

## **Marbled Murrelet**

*The proposed action alternatives will jeopardize the continued existence of the Marbled Murrelet.* The current status and abundance of murrelet populations and the direct, indirect, and cumulative effects of all proposed actions on murrelet populations should be considered and disclosed in the EIS. The EIS should conduct and present an analysis similar to our analysis of spotted owl activity centers that discloses the effects of the changes to land management allocations on known murrelet localities.

*The further reduction in marbled murrelet habitat under the action alternatives is unacceptable.* The murrelet continues to decline and additional losses to habitat will only reduce future options and the likelihood of recovering this species.

## **ESA Listed Anadromous Fish**

*The EIS should consider and disclose the effects of the proposed action on Designated Critical Habitat for all ESA listed species including anadromous fish.*

**Lower Columbia River Chinook Salmon – Threatened.** In Eagle Creek Representative Watershed. Critical Habitat Designated.

The DEIS Page H-1073 states: “Most populations in this ESU have not seen as pronounced increases in recent years as occurred in many other geographic areas.” Given this statement, the EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions. This ESU is only found in one of the five “representative” watersheds (Eagle Creek) with limited areas of BLM managed lands. This analysis is insufficient to comply with NEPA and requirements of the ESA.

**Upper Willamette River Chinook Salmon - Threatened.** In Eagle Creek Representative Watershed. Critical Habitat Designated.

The DEIS Page H-1075 states “...most natural-origin spring-run Chinook populations are likely extirpated, or nearly so.” Given this statement, the EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions.

**Southern Oregon/Northern California Coast Coho Salmon – Threatened.** Found in three Medford District representative watersheds. Critical Habitat Designated.

The DEIS Page H-1076 states that populations in this ESU “...exhibit low population abundance relative to historical numbers and long-term downward trends in abundance.” Given this statement, the EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions.

The DEIS fails to disclose the effects of the proposed actions in the Klamath Resource Area and Medford Districts that may impact water quality and quantity in the lower Klamath River and consequently may affect this ESU.

**Lower Columbia River Coho Salmon - Threatened.** In Eagle Creek Representative Watershed. Critical Habitat Designated.

The DEIS Page H-1077 states “In the only two populations with significant natural production (Sandy and Clackamas rivers), short- and long-term trends are negative, and productivity is down sharply from recent (1980s) levels.” Given the dire situation with this ESU, the EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions. This ESU is only found in one of the five “representative” watersheds (Eagle Creek) with limited areas of BLM managed lands. This analysis is insufficient to comply with NEPA and requirements of the ESA.

**Lower Columbia River Steelhead – Threatened.** In Eagle Creek Representative Watershed. Critical Habitat Designated.

The DEIS Page H-1078 states “Abundance of most populations is relatively low, and those populations for which there is adequate modeling data are estimated to have a relatively high extinction probability.” Given this statement, the EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions. This ESU is only found in one of the five “representative” watersheds (Eagle Creek) with limited areas of BLM managed lands. This analysis is insufficient to comply with NEPA and requirements of the ESA.

**Upper Willamette River Steelhead – Threatened.** Not in any of the Representative Watersheds. Critical Habitat Designated.

The DEIS Page H-1079 provides a qualitative assessment for 2001-2002 runs but does not present more recent data. The EIS should present data from Willamette Falls fish counts and other quantitative data that is available. No analysis is conducted for this ESU as it is not found in any of the five “representative” watersheds. The EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions.

**Columbia River Chum – Threatened.** In Eagle Creek Representative Watershed. Critical Habitat Designated.

The EIS should conduct an ESU specific analysis that documents the direct, indirect, and cumulative impacts to this ESU and designated critical habitat under the proposed actions. The EIS should provide information on the distribution of this ESU and the geographic relationship of occupied and critical habitat to proposed actions. This ESU

is only found in one of the five “representative” watersheds (Eagle Creek) with limited areas of BLM managed lands. This analysis is insufficient to comply with NEPA and requirements of the ESA.

### **Shortnosed Sucker and Lost River Sucker**

***The EIS should consider and disclose the impacts of all actions in the WOPR alternatives on Lost River and shortnosed sucker and their critical habitat.***

***The DEIS fails to analyze the effects of the alternatives on the Lost River and shortnosed suckers.*** Both species are listed as Endangered under the Endangered Species Act and are endemic to the Upper Klamath Basin. The final rule listing the species and the recovery plan written for them by the US Fish and Wildlife Service state that causes of the species decline include “...water quality problems associated with timber harvest, removal of riparian vegetation, livestock grazing, and agriculture.” (USDI 1993). Both species live in lakes and spawn in streams or springs. The DEIS presents no analysis of the impacts to these species.

***The EIS should discuss the threats to these species and how a wood and coho salmon rearing habitat model run on five watersheds outside the range of these species complies with NEPA and ESA requirements.*** It is difficult to follow the logic of the fish and wood model that includes high intrinsic potential for juvenile coho salmon when according to the DEIS “High intrinsic potential streams have not been determined for bull trout, Lost River suckers, or shortnose suckers.” (DEIS Page 338).

***What parts of their former ranges have Lost River and shortnosed suckers been extirpated from?*** The DEIS Page 336 states, “Currently, the shortnose sucker and the Lost River sucker occupy only a fraction of their historic range...”

***The EIS should discuss the affects of all proposed activities on lake water quality, spawning habitat condition and the impacts on the species.*** In particular, the grazing program on the Klamath RA may contribute to water quality problems in occupied sucker habitat. The recovery plan specifically mentions the role of grazing in the deterioration of water quality in the Klamath Basin:

“Grazing practices have led to severe degradation of the riparian areas and have therefore greatly increased the nutrient and sediment export potential (Karr and Schlosser 1978; Schlosser and Karr 1981; Lowrance et al. 1984; Peterjohn and Gorrell 1984; Gregory et al. 1991).” (USDI 1993)

as does the WOPR DEIS:

“Grazing in the riparian zone has eliminated streambank vegetation, and has added nutrients and sediment to river systems (USDI, USFWS 2003d).”

Other activities such as timber harvest that increase sediment input and cause bank erosion have also been identified as contributing to water quality problems in the

Klamath Basin. The WOPR DEIS (page 337) states that "...habitat degradation is considered the primary cause." of the decline in sucker populations.

***The Final EIS should discuss the proposed alternatives and their relationship to the Recovery Plan and assumptions made about BLM management as evidenced in statements such as:***

"For the Klamath River Canyon area, BLM's current management direction is to allow no new roads and to perform minimal forest management activities, with recreational, scenic, and wildlife values to be emphasized." (USDI 1993)

How will changes to ACEC status in the Klamath River Canyon affect the recovery plan and the species?

***BLM has identified responsibilities in the recovery plan – how do these relate to the actions proposed in the WOPR DEIS?***

***How will the proposed activities help achieve the Oregon DEQ water temperature standard (64.4 degrees) for sucker species. Which waters that don't comply with this standard are occupied by these species on BLM lands?*** Given the lack of analysis of the effects of the proposed activities on the two sucker species, the decision maker is unable to compare the effects of the proposed actions on these species.

***Is funding available for the proposed range improvements under the action alternatives? What will the effects of the proposed actions be on suckers if the range improvements are not implemented?***

"Grazing in riparian areas can reduce and eliminate stream bank vegetation and can increase sediment to stream channels. Within the planning area, sedimentation is a limiting factor for endangered Lost River and Shortnose suckers (USDI, USFWS 2003d)."

***The DEIS provides no support for the following assertion regarding sedimentation in the Klamath Basin:***

Even though there would be short-term (less than one year), localized increases in fine sediment delivery from culvert, grazing, and other management activities under all four alternatives, there would be less than a 1% increase in fine sediment compared to existing rates from road-related activities, which often accounts for the majority of sediment that is delivered to stream channels. See the *Water* section in this chapter." (DEIS PAGE 743)"

In addition to roads, erosion from uplands and stream banks are significant sources of sediment. See the Gerber – Willow Valley Watershed Analysis (USDI and USDA 2003) for specific sources and rates of sediment production in the area.

