Here's Your Sign Decision Document
Camas Valley 2011 Harvest Plan Environmental Assessment
DOI-BLM-OR-R050-2011-0005-EA

Bureau of Land Management
South River Field Office, Roseburg District

Background

The Camas Valley 2011 Harvest Plan Environmental Assessment (EA), of which the Here's Your Sign Timber Sale is a component, proposed to apply uniform and variable density thinning to 1,575 acres, and variable retention harvest to 240 acres in the General Forest Management Area land use allocations. The EA describes and analyzes a no action alternative and two sub-alternatives of the proposed action. Under Alternative Two, Sub-alternative A commercial thinning would be utilized whereas Alternative Two Sub-Alternative B utilizes thinning and variable retention harvest. The Here's Your Sign Timber Sale includes the variable retention harvest component of Alternative Two Sub-Alternative B.

The analysis was conducted and the project designed to conform to management direction from the 1995 Roseburg District *Record of Decision and Resource Management Plan* (ROD/RMP) as amended prior to December 30, 2008.

Additional Information

Survey and Manage

In ruling on Conservation Northwest et al. v. Mark E. Rey et al. on December 12, 2009, Judge Coughenour in the U.S. District Court for Western Washington set aside the 2007 Record of Decision (ROD) eliminating the Survey and Manage mitigation measures, but deferred issuing a remedy until further proceedings. Judge Coughenour did not set aside the Pechman exemptions, or enjoin the BLM from proceeding with projects.

The plaintiffs and Federal Agencies entered into settlement negotiations in April 2010, and the Court filed approval of the resulting Settlement Agreement on July 6, 2011. The 2011 Settlement Agreement made four modifications to the 2001 ROD: (A) acknowledged existing exemption categories (2006 Pechman Exemptions); (B) updated the 2001 Survey and Manage species list; (C) established a transition period for application of the species list; and (D) established new exemption categories (2011 Exemptions).

On April 25, 2013, the Ninth Circuit Court of Appeals invalidated portions of the 2011 Settlement Agreement, but the 2006 Pechman Exemptions remain unchanged.

Judge Pechman's Order from October 11, 2006 directs: "Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was amended or modified as of March 21, 2004), except that this order will not apply to:

a) Thinning projects in stands younger than 80 years old;

b) Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;

c) Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement of large wood, channel and floodplain reconstruction, or removal of channel diversions; and

d) The portions of projects involving hazardous fuel treatments where prescribed fire is applied. Any portion of a hazardous fuel treatment project involving commercial logging will remain subject to the survey and management requirements except for thinning of stands younger than 80 years old under subparagraph (a) of this paragraph."

Thinning will be applied to Unit 3, a 58 years old stand (EA, p. 37). Consequently, Unit 3 complies with Pechman exemption "a". All new road construction, whether located within or outside of unit boundaries, is sited in stands less than 80 years old. Habitat conditions in variable retention harvest units 1, 2 and 4 were evaluated and protocol surveys were conducted in suitable habitats using the 2001 Survey and Manage ROD species list (EA, p. 66). Protocol surveys for Oregon shoulderband snail, green sideband snail, and Chase sideband snail were conducted during spring and fall in 2012, but these survey and management species were not located (EA, pp. 67 and 68). Surveys were not conducted for great gray owl and Oregon red tree vole because suitable habitat was not present (EA, p. 66 and 67).

Botanical surveys for Survey and Manage plant species were conducted in the summer of 2011 in variable retention harvest units 1, 2 and 4 using the 2001 ROD species list for Survey and Manage lichens, mosses, bryophytes and vascular plants. The results of the surveys were negative (EA, p. 33).

Carbon Release and Sequestration

In May of 2011, a study on the effects of thinning and biomass utilization on carbon release and storage was published by Oregon State University.[1] The conclusions of the Camas Valley 2011 Harvest Plan EA, with respect to the effects of thinning on carbon storage, were reviewed against findings of the study. Among the study findings were:

- Forest carbon pools always immediately decreased as a result of thinning, with reductions increasing as a function of heavier thinning.
- After thinning, carbon pools remain lower throughout a 50-year period.
- Carbon pool estimates for thinned stands remained lower even after accounting for carbon transferred to wood products.

The findings of the Camas Valley 2011 Harvest Plan EA with respect to thinning are consistent with published findings (Sessions et al. 2011[1]) that carbon pools immediately decline following thinning, and remain lower 50 years after thinning (EA, p. 117). This conclusion applies to thinning Unit 3 in the Here's Your Sign Timber Sale.

[1] Clark, J., J. Sessions, O. Krankina, T. Maness. 2011. Impacts of Thinning on Carbon Stores in the PNW: A Plot Level Analysis. College of Forestry, Oregon State University. Corvallis, OR.

The variable retention harvest treatment was analyzed specifically in the EA (pp. 118-119). The analysis shows variable retention harvest will release approximately 0.4 tonnes per acre annually or 95 tonnes annually for the first 50 years after harvest (EA, p. 118). Variable retention harvest treatment will release 2,757 tonnes of carbon (EA, p. 118).

Table 3-16 of the EA (p. 119) compares carbon release and storage in the No Action Alternative to the effects of variable retention harvest under Alternative Two Sub-Alternative B. Under No Action, the carbon pool in standing live trees increases from current balance of 91 tonnes to 238 tonnes in 50 years. Under Alternative Two Sub-Alternative B, carbon in standing live trees is immediately reduced to 39 tonnes post-harvest, and 50 years after thinning is 133 tonnes, approximately 55 percent less than under the No Action Alternative. The findings that carbon pools immediately decline following treatment, and remain lower 50 years after treatment are consistent with Sessions et al. (2011).

