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780 NE Court Street
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November 4, 2005

Re: 8 Mile Meadow Salvage CE

Dear Mike and Kim,

Please accept these comments from Bark regarding the revised Eight Mile Meadow Salvage Proposal.

Upon reviewing the revised Eight Mile Meadow Salvage Proposal and visiting the planning area, we still have serious concerns about this project. We would like to thank you for removing the acreage that was within Senator Wyden's wilderness proposal. However, we are still concerned about the use of categorical exclusions (CE) by the Barlow District and do not feel it is the best way to have an informed and participatory public process. CEs should be used for their original intended purpose of conducting "no brainer" activities such as repairing and replacing infrastructure, not for circumventing public input and avoiding environmental analysis. The revised proposal asserts the project is no longer intended to reduce forest fuels, but instead, proposes implementing habitat restoration for the Northern spotted owl. The expansion of CE authorities to include large-scale timber sales that clearcut designated Critical Habitat for the Northern spotted owl (NSO) habitat in a Late Successional Reserve, such as proposed here, is very controversial.

Far too many issues need careful evaluation with this project. The proposed units are entirely within federally designated Critical Habitat for the Northern spotted owl. The project would destroy lands surrounding three trails in a popular recreation area; is providing key habitat for an array of sensitive species; and would result in a large-scale clearcut across the landscape that has not recovered well from past management. The brief project notice does not furnish substantive and quantitative evidence showing this project will not cause serious and irreversible damage to endangered species such as the Northern spotted owl, snags, soils, downed woody debris, forest productivity and succession, plant diversity, water quality, wildlife habitat and recreation. It is our opinion that a complete environmental analysis is necessary before proceeding.

In limited circumstances, the NEPA regulations authorize agencies to use a "Categorical Exclusion" for a "category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in implementation of these regulations." 40 C.F.R. §§ 1508.4, 1500.4(p). Neither an EIS nor an EA is required for categorically excluded actions, but the NEPA regulations require Federal agencies to provide for "extraordinary

circumstances" in which otherwise categorically excluded actions require an EA or EIS. 40 C.F.R. §§ 1507.3(b)(2)(ii) & 1508.4. The Forest Service provides that a proposed action may be categorically excluded from documentation in an EA or EIS only if: (i) the action is within a category listed in FSH at Sections 31.1b or 31.2 and (ii) there are no extraordinary circumstances that may result in significant individual or cumulative environmental impacts. FSH 1909.15, 30.3(1)(b) (emphasis added).

The Forest Service plans on categorically excluding the Eight Mile Meadow Salvage Proposal from NEPA documentation under the newly developed Category 13, hazardous fuels reduction. FSH 1909.15, 31.2, category 13. This category allows the Forest Service to categorically exclude the "salvage of dead and/or dying trees not to exceed 250 acres with no more than 1⁄2 mile of temporary road construction. This categorical exclusion allows salvage harvest in areas where trees have been severely damaged by forces such as fire, wind, ice, insects, or disease and still have some economic value as a forest product."

By definition, a project that is categorically excluded cannot individually or cumulatively have a significant impact on the environment. 40 C.F.R. §1508.4. In addition, CE 13 does not apply where there are extraordinary circumstances. Extraordinary circumstances are those circumstances "in which a normally excluded action may have significant environmental effect." 40 C.F.R. § 1508.4. The FSH includes a list of such extraordinary circumstances, which include adverse effects on threatened and endangered species (TES) or their designated critical habitat. FSH 1909.15, 30.3(1) and (2). However, it is not "the presence" of such species or their critical habitat, but "the degree of the potential effect of a proposed action" on the species and its habitat that informs the decision maker of potential extraordinary circumstances. Id. at 30.3(2). The Ninth Circuit has held that categorical exclusions are appropriate where TES species are present if the agency concludes that the project will not have a negative impact on the species. Pyramid Lake Paiute Tribe v. U.S. Dep't of the Navy, 898 F.2d 1410, 1414-16, 1420 (9th Cir. 1990).

A. Extraordinary Circumstances Are Present

1. Northern Spotted Owls

CEs are not appropriate where extraordinary circumstances, such as adverse effects on threatened and endangered species or their critical habitat, exist. Id. at 30.3(1). The Eight Mile Meadow Salvage project would harvest trees on more than 230 acres within Critical Habitat for the Northern Spotted Owl, including snags and dying trees likely to become snags, which are "primary constituent elements" of NSO Critical Habitat. "Primary constituent elements" are those "physical and biological attributes that are essential to a species conservation," 57 Fed. Reg. 1796, 1797, 1798 (Jan. 15, 1992). The proposed 8 Mile Meadow Salvage falls wholly in designated Critical Habitat for the northern spotted owl. Please explain how a 230 acre clearcut will not result in adverse modification and irreversible damage to designated Critical Habitat and Northern spotted owls. Consultation with FWS is required for any project that may affect owls and monitoring needs to be done to determine if owls are using the area. The stands contain prey species for owls. As well, signs exist of species integral to cavity formation, creating ideal conditions for owls, which are dependent on mosaic habitats for both foraging and dispersal. Any habitat alteration of a federally listed endangered species requires a complete environmental analysis to fully ensure that no threats to the species future viability will ensue.

The agency must physically protect and restore designated critical habitat to achieve "recovery" not just maintain the species in bare survival mode. This is the legal mandate of the ESA as reflected in three circuit court opinions Gifford Pinchot Task Force v. FWS (9th Circ August 6, 2004), Sierra Club v. U.S. Fish and Wildlife Service, No. 00-30117 (5th Cir. Mar. 15, 2001). N.M. Cattle Growers Ass'n v. United States Fish and Wildlife Serv., 248 F.3d 1277, 1283 & n.2 (10th Cir. 2001).

Meeting the recovery standard is not only an ESA issue, but also a NEPA issue. The agency is required by law to properly frame its NEPA analysis so that legal mandates are clearly apparent and the consequences of the proposed action are compared to the applicable legal standards. The NEPA document must therefore disclose primary constituent elements of critical habitat, the current condition of the affected CHU, and how this CHU may fit into recovery and conservation efforts for listed species. The NEPA analysis for this project fails to make these disclosures and inappropriately aims to avoid jeopardy rather than contribute to recovery. NEPA requires that the agency properly frame its legal duties so it can accurately disclose whether it is complying with the law. FSH 1909.15 Chapter 40, 43.21. 40 CFR 15087.27(b)(10). NW Indian Cemetery Protective Association v. Peterson, 795 F2d 688 (9th Circ 1986). SAS v. Mosely, 798 F.Supp. 1473 (W.D. Wash. May 1992). ONRC Action v. U.S. Forest Service, CV. 03-613-KI (October 2003). Klamath Siskiyou Wildlands Center v. Boody (#03-3124-CO, May 18, 2004).

The agency must comply with the ESA by formally reinitiating consultation with the FWS on the effects of this project on spotted owl recovery (and within the context of all the new information). Gifford Pinchot Task Force v. FWS (9th Circ August 6, 2004). In the absence of a recovery plan, the agency must retain all options for species recovery and avoid taking actions that will limit options for recovery. It is very controversial whether or not the actions intended to be implemented in the revised Eight Mile Meadow proposal will promote or hinder recovery of the NSO and it's critical habitat.

The agency must follow the recent holding of the 9th Circuit.
… the ESA was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted. See 16 U.S.C. § 1532(3) (defining conservation as all methods that can be employed to "bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary"); Sierra Club, 245 F.3d at 438. … Clearly, then, the purpose of establishing "critical habitat" is for the government to carve out territory that is not only necessary for the species' survival but also essential for the species' recovery. Gifford Pinchot Task Force v. FWS (9th Circ August 6, 2004). http://tinyurl.com/dxljr USFS must account for significant new information about the status of NSO.

NEPA analysis and consultation must be conducted within a context of all the new and continuing threats to the spotted owl, including: continuing habitat loss, competition with barred owls, West Nile virus, Sudden Oak Death, and wildfire, the risk of inappropriate logging under the Healthy Forest Initiative, and the elimination of the "survey and manage" program that formerly protected owl habitat and owl prey species such as red tree voles.

