern Spotted Owl. Sustainable Ecosystems Institute, Portland, Oregon.
<http://www.sei.org/owl/finalreport/OwlFinalReport.pdf>

researchers find that increased conservation and less logging delivers higher economic returns than current levels of logging and conservation. And in the nine cases where status quo logging appears to have a slight economic edge, this only holds if log prices do not fall and if little value is given to the role that forests play in capturing carbon from the atmosphere.¹¹⁹ As we know, log prices have fallen even since this report was released in September 2008. The study was conservative in valuing carbon, placing it at \$20 - \$150 per tone, while other studies have pegged the future price of carbon as high as \$350 per tone.

ODF and FWS must help mitigate climate change to conserve listed species. Climate change is a threat to listed species because all the cascading effects of warming: drought, peak flows, low flows, fire, insects, disease, etc. will alter the quality and quantity of habitat, predator prey interactions, plant/pollinator relations, plant/herbivore interactions, etc. The stress of these cascading impacts is added to the existing stresses that lead each species to be listed. The cumulative impacts will be significant and must be fully disclosed and considered in the EIS.

The Marbled Murrelet Recovery Plan recommends conserving stands over 80 years old because climate change may increase forest disturbance placing habitat at risk and because it may not be possible to replicate suitable habitat for the murrelet under the climate of the future.

3.2.1.2 Protect “recruitment” nesting habitat to buffer and enlarge existing stands, reduce fragmentation, and provide replacement habitat for current suitable nesting habitat lost to disturbance events. Stands (currently 80 years old or older) that will produce suitable habitat within the next few decades are the most immediate source of new habitat and may be the only replacement for existing habitat lost to disturbance (e.g., timber harvest, fires, etc.) over the next century. Such stands are particularly important because of the vulnerability of many existing habitat fragments to fire and wind and the possibility that climate change will increase the effects of the frequency and severity of natural disturbances. Such stands should not be subjected to any silvicultural treatment that diminishes their capacity to provide quality nesting habitat in the future. Within secured areas, these “recruitment” stands should not be harvested or thinned.¹²⁰

A Forest Service publication discusses the impacts of climate change on murrelets: Climate variability also affects bird distribution and abundance indirectly through trophic level impacts on food availability. Some of the best examples are the population changes in seabirds in relation to ocean productivity ... Conservation response to climate change should address means to ensure adequate habitats are available and mitigating against climate change impact on ecological processes that support birds. ... Our review indicates that climate change will likely result in

¹¹⁹ Dr. Duncan Knowler, Associate Professor, School of Resource and Environmental Management, Simon Fraser University. September, 2008. www.davidsuzuki.org/latestnews/dsfnews09030801.asp

¹²⁰ FWS. Recovery Plan for the Marbled Murrelet. http://ecos.fws.gov/docs/recovery_plans/1997/970924.pdf

increased fluctuations in biological productivity, which will be reflected in the numbers of seabirds ...¹²¹

Jerry Franklin points out that “forest management can either exacerbate or reduce the effects of climatic change on the productivity and biological diversity of northwest forestscapes.”¹²²

The proposed alternative violates CWA. Logging mature forests causes the emission of CO₂ pollution to the atmosphere. The Clean Air Act requires ODF to control CO₂ emissions through on-site carbon storage and management. Since the HCP is a long-term plan, ODF should anticipate changes in water pollution regulations. 42 USC § 7402(b) requires all federal agencies to use their authorities to further the goals of the Clean Air Act. Sections 7401(b)(1) and 7470(1) set forth clear goals to protect the public welfare by limiting air pollution such as CO₂.

The lack of analysis of climate change violates NEPA. On January 19, 2001 Secretary of Interior Bruce Babbitt issued Secretarial Order #3226 requiring all bureaus to consider climate change in all major long-term planning efforts:

There is a consensus in the international community that global climate change is occurring and that it should be addressed in governmental decision making. The National Assessment of the Potential Consequences of Climate Variability and Change, an interagency effort initiated by Congress under the Global Change Research Act of 1990, Public Law 101-606, has confirmed that climate change is impacting natural resources that the Department of the Interior (Department) has the responsibility to manage and protect. This Order ensures that climate change impacts are taken into account in connection with Departmental planning and decision making.

...

Each bureau and office of the Department will consider and analyze potential climate change impacts when undertaking long-range planning exercises, when setting priorities for scientific research and investigations, when developing multi-year management plans, and/or when making major decisions regarding the potential utilization of resources under the Department’s purview. Departmental activities covered by this Order include, but are not limited to, programmatic and long-term environmental reviews undertaken by the Department, **management plans and activities developed for public lands**, planning and management activities associated with oil, gas and mineral development on public lands, and planning and management activities for water projects and water resources.