The EA (Appendix F p. 3) also notes that Smith et al. (2006)[2] calculated that 13.5 percent of gross saw log carbon and 14.8 percent of gross pulpwood carbon will be immediately released into the atmosphere at harvest. This is consistent with the finding that not all carbon from harvested timber is transferred into wood and paper products.

Decision

It is my decision to authorize the Here's Your Sign project, which begins implementation of Alternative Two, Sub-Alternative B described in the Camas Valley 2011 Harvest Plan EA (pp. 28-30). The project design features described in the EA (pp. 19-30) have been incorporated into timber sale contract stipulations. The four activity areas total approximately 268 acres including treatment areas and aggregate retention in the variable retention harvest units; approximately 190 acres are in the General Forest Management Area land use allocation and 78 acres are in the Riparian Reserve land use allocation.

Here's Your Sign Timber Sale will implement the following activities (see Table 1, Table 2, and the attached maps):

- **Variable Retention Harvest:** Approximately 140 acres will be treated with variable retention harvest in the uplands of units 1, 2, and 4. In addition to 6-11 trees per acre of dispersed retention trees, approximately 36 acres will be retained as untreated aggregates in the uplands (outside of Riparian Reserves).
- **Uniform Commercial Thinning:** Approximately 14 acres of uniform commercial thinning will be applied to the uplands of Unit 3.
- **Variable Density Thinning:** Approximately 54 acres of variable density thinning will be applied to Riparian Reserves in all units. There will be approximately 24 acres of untreated Riparian Reserve areas within the units.

[2] Smith, J.E., L.S. Heath, K.E. Skog, and R.A. Birdsey. 2006. Methods for calculating forest ecosystem and harvested carbon with standard estimates for forest types of the United States. Gen. Tech. Rep. NE-343. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 216 p

- **Temporary Stream Crossing:** One temporary stream crossing will be installed on BLM Road 29-9-35.1 (Segment B in Unit 29-9-35C). After use, the temporary stream crossing will be removed and the road surface will be waterbarred.
- **Road Construction:** Approximately 26 feet will be cleared for the road rights-of-way outside of unit boundaries. This road segment will be retained for future use.
- **Road Construction followed by Decommissioning:** Approximately one mile of temporary road will be constructed and decommissioned after use, about 99 percent of which is located within unit boundaries. Decommissioning will consist of water-barring, slashing, and/or obstructing motorized access.
- **Road Renovation:** Approximately 0.4 miles will be renovated and retained for future use. Renovation actions are those needed to restore the road to adequate haul specifications and may include spot aggregate placement, blading, brushing, removing obstructions, reshaping drainage dips and the road bed, and replacing cross drains and live water culverts when needed.
- **Road Renovation followed by Decommissioning:** Approximately 1.7 miles of road will be renovated followed by decommissioning.
- **Subsoiling:** Approximately 5.18 miles (7.53 acres) of skid trails and landings will be subsoiled.
- **Post-Harvest Fuels Treatment:** Approximately 60 acres of activity generated slash accumulations within the units will be jackpot burned. Approximately 18 acres of activity generated slash will be broadcast burned. Fuel accumulations along roads and landings will be piled and burned.
- **Post-Harvest Density Control:** Approximately 140 acres of density control treatments within the three variable retention harvest units will be applied as necessary to maintain open tree canopy for approximately 30 years.

Total harvest volume is estimated at 6,252 thousand board feet. Approximately 5,213 thousand board feet derived from thinning and variable retention harvest in 153 acres of General Forest Management Area land use allocation is chargeable to the Roseburg District annual allowable sale quantity. The remaining 1,039 thousand board feet derived from variable density thinning in 54 acres of Riparian Reserves is not chargeable to the annual allowable sale quantity.

Table 1: Here's Your Sign Unit numbers and corresponding Camas Valley Harvest Plan 2011 EA designations.

Sale Unit	EA Unit Designation	Total Activity Area Acres	Upland Treatments*			Riparian Treatment*		Total Acres Treated Uplands and Riparian Reserves	Harvest Method Percent Ground-Based vs. Cable
			Harvest Prescription	Harvest Acres	Retention Acres	VDT Acres	No Treatment Area		
Unit 1	29-9-35C	170.9	VRH	100.8	27.8	28.4	13.9	129.2	60/40
Unit 2	29-9-35A	30.0	VRH	20.9	7.2	1.7	0.2	22.6	80/20
Unit 3	30-9-3A	27.7	CT	14.0	N/A	11.4	2.3	25.4	0/100
Unit 4	29-9-35B	38.5	VRH	17.5	1.4	12.4	7.2	29.9	80/20
Total		267.1		153.2	36.4	53.9	23.6	207.1	

*VRH = Variable Retention Harvest; CT = Commercial Thin; VDT = Variable Density Thinning

Prior to move-in, all equipment used in logging and road construction, excluding log trucks and crew transport, will be steam-cleaned or pressure washed to remove soil and materials that may be contaminated with weed seed or root fragments. Any equipment removed from the contract area during the life of the contract must be re-cleaned before being returned to the contract area.

Conventional ground-based yarding equipment will operate on designated skid trails, using pre-existing trails to the greatest extent practicable. Operations will be limited to the dry season, typically mid-May to mid-October, when soils are at their driest and least susceptible to compaction. This season may be shortened or extended, dependent on weather conditions. Operations are generally restricted to slopes of 35 percent or less, but may be authorized on steeper inclusions and steeper pitches between gentler benches where appropriate.