## **Bull trout**

***The DEIS fails to analyze and disclose the effects of the proposed actions to ESA Threatened Bull Trout and the Draft Recovery Plan and Critical Habitat for this species.*** The EIS should disclose the effects of the proposed actions on this populations and populations that may be affected by watershed impacts or downstream impacts. The BLM's role in the draft recovery plan should be discussed and the relationship of the DEIS alternatives to bull trout reintroductions proposed in the recovery plan should be documented. None of the five "representative" watersheds analyzed currently contain Bull Trout.

The entire McKenzie River is Designated Critical Habitat and will likely be impacted by actions proposed in the WOPR DEIS. The Middle Fork Willamette River is Designated Critical Habitat and significant areas in the Eugene District drain into this reach of the Willamette potentially impacting Bull Trout and Designated Critical Habitat.

***The statement on DEIS Page 336 that "There is less than one stream mile with bull trout on BLM-administered land." conflicts with other information.*** Bull trout are found in the McKenzie River and DEIS Page 1338 states that they are found in the *Low Elevation Headwaters of the McKenzie River* ACEC and that 11 miles of the McKenzie River are suitable for inclusion in the Wild and Scenic River system. DEIS Page 1347 states that the potential *Four Mile* ACEC contains Bull Trout.

The ODFW's McKenzie River Bull Trout Stock Status Report (available at: <http://www.dfw.state.or.us/swwd/McKBullt.html>) reports that the Bull Trout population on the McKenzie River below Trail Bridge Reservoir "... is the largest and appears to be the most secure in the Willamette Basin." The EIS should consider and disclose the effects of direct, indirect, and cumulative impacts to the McKenzie River populations and the role of this population in recovering the species in the Willamette Basin.

***The EIS should reference the Willamette Basin Bull Trout Recovery Plan and document how the actions proposed in the WOPR DEIS conform to this plan.***

Examples of items from the recovery plan that should be discussed include:

"Complete an access and travel management plan for Federal lands in the upper Middle Fork Willamette River."

and

"1.5.1 Identify existing road systems that have a high risk of adversely affecting bull trout streams. Negative changes include sediment delivery and natural drainage networks, interception of groundwater, and interruption of delivery of woody material. Road management plans should be developed to modify, reduce, or eliminate such roads."

## **Oregon Chub**

***The DEIS fails to consider the impacts of the proposed activities on Oregon chub and contains factual errors and omissions regarding this species.*** The DEIS Page 336 states

that the Oregon chub is listed as "...threatened or endangered..." and "...it occurs only on private land." The Oregon chub recovery plan (USFWS 1998) states that only 9 of 24 known sites for this species are on private lands and that the species is listed as endangered under the ESA.

***The DEIS fails to discuss the Conservation agreement signed by the Bureau of Land Management State Director and included as an appendix to the recovery plan (USFWS 1998).***

### **Jenny Creek Sucker and Jenny Creek Redband Trout**

***The DEIS states:***

"Habitat for these special status fish species is affected by the same processes that affect the listed fish species. Therefore, the description of current conditions for listed fish species provides a sufficient description of conditions for the special status fish species."

***The FEIS should discuss the threats to these species and how a wood and Coho salmon rearing habitat model is relevant to the habitat occupied by these species.*** See our discussion of the deficiencies of the aquatics and fish habitat analysis. In addition, the Final EIS should reference the Jenny Creek Late-Successional Reserve Assessment and the Jenny Creek Watershed Analysis fully to review the impacts of the proposed land management changes on these endemic fish.

### **Torrent Salamanders**

Southern Torrent Salamander (*Rhyacotriton variegatus*) was petitioned for listing under the Endangered Species and on June 6, 2000 the US Fish and Wildlife Service determined that listing was not warranted (USDI 2000). It is currently a USFWS Species of Concern in Oregon and listed as a vulnerable species by the Oregon Department of Fish and Wildlife. In their finding the Fish and Wildlife Service relies heavily on the Northwest Forest Plan's Aquatic Conservation Strategy stating:

"Based on the evidence that southern torrent salamanders appear to stay in very close proximity to watercourses, we believe the riparian reserve system of the currently adopted and court-tested Forest Plan [Northwest Forest Plan] provides adequate protective measures to maintain the quality of most of the riparian and aquatic habitats for the southern torrent salamander on public lands across the range of the species."

and conclude:

"...we believe that current regulatory practices, while not ideal, provide sufficient protection to insure that the existence of the species is not threatened at this time. While recent improvements in protections of southern torrent salamander habitats have been implemented on Federal

lands, habitats on private lands are still vulnerable until specific changes in policy and procedures change the way these habitats are protected.”

***While this species has a limited range that includes all WOPR BLM districts with the exception of the Klamath Falls Resource Area, has a demonstrated association to older forests, and is negatively impacted by timber harvest, we find no mention of this species in the WOPR DEIS.***

***We request that the Final DEIS analyze and disclose the direct, indirect, and cumulative impacts to this species and disclose any trend towards listing that might occur under the activities proposed in the WOPR DEIS.*** This species is found in small seeps and springs and high order, high gradient streams, is particularly vulnerable to changes in microclimate, and has limited capacity to disperse across the landscape. The elimination of riparian reserves along intermittent streams and small seeps and springs may significantly affect this species.

## **Terrestrial Habitats**

### **Post-fire Logging**

***The DEIS fails to consider the effects of post-fire logging and other forms of “salvage” on terrestrial habitats and species.***

Many studies have documented widespread impacts of post-fire logging on ecosystem processes and habitat structures (e.g., see Beschta et al. 2004, Lindenmayer et al. 2004, Noss and Lindenmayer 2006, Donato et al. 2006, Thompson and Spies 2007). In general, post-fire logging impacts are known to: (1) remove biological “legacies” important in restoring forest function after natural disturbances; (2) compact soils that can magnify erosion problems with impacts to streams; (3) compound the initial disturbance; (4) spread weeds; (5) increase mortality of conifer seedlings; and (6) elevate fire hazard due to excessive build up of logging slash. Additionally, Clark (2007) documented significant impacts to the northern spotted owl following post-fire clearcutting in burn areas in southwest Oregon. Based on these findings, Clark (2007) recommended no harvest within 1.5 km of owl activity sites following natural disturbances. In sum, not a single study has documented ecosystem benefits from post-fire logging, yet BLM would permit post-fire logging in the LSMAs following disturbance that is likely to further impact threatened species, degrade water quality, inhibit forest establishment, and elevate fire risks. The impacts of post-fire logging in light of this research need to be fully addressed in the DEIS, including how much incidental “take” post-fire logging in the LSMAs could trigger.

### **Landslides**

***Will timber harvest, road building, or other activity occur on lands identified as unstable in the TPCC system?*** The EIS must consider and disclose the impacts of these activities especially as they relate to the frequency, scale, consequences, and other impacts to resources.

***The DEIS Page 742 states:***

“...rate of susceptibility to shallow landsliding from timber harvesting and road construction over the next 10 years would not increase. This is because fragile soils susceptible to landsliding are either currently withdrawn under the timber productivity capability classification system as nonsuitable forest or would be withdrawn when identified with a project activity. See the Water section in this chapter.”

***However, the DEIS Page 63 states that TPCC withdrawn lands “...may be managed similarly to the adjacent or surrounding land use allocations.”*** The EIS should clarify what management practices will occur on TPCC withdrawn lands and include this information in the consideration of water quality, sediment, and frequency of disturbance to streams.

***The DEIS Page 763 states that no increase in landslides will occur under the proposed actions.*** However, on DEIS Page 379 it states “Weaver and Hagans (1996) found that 71% of observed landslides in western Oregon from the February 1996 storms were initiated from recent regeneration harvests...” Given the increase in regeneration harvest under the proposed actions how does the BLM predict that no increase in landslides will occur.

***The EIS should consider the findings of Robinson et al (1999) especially regarding the impacts of timber harvest and associated activities such as road building on landslides.***

***The EIS should consider and disclose the effects of increases in landslides and debris torrents to human safety, damage to property, and economic costs associated with landslides and debris torrents.***

## **Hardwoods**

***The DEIS fails to disclose the extent or impact of converting hardwoods and brush fields to plantations.*** The DEIS Page 52 states that under all action alternatives brush or hardwoods would be converted to conifer plantations unless “the hardwoods would produce a higher net monetary return”. The EIS must address the impacts to wildlife from this activity and disclose the extent of the proposed actions. How will white oak stands and brushy habitats that are important habitat for big game and other species be managed? What are the “undesirable” conifer species and how will these stand conversions affect TE&S species?