¹²¹ Butler and Taylor. 2005. A Review of Climate Change Impacts on Waterbirds. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191. 2005.

http://www.fs.fed.us/psw/publications/documents/psw_gtr191/Asilomar/pdfs/1107-1109.pdf

¹²² Dudley, Nigel. 1998. Forests And Climate Change - A report for WWF International November 1998. <http://www.equilibriumconsultants.com/publications/docs/climatechangeandforests.pdf> citing Franklin, J.F., F.J. Swanson, M.E. Harmon, D.A. Perry, T.A. Spies, V.H. Dale, A. McKee, W.K. Ferrell, J.E. Means, S.V. Gregory, J.D. Lattin, T.D. Scholwatter and D. Larsen (1992); Effects of Global Warming on Forests in Northwestern America; The Northwest Environmental Journal; 7:233-254.

The FWS failed to meaningfully consider climate change in the DEIS for the Elliott State Forest 50-year long-range plans. The FWS and ODF must strive to realize the full potential of Oregon state lands to mitigate climate change, because any compromise of that potential is a lost opportunity that will retard attainment of the best use of these lands in the public good. Carbon storage is the highest and best use of western Oregon forest lands.

12. Revenue and Cost Projections are Inaccurate

It is ODF's management responsibility to maximize revenue on the Elliott over the long-term. The preferred alternative does the opposite. It increases logging by 43% at a time when the timber market is at an all-time low.

While the housing market fluctuates over time, everyone agrees that it will not return to its artificial bubble-high of 2005-06 over the next 50 years. Yet the HCP projects revenue over 50 years based on averaging in the fluke housing boom.

Our economic system has crashed. The FWS and Oregon State must reconsider the revenue and economic expectations of the HCP/DEIS, under the current economic climate, using peer reviewed methods that are clearly disclosed to the public, something the DEIS failed to do.

Under the current economic conditions, there has been no timber sales advertised on the Elliott in recent months. Before that, unsold timber sales were re-advertised at a 50% discount. At least three times in the past year, the Oregon Department of Forestry re-advertised previously unsold sales. All three were re-advertised with almost a 50% discount.

1. In October 2007 the 109 acre 1.96 mmbf **Mill Creek Bridge #2** sale was advertised for \$416,265. It didn't sell. July 2008 ODF did another value assessment for re-advertisement. It is virtually the exact same sale area, except, ODF added 3 acres, and the timber grew for 9 months. In spite of this added value, ODF advertised it for only \$233,631. It finally sold on August 20 with this discount. The price of Douglas fir fell from \$282.47 per mbf in October, down to only \$185.64 in July. Western Hemlock and other conifers went from \$119 to \$67. One saving grace, Red Alder, which is 171mbf of the sale, went up. It was \$341 in October, and now it is \$477. None the less, It was almost a 50% loss of returns to the common school fund and the county.

2. In October 2007 the **South Marlow Switch** timber sale was advertised for \$850,439.00. In July 2008, the very same 2.4 mmbf on 81 acres, was re-advertised for \$484,802, almost half as much. Luckily it sold for more, but it was still a 25% loss from the 2007 value.

3. In August and October 2007 **Pildup Marlo** was advertised for \$632,741. In April of 2008 it was re-advertised for \$303,634, a 50% loss of value in 6 months! It sold for almost exactly the appraised value (appraised value of DF was \$179.85 and it sold for \$180.70) . This was another huge loss of to the common school fund.

None of these reduced prices were considered in the economic analysis of the DEIS, nor averaged in with projected revenues.

In times of low-demand, most timber producers reduce their cut. But if this HCP is approved, the state will actually increase harvests during low demand period and sell 43% more endangered species habitat than when there was a higher, more lucrative demand.

Revenue and Costs detailed in the HCP/DEIS are not based on any peer reviewed economic analysis, and indeed, the DEIS does not tell us how they were arrived at. For instance, the DEIS assumes alternative 2 will produce an “average annual net revenues of about \$15.7 million over the next 50 years.”¹²³ What was that based on, a percent increase from the average of the last 10 years? How that percent arrived at, and is it realistic considering few new houses will be built for quite awhile?

Costs detailed on HCP page I-14 and 15 were also not based on any disclosed assumptions. There is no information on how costs are increased due to inflation over 50 years. For instance, the HCP assumes: “The cost for fertilization was \$75 per acre.” The cost of fertilization is likely to change significantly in the near future. Helicopter fuel prices will be higher in 10 or 50 years. Fertilizer itself is a petroleum product, a non-renewable energy source dependent on middle-east relations, so it’s cost will also increase significantly. Pesticides prices will also increase for the same reasons.

The ODF claims that Alternative 1, the current plan, is illegal because it “would not meet the fiduciary responsibility of the State Land Board”¹²⁴. This is an incredible claim to make – that the ODF has been implementing an illegal plan for the last 13 years. Why was this not revealed during the environmental process for that plan in 1995?