Conventional ground-based harvest systems, except feller bunchers, are acceptable for the ground-based harvest areas. The soils contain high clay contents that are subject to compaction. Field review[3] shows feller buncher operations on these soil types have not yielded acceptable results.

Subsoiling will occur on approximately 5.18 miles (7.53 acres) of skid trails and landings. Subsoiling will treat compacted soils to a minimum of 18 inches in depth, or to the top of gravelly-cobbly soil layers if these layers are shallower than 18 inches.

For cable yarding, a skyline system capable of maintaining a minimum of one-end log suspension will be used. It shall be equipped with a mechanical slack pulling carriage having a minimum of 75 feet of lateral yarding capability. The system shall also have the capability to yard in multi-span configuration.

With the exception of the clearing of road rights-of-way, no timber falling, bucking or yarding shall be conducted in thinning Unit 3 during the bark-slip period from April 15 to July 15 of each calendar year, both days inclusive. This restriction may be waived or modified depending upon seasonal variations, logging systems, and operator skill.

Access will be primarily provided by existing roads, supplemented by the construction of up to eight spur roads. Temporary road construction (1.0 mile) and renovation (2.0 miles) are restricted to the dry season, typically May 15 and October 15. This season may be shortened or extended, dependent on weather conditions.

Table 2 and the attached maps display details of necessary road treatments. Six road segments (1.7 miles) will be *renovated* and used for harvest operations during the dry season between May 15 and October 15, then decommissioned in the same respective operating season. Six road segments (1.0 mile) will be *constructed* and used for harvest operations during dry operating conditions between May 15 and October 15, then decommissioned in the same respective operating season. Two road segments (0.4 miles) will be renovated and retained for future use. One privately controlled road (29-9-35.3; 1.2 miles) will be renovated and retained after reestablishing pre-harvest conditions after use. Renovation includes activities such as brushing, ditch cleaning, surface grading, replacing drainage structures, and adding rock surfacing where needed. Decommissioning will consist of water-barring, slashing, and/or obstructing motorized access. If it is not possible to decommission these roads at the end of an operating season, the purchaser shall be responsible for winterizing them by water-barring, obstructing motorized access, and mulching.

[3] USDI BLM 2013. Sir Galahad Commercial Thinning and Density Management Soil Impacts Field Review. Roseburg District, Roseburg, Oregon.

Table 2: Here's Your Sign road construction, renovation and decommissioning.

Road	Road Treatment	Length (miles)
29-9-34.0	Temporary Road Construction followed by Decommissioning	0.1
29-9-35.1 shoe fly*	Temporary Road Construction followed by Decommissioning	0.1
Spur 2	Temporary Road Construction followed by Decommissioning	0.4
Spur 3	Temporary Road Construction followed by Decommissioning	0.1
Spur 5	Temporary Road Construction followed by Decommissioning	0.2
Spur 5 punchout**	Temporary Road Construction followed by Decommissioning	0.1
29-9-34.0	Road Renovation followed by Decommissioning	0.3
29-9-35.1	Road Renovation followed by Decommissioning	0.6
Spur 1	Road Renovation followed by Decommissioning	0.2
Spur 4	Road Renovation followed by Decommissioning	0.2
Spur 6	Road Renovation followed by Decommissioning	0.3
Spur 7	Road Renovation followed by Decommissioning	0.1
29-9-36.1	Road Renovation. Road to be Retained	0.3
Spur 8	Road Renovation. Road to be Retained	0.1
29-9-35.3	Road Renovation. Privately controlled road to be retained after reestablishing pre-harvest conditions	1.2

* A shoe fly is a short section of road used to change haul direction.
** A punchout is a short section of road used to reach a slope break.

Public Involvement & Response to Comment

Analysis for the Camas Valley Harvest Plan EA began in June of 2011. Informal scoping comments were received from two organizations in May and June of 2011. These comments were considered and addressed in the EA (pp. 5-13).

The EA was released for a 30-day period of public review and comment beginning on June 18, 2013, and running through July 17, 2011. Comments were received from three organizations. Responses to pertinent issues not already addressed in the EA are included in this document as Appendix A.

Rationale for the Decision

Alternative Two, Sub-Alternative B will meet the objectives of providing sustainable timber production; developing desired species composition, structural characteristics, and distribution of seral or age classes; enhancing species and structural diversity in Riparian Reserves; and reducing stand densities to promote tree survival and growth (EA, pp. 43, 50, 51-54). Alternative One will not accomplish these objectives (EA, pp. 40-42). Alternative 2A will not accomplish these objectives to the extent that Two, Sub-Alternative B will. Specifically, Two, Sub-Alternative A would not alter seral stage of stands, change the seral stage distribution of BLM-managed lands, or restore species composition to produce stands that are resilient to insects, disease, and fire in areas currently dominated by grand fir (EA, p. 43).

Wildlife

Consultation with the U.S. Fish and Wildlife Service (Service) has been completed and the project complies with the Endangered Species Act. The Biological Opinion (TAILS #: 01EOFW00-2013-F-0200, dated September 30, 2013) includes a finding that the proposed action would not jeopardize the continued existence of the northern spotted owl or marbled murrelet and will not adversely modify critical habitat for either species (p. 1). All of the Here's Your Sign project is within the 2012 designated

northern spotted owl critical habitat (EA, p. 59, Appendix C). Critical habitat will continue to provide demographic support for the northern spotted owl (EA, p. 76, 83). There are no known or historic marbled murrelet sites affected by this action.