***The EIS should consider the cumulative effects of Sudden Oak Death, Port Orford Cedar Root Rot and hardwood conversion activities on aquatic and terrestrial habitats, species and ecosystem processes.***

## **Aquatic Habitats**

***The DEIS fails to discuss the current condition of aquatic habitats and fish populations. Given the lack of baseline information it is impossible to assess the cumulative affect of past actions and the proposed alternatives.*** The disclosure of the affected environment for Endangered Species Act [ESA] listed fish species does not meet the minimum requirements of the National Environmental Policy Act [NEPA] and no discussion of populations or current habitat conditions is presented for special status species (Oregon Coast Coho salmon, Columbia River/Southwest Washington Coastal cutthroat trout, Jenny Creek sucker, Jenny Creek redband trout) or other recreationally and ecologically important species. The DEIS Page 335 states:

“Habitat for these special status fish species is affected by the same processes that affect the listed fish species. Therefore, the description of current conditions for listed fish species provides a sufficient description of conditions for the special status fish species.”

Habitat requirements, seasonal movement patterns, migration timing, and ranges are quite variable among these species. Significant differences exist between these species and ESA listed fish in the WOPR plan area.

Given the large body of information regarding the status of populations and habitats for these species, the BLM must disclose the current condition of habitat and populations to allow the reader and decision maker to compare the direct, indirect, and cumulative impacts caused by each alternative. Past land management activities have seriously degraded fresh water habitats throughout the WOPR planning area. The reader and decision maker are only able to assess the impact of proposed actions if the current condition of these habitats and populations are disclosed.

***The EIS should incorporate information regarding current conditions, ecosystem processes, and cumulative impacts of past, ongoing, and future actions on aquatic habitats documented in Watershed Analysis, LSR Assessments, monitoring documents, and other previously compiled information.***

***The DEIS fails to analyze the impacts of the proposed alternatives on ESA listed bull trout, Oregon chub, Lost River suckers, and shortnose suckers as well as special status fish species.*** The DEIS Page 338 states, “High intrinsic potential streams have not been determined for bull trout, Lost River suckers, or shortnose suckers.” Oregon chub and special status fish species should be included in this list. Because the analysis of effects relies on the calculation of intrinsic potential this statement indicates that no analysis was conducted for any of these species. A supplemental EIS should be produced prior to the completion of a final EIS to correct this and other significant failures to analyze and disclose the effects of the proposed activities as required by NEPA.

***The EIS must disclose the current condition of habitats and populations for both special status and ESA listed species to provide a base line to judge the impacts of the proposed alternatives.*** The DEIS fish analysis fails to comply with NEPA requirements

to disclose current conditions. In the Affected Environment section on fish (DEIS Page 339) states that:

“This analysis focuses on the key ecological processes that shape fish habitat over time rather than static conditions at one point in time.”

While we acknowledge the dynamic nature of aquatic habitats, the EIS must disclose the current condition of these habitats to allow an interpretation of the magnitude of projected effects and an assessment of cumulative impacts.

***How does the DEIS incorporate fish distribution and critical habitat for ESA listed species?*** The DEIS Page 338 states, “This analysis determines the effect of each alternative on fish habitat using current fish distribution data. The fish distribution is greater than the critical habitat distribution; therefore, the designated critical habitat is included for this analysis.” The meaning of this passage is unclear. Is fish distribution or critical habitat analyzed? The DEIS only discloses the results of the Wood/Intrinsic Potential/Fish Productivity model for the five “representative” watersheds. How do range and/or critical habitat play a roll in this analysis?

***The DEIS unreasonably discounts the BLMs role in the recovery of ESA listed fish species and the NEPA requirement to analyze and disclose the cumulative impacts of the agencies action on the environment.*** For example, the DEIS Page 338 states:

“The BLM can contribute to improving fish habitat, but the BLM within the planning area is rarely the predominant landowner in a fifth-field watershed. Therefore, limiting factors (habitat and nonhabitat) for listed species may continue regardless of the BLM’s contribution to improving habitat trends because of the other influences on the populations and their habitat.”

While it appears in the affected environment section of the DEIS, this passage provides no specific information regarding the current condition of ESA listed fish or their habitat in the analysis area. Its meaning should be clarified or the passage deleted. Are there any aspects of the Endangered Species Act that are modified or eliminated because a particular land manager owns a certain portion of a fifth-field watershed?

Discounting the BLMs role in listed fish conservation due to partial ownership of watersheds at a fifth-field scale fails to consider the cumulative impact of *all* actions on these species. Rather than discount the BLMs role in conserving and recovering listed fish the EIS must provide a review of the affected environment and all direct, indirect, and cumulative impacts on these species.

***Numerous sections of the affected environment fish section are unnecessary and provide no relevant information to the current condition of fish populations and habitat.*** The Code of Federal Regulations (40 C.F.R. 1502.15) states:

“Agencies shall avoid useless bulk in statements and shall concentrate effort and attention on important issues. Verbose descriptions of the

affected environment are themselves no measure of the adequacy of an environmental impact statement.”

Given the length of the DEIS the affected environment fish section should be focused on current conditions of fish habitat and fish populations allowing the reader and decision maker to compare the effects of the alternatives on fish.

Specific examples of extraneous passages include (but are not limited to):

- The last paragraph on DEIS Page 338 that continues onto DEIS Page 339 and figures 80 and 81.
- The final paragraph on DEIS Page 339.
- The section prior to the heading “Large Wood” at the top of DEIS Page 340.
- Much of the discussion of large wood on DEIS Pages 340-341 and figure 82 are not relevant to the affected environment section. This passage could be shortened to a few sentences about historical impacts of land management on large wood in streams.
- DEIS Pages 342-344 and figures 83-85 are not relevant to the affected environment section.
- Much of the remaining fish section in chapter 3 is also irrelevant to the disclosure of condition of the affected environment.

*Figures 80 and 81 on DEIS Page 339, while extraneous to the discussion of the affected environment, would be more informative if the y-axis units were in miles rather than the percent of the total.*

*The bullet list on DEIS Page 338 is followed by the statement, “The BLM can contribute to the survival of anadromous salmonids. For example, replacing culverts can increase fish distribution by improving mobility.” It is unclear if the statement is referring to individual or population level survival. The meaning and purpose of this statement is unclear. The affected environment section of a NEPA document should focus on the current conditions not on potential actions that may be undertaken.*

*The DEIS Page 336 states “Fish populations are cyclic by nature...” Does this mean all fish species in the analysis area? The EIS should provide a reference for this statement. While some species may be subject to cycles in population size, many species likely are not.*

*The DEIS Page 336 states “Those fish species within the planning area that have been listed as threatened or endangered have been listed as a result of the following factors*

***(Good et al. 2005)...*** Good et al. (2005) provides a discussion of salmon and steelhead not all listed species in the WOPR area and specifically does not address factors for decline stating:

“However, in the status reviews, the BRTs did not attempt a rigorous analysis of this subject [factors for decline], and the same is true for this report.”

The EIS should refer to the original listing documents for each species to determine the cause for ESA listing.

***The DEIS Page 337 contains a paragraph that begins “A biological review team, consisting of scientists from...” The EIS should provide a reference to this document.***

***The DEIS Page 338 provides four bullet statements regarding survival traits of fish. This bullet list does not seem to be logically connected with the paragraphs either before or after it.*** Why does this list appear here? Reeves et al. (1995) were referring to survival at the population, evolutionary significant unit, and species levels. The title “Survival traits of fish” appears to refer to individuals.

***On DEIS Page 338 the statement “...streams are ranked by their intrinsic potential to provide habitat for chinook, coho salmon, and steelhead.” is misleading.*** The intrinsic potential is for ***juvenile rearing habitat*** for chinook, coho, and steelhead.

***The statement at the top of DEIS Page 339 omits or poorly represents the findings of Burnett et al. (2007).*** The statement fails to note that the Burnett et al. (2007) paper only studied these fish in the CLAMS project area. Within the CLAMS project area lands with in 100m of high intrinsic potential streams “is about evenly distributed between private and public owners.” The vast majority of lands within 100 meters of high intrinsic potential coho streams were forested (Figure 4 in Burnett et al. 2007).