The proposal to categorically exclude this project from NEPA shows a lack of acknowledgment of the significant new information raised by the Recent Status Review. New information on the Threatened northern spotted owl indicates that there are significant new uncertainties for the owl that have not been fully considered at the regional or local scale. As recognized by the spotted owl status review, all existing suitable habitat could be critical to the survival of the spotted owl. New concerns include but are not limited to the following:

a. competition and displacement from the barred owl that is dramatically increasing in numbers within the range of the spotted owl;
b. the effects of West Nile Virus which is fatal to the owl;
c. the potential loss of habitat from Sudden Oak Death syndrome;
d. greater than expected loss of habitat to wildfire;
e. the potential effect of climate change on regional vegetation patterns; and

f. misapplication of the Healthy Forest Initiative.

Per above, the 2004 status review identified "Inappropriate Application of 'Healthy Forest Initiative'" to be a newly inadequate regulatory mechanism. http://www.sei.org/owl/meetings/Presentations/June/Gutierrez-Threats.pdf Thinning in fire suppressed eastside owl habitat can be beneficial if it reduces surface and ladder fuels to reduce the risk of canopy replacing fire, while at the same time retaining enough forest canopy and structure to still provide habitat. Inappropriate use of the HFI would include an overzealous thinning regime that removed too much canopy so as to eliminate the owl habitat value and/or increase fire hazard by moving fuels from the canopy to the ground where they are more available to combust, by causing fuels to dry out and wind speeds to increase, and/or by stimulating the growth of ladder fuels.

2. Scenic Viewshed

The entire project would take place in a B2 Scenic Viewshed designated under the Mt. Hood Land and Resources Management Plan. Currently plantations in the area do not meet the requirement for a regenerated site in a Scenic Viewshed, where 20 feet high trees are required to achieve Retention and Partial Retention Visual Quality Objectives. (LRMP, Four 190).

3. Key Riparian Area

The project overlaps with a Key Riparian Area, where the stated goal is to "maintain or enhance habitat and hydrologic conditions of selected riparian areas, notable for their exceptional diversity, high natural quality and key role in providing for the continued production of riparian dependent resource values" (LRMP Four-179). How exactly will removal of late successional forest around this key riparian area maintain or enhance it?

Directly east of Forest Service Road 273 is the Watershed for the community of Dufur. How will this project impact the drinking water of this community? When this project has the potential to disrupt the water supply of the community of Dufur why are they not afforded the right to have the potential impacts diagnosed and the ability to comment based on that scientific assessment?

According to the Mile Creeks Watershed Analysis the present proposal is within a Tier 1 Key Watershed. Tier 1 Watersheds are specifically selected for directly contributing to conservation of habitat for at-risk anadromous salmonids, bull trout and resident fish species. The network of Tier 1 Key Watersheds are also to ensure that refugia are widely distributed across the landscape. Because Key Watersheds maintain the best of what is left and have the highest potential for restoration, they are given special consideration. All Key Watersheds require watershed analysis prior to further resource management activity; except that in the short-term, until watershed analysis can be completed, minor activities such as those that would be Categorically Excluded under National Environmental Policy Act regulations may proceed if they are consistent with Aquatic Conservation Strategy Objectives and applying Interim Riparian Reserves and Standards and Guidelines.

The Aquatic Conservation Strategy includes two designations for Key Watersheds. Tier 1 (Aquatic Conservation Emphasis) Key Watersheds contribute directly to conservation of at-risk anadromous salmonids, bull trout, and resident fish species. They also have a high potential of being restored as part of a watershed restoration program. Tier 1 Key Watersheds consist primarily of watersheds identified previously by the Scientific Panel on Late-Successional Forest Ecosystems (1991), and in the Scientific Analysis Team Report (1993). The network of Tier 1 Key Watersheds ensures that refugia are widely distributed across the landscape.

Long-term management within Key Watersheds requires watershed analysis prior to further resource management activity. In the short term, until watershed analysis can be completed, minor activities such as those that would be Categorically Excluded under National Environmental Policy Act regulations (except timber
harvest *emphasis added*) may proceed if they are consistent with Aquatic Conservation Strategy objectives and apply Riparian Reserves and standards and guidelines. Timber harvest, including salvage, *can not* occur in Key Watersheds without a watershed analysis. Has a watershed analysis been completed for this Tier 1 watershed? Key Watersheds that currently contain poor quality habitat are believed to have the best opportunity for successful restoration and will receive priority in any watershed restoration program (see "Watershed Restoration" on page 2-14).

Watershed analysis, as described here, focuses on implementing the Aquatic Conservation Strategy. Watershed analysis is required in Key Watersheds, Roadless areas in non-Key Watersheds and Riparian Reserves. Decision makers require watershed analysis to determine how proposed land management activities will meet Aquatic Conservation Strategy objectives. Watershed analyses must be completed before initiating actions within a Key Watershed. Ultimately, watershed analyses should be conducted in all watersheds on federal lands as a basis for ecosystem planning and management. Watershed analysis has a critical role in providing for aquatic and riparian habitat protection. Watershed analysis is important for planning ecosystem management and establishing Riparian Reserves. Watershed analysis considers the overall watershed condition including the protection and restoration of riparian and aquatic habitat. Watershed analysis considers an array of processes that include the condition of the uplands, the distribution and type of seral classes of vegetation, the effects of previous natural and land-use related disturbances, the distribution and abundance of species and populations and the land use history.

These factors strongly influence the structure and functioning of aquatic and riparian habitat. Effective protection strategies for riparian and aquatic habitat on federal lands must accommodate the wide variability in landscape conditions present across the Pacific Northwest. Watershed analysis plays a key role in the Aquatic Conservation Strategy, ensuring that aquatic system protection is fitted to specific landscapes. Watershed analysis focuses on collecting and compiling information within the watershed that is essential for making sound management decisions. It is an analytical process, not a decision-making process proposing an action requiring NEPA documentation. It serves as the basis for developing project-specific proposals, and monitoring and restoration needs for a watershed. Some analysis of issues or resources may be included in broader scale analyses because of their scope. The information from the watershed analyses contributes to decision making at all levels. Project-specific NEPA planning will use information developed from watershed analysis. For example, if watershed analysis shows that restoring certain resources within a watershed could contribute to achieving landscape or ecosystem management objectives, then subsequent decisions will need to address that information. Watershed analysis is described in further detail in *A Federal Agency Guide for Pilot Watershed Analysis*.

The scoping letter notes that less than a half a mile of temporary roads will be constructed for the project. In Tier 1 Watersheds there are not to be an increased amounts of roads. The Forest Service continually tries to circumvent this by declaring that these roads are temporary. I would like to remind the agency that there is nothing temporary about the effects of these so-called "temporary roads." These roads will have all the negative effects of roads (sedimentation, erosion, increased run-off, and landscape fragmentation) for the many years that these roads remain after a logging operation.

According to the Aquatic Conversation Strategy's Standards and Guidelines for Key Watersheds suggest that the agency reduce existing system and non-system road mileage outside roadless areas. The amount of existing

system and nonsystem roads within Key Watersheds should be reduced through decommissioning of roads. Road closures with gates or barriers do not qualify as decommissioning or a reduction in road mileage. If funding is insufficient to implement reductions, there will be no net increase in the amount of roads in Key Watersheds. That is, for each mile of new road constructed, at least one mile of road should be decommissioned, and priority given to roads that pose the greatest risks to riparian and aquatic ecosystems.

Eight Mile Meadow in foreground. Proposed unit in background

Key riparian area

4. Key Recreation Area

The Scoping Letter mentions that 75 foot buffers will be put along Forest Service Trail 456. It appears on the ground, based on agency flagging, there is a 75 foot gap *in total* and not 75 feet on each side of the trail. This will not be sufficient to prevent the recreationalist from seeing the effects of this proposal. Further the proposed project still effectively closes this trail while the area is logged. There are two other trails that pass through the planning area, including trails heading to Bottle Prairie and Lookout Mountain, #450 and 458, which leads into the Badger Creek Wilderness. Based on the mountain bike and horse tracks spotted along the trails, these trails are currently used by the public frequently.

On three separate occasions Bark volunteers surveyed users of the trail system leaving from the 15 Mile Creek Campground located at the southern end of units three and four. A total of 41 users were identified that included hikers, mountain bikers and folks on horseback. Of these forty-one users, thirty-six stated that they *did not* agree with the agency's proposed plan for the Eight Mile Meadow area upon presenting it to them. Only five trail users stated that they were undecided and no one agreed that the proposed plan was a good idea. All forty-one users stated that the agency *should not* proceed without conducting an Environmental Assessment first.