Northern Spotted Owl

No effect to northern spotted owls (*Strix occidentalis* var. *caurina*) from noise disruption or disturbance is expected (EA, p. 26, 75). Any operations with the potential for disruption of nesting owls would be subject to seasonal restrictions. Operations within applicable disruptions threshold distances of known northern spotted owl sites or unsurveyed suitable habitat will be prohibited from March 1st to July 15th, both dates inclusive.

Northern spotted owls are expected to continue to use thinned areas (Unit 3 and treated Riparian Reserves in units 1, 2, and 4) after operations are complete because post-treatment canopy closure will remain above 40 percent and the quadratic mean diameter of trees in the stands will exceed 11 inches, figures widely used as thresholds for dispersal function (EA, p. 21, 75). However, the northern spotted owls may utilize the thinned stand less than unthinned stands until canopy closure returns to pre-thinning levels in a projected 10 to 20 years (EA, p. 75).

This project is consistent with the 2011 Northern Spotted Owl Recovery Plan by implementing disturbance-based management within the range of the northern spotted owl with the goal of maintaining or restoring forest ecosystem structure, composition, and processes so they are sustainable under current and future climate conditions. It is also consistent with the Recovery Plan recommendations for the application of ecological forestry principles (EA, p. 76, 83). Here's Your Sign Timber Sale complies with Recovery Action 6 by implementing ecological forestry principles that emphasize retention of larger and older trees, snags and downed wood, and live trees (EA, p. 28-29).

The project will be conducted following principles of ecological forestry as recommended throughout the Northern Spotted Owl Recovery Plan (USFWS 2011, pp. III-11 thru 14, 19, and 20). It will emulate natural disturbance processes through prescriptive actions (USFWS 2011, p. III-13), promoting spatial heterogeneity within patches on local landscapes, and restore lost species and structural diversity within the historical range of variability, including early successional ecosystems (USFWS 2011, pp. III-14 and 18).

The Northern Spotted Owl Recovery Plan (NSO RP) recommends conserving northern spotted owl sites and high-value northern spotted owl habitat (USFWS 2011, pp. III-42 thru 47). The Recovery Plan also identifies a number of activities that could have short-term effects to northern spotted owls, but which would still be consistent with the Recovery Plan. Among these are restoration activities that would reduce threats from stochastic disturbance (USFWS 2011, pp. III-13 thru 14, and 45 thru 46) and restoration of high quality early-seral habitat (USFWS 2011, pp. III-14 and 46), both of which will be accomplished by implementing Here's Your Sign Timber Sale. Given this, the sale is consistent with the Recovery Plan (EA, p. 83).

Here's Your Sign Timber Sale is located in the Klamath West Subunit 1 (KLW 1). In a Biological Opinion (Tails #01EOFW00-2013-F-0200), the Service found activities in KLW 1 dispersal habitat will not impair the overall function of the subunit because sufficient habitat will remain available (USFWS 2013, p. 105).

Known threats to the northern spotted owl are addressed by recovery strategies that include habitat conservation and active forest restoration as recovery strategies (USFWS 2011, p. II-2). The recovery plan also strongly encourages land managers to be aggressive in the implementation of recovery actions. (USFWS 2013, p. 42).

In a Biological Opinion (USDI FWS 2013), the Service made the following findings:

- Through designation of revised critical habitat, the Service has encouraged land managers to consider implementation of forest management practices recommended in the Revised Recovery Plan (USDI FWS 2011) to restore natural ecological processes where they have been disrupted or suppressed (*e.g*., natural fire regimes), and application of ecological forestry management practices (e.g., Franklin et al. 2007) within critical habitat to reduce the potential for adverse impacts associated with commercial timber harvest when such harvest is planned within or adjacent to critical habitat. In the final rule, the Service encourages land managers to consider the conservation of existing high-quality spotted owl habitat, the restoration of forest ecosystem health, and the ecological forestry management practices recommended in the Revised Recovery Plan that are compatible with both the goals of spotted owl recovery and Standards and Guidelines of the Forest Plan. (p. 72)
- The revised spotted owl recovery plan (USDI FWS 2011) emphasizes the importance of retaining the older, and more structurally complex stands between the reserves (Recovery Action 32); conserving spotted owl sites for demographic support through maintaining habitat at known sites (Recovery Action 10); and the use of ecological forestry principles (Franklin et al. 2002, Johnson and Franklin 2009 and Franklin and Johnson 2012) when implementing silvicultural activities (Moist Forest Habitat and Recovery Action 6). The Biological Assessment (USDI BLM 2013) indicates these Recovery Actions were considered in the design of the project and incorporated to the extent practical, in keeping with the intent of the project. (p. 84-83)
- The NWFP reserve system coupled with spotted owl Recovery Actions 10 and 32 are intended to enhance spotted owl demographic support through habitat conservation. The Roseburg District is implementing Recovery Actions 10 and 32, to the extent practicable, so as to avoid and minimize impacts to spotted owl sites and high value and complex habitats. All activities are planned to occur beyond the disruption distance of any known affected sites. (p. 117)
- The action area's contribution to the Oregon Coast Range, Klamath Mountains and the Oregon West Cascades Provinces' demographic support function is not likely to be appreciably diminished. (p. 117)
- Here's Your Sign Timber Sale is consistent with the NWFP and to the extent practicable with the recovery plan and is not likely to appreciably reduce the likelihood of survival and recovery of the spotted owl population at the provincial or range-wide scales. (p. 118)
- Based upon the critical habitat analysis in the Biological Opinion, the Service finds that Here's Your Sign Timber Sale is not likely to impair the capability of critical habitat to provide demographic support or facilitate connectivity among adjacent subunits. (p. 118)