Revenue from Carbon Credits should be considered. Unfortunately, the DEIS never considered an alternative that would generate revenue from carbon credits, recreation, and other sources of revenue. Revenue from sustaining carbon sequestration would also generate revenue from other ecosystem services, such as a healthy fishery. An old growth forest (not far in the future if it is not clearcut now) would be huge draw for responsible recreation in this coastal area.

Carbon credit revenue has the potential to generate significant revenue within the next decade. Keeping the most valuable carbon stores uncut, and regrowing plantations, has the potential to generate significant revenue.

¹²³ HCP ES-23

¹²⁴ HCP 10-3

Because of inaccurate revenue projections, the HCP fails to meet the #1 goal of the HCP: Actively manage CSFLs with the objective of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management to maximize revenue for the CSF over the long term.”¹²⁵

Correcting the revenue projections of the HCP/DEIS is important to project what will be available to the State Land Board for schools. The Common School Fund Lands (CSFL) resources are not limited to timber, but include all features of the land that may be of use to the schools. The State Land Board should consider other resources that may offer revenue for the CSF, such as carbon credits and other benefits of carbon sequestration. The State Land Board may take management actions that reduce present income if such actions are intended to maximize income over the long term. Considering revenue from actions that offset the global warming problems that threaten our civilization makes sense, and is legal to do on the Elliott.

Oregon Administrative Rules (OARs) 629-35-0000 to 629-35-0110, “Management of State Forest Lands,” provide additional direction to the ODF in the management of BOFLs. These rules do not preclude revenue from carbon credits. They state that *greatest permanent value* means healthy, productive, and sustainable forest ecosystems that, over time and across the landscape, provide a full range of social, economic, and environmental benefits to the people of Oregon. Contributing to strategies to slow Global Warming is currently THE *greatest permanent value*.

Global warming is a reality that must be considered a threat to the people of Oregon. OAR 629-35-0020(2) states:

To secure the greatest permanent value of these lands to the state, the State Forester shall maintain these lands as forest lands and actively manage them in a sound environmental manner to provide sustainable timber harvest and revenues to the state, counties, and local taxing districts.

This management focus is not exclusive of other forest resources, but must be pursued within a broader management context that:

- Results in a high probability of maintaining and restoring properly functioning aquatic habitats for salmonids, and other native fish and aquatic life;
- Protects, maintains, and enhances native wildlife habitats;
- Protects soil, air, and water; and
- Provides outdoor recreation opportunities.¹²⁶

Protecting our climate from global warming results in a higher probability of maintaining and restoring properly functioning aquatic habitats. It protects our wildlife, soil, air, and water and promotes responsible enjoyment of our public forests. The proposed alternative, based on pie-in-the-sky revenue productions, does the opposite.

¹²⁵ HCP 1-2

¹²⁶ See HCP page 2-2.

13. NEPA violations

Thorough out these comments we have point out NEPA violations. Additionally, the DEIS failed to fully consider cumulative impacts, and a full range of alternatives.

Cumulative Impacts are not adequately disclosed. The Elliot DEIS does not adequately analyze the direct, indirect, and cumulative effects of the proposed incidental take statement on the environment. The DEIS provides only general information overviews, neither of which are adequate for understanding the cumulative effects analysis. With only general, scattered statements on cumulative effects it the DEIS, the FWS has ignored the “incremental impact” of the Elliott HCP on the environment. Instead, the FWS should have looked at past individual projects such as timber sales, the Western Oregon Plan Revisions (WOPR), the Jordan Cove liquefied natural gas project, the Millicoma Tree Farm HCP, the Final Spotted Owl Recovery Plan, and the marbled murrelet recovery plan, murrelet studies on the Elliott, the murrelet critical habitat redesignation, and climate change.

Cumulative impacts should also look at the Coos Bay and Roseburg BLM proposed timber sale program. Coos Bay is now taking scoping on regeneration harvests of spotted owl habitat in the EFC 2009 sale, less than 20 miles south of the Elliott. The FWS is currently considering the Biological Assessment for Roseburg BLM, FY 2008, Regeneration Harvests, dated January 2008, proposing to clearcut 1,878 acres of suitable habitat in Douglas and Coos Counties.

The DEIS states that the effects of the Jordan Cove LNG project cannot be determined. (DEIS at 5-22). However, FERC has now released the DEIS for the Jordon Cove LNG project. The LNG pipeline goes through 72 miles of federal forestland, much of which is mature forest and almost half in endangered species reserves. The pipeline runs to within 4 miles of the Elliott State Forest, and will clearcut 95’ wide corridors through the coast range forests, wider in places where it is needed for equipment.