It is inconceivable that the Forest Service, which constantly complains of overuse and abuse of wilderness areas, would destroy this beautiful recreational trail system. This trail system is designated as a Level I Sensitivity Trail, where Retention is required in the Foreground, Partial Retention in Far Foreground and Modification in Middle Ground Distance are required (LRMP Four 115). The project as described will not conform to these requirements with such inadequate buffers.

Popular Trail at Risk

Scenic beauty would be destroyed by clearcuts

5. B6 Special Emphasis Watershed

The project appears to be entirely within the Eight Mile Creek and Fifteen Mile Creek Watersheds (information not included in the scoping letter), both Special Emphasis Watersheds where the impact area should not exceed the threshold of concern (TOC) of 25 percent. How will this project affect the TOC for these watersheds?

B. Significant Impacts May Result

The National Environmental Policy Act (NEPA) directs all federal agencies to assess the environmental impact of proposed actions that significantly affect the quality of the environment. 42 U.S.C. § 4332(2)(C). NEPA requires the agencies to prepare an Environmental Impact Statement (EIS) when proposing a major federal action that may significantly affect the quality of the environment. 42 U.S.C. § 4332(2)(C), 40 C.F.R. § 1501.4(a)(1). If an action is not categorically excluded, an agency must prepare an environmental assessment (EA) to determine whether it needs to prepare an EIS. 40 C.F.R. § 1501. The agency implementing the project, not the public, has the burden of demonstrating that significant adverse effects will not result from the proposed project. Id. § 1508.13. To determine whether a proposed action may significantly affect the environment, agencies must consider both the context and the intensity of the action. 40 C.F.R. § 1508.27. The context of the action includes consideration of the affected region and locale. Id. § 1508.27(a). In analyzing "intensity," the agency must consider such factors as the "unique characteristics of the geographic area such as proximity to ... ecologically critical areas," a high level of controversy surrounding environmental effects, "the degree to which the action may adversely affect an endangered or threatened species" or its critical habitat, and "whether the action is related to other actions with individually insignificant but cumulatively significant impacts." Id. at §1508.27(b)(3), (b)(4), (b)(9), (b)(7). A CE is inappropriate for the Eight Mile Meadow Salvage project because there are several factors that indicate the project may have a significant effect on the environment and the agency must complete an Environmental Assessment before proceeding.

1. Ecologically Critical Areas

A. Snags

The Eight Mile Meadow Salvage will harvest snags, and live and dead trees on 230 acres of late-successional forest, which is designated critical habitat for the NSO. The Watershed Analysis notes that "salvage harvests before 1990 have greatly reduced the number of snags significantly." (MCWA 34). Moreover, according to a Bull et al. for the Pacific Northwest Research Station, the Forest Service's standards for snag retention are insufficient to provide adequate habitat for species that depend on snags. *See* Pacific Northwest Research Station, United States Forest Service General Technical Report, PNW-GTR-391. Indeed even the Forest Service has recognized that snags are in short supply across the landscape. Pacific Northwest Research Station, United States Forest Service, Science Findings *Dead and Dying Trees: Essential For Life in the Forest. (Nov. 1999* How will this proposal affect the overall watershed for snag availability now and in the future?

Northern spotted owls, bats, martens, woodpeckers, bears, and many other species are dependant upon snags and downed wood. Snags and downed wood also serve several crucial ecosystem functions and serve as the "primary constituent elements" which are those "physical and biological attributes that are essential to a species conservation" in designated NSO Critical Habitat. Current direction for protecting and providing snags and downed wood does not ensure the continued operation of these ecosystem functions nor does it meet the needs of the many species associated with this unique and valuable habitat component.

The pileated woodpecker is vital to the forest because it is the primary excavator that creates cavities that create habitat for a multiplicity of wildlife. Recent studies have shown that, "cavity users typically represent 25 to 30% of the terrestrial vertebrate fauna in the forests of the Pacific Northwest." (Bunnelle et al. 1999). This study

goes on that a "lack of cavity sites is the most frequently reported threat to "at-risk" species in the Pacific Northwest." With a species so vital to forest health, it is discouraging to read that though habitat is present in the area the proposal would eliminate nearly all that's available. We have identified numerous larger, rectangular shaped cavities associated with the presence of the pileated woodpecker within the proposed Eight Mile Meadow project area, which is a strong indication that they are using the area. Has the agency conducted recent surveys to see if the pileated woodpecker is using the Eight Mile area?

One critter in particular that depends on cavities for nests is the Northern spotted owl. According to the Scientific Evaluation of the Status of the Northern Spotted Owl, in the southern portion of Eastern Washington 23% of the owls were using cavities for nesting sites. It is a simple principle of succession that the beetle, and the blue staining fungus it carries, infects the tree. The woodpecker creates cavities seeking out the beetle as a food source. Overtime through weathering and the work of other inhabitants these cavities are expanded to a size that eventually may be used by the northern spotted owl. This report cited that the "protection of all existing suitable owl habitat may prove important to the persistence of the owl." Please explain how leaving only 10 snags per acre and removing all beetle infested trees, which are highly likely to become snags in the very near future will protect all existing habitat and contribute to the recovery of the NSO?

B. Eight Mile Meadow

The project would also allow harvest adjacent to sensitive meadows and streams. The Eight Mile Meadow is only about 100 yards from the projects boundary. This becomes a concern as the meadow is transitioning from a wet to a dry meadow as is exemplified by the raised soil hummock and the plants it supports in the center of Eight Mile Meadow. As this meadow transitions into a drier habitat many of the weeds inevitably introduced from this logging operation may find a home in this now pristine meadow environment. What precautions will be taken to ensure that invasive plants will not spread as a result of any logging activity?

C. Plant Diversity

The area hosts an incredible diversity of flora and fauna. Please explain how the agency's proposal will not threaten the plant biodiversity currently contained within the project area? What measures are being taken to ensure that plant diversity will not be threatened? *Some* of the plants found in the area include:

1. Abies grandis/concolor Grand/White Fir Pinaceae
2. Acer glabrum var. douglasii Douglas maple Aceraceae
3. Acer macrophyllum Big-leaf maple Aceraceae
4. Achillea millifolium Yarrow Asteraceae
5. Agoseris grandiflora Large-flowered agoseris Asteraceae
6. Agoseris heterophylla Annual agoseris Asteraceae
7. Agoseris retrorsa Spear-leaf agoseris Asteraceae
8. Allium amplectans Slim-leaf onion Liliaceae
9. Allium sp. Onion Liliaceae
10. Alnus incana var. tenuifolia Mountain Alder Betulaceae
11. Amelanchier alnifolia Serviceberry Rosaceae
12. Anemone oregana Oregon anemone Ranunculaceae
13. Antennaria dimorpha Low pussy-toes Asteraceae
14. Antennaria luzuloides Woodrush pussy-toes Asteraceae
15. Antennaria racemosa Raceme pussy-toes Asteraceae
16. Apocynum androsaemifolium Spreading dogbane Apocynaceae

17. Arctostaphylos patula Green manzanita Ericaceae
18. Arenaria macrophylla Big-leaf sandwort Caryophyllaceae
19. Arnica cordifolia Heart-leaf arnica Asteraceae
20. Balsamorhiza deltoidea Balsamroot Asteraceae
21. Berberis aquifolium Oregongrape Berberidaceae
22. Blepharipappus scaber Rough Eyelashes Asteraceae
23. Castilleja hispida Harsh paintbrush Scrophulariaceae
24. Caucalis microcarpa Small bur-parsley Apiaceae
25. Ceanothus integerrimus Deerbrush Rhamnaceae
26. Ceanothus prostratus Mahala Mat or Squaw Carpet Rhamnaceae
27. Centaurea sp* Knapweed Asteraceae
28. Chimaphila umbellate Prince's Pine Ericaceae
29. Chrysothamnus viscidiflorus Green rabbit-brush Asteraceae
30. Clarkia amoena? Farwell-to-spring Onagraceae
31. Commandra umbellate Bastard toad-flax Santalaceae
32. Cornus stolonifera Red-osier dogwood Cornaceae
33. Crepis intermedia Gray hawksbeard Asteraceae
34. Cryptantha sp. Popcorn Flower Boraginaceae
35. Delphinium nuttallianum? Upland larkspur Ranunculaceae
36. Dodecatheon pulchellum? Few-flowered shooting star Primulaceae
37. Epilobium angustifolium Fireweed Onagraceae
38. Erigeron linearis Desert yellow daisy Asteraceae
39. Eriogonum compositum Arrow-leaved buckwheat Polygonaceae
40. Eriogonum sp. Buckwheat Polygonaceae
41. Eriophyllum lanatum Oregon sunshine Asteraceae
42. Erodium cicutarium* Filaree Geraniaceae
43. Erythronium grandiflorum? Glacier lily Liliaceae
44. Fragaria vesca Wild strawberry Rosaceae
45. Galium aparine Cleavers Rubiaceae
46. Habenaria unalascensis Alaska rein-orchid Orchidaceae
47. Hieracium scouleri? Scouler's hawkweed Asteraceae
48. Idahoa scapigera Scalepod Brassicaceae
49. Juniperus occidenalis Western juniper Cupressaceae
50. Lathyrus lanszwertii Thick-leaved Pea Fabaceae
51. Lathyrus pauciflorus Few-flowered peavine Fabaceae
52. Linanthus bakeri Baker's linanthus Polemoniaceae
53. Lithophragma parviflora Small-flowered prairie-star Saxifragaceae
54. Lithospermum ruderale Columbia puccoon Boraginaceae
55. Lomatium grayi Pungent Desert-parsley Apiaceae
56. Lomatium macrocarpum Large-fruited lomatium Apiaceae
57. Lomatium nudicaule Pestle parsnip Apiaceae
58. Lomatium triternatum Nine-leaf lomatium Apiaceae
59. Lotus nevadensis? Nevada deervetch Fabaceae
60. Luina nardosmia Silvercrown luina Asteraceae
61. Lupinus latifolius Broad-leaf lupine Fabaceae
62. Lupinus leucophyllus Velvet lupine Fabaceae
63. Madia citriodora Lemon-scented tarweed Asteraceae
64. Madia exigua Little tarweed Asteraceae