No suitable northern spotted owl habitat will be treated. The project includes application of variable retention harvest (VRH) in northern spotted owl dispersal habitat (140 acres; units 1, 2 and 4). Variable retention harvest will downgrade dispersal habitat such that it will no longer function as dispersal habitat (EA, p. 82, 83). Effects are moderated by retention in the VRH areas that includes approximately 36 acres of aggregate retention and 6-11 trees per acre of dispersed retention (EA, p. 28). Although thinning

will modify approximately 68 acres of dispersal habitat, it will continue to function as dispersal habitat (EA, p. 75). The environmental effects of project implementation on northern spotted owls will be the same as those described in the Camas Valley Harvest Plan EA (pp.74-77, 82-83).

Variable retention harvest Unit 2 overlaps dispersal habitat outside of the nest patches and core areas and at the perimeters of northern spotted owl home range 2186A which has been unoccupied since 1993 and home range 2186O which has been unoccupied since 2007 (EA, Table C-3). Treatment will not alter suitable habitat needed to support owls in these home ranges. Units 1, 3 and 4 do not overlap known northern spotted owl home ranges.

Marbled Murrelet

As described in the EA (p. 78), there will be no effect to the marbled murrelet (*Brachyramphus marmoratus*) from disturbance. Here's Your Sign Timber Sale will not occur in suitable or occupied marbled murrelet habitat (EA, p. 84). None of the Here's Your Sign units are within the 100-yard threshold for disturbance, and no seasonal restriction will be required. The Service does not anticipate the incidental take of any murrelets due to the activities addressed in the Biological Opinion (USFWS 2013, Tails # 01EOFW00-2013-F-0200, p. 121).

Botany Special Status Species

The project is within the range of Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*), a Federally-threatened herbaceous perennial plant. There will be no direct effect to Kincaid's lupine, as no populations have been identified in any of the units comprising this project (EA, p. 33, EA Appendix D)

There will be no effects on the Federally-Endangered rough popcorn flower (*Plagiobothrys hirtus*). The project is not within in the geographic range of the species and habitat provided by vernally wet meadows is not present (EA, Appendix D).

No Bureau sensitive plant species were located during surveys in Here's Your Sign units, therefore no affect to Bureau sensitive species is anticipated (EA, p. 33, EA Appendix D).

Aquatic Habitat, Fish, and Essential Fish Habitat

Oregon Coast coho salmon (*Oncorhynchus kisutch*), a federally threatened species, are present in the Middle Fork Coquille River, which is designated as critical habitat for the Oregon Coast coho salmon, and Essential Fish Habitat for both the Oregon Coast coho salmon and Oregon Coast Chinook salmon (*O. tshawytscha*).

The Here's Your Sign units are within the Middle Fork Coquille River watershed. In the Middle Fork Coquille River, upstream migration by Oregon Coast coho salmon is blocked by Bradford Falls, near the mouth of Bear Creek, approximately two miles downstream from the nearest harvest unit and 1.5 miles from the nearest haul road crossing over the Middle Fork Coquille River (EA, p. 88). No direct effects from harvest activities are expected to Oregon Coast coho salmon, critical habitat for the species, or Essential Fish Habitat (EA, pp. 96-99, 102, 103). Riparian Reserves have been established on all streams located within or adjacent to the units, and "no treatment" areas that will filter sediment and provide effective shade for maintenance of water temperatures (60 feet on fish bearing and perennial streams; 35 feet on intermittent streams) have been established adjacent to the stream channels.

Potential effects on aquatic systems come primarily from road related activities, which can contribute sediment to streams that can affect substrate for spawning (EA, p. 96). All renovation of existing roads will take place during the dry season, typically mid-May through mid-October (EA, p. 96). Absent seasonal precipitation which could mobilize sediments, these activities will not contribute sediment to streams that could affect spawning substrates (EA, p. 96). Dry-season hauling will neither generate nor deliver sediment to live stream channels (EA, p. 97). Application of project design features and Best Management Practices (EA, pp. 28-31, 97, 101) will effectively eliminate delivery of road derived sediment to live stream channels (EA, p. 98). Some sediment may enter streams, however, resulting in elevated levels of turbidity, but not at levels that exceed typical background levels during winter high flows (EA, p. 101).

All renovation of existing roads will include application of rock lifts where needed, and grading and brushing to make roads more accessible (EA, p. 96). All road renovation activities will take place during the dry season of operation and, absent seasonal precipitation, would not contribute sediment to stream crossings that could affect spawning substrate in downstream reaches (EA, p. 96).

Haul during the dry season would neither generate nor deliver road-derived sediment to live stream channels (EA, p. 97). Absent substantial precipitation, there would be no mechanism for moving fine sediment from road surfaces into ditch lines and potentially into nearby stream channels (EA, p. 97).

Gravel-surfaced haul routes could contribute small amounts of fine sediment to stream channels at stream crossings at a time of year that sediment is being transported downstream by high winter flows (EA, p. 97). Under such circumstances small amounts of sediment could become entrained in substrates in fish-bearing reaches, reducing spawning habitat quality (EA, p. 97). Implementing project design features will reduce the potential for these effects (EA, p. 97). Active haul during the wet season will be suspended during or prior to forecasts of substantial rain or if the haul route becomes adversely impacted (EA, p. 97). Where haul routes are paved, there is no mechanism for sediment to be generated or carried to adjacent stream channels (EA, p. 97).