LSRs adjoining the Elliott have been eliminated. The HCP states that large amounts of federal land are designated as Late Successional Reserves¹²⁷, and that the Northwest Forest Plan is being implemented to provide for the federal portion of the recovery of the northern spotted owl. However, BLM’s FEIS for the Western Oregon Plan Revision (WOPR), BLM has re-designated the LSRs as Late-Successional Management Areas (LSMA) and reduced the approximately 936,000 LSR acres to 566,373, a 39.5% reduction in forest habitat initially set aside for at risk species. Because the BLM land affected by WOPR surrounds the Elliott State Forest, the proposed HCP is inadequate now that LSRs have been significantly reduced on the surrounding BLM land.

The Final EIS for the WOPR removed most adjoining and near-by BLM lands from LSR (and LSMA), into Timber Management Areas:

¹²⁷ HCP at 3-3

* T22, R10W Section 35 is a BLM interlocking section with the Elliott. It has been completely stripped of its reserve status and moved into TMA.

* T23, R9, sections 4, 6, 7, 9 and 10 have also lost their reserve status and are open to eventually all being clearcut. This block of forest is less than mile from the Elliott.

The DEIS did not disclose this loss when it states: “Much of the Federal land near the action area is currently designated as late successional reserves (LSRs). Late successional reserves are designated in the Northwest Forest Plan (NWFP)”¹²⁸ The DEIS considered the 6 sections that lost their LSR status as “designated in the Northwest Forest Plan (NWFP) specifically for habitat connectivity, and threatened and endangered species conservation.”¹²⁹ Use of this incorrect information is a violation of NEPA.

The HCP fails to consider impacts to other species. For instance, Section 9.4.4.1¹³⁰, Effects to Goshawks, only discusses effects to nests found in the future. There was no impacts considered to nests that currently exist, but have not been discovered. Since no surveys or monitoring is required, no pre-harvest monitoring and no presence-absence monitoring is required, existing goshawks nests will be destroyed by logging and road building. The FWS failed to consider the cumulative impacts to goshawks from logging right over undiscovered nest sites.

The DEIS fails to consider an adequate range of alternatives. Scattered throughout these comments we point out where reasonable alternatives were not considered. The Elliot DEIS does not adequately consider all alternatives that would reasonably meet the purpose and need of the Elliott HCP to protect listed species and allow sustainable timber harvest. NEPA requires the agency to “rigorously explore” and objectively evaluate “all reasonable alternatives.”¹³¹ In particular, the FWS has not considered a plantation-thinning alternative. The existence of a “viable but unexamined alternative renders an environmental impact statement inadequate.”¹³² Plantation-thinning alternatives could preserve existing mature and old-growth forests that are crucial for listed species and forest health, while providing the steady flow of timber to meet the purpose and need of the Elliott HCP. We have also given the example an alternative that considers revenue from Carbon Credits that was not considered.

14. The DEIS and draft HCP violate the Endangered Species Act

Elsewhere in these comments we point out how the DEIS and draft HCP violate the Endangered Species Act, such as a failure to quantify take of endangered species. Section 9 of the ESA and its implementing regulations prohibit any person from “taking” a threatened or endangered species. “Take” is defined as harming, harassing, trapping, capturing, wounding, or killing a protected species, either directly or by degrading its habitat. An exception is found in section 10(a)(1)(B) of the ESA which authorizes the

¹²⁸ DEIS 3.12-2 – 4.12-2

¹²⁹ DEIS 3.12-2

¹³⁰ DEIS 9-13

¹³¹ 40 C.F.R. §1502.14(a)

¹³² 40 CFR s. 1502.14(c),(d).

FWS to issue state governments incidental take permits for “any taking otherwise prohibited” by section 9, “if such taking is incidental to and not the purpose of the carrying out of any otherwise lawful activity.”¹³³ A permit applicant must prepare and submit to FWS a habitat conservation plan (“HCP”).

The proposed HCP fails to qualify for an ITP. Some problems include:

- * The draft HCP does not disclose the impact that is likely to result from take.
- * The DEIS fails to fully disclose what steps the applicant will take to monitor, minimize, and mitigate those impacts; the funding that will be available to implement such monitoring, minimization, and mitigation activities; and the procedures to be used to deal with unforeseen circumstances;
- * The DEIS fails to fully disclose what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized.
- * The DEIS fails to minimize and mitigate to the maximum extent practicable
- * The DEIS fails to ensure taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild

The FWS failed in its duty to protect endangered species dependent on habitat on the Elliott State Forest. The new HCP should not be approved and the old HCP should be reconsidered. Please consider these comments in the FEIS. Feel free to call the phone numbers below if you have any questions.

Sincerely

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¹³³ 16 U.S.C. § 1539(a)(1)(B)