***The EIS should provide references to the science used select riparian management widths and management direction under each alternative. The EIS must specifically analyze and disclose the effects of the elimination of all aspects of the Aquatic Conservation Strategy.*** Given the poor health of riparian and aquatic habitats throughout the WOPR analysis area and the large number of ESA listed fish species, we find the significant reductions in riparian buffer widths and the elimination of the other aspects of the Northwest Forest Plan’s Aquatic Conservation Strategy unacceptable. The WOPR DEIS fails to consider important recent science including a review of the ecology and management of riparian and aquatic habitats in the Pacific Northwest (Everest and Reeves 2007) that states:

“We found no scientific evidence that either the default prescriptions or the options for watershed analysis in the Northwest Forest Plan and Tongass Land Management Plan provide more protection than necessary to meet stated riparian management goals.”

The drastic reductions of riparian widths and the elimination of the Aquatic Conservation Strategy proposed under the WOPR action alternatives are not based on scientific information and will result in significant impacts to aquatic organisms including ESA Listed species and important sport fishing populations. Everest and Reeves (2007) referring to curves illustrating the relationship between cumulative effectiveness of riparian buffers and distance from stream channel state:

“We are unaware at this time of any evidence in the scientific literature that supports modifying or retracting the original curves. The science produced since then (i.e., 1993) has supported the original assumptions and judgments used in developing the FEMAT curves (e.g., Brosofske et al. 1997, Gomi et al. 2002, Reeves et al. 2003).”

Everest and Reeves (2007) specifically warn of the danger of the approach used to assess fish effects in the WOPR DEIS:

“However, management strategies developed from studies of individual functional aspects of riparian zones (e.g., *contribution of large wood to stream channels*) have often failed to meet riparian management goals (IMST 1999, Murphy 1995, USDA Forest Service 1995).” Emphasis added.

***The EIS should expand the analysis of the impacts to aquatic habitats and organisms to include all functions and processes important to riparian systems.*** The narrow focus of the WOPR DEIS analysis places valuable aquatic resources at risk. Everest and Reeves (2007) state:

“The multiple functions of riparian ecosystems operate in concert, with differing widths of unmanaged near stream vegetation needed to maintain different functions (table 2). Attempts to protect or maintain a single function, based even on well-designed scientific studies, may result in damage or loss of other functions.”

***The EIS must analyze and disclose the effects of the proposed activities and reconcile the analysis with available science and the requirements of the Endangered Species Act and Clean Water Act.*** In particular, the EIS must analyze and disclose the effects of the elimination of all five aspects of the Aquatic Conservation Strategy (Watershed Analysis, Riparian Reserves, Key Watersheds, Watershed Restoration, and Standards and Guidelines for Management Activities) under the action alternatives. Additionally, the EIS must analyze and disclose the indirect and cumulative impacts of the proposed actions on the US Forest Service’s programs and on other agency and private activities including the Oregon Plan for Salmon and Steelhead, Clean Water Act compliance plans, and other actions that depend on implementation of the Aquatic Conservation Strategy.

*We include a letter for the Environmental Protection Agency commenting on the Draft Spotted Owl Recovery Plan with our comments and incorporate by reference its comments on the Clean Water Act, the Northwest Forest Plan, aquatic habitats and other resources.* See attached: Environmental Protection Agency. August 29, 2007. EPA Comments on the Draft Recovery Plan for the Northern Spotted Owl. (spotted owl epa letter.pdf)

*The EIS should consider the information regarding headwater streams in the publication:*

Olson et al. 2007. Biodiversity management approaches for stream-riparian areas: Perspectives for Pacific Northwest headwater forests, microclimates, and amphibians. *Forest Ecology and Management* 246:81-107.

### **Post-fire Logging**

*The DEIS fails to consider the effects of post-fire logging and other forms of “salvage” on aquatic habitats and species.* The EIS should fully consider and disclose the effects of the proposed changes to land management on aquatic species and habitats. See the post-fire logging section in the terrestrial habitats section of these comments for a list of scientific references relevant to the analysis.

### **Riparian Management Areas**

*Post fire logging and other forms of “salvage” in RMAs is not appropriate and will harm aquatic resources.* The EIS should consider the work of Reeves et al (2006) on post fire logging in riparian areas and other research on the subject and disclose the potential effects of the proposed changes to land management plans on riparian and aquatic resources.

*The EIS should fully analyze the cumulative, direct, and indirect impacts of activities in RMAs under all action alternatives including:*

- Yarding corridors and new roads permitted in RMAs (DEIS Page 5)
- Incidental harvest in non-harvest base lands for safety or operational reasons (DEIS Page 52)
- “Prescribed burns would be applied in riparian management areas to reduce the potential for uncharacteristic wildfires.” (DEIS Page 57)

*The DEIS states that “Channel Migration Zone” is used to define edge of streams. Channel Migration Zone does not appear in the glossary – how is it defined? How will it be identified operationally when implementing projects?* Specific definitions should be given for areas or factors used to delineate RMAs

*Under alternative #1 (Table 25 DEIS Page 70) the definitions of the RMAs are unclear.* For perennial streams the table states: “One site-potential tree height on each side of a stream extending from the edge of an active stream channel and including its channel migration zone.” The initiation point of the streamside end of the RMA is unclear in this statement. Both the Natural Lakes and Ponds and Natural Wetlands

definitions are unclear. Is the outer edge of the riparian vegetation the maximal extent of the RMA? How is the edge of a wetland defined and identified?

***Do RMAs include all flood plains?***

***What is the effect of the elimination of Riparian Reserves on unstable and potentially unstable lands?***

***The EIS should specify what is meant by operational or safety reasons to harvest in riparian management areas.***

***The use of the term “Nonharvest Zone” in the discussion of riparian management areas is confusing and misleading. These areas are open to timber harvest for safety or operational reasons and for silvicultural treatments.***

***Under Management Objective for the “Riparian Management Area Land Use Allocation for the Nonforest Areas of the Medford District and the Klamath Falls Resource Area of the Lakeview District” DEIS Page 57 states, “Perennial and intermittent streams, wetlands, lakes, and natural ponds would be managed to maintain, improve, or restore floodplain connectivity.” What does this mean? How will it be accomplished?***

***How will the BLM define and map “intermittent streams”? It does not appear in the glossary. How will it be identified operationally when implementing projects?***

***The EIS should provide a description of what the BLM means by noncommercial vegetation and specify the minimum size and distribution of the 12 conifer trees per acre retained along intermittent non-fish-bearing streams under alternative #2 and other similar requirements under the various alternatives.***

***How will the BLM identify non-fish bearing intermittent streams?***

***The costs of identifying intermittent and non-fishbearing streams should be included in the EIS estimate of sale preparation costs?***

***The DEIS fails to analyze and disclose the effects of the proposed changes to the management of riparian areas surrounding lakes, ponds, reservoirs, wetlands, springs, and seeps under the action alternatives.***

***Several of the RMA delineations include “...the extent of seasonally saturated soil...” (e.g., Alternative #1 Natural Wetlands Table 25 Page 70). How will “Seasonally saturated soil” be identified?***

***The DEIS uses a definition of a site-potential tree that is inconsistent with assumptions of the wood model and is not supported by riparian science. The DEIS Page 70 defines a site-potential tree as: “The site-potential tree height for the purposes of determining the***

riparian management areas would be based on district averages that are measured at a scale that is no finer than the fifth-field watershed.” How was this definition chosen and how does it differ from definitions used in the Northwest Forest Plan and the other Action Alternatives? The EIS should disclose the actual values to be used in RMA delineation. TMDL documents prepared under the Clean Water Act calculate site potential vegetation height (for example see McKenzie River TMDL). Why is this height not used?

***The EIS should explicitly state how debris-flow prone intermittent streams will be defined and identified under alternative #2. Table 31 DEIS Pages 79-80 Footnote #2 states:***

“Intermittent streams that are below unstable headwalls (as identified by the timber production capability classification (TPCC) codes indicating significant instability (i.e., FGNW, FPNW, and FGR2)) that would periodically deliver large wood to fish-bearing streams. Intermittent streams that would not deliver large wood to fish-bearing streams because of geomorphic conditions (such as stream junction angle and low stream gradient) or roads would not be included.”