Water Quality and Quantity

Riparian Reserves have been established on all streams located within or adjacent to the harvest units, and "no treatment" areas have been established adjacent to the stream channels that will filter sediment and provide effective shade for maintenance of water temperatures (EA, pp. 20, 99, 100, Appendix E).

As discussed in the EA (p. 102), large openings in a forest canopy greater than two tree heights across can affect precipitation, snow melt and peak flows. Thinning in the uplands of Unit 3 will maintain 70 to 80 percent canopy cover (EA, p. 21). Variable density thinning in Riparian Reserves will maintain an average canopy cover of at least 50 percent (EA, p. 21). Small (less than two tree heights) gaps or openings created by the variable density thinning in Riparian Reserves will have little effect on forest hydrology (EA, p. 102). Variable retention harvest in units 1, 2, and 4 will create canopy gaps large enough to potentially impact peak flows (EA, p. 104). With the addition of approximately 140 acres of concentrated harvest, the Equivalent Clearcut Area (ECA) would increase to 10.8 percent. There would be no mechanism for peak flow enhancement due to a lack of response until ECA exceeds 29 percent of the subwatershed (EA, p. 104). Consequently, Here's Your Sign Timber Sale does not present a risk to peak flow enhancement.

As discussed in the EA (p. 92), the average road density, an index of the relative amount of road in the analysis area, is 5.65 miles per square mile. Based on rights-of-way widths, assumed to be 40-feet on average, roads cover approximately 3,616 acres and represent 4.28 percent of the analysis area (EA, p. 92). Increases in peak flow can be found when the roads and other impermeable areas occupy more than 12 percent of a catchment scale watershed (Harr *et al*. 1975) (EA, p. 92). Road decommissioning will reduce road density which will remain well below the 12 percent threshold for risk of peak flow enhancement identified by Harr et al. (1975) (EA, p. 104).

Aquatic Conservation Strategy

Riparian Reserves were established consistent with the 1995 ROD/RMP specification that Riparian Reserve widths will be equal to the height of two site potential trees on each side of fish-bearing streams and one site-potential tree on each side of perennial or intermittent non-fish bearing streams, wetlands greater than an acre, and constructed ponds and reservoirs (EA, p. 20, Appendix E). The height of a site-potential tree is calculated as 180-feet for the Upper Middle Fork Coquille River watershed analysis unit (EA, p. 20). Approximately 54 acres of variable density thinning will be conducted in Riparian Reserves on the Here's Your Sign project. A principal objective for these treatments is to accelerate the development of late-seral characteristics (EA, p. 50).

Key Watersheds were established "as refugia...for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species (ROD/RMP, p. 20)." The Middle Fork Coquille River watershed, in which Here's Your Sign is located, is not designated as a Tier 1 or Tier 2 Key Watershed (ROD/RMP, p. 20).

In developing the project, the Upper Middle Fork Coquille Watershed Analysis (USDI BLM 1999)[4] was used to evaluate existing conditions, establish desired future conditions, and assist in the formulation of appropriate alternatives (EA, p. 35, 54, Appendix E).

One of the primary purposes of this project is to accelerate tree growth in Riparian Reserves and speed attainment of late-seral stand conditions with high vegetative diversity and complexity (EA, p. 4 and Appendix E). The thinning prescriptions are considered to be a watershed restoration project and are therefore consistent with the Watershed Restoration component of the Aquatic Conservation Strategy (EA, Appendix E).

Cultural/Historical Resources

Here's Your Sign project was surveyed for cultural resources, and two previously undocumented sites were identified. Site OR-10-307 is located well within a no treatment zone and will not be impacted by ground-disturbing activities. Site OR-10-308 has been buffered and flagged and a note was put in the contractor file to avoid any impacts to the site. Consequently, the project will have "No Effect" on cultural resources. The results of the surveys are documented in CRS No. SR1208. The BLM has completed its National Historic Preservation Act Section 106 responsibilities under the 2012 National Programmatic Agreement and the 1998 Oregon Protocol (EA, p. 31 and 32). In compliance with the Act, ground-disturbing activities will be halted if cultural resources are discovered until an Archaeologist can properly evaluate and document the resources.

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[4] USDI BLM. 1999. Upper Middle Fork Coquille Watershed Analysis. Roseburg, OR.

Noxious Weeds

As discussed in the EA (p. 34), in the absence of this project, weed control measures will still be undertaken. These actions include inventory of infestations, assessment of risk for spread, and application of control measures in areas where other management actions are proposed or planned (EA, p. 34). Control measures may include mowing, hand-pulling, and limited use of approved herbicides (EA, p. 34).

As previously described in this document, equipment washing is required to minimize the risk of introducing soil from outside the project area that may be contaminated with noxious weed seed or other propagative materials. Any new infestations would be treated and periodically monitored to determine further treatment needs. Given that regular weed treatments would continue, there would be no perceptible difference in the risk of weed establishment and spread (EA, p. 34).

Monitoring

Monitoring of the effects of the Here's Your Sign project will be done in accordance with provisions contained in the 1995 ROD/RMP, Appendix I (p. 84-86, 190-191, 193-199, and 201), focusing on the effects of thinning on: Riparian Reserves, Matrix, Air Quality, Water and Soils, Wildlife Habitat, Fish Habitat, Special Status Species Habitat, and Cultural Resources.

Protest Procedures

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR Subpart 5003 Administrative Remedies, protests of this decision may be filed with the authorized officer, Steve Lydick within 15 days of the publication of the notice of decision/timber sale advertisement on November 19, 2013, in *The News-Review*, Roseburg, Oregon.