65. Madia glomerata Mountain tarweed Asteraceae
66. Madia gracilis Common tarweed Asteraceae
67. Madia minima Small-head tarweed Asteraceae
68. Microseris laciniata Cut-leaved microseris Asteraceae
69. Montia linearis Narrow-leaf montia Portulacaceae
70. Montia perfoliata Miner's lettuce Portulacaceae
71. Nemophila pedunculata Meadow nemophila Hydrophyllaceae
72. Orthocarpus hispidus Hairy owl-clover Scrophulariaceae
73. Osmorhiza chilensis Mountain sweet-cicely Apiaceae
74. Pachistima myrsinites Oregon Boxwood Celastraceae
75. Pectocarya pusilla Little pectocarya Boraginaceae
76. Penstemon sp. Penstemon Scrophulariaceae
77. Philadelphus lewisii Mock-orange Hydrangeaceae
78. Pinus ponderosa Ponderosa Pine Pinaceae
79. Plagiobothrys scouleri? Scouler's popcorn-flower Boraginaceae
80. Plectritus ciliosa Long-spurred plectritus Valerianaceae
81. Plectritus congesta Rosy Plectritus Valerianaceae
82. Potentilla glandulosa Sticky cinquefoil Rosaceae
83. Potentilla gracilis Graceful cinquefoil Rosaceae
84. Prunus emarginata Bitter cherry Rosaceae
85. Psiloparphus elatior Tall woolly-heads Asteraceae
86. Pseudotsuga menziesii Douglas fir Pinaceae
87. Quercus garayana Oregon white oak Fagaceae
88. Ribes cereum Wax currant Grossulariaceae
89. Rigiopappus leptocladus Bristlehead Asteraceae
90. Rosa woodsii Wood's rose Rosaceae
91. Rubus parviflorus Thimbleberry Rosaceae
92. Rubus ursinus Wild blackberry Rosaceae
93. Sambucus cerulea Blue elderberry Caprifoliaceae
94. Sedum stenopetalum Worm-leaf stonecrop Crassulaceae
95. Senecio integerrimus v. ochroleucus White Western groundsel Asteraceae
96. Smilacina racemosa False Solomon's seal Liliaceae
97. Spiraea betulifolia? Birch-leafed spirea Rosaceae
98. Stellaria sp. Chickweed Caryophyllaceae
99. Symphoricarpos albus Common snowberry Caprifoliaceae
100. Symphoricarpos mollis Creeping snowberry Caprifoliaceae
101. Thuja plicata Western red cedar Cupressaceae
102. Trientalis latifolia Broadleaved starflower Primulaceae
103. Trifolium eriocephalum Wooly-head clover Fabaceae
104. Trifolium macrocephalum Big-headed clover Fabaceae
105. Trillium ovatum White trillium Liliaceae
106. Valerianella locusta* European corn salad Valerianaceae
107. Veronica arvensis* Field veronica Scrophulariaceae
108. Veronica serpyllifolia Thyme-leaf speedwell Scrophulariaceae
109. Vicia Americana var. lineraris American vetch Fabaceae
110. Woodsia oregana Oregon woodsia Polypodiaceae
111. Zigadenus venenosus Meadow death camas Liliaceae

2. Scientific Controversy

A. Northern Spotted Owl

The revised proposal asserts the project is no longer intended to reduce forest fuels, but instead, proposes implementing habitat restoration for the Northern spotted owl. We are very curious to know where the Barlow District has found the science that states that a 230-acre clearcut will help provide habitat for the spotted owl. The only barely rational explanation is that this proposal will help the forest recover quicker for the spotted owl. The main problem with this argument is the spotted owl are *threatened today* and the Forest Service should be *doing all that they can today* to protect the spotted owl. To plan on the creation of habitat for this species *eighty to one hundred years from now* ignores the fact that presently spotted owls are declining at 4% across their range, according to the Scientific Evaluation of the Northern Spotted Owl.

If the rationale of the scoping letter is one of expediency for the creation of habitat for the NSO, we feel that this proposal will not accomplish its goal but in fact will slow the process of succession. We have found on surveys in the area that nine species of conifers are already beginning to establish themselves in the understory. Any aggressive logging proposal such as this will likely eliminate this diverse understory already beginning to move the area into the next seral stage. Allowing the standing dead trees to remain will provide stability for the soil and shade to keep the microsites cooler and moister for the establishment of saplings; and it would decrease the loss of nutrients through sedimentation and compaction. Logging and replanting will bring in trees not genetically suited for the area and will exclude the shade tolerant species that are already establishing themselves in the area.

The USFS is required to demonstrate that there is no effect to the spotted owl, or any other extraordinary circumstances that might be present in the planning area if implementing the project as a CE. Consultation with FWS is required for any project that may affect owls and monitoring needs to be done to determine if owls are using the area. These stands do contain prey species for owls, and owls use mosaic habitats for both foraging and dispersal. Therefore we strongly urge that surveys be done for northern spotted owl before this project proceeds further.

This issue is especially relevant, as it is known that northern spotted owls use the witch's broom of the mistletoe as nests. It is very difficult to see how destroying this potential habitat (the mistletoe), as indicated in the scoping letter, will increase habitat for the northern spotted owl. In fact according to the Scientific Evaluation of the Northern Spotted Owl (5-19) in the eastern Cascades 31% of nests were made in the witch's brooms of mistletoe and an additional 51% of the nests were constructed on top of witch's broom.

Another serious concern is the loss of available snags and the cavities they support. According to the Scientific Evaluation of the Status of the Northern Spotted Owl, in the southern portion of Eastern Washington, 23% of the owls were using cavities for nesting sites. It is a simple principle of succession that the beetle, and the blue staining fungus it carries, infects the tree. Then the pileated woodpecker creates cavities, seeking out the beetle as a food source. Over time, through weathering and the work of other inhabitants, these cavities are expanded to a size that eventually may be used by the northern spotted owl. This report cited that the "protection of all existing suitable owl habitat may prove important to the persistence of the owl."

Another citing of the Scientific Evaluation of the Northern Spotted Owl is that "logging in owl habitat remains a major threat to owl survival, particularly ongoing logging on state and private lands, and salvage logging on federal lands." (5-19).

Clearcutting this area will not help the Northern Spotted Owl. In fact, many of the trees slated to be cut are potential Spotted Owl habitat. Mountain Pine Beetles play important and complex roles in many aspects of forests ecosystems. In his recently published report, *Logging To Control Insects: The Science and Myths Behind Managing Forest Insect "Pests", A Synthesis of Independently Reviewed Research*, Scott Black shows that mountain pine beetle infestations play important roles in creating habitat and forage for an array of insects, animals, and birds. Woodpeckers especially feast on the beetles, creating holes in dead or dying trees that are eventually potential sites for nesting birds, including Owls. As this project lies entirely in designated Critical Habitat for the Northern spotted owl, logging trees that are on their way to becoming owl habitat is not going to provide more habitat, especially not anytime in the near and relevant future.