Specific details of what geomorphic conditions will result in streams being excluded must be disclosed. What is the relationship between the areas with this TPCC and the areas identified as potential source areas under the wood models used in the analysis? What portion of the analysis area is classified as unstable? How many miles of stream will be included in this category?

***The Northwest Forest Plan includes unstable and potentially unstable areas in riparian reserves while the WOPR action alternatives do not. How will this change impact land use and resources?***

***The proposed RMAs and management actions on lands adjacent to the Coquille Forest will result in significant effects to fish and aquatic habitats.*** The proposed activities fail to comply with both the Clean Water Act and the Endangered Species Act. The DEIS fails to analyze and disclose the effects of implementing this management scheme on fish populations. None of the five “representative” watersheds includes areas affected by this proposed management plan.

***The DEIS defines Riparian Management Areas for Non-Forested Areas of the Medford District and Klamath Falls RA under all action alternatives as“...water influence zone as indicated by hydrophilic vegetation.”(DEIS Page 57)*** The EIS should provide a more specific definition and provide an analysis of the effects of this change from the Northwest Forest Plan definition of Riparian Reserves. An indication of the area that will be affected by this definition and the locations where it will be used should be included in the EIS. The EIS must also describe what plants constitute “hydrophilic vegetation” and how the RMAs will be determined in areas where degraded riparian conditions have eliminated hydrophilic vegetation, water tables have been lowered

through erosional processes, or otherwise fail to meet the definition but remain important to the proper function and health of riparian systems. In particular, this change in definition likely will affect Lost River and short-nosed suckers. A specific discussion of this change and an analysis of its affect on these Endangered Species Act listed species must be included in the EIS.

*The DEIS page 57 states that conifer encroachment would be removed in RMAs in the Areas for Non-Forested Areas of the Medford District and Klamath Falls RA.* While this may be an ecologically sound management activity, the BLM should address the root problems causing the encroachment including grazing and fire suppression.

*Wind throw of trees retained in riparian reserves will reduce shade and should be considered in the design and analysis of RMA widths.* The EIS should consider the following publication in the design and analysis of RMA/Riparian Reserve Widths:

Reid LM, Hilton S. 1998. Buffering the Buffer. USDA Forest Service General Technical Report PSW-GTR-168, Berkeley, California.

### **Best Management Practices**

*DEIS Page LXII states: "Under all four alternatives, best management practices would be applied and are assumed to maintain or improve water quality."* The EIS should provide reference to any work supporting this assumption and discuss risks and potential impacts of making this assumption.

*The DEIS Page 57 states that Best Management practices found in Appendix I will be used to meet water quality standards.* The EIS should document any monitoring or research to show the effectiveness of the Best Management Practices found in Appendix I in meeting water quality standards.

*The use of heavy equipment in riparian management areas is not appropriate and will result in damage to riparian habitats, water quality, fish, and other species associated with riparian zones or aquatic habitats.* DEIS Page 1156 states: "Site-specific conditions, such as shade retention or soil erodibility, may require a ground-based equipment exclusion zone (50 to 75 feet) adjacent to waterbodies, floodplains, and wetlands to provide filtration and shade retention." The wording of this passage using "may" indicates that heavy equipment may be allowed to operate on the banks of rivers and streams.

*How do BMPs change from current management plans? What will the effect of these changes be?*

### **Peak Flows**

*The analysis of peak flows relies on unpublished work by Dr. Gordon Grant.* The analysis is critical to understanding the analysis of peak flows. It should be made available.

*The analysis of peak flows fails to consider global climate change.*

*The analysis of peak flows fails to consider road building and other activities related to timber harvest.*

*The analysis of peak flows relies on an out of date data set for non-BLM lands.*  
Significant timber harvest has occurred on non-BLM lands since 1996.

## **Climate Change**

*The DEIS fails to consider the cumulative impacts of global climate change and BLM actions on resources impacted by the WOPR.* The DEIS Page 491 states, “The analysis assumes no change in climate conditions, because the specific nature of regional climate change over the next decades remains speculative.” The DEIS fails to consider the extensive published scientific literature on climate change in the Pacific Northwest. The management of forests, fish, and water resources under changing climates has been the subject of intensive study in the Pacific Northwest. Recently, three researchers from the US Forest Service’s Pacific Northwest Research Station shared in the Nobel Peace Prize for their work on climate change. The scientific foundation and conclusions of published peer-reviewed climate change research is much less speculative than the modeling and analyses presented in the WOPR DEIS. The final EIS should include climate change in the modeling of future condition, tree growth, and environmental effects on resources including fire, fish, wildlife, invasive species, and water.

*For information on climate change in WOPR plan area, we recommend reviewing the information presented at:*

USDA Forest Service PNW Research Station’s Climate Change web page:  
<http://www.fs.fed.us/pnw/research/climate-change/index.shtml>

Pacific Northwest Climate Impacts Group’s web page:  
<http://www.cses.washington.edu/cig/about/about.shtml>

*The following references include some but not all of the publications on climate change in the Pacific Northwest that should be considered in the EIS:*

Battin J, Wiley MW, Ruckelshaus MH, Palmer RN, Korb E, Bartz KK, Imaki H. 2007. Projected impacts of climate change on salmon habitat restoration. Proceedings of the National Academy of Sciences 104:6720–6725.

Hamlet AF. 2006. Hydrologic implications of 20th century warming and climate variability in the western U.S. Ph.D. dissertation, University of Washington, Seattle.

Hamlet AF, Lettenmaier DP. 2007. Effects of 20th century warming and climate variability on flood risk in the western U.S.. Water Resources Research 43: W06427, doi:10.1029/2006WR005099.

- Hamlet AF, Mote PW, Clark MP, Lettenmaier DP. 2007. 20th century trends in runoff, evapotranspiration, and soil moisture in the Western U.S. *Journal of Climate* 20:1468-1486.
- Hamlet AF, Mote PW, Clark M, Lettenmaier DP. 2005. Effects of temperature and precipitation variability on snowpack trends in the western United States. *Journal of Climate* 18:4545-4561.
- Harmon M, Ferrell W, Franklin J. 1990. Effects of Carbon Storage of Conversion of Old-Growth Forests to Young Forests. *Science* 247:669-702.
- Harmon, ME et al. (2004). Production, respiration, and overall carbon balance in an old-growth *Pseudotsuga/Tsuga* forest ecosystem. *Ecosystems* 7:498-512.
- Keeton WS, Mote PW, Franklin JF. 2007. Climate variability, climate change, and western wildfire with implications for the urban-wildland interface. pp. 225-253. In A. Troy and R. Kennedy (eds.), *Living on the Edge: Economic, Institutional and Management Perspectives on Wildfire Hazard in the Urban Interface*. *Advances in the Economics of Environmental Resources*, Vol. 6. Oxford, United Kingdom: Elsevier Sciences JAI Press.
- Lenihan JM, Bachelet D, Drapek R, Neilson RP. 2006. The response of vegetation distribution, ecosystem productivity, and fire in California to future climate scenarios simulated by the MC1 dynamic vegetation dynamic California Climate Change Center, CEC-500-2005-191-SF: 1-19. Available online at: <http://www.treesearch.fs.fed.us/pubs/27222>
- Leung LR, Ghan SJ. 1999. Pacific Northwest Climate Sensitivity Simulated by a Regional Climate Model Driven by a GCM. Part I: Control Simulations. *Journal of Climate* 12: 2010–2030. Available online at: <http://ams.allenpress.com/perlserv/?request=get-document&doi=10.1175%2F1520-0442%281999%29012%3C2010%3APNCSSB%3E2.0.CO%3B2>
- Leung LR, Wigmosta MS. 1999. Potential climate change impacts on mountain watersheds in the Pacific Northwest. *Journal of the American Water Resources Association* 35:1463–1471.
- Littell JS. 2006. Climate impacts to forest ecosystem processes: Douglas-fir growth in northwestern U.S. mountain landscapes and area burned by wildfire in western U.S. ecoprovinces. Ph.D. dissertation, University of Washington, Seattle.
- McKenzie D, Allen CD. 2007. Climate change and disturbance regimes in western North America. *EOS Transactions* 88:227.
- Miles EL, Snover AK, Hamlet AF, Callahan B, Fluharty D. 2000. Pacific Northwest regional assessment: The impacts of climate variability and climate change on the water

resources of the Columbia River Basin. *Journal of the American Water Resources Association* 36:399–420.