43 CFR § 5003.3 subsection (b) states: "Protests shall be filed with the authorized officer and shall contain a written statement of reasons for protesting the decision." This precludes the acceptance of electronic mail (email) or facsimile (fax) protests. Only written and signed hard copies of protests that are delivered to the Roseburg District Office will be accepted. The protest must clearly and concisely state which portion or element of the decision is being protested and the reasons why the decision is believed to be in error.

43 CFR § 5003.3 subsection (c) states: "Protests received more than 15 days after the publication of the notice of decision or the notice of sale are not timely filed and shall not be considered." Upon timely filing of a protest, the authorized officer shall reconsider the project decision to be implemented in light of the statement of reasons for the protest and other pertinent information available.

The authorized officer shall, at the conclusion of the review, serve the protest decision in writing to the party or parties. Upon denial of protest, the authorized officer may proceed with the implementation of the decision as permitted by regulations at 43 CFR § 5003.3 subsection (f).

If no protest is received by close of business December 4, 2013 (4:30 P.M., PST), this decision will become final. If a timely protest is received, the project decision will be reconsidered in light of the statement of reasons for the protest and other pertinent information available, and the South River Field Office will issue a protest decision.

Steve Lydick
Field Manager
South River Field Office
(541) 464-3211

11/12/13
Date

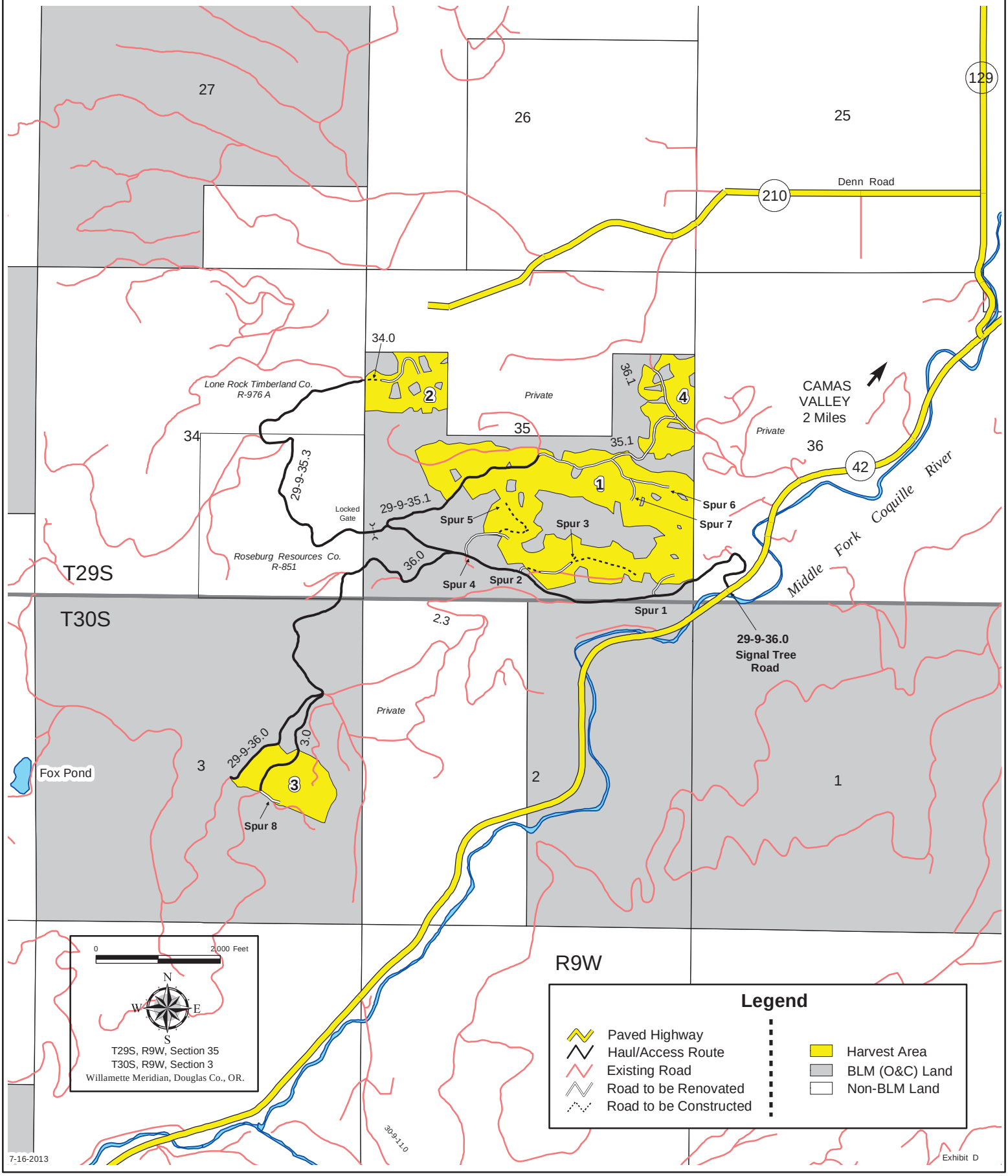
Department of Interior
Bureau of Land Management
Roseburg District