In his study, Black states, "[e]pidemics of bark beetles increase the availability of plant material for foraging, browsing, and nesting for wildlife such as small mammals and birds." It goes on to say "[b]ark beetles are also important parts of many forest food webs. A salient feature of bark beetle communities is the staggering number of organisms associated with them. These insects are hosts for parasites and are prey for a variety of animals, including spiders, birds, and other beetles. In his discussion of birds and other animals, Black goes on to state that "[b]y feeding upon dead or dying trees, forest insects provide food to insect-gleaning species of birds such as woodpeckers and create snags that may be utilized by birds such as woodpeckers, **owls**, hawks, wrens, and warblers, as well as many mammals, including bats, squirrels, American marten, Pacific fisher, and lynx." Specifically pertaining to Woodpeckers, Black discusses that "[they] accounted for 28 percent of mortality of low bark beetle populations, 84 percent during outbreaks and 53 percent at epidemic densities. Broods were reduced by 98 percent by woodpeckers on heavily worked trees. Woodpeckers also cause additional mortality by removing bark, thereby drying out the bark beetles and allowing parasitoids and predators greater access." In further discussion about birds, he says "[s]tanding trees are important for several birds that feed on mountain pine beetles, these birds are important regulators of endemic beetle populations that keep the risk of epidemics down. Widespread removal of dead and dying trees eliminates the habitat required by bird species that feed on those insects attacking living trees, with the result that outbreaks of pests may increase in size or frequency."

Additionally, the entire planning area was set aside as a Critical Habitat Unit for the spotted owl. The term "critical habitat" for a threatened or endangered species means:
(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
(ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

B. Increased Fire Risk

In determining the significance of a proposal, the NEPA regulations require the subject federal agency to consider the degree to which the environmental effects are "likely to be highly controversial." 40 C.F.R. § 1508.27(b)(4). The objective of the Eight Mile Meadow Salvage project is to "reduce fuel hazard" and "salvage the value of dead trees." (Scoping letter). There is a great deal of scientific controversy surrounding the use of commercial logging of native and late-successional forests to decrease the potential for high severity fire, which makes this project inappropriate for a CE.

A veritable litany of scientific evidence suggests that large snags and down logs provide benefits which guard against high fire severity. NOT salvage logging (e.g., natural recovery) may have some countervailing benefits

in terms of fire risk, including: (a) large logs store water, (b) standing snags provide some shade, (c) regrowth tends to be more patchy and less dense and continuous, (d) falling snags over time tend to break up the continuity of fuels in the form of brush and reprod.

Salvage typically removes the largest logs that act as water "reservoirs" and are least prone to drying. *See* Amaranthus, M.P.; Parrish, D.S.; and D.A. Perry. 1989. Decaying Logs as Moisture Reservoirs After Drought and Wildfire. In: Alexander, E.B. (ed.) Proceedings of Watershed '89: Conference on the Stewardship of Soil, Air, and Water Resources. USDA-FS Alaska Region. RIO-MB-77. p. 191-194. "When forest managers are analyzing for fire risk, they should take into account the high water content of fallen logs during the period in which wildfire potential is greatest ... Fallen trees, in a range of decay classes, therefore provide a long-term reservoir of moisture. A continuous supply of woody material left on the forest floor, not only protects the productive potential of the forest soil, but also provides a sanctuary for ectomycorrhizae and a significant source of moisture in the event of prolonged drought or wildfire." The study was conducted in the Klamath region in an area with roughly 40 inches of annual rainfall. It was published in 1989 in Proceedings of Watershed '89: a conference on the stewardship of soil, air and water resources. USDA Forest Service, Alaska Region: pp. 191-194 (1989).

The Forest Service own research shows that pound-for-pound small fuels are far more hazardous than large fuels, and that if the agency would remove more small fuels they could safely leave more large logs that are beneficial to wildlife:

> **Small and large downed woody fuels contribute differently to the various elements of fire hazard. … Large woody fuels have little influence on spread and intensity of the initiating surface fire in current fire behavior models**… [T]he spatial distribution of snags was highly variable . . .
>
> Higher loadings of CWD are acceptable where larger piece sizes predominate, for example in accumulated falldown of old growth trees. Larger piece sizes also are desirable because, faced with decomposition and fire, they persist longer to benefit wildlife and soil productivity. Unfortunately, the relationship between quantity and size of CWD and the various measures of fire hazard is largely undefined. Thus, it is a matter of judgment to consider that the larger the diameter of downed CWD the greater the loading that could be allowed without undesirable fire effects. … surface area. . . . This suggests that **where CWD comprises predominately 3- to 6-inch material, the optimum quantity is less**, perhaps by 5 tons per acre or more, than for larger sized material. . . .

Brown, James K.; Reinhardt, Elizabeth D.; Kramer, Kylie A. 2003. Coarse woody debris: managing benefits and fire hazard in the recovering forest. Gen. Tech. Rep. RMRSGTR-105. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 16 p. http://www.fs.fed.us/rm/pubs/rmrs_gtr105.html[1]

The objective "to reduce the fuel hazard" (Scoping letter dated 3 May, 2005) is ridiculous given the surrounding area. The project is surrounding by plantations that are filled with fuel. (Note that plantations have been proven to burn faster and hotter than older native stands.) The Badger Creek Wilderness Area is also filled with "fuel," and in the event that a fire started in the wilderness area, logging these acres would likely do more harm than

[1] Additional scientific evidence on the value of down wood and snags for wildlife and prevention of fire is available and the risks associated with logging snags and broken tops is available. However, in the interest of time, I have noted only a few studies here.

good from a fire severity perspective. Logging is known to increase the risk of severe fire due to leaving fine fuels and slash on the ground and by opening up the canopy which creates a drier more flammable understory. Some of the nearby plantations have also recently been pre-commercially thinned, and have an abundance of fine fuels and flammable needles that could easily ignite.

Fuel in area adjacent to units

Nearby plantation stands are much bigger fire risk

There are numerous large ponderosa pines in the vicinity, some with slight signs of beetle (ie/a clump or two of brown needles), and no stated diameter limits in the scoping letter. Under the stated guidelines, removal of ponderosa pines such as this one would result, and would lead to an increased fuel hazard

Keeping the forest intact will not increase the risk of a severity wildfire, as noted by **Bebi, P., D. Kulakowski and T.T. Veblen. 2003. Interactions between fire and spruce beetles in a subalpine Rocky Mountain forest landscape. *Ecology* 84(2): 362-371.**

Summary: In a subalpine forest landscape in northwestern Colorado they quantified spatial associations of fire and spruce beetle *Dendroctonus rufipennis* outbreaks over more than a century and developed a multivariate logistic model of probability of occurrence of spruce beetle outbreaks. Forests that had burned in 1879 were less affected by the 1940s outbreak than older stands. On the other hand, areas affected by the 1940s spruce beetle outbreak showed no higher susceptibility to subsequent fires. The results of this study do not support the often suggested increase in fire occurrence expected to follow spruce beetle outbreaks.

Also note that: Pollet and Omi (2002 at page 2) reported that: "the beetle-killed lodgepole pine (self-thinned to lower density) experienced significantly lower fire severity compared to adjacent burned areas" in the 3,400 ha Robinson Fire that burned in Yellowstone National Park in 1994. Emphasis added. Pollet, J. and P. N. Omi. 2002. Effect of thinning and prescribed burning on crown fire severity in ponderosa pine forests. *International Journal of Wildland Fire* 11:1—10.

Furthermore, please consult Graham, Russell. 2003. Hayman Fire Case Study. Rocky Mountain Research Station Report RMRS-GTR-114. On p. 144 the author states, "In addition to wildfires, the Hayman Fire burned over another type of natural fuel modification: an area affected by a spruce budworm outbreak. Most Douglas-fir in the area between points 47 and 48 on figure 63 were killed by spruce budworm in the early 1990s with subsequent mortality in remaining trees from Douglas-fir beetle. Surface fuel loads were not excessive, since most of the Douglas-fir snags remained standing. The only live trees remaining prior to the Hayman fire were scattered ponderosa pine and the reduction in crown cover due to insect mortality seemed to affect fire behavior. The fire spread towards the southeast through this area during the relatively inactive period between the runs of June 9 and 17. The fire burned mostly as a surface fire on both sides of Westcreek, with small patches of crown fire activity. From the air, the burn appeared less severe than in areas outside the budworm affected area (fig. 70).