Mote PW. 2003. Trends in temperature and precipitation in the Pacific Northwest during the twentieth century. *Northwest Science* 77: 271-282.

Mote PW, Parson EA, Hamlet AF, Keeton WS, Lettenmaier D, Mantua N, Miles EL, Peterson DW, Peterson DL, Slaughter R, Snover AK. 2003. Preparing for Climatic Change: The Water, Salmon, and Forests of the Pacific Northwest. *Climatic Change* 61:45-88.

Payne JT, Wood AW, Hamlet AF, Palmer RN, Lettenmaier DP. 2004. Mitigating the Effects of Climate Change on the Water Resources of the Columbia River Basin. *Climatic Change* 62: 233-256.

Stephenson N, Peterson DL, Fagre D, Allen CD, McKenzie D, Baron JS, O'Brian K. 2006. Response of western mountain ecosystems to climatic variability and change: the Western Mountain Initiative. *Park Science* 24:24-29.

Stewart IT, Cayan DR, Dettinger MD. 2004. Changes in Snowmelt Runoff Timing in Western North America under a 'Business as Usual' Climate Change Scenario. *Climatic Change* 62:217–232. Available online at: [http://meteora.ucsd.edu/cap/stewart\\_clch.pdf](http://meteora.ucsd.edu/cap/stewart_clch.pdf)

Turner, DP et al. 2007. Scaling net ecosystem production and net biome production over a heterogeneous region in the western United States. *Biogeosciences* 4:597–612.

***The DEIS fails to consider the effect of the proposed actions on carbon cycles and global climate change.*** The DEIS does not address this issue. Old, naturally formed forests in the Pacific Northwest store more carbon than any other forest (Harmon et al 2004, Turner et al. 2007) and logging these forests releases large amounts of carbon to the atmosphere that is not sequestered by subsequent stands managed on short to medium length rotations proposed in alternatives #1 and #2 (Harmon et al 1990). The work of Harmon et al (1990) should be used as the basis for an analysis of the effects of the proposed actions on atmospheric carbon levels.

**The economic analysis should consider the value of the carbon stored in old forests in the WOPR plan area.** The Chicago Climate Exchange (<http://www.chicagoclimatex.com>) provides a source of information on the value of carbon storage. Carbon credits are currently trading for \$2.00/metric ton and they have traded as high as \$5.00/metric ton of CO<sup>2</sup> in December. Given that Harmon et al (1990) estimate that logging old-growth in the Pacific Northwest releases 187 megagrams of carbon per hectare. The value of forgone carbon storage under the WOPR alternatives should be straightforward to calculate.

## **Recreation**

### **Wild and Scenic Rivers**

*The proposed actions will negatively affect potential and existing Wild and Scenic Rivers. Given the O&C Act's mandate to provide recreational opportunities, the need to conserve ESA listed fish, and the requirements of the Clean Water Act the EIS should fully examine and disclose the effects of the alternatives on each potential and existing Wild and Scenic River.*

### **State Scenic Rivers**

*The DEIS fails to consider and disclose the effects of the action alternatives on State Scenic Rivers. The DEIS Page 50 states that O&C lands within State Scenic River Corridors would not be managed "...to protect and enhance identified scenic, aesthetic, recreation, scientific, research, fish, and wildlife...". The EIS should disclose the area of O&C lands within state scenic river corridors and the effects of the proposed action on these rivers. The analysis should consider the economic value, recreational use and contribution to community stability of these corridors.*

*The State of Oregon requires a permit for activities, including timber harvest, within 1/4 mile of State Scenic Rivers. Will the BLM comply with this requirement?*

*The EIS should provide an internet link or other reference to the State Scenic River Management Plans and Agreements. The DEIS Page 145 states that the Scenic sections of the Clackamas River, Nestucca River, and Sandy River have joint state and federal management plans in place and the Klamath River has a cooperative management agreement between the BLM and the Oregon Department of Parks and Recreation. We have been unable to locate these documents. The EIS should provide a reference to these documents and internet access to them.*

### **Off-Highway Vehicles**

*The DEIS fails to consider a range of alternatives for the management of Off-Highway Vehicles. The EIS must consider a range of options regarding the management of OHVs. Including a single plan under the actions common to all alternatives is not sufficient to comply with the requirements of NEPA.*

*The public would be better served by creating an Off-Highway Vehicle planning process separate from the WOPR. While OHV issues are ripe for discussion and the BLMs effort to better manage the impacts of OHVs are timely, we recommend that the BLM initiate an independent effort to plan for and manage the use of OHVs.*

*Given the extent and magnitude of impacts from OHVs on BLM lands and BLMs inability to manage existing use no areas currently closed to OHVs should be opened to their use. Examples areas opened to OHVs that should remain closed include the Haceta Dunes ACEC and Valley of the Giants ACEC.*

***The DEIS fails to inform the public and decision maker regarding the proposed OHV designations.*** The DEIS Page 50 states, “Detailed maps are available to the public at each district office that show proposed off-highway vehicle designations with a preliminary road and trail network.” These maps should be made available via the internet or published in the EIS.

***The DEIS fails to consider and disclose the effects of the proposed changes to OHV management.*** Specifically, the EIS should disclose the current impacts of OHVs on resources and analyze the effects of the proposed changes to OHVs on soils, erosion, streams, invasive plants, Sudden Oak Death, Port Orford Cedar Root Rot, federal and state listed Threatened and Endangered species, fish, big game, special status species, non-motorized recreational users, and other resources that may be impacted.

***The DEIS states that travel management plans will be completed in the next five years.*** Does the BLM have staff available to complete this work? The cost of this work should be included in the BLMs budgets requirement estimates and economic analysis.

***The DEIS fails to consider the impact of OHV use on streams and other aquatic habitats and aquatic species including Endangered Species Act listed salmon and steelhead.*** The analysis of sediment transport to streams does not consider the proposed OHV designations.

***The DEIS fails to consider the impact of OHV use on terrestrial species and habitats including ESA listed and Bureau Special Status Species.***

## **Sudden Oak Death/Port Orford Cedar Root Rot**

***The DEIS fails to assess the risks posed by this introduced plant pathogen and provides a misleading interpretation of the existing science.*** The DEIS Page 492 states:

“Future spread of the disease into Oregon is uncertain. Models identify different levels of risk of sudden oak death spread across the planning area (Kelly et al. 2005).”

and concludes:

“However, because future spread of the disease and subsequent tree mortality in the planning area is speculative, there is no basis on which this analysis can assume future changes to forest composition, structure, and process as a result of Sudden Oak Death.”

Contrary to the conclusions of the DEIS, the General Technical Report cited (Kelly et al 2005), a habitat model for Sudden Oak Death created by the USDA Forest Service’s Pacific Southwest Research Station, found that all five models examined “...were consistent in their prediction of some SOD risk in coastal CA, OR and WA.” Three of the five models predict high risk for almost all of the WOPR area and a

composite model placed most of the WOPR area in the highest two risk categories (Kelly et al 2005).

***The DEIS erroneously reports that only one site is infected with Sudden Oak Death in Southwestern Oregon.*** Although the DEIS reports only one infected site in Southwestern Oregon, at least 53 localities have been reported (Kliejunas 2007).

***The DEIS fails to use the best available science and does not cite an important comprehensive summary of the literature.*** The EIS must analyze the effects of the WOPR alternatives on the spread of Sudden Oak Death and incorporate the effects of Sudden Oak Death on resources. In particular, the cumulative effects of hardwood conversion projects and Sudden Oak Death on wildlife associated with oaks and other hardwoods affected by Sudden Oak Death should be disclosed.

***The DEIS should incorporate the latest science regarding Sudden Oak Death including the review by Kliejunas (2007).***

***The DEIS fails to discuss the impacts of the proposed activities on Port Orford Cedar Root Rot.*** The EIS must disclose the increase risk of infection and spread of this plant disease under the WOPR action alternatives.

***The EIS should consider and disclose the cumulative impacts of Sudden Oak Death, Port Orford Cedar Root Rot, off-highway vehicles, suction dredge mining, timber harvest and associated activities including road building on resources particularly aquatic resources including fish, water quality, and aquatic habitats.***

## **Areas of Critical Environmental Concern**

***The EIS should analyze and disclose the effects to timber production of designating ACECs.*** Given the small area of existing and proposed ACECs we believe this impact will be relatively small. This information could inform the public and decision maker allowing an assessment of the trade-offs between timber production and other resource benefits inherent in the decision to designate or eliminate ACECs.