In summary, once the needles fall off beetle-killed trees (within a few years after attack), there is relatively little risk of fire, unless there is substantial fuel loading at the bases of the trees. Even then, the risk is less than it would be with live trees because the latter have volatile compounds that burn hot under the right conditions. The dead trees dry out and lose these compounds. Leaving the stands in place could actually create a fire break should a fire break out in the nearby Badger Creek Wilderness Area. The 100,000 acre, 2003 Farewell fire on the Okanogan NF was moving steadily north and east until it hit the beetle-killed lodgepole along the Chewuch River and dropped to the ground. The beetle-killed trees had been dead for over five years and had dropped all of their needles, leaving little crown density to carry the crown fire. The crown density went from about 50% ten years ago to about 20% in some areas of the beetle killed lodgepole.

Clearcutting on the other hand, only contributes to the beetle infestation and fuel loading. When trees are removed and replaced by new trees, these even aged trees are vying for the same limited amount of nutrients. That stresses the trees, making them vulnerable to infestation. If the agency is seriously concerned about the fuel loading in this area, then it should withdraw the proposal and reintroduce fire into the landscape through prescribed burning.

Because the effect of removing late-successional snags and live and dead trees from the planning area is highly controversial, a CE is inappropriate under NEPA.

B. Larch and Mistletoe

A second change in the new scoping letter is the new found problem of Larch Dwarf Mistletoe (Arceuthobium laricis) that is found on western larch and very occasionally, subalpine fir in the planning area. After reviewing the Forest Insect & Disease Leaflet 169 found on the Forest Service Region 6 website we learned that the mistletoe growing in dense stands, such as those present at Eight Mile, have poor seed dispersal due to low light and reduced tree vigor. Mistletoe generally only spreads rapidly in multistoried canopies where the seed can be disseminated from trees in the overstory to smaller trees. In even aged stands like Eight Mile they tend to spread extremely slow as there is no height advantage from where the seeds release to their potential host. Based on these facts there is no real concern of the dwarf mistletoe in these areas reaching epic proportions in this area. It is also worthy to note that this is an endemic species and has part of the ecosystem for millennia.

The Forest Service has also devised the 6 Class Dwarf Mistletoe Rating System to determine the severity of infection in western larch stands. Has the Service assessed the damage to the area? We highly encourage them to do so before proceeding. The ground work that we at BARK performed did not find mistletoe to be as rampant as the scoping letter suggested. And as it was not cited in the initial letter sent out by the district it must not have been as noticeable to the district biologist either.

It is also noted in the Forest Insect & Disease Leaflet published in 1997 by the USDA, that, “The key to proper management of this parasitic plant is to recognize its importance in the overall diversity of ecosystems and to devise management alternatives that recognize and maintain that diversity while meeting management objectives.” It is also noted that “shoots and fruits are food for insects, birds, and mammals… are used for hiding, nesting, and thermal cover.” Mistletoe will also leave a dead top on host plants which act as perches and homes for a variety of species. We would encourage that any proposal put forth from the Barlow District would use an ecosystemic approach when managing public lands.

This is especially relevant as it is known that northern spotted owl use the witch’s broom of the mistletoe as nests. It is very difficult to see how this potential habitat is targeted through this proposal when it is designed to

increase habitat for the northern spotted owl. Please explain how removing this potential habitat will restore NSO Critical Habitat when according to the Scientific Evaluation of the Northern Spotted Owl (5-19) in the eastern Cascades 31% of nests were made in the witch's brooms of mistletoe and an additional 51% of the nests were constructed on top of witch's broom?

3. Cumulative Impacts

The regulations implementing NEPA state that cumulative effects result "from the incremental impact of the action when added to other past, present, and reasonably foreseeable future [federal and non-federal] actions." 40 C.F.R. § 1508.7. "Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." Id. § 1508.27(b)(7). There will certainly be cumulative effects of removing 250 acres of forest from critical habitat on the watersheds, soils, vegetation and wildlife in concert with recent past logging projects in the area, including the Wampus sale. Please fully disclose the cumulative watershed effects analysis for this proposed project, including all past, present and reasonably foreseeable future actions or both public and private land impacting this watershed. Please document the current watershed condition, Threshold of Concerns (TOC) and specific soil conditions related to the sensitivity index for this watershed.

4. Opening Size Exceeds 40 Acres

The project scoping letter states that the proposed action would salvage trees that show signs of beetle infestation and those trees already dead from beetle infestation. This would essentially result in the removal of practically all of the trees on the site, leaving a 250-acre clearcut surrounded by plantations which are not currently hydrologically recovered. Forest openings in this area are not to exceed 40 acres in size for non Douglas fir and eastside-Cascade types (LRMP, Four-89). This prescription is controversial in and of itself, and would have severe adverse impacts to the landscape from both a visual and ecological perspective.

Poor hydrologic recovery of adjacent stands would result in large openings

5. Adverse Impacts to Wildlife

A. Sensitive Species

That the MPB is native, natural, has coevolved with lodgepole pine, and is a natural agent of succession. In Bark's 5/25/05 field visit, numerous woodpeckers were spotted, in addition to rodents, deer tracks, elk tracks and cougar scat. Additionally, Western gray squirrels are abundant here. The western gray squirrel is no longer as common as it once was throughout the foothills of the Pacific Northwest's Cascade Ranges. Today, its range has collapsed across much of the region and its populations have significantly declined over the last century. Western grays are a federal Species of Concern. Oregon considers them a State Sensitive Species, and Washington state considers them State Threatened.

The Forest Service Handbook confers discretion on the Forest Service to determine whether certain resource conditions, including the presence of sensitive species such as the spotted owl, goshawk, marten and fisher, raise the potential for the project to have significant environmental impacts on either an individual or cumulative basis. (*See* Interim Directive August 23, 2002. 67 Fed. Reg. 54622) Chapter 30—Categorical Exclusion From Documentation Policy 30.3.) Here, the reduction in habitat proposed by the project, in combination with other projects precludes the Forest Service from making this finding. Please identify all

sensitive species potentially impacted by this project and provide documentation as to how this project will affect all sensitive species in the project area and how this project will cumulatively affect sensitive species when considered with other past, present and reasonably foreseeable future projects.

B. Survey and Manage Species

The Mt. Hood National Forest has failed to adequately survey for sensitive and listed species and therefore lacks the necessary information to support the proposed action for the Eight Mile Salvage.

We do not believe that the Forest has to survey for every species that may be present in a project area in order to propose a project. However, before making a final decision, surveys for sensitive, listed, proposed for listing/rare, and management indicator species that have been reported or are likely to utilize the project area should be conducted if reliable population estimates are not available. *See generally,* OFFICE OF THE INSPECTOR GENERAL, FOREST SERVICE TIMBER SALE ENVIRONMENTAL ANALYSIS REQUIREMENTS (1999) 20. The agency is at minimum needs to comply with the 2001 Survey and Manage Record of Decision, which is the law. Such monitoring is required under NFMA, and NEPA requires the agency to use only high quality science and to obtain data when it is missing yet necessary to make an informed decision. 36 C.F.R. § 219.27(a)(6); 40 C.F.R. §§ 1503.24 (scientific accuracy), 1502.22 (incomplete or unavailable information). Has the agency completed surveys in accordance with the 2001 Record of Decision? The failure to complete such monitoring means that the data is not collected, and the approximate population levels or trends of species on the Forest are unknown. Without such data, the MNF lacks the informed ability to issue a Decision Memo, in violation of NEPA. 40 C.F.R. § 1500.1; *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999). The USFS has to demonstrate that there is no effect to the NSO, or any of the other extraordinary circumstances that are present in the planning area.

C. Management Indicator Species

Applicable regulations for NFMA require the Forest Service to provide animal and plant diversity in the national forests. 16 U.S.C. 1604(g)(3)(B). USFS regulations implementing this requirement direct the Service to manage forests for viable populations of native vertebrate and desired non-native species. 36 C.F.R. 219.19. The regulations define viable populations as a population that has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. *Id*.

To ensure that viable populations are maintained, the Forest Service regulations also require that the Service identify management indicator species (MIS) and that [p]opulation trends of the management indicator species will be monitored and relationships to habitat change determined. 36 C.F.R. 219.19(a)(6). This monitoring is essential to verify and, if necessary, modify the forest plan's assumptions about the effects of timber harvesting and other management activities on wildlife and in order to meet the monitoring requirement, planners will need to obtain adequate inventories of wildlife populations and distribution. Charles F. Wilkinson and H. Michael Anderson, *Land and Resource Planning in the National Forests*, 304 (1987).

The Forest Service has not conducted surveys for MIS in this area and therefore is failing to adequately disclose or analyze the direct and indirect impacts of this projectl on these MIS. If an EA is not conducted and MIS are not adequately surveyed for, this project will be in violation of NFMA, Forest Service implementing regulations, and the Mount Hood Land and Resource Management Plan by failing to gather quantitative population data or analyzing population or habitat trends for certain species chosen by the Forest Service as "management indicator species" ("MIS") for the Mount Hood National Forest and the Eight Mile Meadow project area.

Please disclose impacts to all MIS within the project area. This analysis should not rely on the outdated concept of "habitat as proxy" for species viability or trend but should include adequate population monitoring as per the Sierra Nevada Framework FEIS and the amended Forest Plan. The analysis should also include a cumulative impacts analysis for all relevant MIS.

D. Reducing Endemic Pests from the Stand

The majority of these trees in the Eight Mile Planning Area are lodgepole pine (Pinus contorta). According to the Miles Creek Watershed Analysis, in 1898 a major fire passed through the area and left stands of predominantly lodgepole pine in its wake (MCWA 34). As is known, lodgepoles are an early seral species in the eastern Cascades and their serotinous cones often leave them the dominant species following fire. As is true with most early seral species, they are also a short-lived coniferous species. In dense stands, such as Eight Mile, they tend to near their end after 100 years, or as stated again in the MCWA, "Stand break-up is not very advanced at this time but the trend in deterioration will become more pronounced over the next ten to thirty years." (MCWA 34). This brings us to right about now.

Many studies have shown that the mountain pine beetle will generally tend to attack weakened trees. (see the numerous examples below). In fact, in the Miles Creeks Watershed Analysis it states that, "Dendroctonus spp. are seldom directly responsible for tree killing, these beetles are attracted to trees weakened by other agents," (MCWA 36). Therefore, this stand of lodgepole have had their time being the dominant species and now this ecosystem is progressing into its next seral stage. This salvage proposal goes against what nature has been doing for millennia and has the potential to disrupt the natural processes of this ecosystem.

As even Hood River District Ranger Kim Smolt stated in *Logging to Control Insects: The Science and Myths Behind Managing Forest Insect "Pests,"* (Black S.H. 2005), that "In keeping with the scientific literature, Mt. Hood personnel have stated that the recent outbreak affecting lodgepole pine is almost over and the occurrence was a natural process with self correcting mechanisms." It would seem from this that the CE is unwarranted as this natural process is winding down – and that nature is better equipped to recover from the outbreak than human interference.

Additionally, the agency should investigate the positive wildlife benefits created from the presence of endemic beetles on the landscape, starting with the below study.

Matsuoka, S.M., C.M. Handel and D.R. Ruthrauff. 2001. Densities of breeding birds and changes in vegetation in an Alaskan boreal forest following a massive disturbance by spruce beetles. *Canadian Journal of Zoology* 79: 1678-1690.

Summary: Researchers studied the effects on several ecological changes following an outbreak of spruce beetles (*Dendroctonus rufipennis*) in spruce stands. The beetles tended to ignore black spruce in favor of white spruce thereby changing the stand characteristics. Spruce beetle selectively killed the larger white spruce resulting in mortality of 71 +/- 9% for large spruce, 42 +/- 11% of medium sized spruce, 7 +/- 3% for medium sized spruce and 1.1 +/- 0.7% for black spruce. By altering the forest patches differentially, this widespread outbreak of spruce beetles served to maintain a mosaic like structure of the forest types and successional stages in the region. High densities of understory plants (most notable alders and crowberry) accompanied a high mortality level of mature spruce. Contrary to predictions, forest stands that suffered a high level of spruce mortality did not support lower densities of tree nesting birds (with the exception the Ruby crowned Kinglet) than stands that had suffered low mortalities, nor were densities of woodpeckers higher in areas with high densities of beetle

killed spruce. Even species strongly associated with mature white spruce such as boreal chickadees and varied thrushes did not decline with increases in spruce mortality.

Finally, we encourage you to carefully review the following resources in reviewing the appropriateness and the impacts of The Eight Mile Meadow Salvage Proposal as a CE:

Aber, J., N. Christensen, I. Fernandez, J. Franklin, L. Hidinger, M. Hunter, J. MacMahon, D. Mladenoff, J. Pastor, D. Perry, R. Slangen, and H. van Miegroet. 2000. Applying Ecological Principles to Management of the U.S. National Forests. *Issues in Ecology Number 6.* Ecological Society of America, Washington, D.C.

Summary: Identifies major ecological considerations that should be incorporated in sound forest management policy and their potential impacts on current practice. There is no evidence to support the view that natural forests or reserves are more vulnerable to disturbances such as wildfire, windthrow, and pests than intensively managed forests. Indeed, there is evidence natural systems may be more resistant in many cases. The spread of native and exotic pests and pathogens in many forest systems can be linked to simplification and fragmentation of the forest. From an ecological standpoint the strategy with the greatest probability of long term success in protecting forests against pests and pathogens is to encourage maintenance of a diverse set of controls such as occurs in nature.

Amman, G.D. 1977. The role of the mountain pine beetle in lodgepole pine ecosystems: Impact of succession. In W.J. Mattson, ed. The Role of Arthropods in Forest Ecosystems. Springer Verlag. New York, N.Y. Pp. 3-18.

Summary: Mountain pine beetle epidemics in lodgepole pine forests of the inland West are part of a natural "boom and bust" cycle that has occurred for centuries. Mountain pine beetle populations typically increase to epidemic levels when large homogenous areas of lodgepole pine mature and provide a sustainable food resource. The insect selectively kills susceptible trees from specific size classes, thereby facilitating development of a forest that is structurally, genetically and compositionally more diverse and less prone to beetle attack, thus starting the cycle over again.

Black, S.H. 2005. Logging To Control Insects: The Science and Myths Behing Managing Forest Insect "Pests". A Synthesis of Independently Reviewed Research. The Xerces Society for Invertebrate Conservation, Portland, OR.

Summary: Insects, including those that feed on and sometimes kill trees, are integral components of healthy forest ecosystems. They help decompose and recycle nutrients, build soils, maintain genetic diversity within tree species, generate snags and down logs that wildlife and fish rely on, and provide food for birds and small mammals.

Dahlsten, D.L. 1982. Relationships between bark beetles and their natural enemies. In *Bark Beetles in North American Conifers*, ed. by J.B. Mitton and K.B. Sturgeon, pp. 140–82. University of Texas Press, Austin, TX.

Summary: The author looked at the complex of organisms that coevolved with the beetles and that affect their mortality and natality through parasitoidism, predation, and competition. A salient feature of bark beetle communities is the staggering number of organisms associated with them. Over seventy natural insect enemies and associates have been recorded for the western pine beetle and sixty species for the mountain pine beetle. Natural enemies inflict significant

mortality of bark beetles. The author cited studies showing parasitism rates from as low as 4 percent to as high as 98 percent. Predation rates primarily by clerid beetles was also high in some instances, and western pine beetles were three times as abundant in logs from which clerids were excluded. Woodpeckers can consume 20 to 30 percent of beetles, and in a beetle epidemic these predators may consume up to 98 percent. They also cause additional mortality by removing bark, thereby drying out the bark beetles and allowing parasitoids and predators greater access. Spiders, mites, and disease also may play a role in bark beetle control.

Ferrel, G. 1996. The Influence of Insect Pests and Pathogens on Sierra Forests. Sierra Nevada Ecosystem Project: Final Report to Congress, Vol. II.

Summary: A summary of current conditions, key pests, biotic and other environmental factors effecting outbreaks, the effects on forest composition and structure and mitigation methods.
Sierra forests have high levels of mortality caused by bark beetles infesting trees stressed by drought, fire, overly dense stands and pathogens. Past logging and fire exclusion are partially responsible for this situation. Mortality has been greatest in overly dense stands, especially those where past logging and/ or fire exclusion practices have promoted tree species susceptible to insects, pathogens, fire and drought. In California drought is probably the most important predisposing factor. But overly dense stands, fire logging, urbanization, air pollution, snow breakage, windthrow, and flooding can also weaken trees and cause them to become susceptible to pathogens and insects.

Hughes, J. and R. Drever. 2001. Salvaging solutions: science-based management of British Columbia's pine beetle outbreak. Report commissioned by The David Suzuki Foundation, Vancouver, B.C.