***The presentation of the changes to ACECs and RNAs in the DEIS is difficult to follow and fails to adequately disclose the proposed action and the resulting effects.*** The DEIS provides little detail regarding the extant or impacts of eliminating or reducing the area of ACECs and RNAs. The EIS would provide greater clarity and transparency if each ACEC and RNA was discussed individually and a map including the extent of the ACEC or RNA and the distribution of O&C, public domain, and other lands was included. It is impossible to track the logic of why individual areas are included or excluded from designation and why individual areas are designated under some alternatives and not under other alternatives.

***Given that the courts have upheld the current Resource Management Plans that include the currently designated ACECs and RNAs the DEIS wrongly relies on the O&C Act to eliminate protection for these areas.***

***The DEIS fails to analyze and disclose the effects of eliminating ACECs and RNAs on rare organisms, special status species, ESA listed species, big game, fish, recreational opportunities and other resources.*** Tables 231, 232, 233, 234 do not show effects they only list the number of ACECs with each group of relevant and important values. The EIS should consider and disclose the effects of elimination, partial elimination, or failure to designate each ACEC on fish, wildlife, other species and resources.

***The DEIS provides no explanation of how ACECs were selected for designation, elimination, or exclusion of O&C Lands.*** The EIS must include a discussion of how decisions were made and what criteria were used to make the decisions. There is no apparent pattern in how the alternatives relate to the ACEC determinations.

***The DEIS combines proposed and existing special designation lands in the analysis making interpretation of the impacts to individual areas difficult.*** Existing and proposed ACECs and RNAs should be discussed and summarized separately.

***At a minimum, existing ACECs should be maintained and proposed ACECs should be designated on all non-harvest land base areas including on TPCC withdrawn lands and LSMAs.***

***The EIS should analyze and disclose the cumulative effects of removing ACEC status or failing to designate ACECs with significant blocks of old growth forest in watersheds or physiographic provinces where little unlogged native forest remains or where old growth is far below its historical distribution.*** In many cases (e.g. Valley of the Giants) these areas represent the only remaining native forest throughout watersheds and often over considerable areas. Cumulative impacts to old forest associated species, ecosystems, and processes should be considered across federal, state, and privately managed lands.

***The EIS should analyze and disclose the cumulative effects of removing ACEC status or failing to designate ACECs in areas with significant fish populations or habitats.*** Resident and anadromous fish are important components of Oregon's biodiversity and represent a significant recreational resource. Many of the proposed or existing ACECs (e.g. North Fork of the Wilson River ACEC) are known for their high quality fish habitat and important role in providing a foundation for the recovery of ESA listed and other depressed populations. Cumulative impacts to fish populations should be considered across federal, state, and private land.

***The EIS should designate the "Low Elevation Headwaters of the McKenzie River" ACEC.*** The McKenzie River is world renowned for flyfishing and the McKenzie River Drift Boat was specifically designed for fishing this river. The proposed ACEC flanks the river along one of the most popular floats for anglers and other recreational users. The BLM manages three popular boat launches in this area Silver Creek Landing, Rennie Landing, and Taylor Landing. The river corridor provides year-round recreational opportunities close to the Eugene-Springfield metropolitan area. The Eugene BLM

District's webpage lists the entire Highway 126 corridor between Waltherville and Nimrod (includes the proposed ACEC) as a Wildlife Viewing Site and Silver Creek Landing as featuring "picnicking, wildlife viewing, fishing, watercraft launch". Salmon, steelhead, and trout fishing are popular on the McKenzie River. The area is inhabited by Endangered Species Act listed species including bull trout, Upper Willamette spring chinook, bald eagle and the northern spotted owl (DEIS Page 1338). Other species include the Bureau sensitive Harlequin duck. Native cutthroat Trout and rainbow trout, known as "McKenzie Redsides", provide a popular sport fish. Osprey can be viewed along the river. The Oregon Department of Fish and Wildlife's McKenzie River Stock Status Report (2002) emphasizes the importance of this basin for ESA listed Upper Willamette spring chinook:

"The McKenzie basin is the most important remaining area for natural production of spring chinook in the Willamette Basin. Although heavily influenced by hatchery fish, the wild population of spring chinook in the McKenzie River is the most productive in the Willamette gene conservation group."

The area is also important for ESA listed bull trout – the Oregon Department of Fish and Wildlife (<http://www.dfw.state.or.us/swwd/McKBullt.html>) referring to the Mainstem McKenzie below Trail Bridge Reservoir stated:

"This population of bull trout is the largest and appears to be the most secure in the Willamette Basin."

While native low elevation forests have largely be converted to tree farms the DEIS (Page 1338) identifies the value and rarity of these stands listing the relevant and important value category "Unique nature of a large continuous block of native forest. Minimally disturbed blocks of land under 2,000 feet on the east side of Willamette Valley." and that 11 miles of the river are "...suitable for inclusion in National Wild and Scenic System as a Recreational Segment."

The McKenzie River is listed as water quality limited under the Clean Water Act for excessive temperature. Excessive temperature negatively affects the beneficial uses "Salmonid fish spawning and rearing, anadromous fish passage, resident fish and aquatic life are the most sensitive beneficial uses in the McKenzie Subbasin." (Willamette Basin TMDL Document).

At a minimum, the EIS should disclose the effects of converting these lands from Adaptive Management Area to Timber Management Area and disclose the impacts to recreational and scenic values, Wild and Scenic River qualities, water quality, endangered and special status species, and angling opportunities. Economic effects of the proposed land management changes should also be considered and disclosed. Businesses and communities in the area rely on recreational visitors and the opening day of trout season is a major event in Leaburg and Vida with many community organizations hosting events. The analysis should consider the condition of the surrounding area and the

cumulative effects of past, ongoing, and likely future actions that have and will eliminate other native forests from the area.

***The proposed Taylor Creek ACEC should be designated for many of the reasons listed in the previous section regarding the Low Elevation Headwaters of the McKenzie River ACEC section.*** According to the DEIS this small (155 acre) area provides habitat for the Federally threatened bald eagle and northern spotted owl and that the “western parcel is a significant spawning channel of the McKenzie River.” The EIS must disclose the effects of not designating this area as an ACEC on Upper Willamette Spring Chinook, bull trout, and resident trout. The EIS must disclose the impacts to recreational and scenic values, Wild and Scenic River qualities, water quality, endangered and special status species, and angling opportunities.

***The proposed Wells Island ACEC should be designated.*** This tiny (73 acre) isolated block of BLM land, an island in the Willamette River between the communities of Albany and Independence, should be designated an ACEC. It has no commercial timber and the GIS coverage lup\_aa\_a\_acec\_allocations\_poly lists this area as eligible for Wild and Scenic River Status. Given the value of this island as wildlife habitat and the DEIS statement that “This island includes habitat that is unique from all BLM ownership in NW Oregon.” It is difficult to understand why the BLM would choose not to designate this area as an ACEC. If this area is not designated as an ACEC the EIS should disclose the rationale for the decision.

***The proposed Little North Fork of the Wilson River ACEC should be designated in its entirety.*** In the DEIS this ACEC would be designated under alternatives #1 and #3. It would be designated under alternative #2 but O&C Lands would be excluded. The majority of the area is administratively withdrawn under WOPR Alternative #2 and the limited area of TMA found on O&C lands appears to be non-commercial in the TPC data field of the lup\_aa\_a\_acec\_allocations\_poly GIS data layer. If the BLM decides not to designate this area as an ACEC the EIS should disclose the rationale for the decision. If O&C lands are excluded the EIS should disclose the area of the excluded lands and the proportion of the total that they represent.

The DEIS provides an accurate description of the area:

“Intact old-growth conifer riparian habitat is rare throughout the state of Oregon and is especially rare in coastal ecosystems. This potential ACEC contains old-growth components in a biologically diverse and natural condition not only within the riparian areas but throughout the adjacent slopes and tributary drainages as well. A relict old-growth plant community of Douglas-fir, Sitka spruce, Western hemlock, and Western redcedar that is approximately 450 years old within the canyon of the Little North Fork of the Wilson River. The riparian plant community is essentially natural, having large conifers shading and contributing downed material to the river system.”

“High quality habitat and known sites for northern spotted owl (FT), marbled murrelet (FT) and bald eagle (FT) exists within the potential Little North Fork Wilson River ACEC. All three species have nested either now or in the recent past within the area. Due to its inaccessibility, ruggedness, lack of fragmentation, and proximity to highly managed state and private forest lands, this area is one of the few remaining areas in the northern coast range where late-successional dependent species exist largely undisturbed.”

Besides containing this rare remaining fragment of old-growth forest surrounded by a sea of state and private clearcuts and providing habitat for three federally threatened bird species (northern spotted owl, marbled murrelet, and bald eagle), the importance of this area as a refuge for fish was recognized and the watershed was designated a tier 1 key watershed under the Northwest Forest Plan. Five species of salmon are found in the Little North Fork of the Wilson River and it is the only stream on BLM managed lands

*The EIS should designate the Steel Creek ACEC.*

*The EIS should maintain the Crabtree Complex RNA/ONA in its entirety.*

*The EIS should maintain the Jackson Bend ACEC*

*The EIS should designate the Molalla Meadows*

*The DEIS should maintain and protect the Sandy River Gorge ONA and all other BLM lands in the Sandy River Basin. Given the efforts of private conservation groups working with the BLM, the recent removal of Marmot Dam and other efforts to restore salmon and steelhead and the proximity to Oregon’s largest metropolitan area this area should be protected to comply with the O&C Act’s mandate to provide for recreation.*

*Other important ACECs that should be designated or maintained include (but are not limited to):*

Elk Creek

Nestucca River

Valley of the Giants

North Fork Coquille River

Tioga Creek

North Santiam

North Umpqua River

## **Fire and Fuels Management**

*The EIS should explain how the management objective “Promote ecosystem function and resiliency (DEIS Page 33) can be accomplished given the proposed alternatives.*

Alternatives 1 and 2 reduce resiliency on Medford District and the Klamath Falls Resource Area. It is difficult to reconcile this management objective with is difficult to

reconcile with the Management Action “Immediate action to control and suppress all wildfires would be taken in all areas” (DEIS Page 33).

*The DEIS Page 33 states that a management objective is to “Reduce the fire hazards to communities that are at risk from uncharacteristic wildfires”* The management objective should be to protect communities from all fires.

*The WOPR DEIS has used an overly broad definition of Wildland Urban Interface (WUI).* The Wildland Urban Interface as depicted in Map 6 (DEIS Page 155) encompasses most of the Bureau of Land Management Lands in the project area. Other sources, such as the Oregon Department of Forestry, classify a much smaller part of the project area as WUI (see: <http://egov.oregon.gov/ODF/GIS/gisdata.shtml>). We can find no definition of WUI in the DEIS document other than general descriptions. WUI lands must be identified precisely to direct limited resources to areas where they are most needed and avoid applying treatments intended to safeguard homes to remote areas where they may have negative ecological impacts and provide little or no benefit to the protection of homes. The EIS should consider and disclose the direct, indirect, and cumulative impacts of activities allowed in WUI that would otherwise be prohibited or limited in the area.

## **O&C lands / Coos Bay Wagon Road Lands / Public Domain Lands**

*The O&C Act does not govern Public Domain lands. The DEIS and the proposed actions fail to distinguish between O&C Act Lands and public domain lands. The EIS should disclose the distribution of non-O&C Lands and consider the requirements of FLPMA for these lands.* The DEIS proposes the same management actions on public domain lands and lands governed by the O&C Act. These actions include elimination of Northwest Forest Plan Standards and Guidelines, RMA widths and management direction, provisions for salvage logging, limited to no retention of green trees, snags, and down wood, and protection of intermittent streams and other important wildlife habitats. Roughly 400,000 acres of the WOPR area are public domain. These lands should be identified in the EIS and the BLM’s narrow interpretation of the O&C Act should not be applied to these non-O&C Act lands. The BLM should consider an alternative that provides a high level of conservation emphasis on Public Domain lands.

*The Coos Bay Wagon Road Lands are not governed by the 1937 O&C Act. The EIS fails to discuss the 1939 law governing the Coos Bay Wagon Road Lands.* The EIS must discuss the 1939 law governing the Coos Bay Wagon Road and its tax-equivalence basis for calculating payments to the counties. The EIS must clearly show how county payments from O&C Lands, Coos Bay Wagon Road Lands, and Public Domain Lands are calculated. The EIS must also clearly state how the 1939 law directs the BLM to manage Coos Bay Wagon Road Lands.

*The Coos Bay Wagon Road Lands should be managed according to FLPMA.* FLPMA does not provide an exemption for the Coos Bay Wagon Road lands. All management of these lands should conform to this law.

**O&C Act Lands on National Forests.** Fairfax and Yale (1987) state that approximately 20% of the O&C lands are found on National Forests. The EIS should disclose where these lands are, which agency manages them, and how they are managed. Are these lands included in the WOPR planning area?

## **Management of Lands Surrounding the Coquille Forest**

***The DEIS fails to disclose the Coquille Tribe's Management Direction for Tribal Cooperative Management Areas document.*** During extensive internet searches on general search pages and searches of both the BLM's and Coquille Tribe's web pages we failed to locate this document. Because the EIS adopts this document for management of BLM lands, it must make this information available and consider the consequences of implementing it.

***The BLM must disclose the relationship between WOPR alternatives and management of the Coquille Tribal Lands.*** Is management on Coquille Tribal lands currently required to follow the Northwest Forest Plan? Will the WOPR change this? If so what are the effects of this change?

***The DEIS fails to analyze the direct effects of the proposed Coquille Management plan on BLM lands and the indirect effects of adopting this plan on resources on lands managed by the Coquille Tribe. In particular, the EIS should consider and disclose the direct, indirect, and cumulative effects of this action on ESA listed terrestrial and aquatic species, special status species, old-growth forests, and water quality limited streams.***

***The proposed management action on lands surrounding the Coquille Tribal forest violate the Clean Water Act by increasing water temperatures in water quality limited streams.***

## **Comments on other issues**

### **Grazing**

***The DEIS fails to consider and disclose the effects of livestock grazing and associated activities on ESA listed and other special status species including Lost River and shortnose suckers, bull trout, Oregon spotted frog, coho salmon, and Jenny Creek redband trout. The DEIS fails to consider and disclose the effects of livestock grazing and associated activities on water quality and aquatic habitats.***

### **Air Quality**

***The DEIS Page 30 mentions "Dust palliatives". What are these and what are their environmental effects?***

## **Fertilizer**

*The DEIS fails to disclose the extent and impact of fertilizer use.* The DEIS Page 52 states that fertilizers will be used in forested stands. Are there limits placed on the use of fertilizers? Will they be used near aquatic habitats? How will the use of these fertilizers affect water quality and fish including listed fish species?

## **Ecology**

*The analysis should differentiate between “mature” and “structurally complex” forests.* While the DEIS combines these two successional stages significant differences exist between them. The affected environment and environmental consequences should differentiate between these two stages and present analysis results for each stage rather than combined results.

*Forest age distribution graphs should present all age classes.* In graphs of forest age distribution, the DEIS lumps stands > 200 years old. These graphs should display all age classes. Combining stands > 200 years old hides the loss of very old forests under the WOPR action alternatives.

## **Visual Resource Management**

*The DEIS fails to consider a range of alternatives for visual resource management.*

*The DEIS fails to consider and disclose the impacts of the changes to visual resource classes on the economy, community stability, and recreation.*

## **Cumulative Impacts**

*The DEIS fails to adequately describe the affected environment as it relates to lateral associated organisms and fish.*

“To address cumulative effects adequately, the description of the affected environment should contain four types of information: data on the status of important natural, cultural, social, or economic resources and system...” (CEQ Cumulative Impact Handbook Page 24)

The NEPA explicitly requires a cumulative impact analysis. A particular action may seem unimportant in isolation, but that small action may have dire consequences when combined with other actions - See document in WOPR file titled Mt Ashland Decision Notes.

*The EIS should consider and disclose the cumulative impacts of:*

The West wide energy corridors project  
Cumulative impact of energy corridors  
Suction dredging mining

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