Summary: A report funded by The David Suzuki Foundation, The Sierra Legal Defense Fund and Canadian Parks and Wilderness Society (B.C. Chapter) and focused on statistically supported control measures (or lack thereof) for pine beetles in BC.

The report concludes that bark beetles are the second biggest source of natural disturbance after fire and that protected areas must remained unlogged, even in light of an outbreak. Additionally, 1) bark beetles are native species and natural and important agents of renewal and succession in forests, 2) management interventions have never before controlled a large outbreak, 3.) Sanitation and salvage clearcutting differ from natural disturbance in their effect and tend to decrease habitat complexity and diversity, 5.) logging and sanitation harvest can increase future susceptibility, 6.) logging after a natural disturbance can cause disturbance outside the natural range of variability, 7.) the legacy value of the snags and coarse woody debris may outweigh the economic value of any timber recovered and 8.) basic questions about bark beetle ecology still need to be answered despite nearly 100 years of management experience.

Citing several sources they assert that the weight of opinion seems to be that most control efforts to date have had little effect on the final size of outbreaks, although they may have slowed beetle progress and prolonged outbreaks in some cases. (Klein 1978; Wood et al.1985; Amman and Logan 1998). Also citing several sources they assert that models of the population dynamics of mountain pine beetles and other insects, control of outbreaks is theoretically possible, but requires treatment of almost all infected trees (Berryman 1978; Clark et al. 1979; Thompson et al. 1981; Raffa and Berryman 1986, Mawby et al 1989.)

Large-scale efforts for beetle control are economically and ecologically expensive, and the uncertain benefits of control efforts should be weighed carefully against their costs. Since future outbreaks are inevitable, forest managers should include realistic estimates of beetle damage on projected long-term timber supply.

Koplin, J.R., and P.H. Baldwin. 1970. Woodpecker predation on an endemic population of Engelmann spruce beetles. *The American Midland Naturalist* 83: 510–15.
Summary: This study looked at predation by northern three-toed and hairy woodpeckers on the spruce beetle in northern Colorado. They found that the woodpeckers consumed up to 26 percent of the brood of the endemic population of beetles. Citing other studies, the authors contend that densities of broods of epidemic populations of spruce beetle are reduced by between 45 and 98 percent by woodpecker predation. They attribute greater mortality during epidemics to an influx of woodpeckers and to more beetles in standing trees that woodpeckers can feed on in winter.

Machmer, M.M., and C. Steeger. 1995. *The Ecological Roles of Wildlife Tree Users in Forest Ecosystems*, p. 54. Land Management Handbook 35, British Columbia Ministry of Forests, Victoria, BC. Cited in Hughes, J., and R. Drever. 2001. *Salvaging Solutions: Science-Based Management of British Columbia's Pine Beetle Outbreak*. Report commissioned by The David Suzuki Foundation, Vancouver, BC.
Standing dead and dying trees provide important habitat for approximately one quarter of all wildlife species in British Columbia.

McCullough, D.G., R.A. Werner and D. Neumann. 1998. Fire and insects in northern boreal forest ecosystems of North America. *Annual Review of Entomology* 43: 107-127.

Summary: This paper reviews literature on the effects of fire-insect interactions on ecological succession, use of prescribed fire for insect control and the effects of fire on insect diversity from northern and boreal forests in North America. Fire and insects are critical and intrinsic natural disturbance agents that have been shown to interact synergistically to affect forest succession, nutrient cycling, floristic composition and species diversity. They contend that fire suppression sometimes in combination with logging practices have resulted in profound changes in forests species composition and structure. Associated with these changes is an increased vulnerability of forest stands to damage during insect outbreaks.

Naeem, S., F.S. Chapin III, R. Costanza, P.R. Erlich, F.B. Golley, D.U. Hooper, J.H. Lawton, R.V. O'Neill, H.A. Mooney, O.E. Sala, A.J. Symstad and D. Tilman. 1999. Biodiversity and Ecosystem Functioning: Maintaining Natural Life Support Processes. *Issues In Ecology* No. 4. Ecological Society of America, Washington, D.C.

Summary: Human modification to the living community in an ecosystem can alter ecological functions and life support services that are vital to the well being of human societies. Biodiversity in managed ecosystems is poor, less biodiverse communities and ecosystems are more susceptible to adverse weather (such as drought), exotic invaders and have greatly reduced rates of biomass production and nutrient cycling.

Nowak, J.T. and C.W. Berisford. 2000. Effects of intensive forest management practices on insect infestation levels and loblolly pine growth. *Journal of Economic Entomology* 93(2): 336-341.

Summary: The study monitored the differences in growth and insect infestation levels related to management activities in loblolly pine. Reports higher insect pests in plantation style timber stands, particularly after intense management activities. They found that tip moth infestation levels fluctuated more in areas without competing vegetation. One possible reason is that tip moth natural enemies exert more consistent influence in areas with herbaceous weeds. They concluded that intensive management may disrupt the balance between common insect pests such as the tip moth and their natural enemies. Also new pests such as coneworms may become more prevalent as standard management practices intensify.

Schowalter, T.D. 1995. Canopy arthropod community response to forest age and alternative harvest practices in western Oregon. *Forest Ecology and Management* 78:115-25.

Summary: Schowalter compared arthropod community structure in replicate Douglas fir and western hemlock canopies in intact old growth, partially harvested old growth, natural mature stands and regenerating plantations in Western Oregon. Species diversity and abundance for several taxa, especially predators and detritivores were significantly lower in plantations than older forests. Old growth had less variable (tighter clustered) arthropod diversity and abundance than partially harvested stands The data suggest that Douglas fir canopies may largely recover old growth structure by 150 years. He concludes that the recent conversion of large portions of old growth and mature forests to young plantations (on the Willamette National forest in Oregon) likely has reduced regional populations of many predator and detritivore species. Reduced predator diversity increases the probability that herbivores will escape regulation by predators, which could lead to a greater likelihood of pest outbreaks.

Shouse, B. 2003. Old-growth forest spared for now. *Science* 299: 802.

Summary: A drought and threat of fire and beetle outbreaks caused the Mexican Ministry of the Environment to order Mexican landowners to clear their land of dead trees and brush within 120 days or risk fines in the San Pedro Martír Mountains of Baja California. An ecologist in a nearby town contacted his colleges in the USFS and University of California who came to Baja and presented evidence that fire-adapted, natural matrix of the National Forest could resist the drought and beetle threats without management.

Stone, W.E., and M.L. Wolfe. 1996. Response of understory vegetation to variable tree mortality following a mountain pine beetle epidemic in lodgepole pine stands in northern Utah. *Vegetatio* 122: 1–12.
Summary: The authors studied the impacts of a mountain pine beetle outbreak on the understory floral community in ten lodgepole pine stands in Utah. Understory biomass increased with decreasing canopy cover, but plant species diversity reached its maximum at intermediate levels of tree mortality. Their results indicate that epidemics of bark beetles in coniferous forests increase the availability of forage and browse for wildlife. In the absence of intense grazing pressure by herbivores, these stands offer nesting and foraging cover to small mammals and birds. They observed that severely disturbed stands often resemble wet meadows with dense stands of grasses and sedges (except on steep slopes). Stands with moderate mortality may give a competitive advantage to aspen.

In summary, Bark is very disturbed by this proposal. We strongly object to the use of a CE to restore designated Critical Habitat for the Northern spotted owl and for a project of this magnitude with such a high level of community interest at stake. This proposal does not reflect well on the Barlow District, which is purporting to be interested in collaboration and public involvement. Additionally, on November 1 Bark submitted a FOIA for the following information: the Biological Assessment for the northern spotted owl for the Eight Mile Meadow Salvage CE Project Area, the survey data, results, and reports associated with surveys for Survey and Manage species in the Eight Mile Meadow Salvage CE Project Area consistent with the 2001 Survey and Manage Record of Decision, the survey data, results, and reports associated with surveys for management indicator species for the Eight Mile Meadow Salvage CE project area, the watershed analysis (if any) associated with the planning area and the late-successional reserve assessment (if any) associated with the planning area. Since Bark did not receive these documents prior to the comment deadline we reserve the right to use the information contained within the requested documents to further develop our case. We strongly encourage you to withdraw the Eight Mile Meadow Salvage proposal and refrain from using CEs in the future except for reasonable small scale projects.

Sincerely,

Michele McKinzie
Volunteer/Outreach Coordinator, Bark