'Final Decision' Document Map

'Camas Valley 2011 Harvest Plan' EA

HERE'S YOUR SIGN

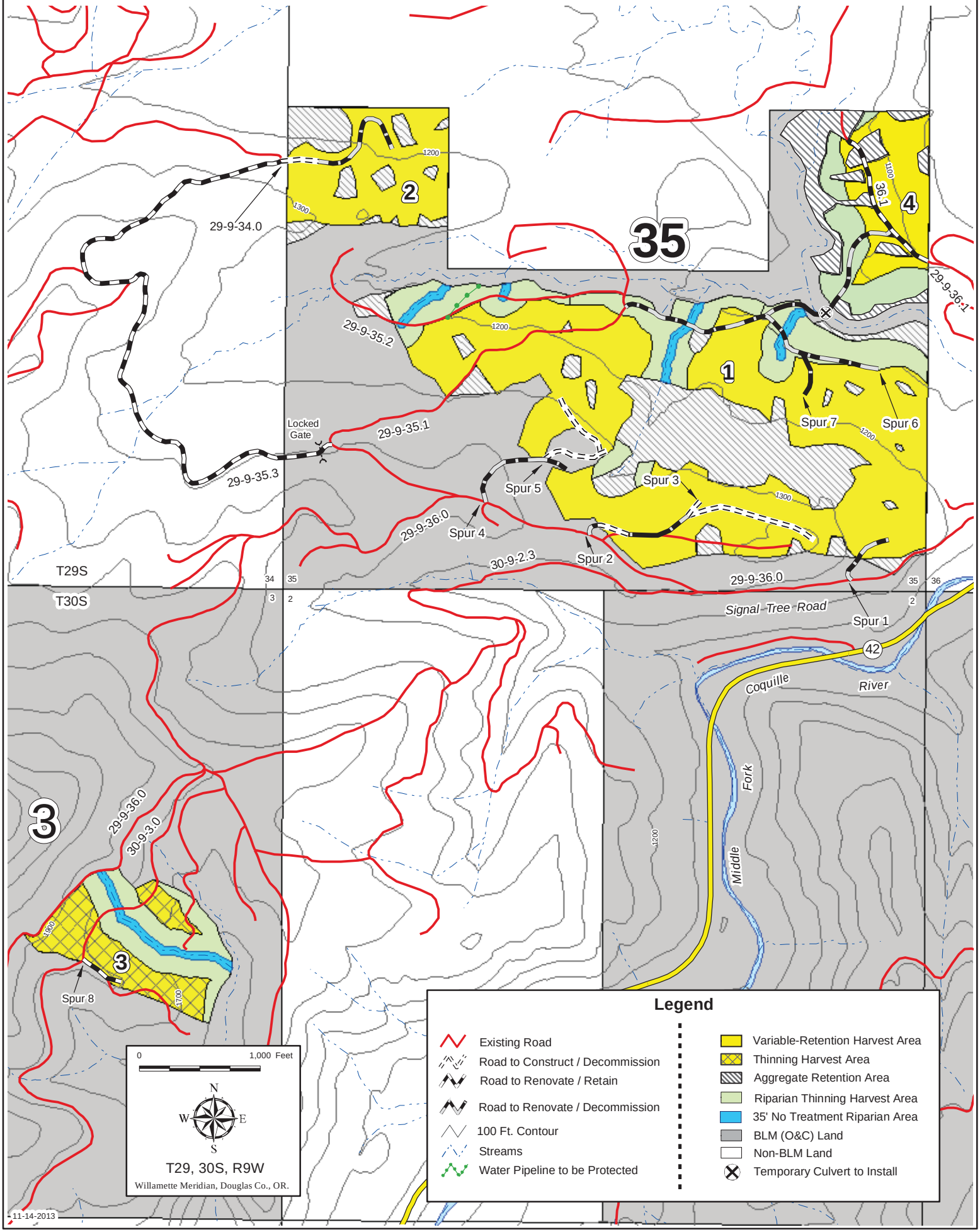
Contract # ORR05-TS-2014.0009



7-16-2013

Exhibit D

HERE'S YOUR SIGN



11-14-2013

Appendix A

Bureau of Land Management
Response to Comments on
Camas Valley 2011 Harvest Plan
Environmental Assessment

July 17, 2013

Steven Lydick
South River Field Manager
Roseburg District BLM
777 NW Garden Valley Blvd, Roseburg Oregon 97470
emailed to: or100mb@blm.gov

RE: Comments on Camas Valley 2011 Harvest Plan EA. OR-R050-2011-0005-EA

Please consider these comments from Cascadia Wildlands and Klamath Siskiyou Wildlands Center when developing alternatives for the Camas Valley 2011 Harvest Plan.

The project includes:

Sub-Alternative A thins 1,775 acres in 53 units, including:

- 1,170 acres in LSR and adjacent riparian reserves
- 434 acres in Matrix (371 acres GFMA, 63 acres C/D Block)
- 171 acres additional acres in riparian reserves adjacent to matrix.

Sub-Alternative B logs 1,815 acres. It includes thinning an unknown number of acres in Riparian Reserves, an unknown number of acres in Matrix, and 1,170 acres in LSRs and adjacent Riparian Reserves. It also includes Variable Retention Harvest (aka clearcut) of 240 acres in three 65-year-old units.

BLM Response: 1-1: *Alternative Two Sub-Alternative B includes approximately: 214 acres of variable density thinning (VDT) in Riparian Reserves, 232 acres of uniform thinning in the General Forest Management Area (GFMA) land use allocation, 140 acres of concentrated upland variable retention harvest and approximately 36 acres of retention aggregates in the GFMA (see Table 1 in the decision document); 63 acres of VDT in the Connectivity/Diversity Block land use allocation; and 1,170 acres of VDT in the Late-Successional Reserves land use allocation.*

1. Variable Retention Harvest (VRH) units were not adequately described.

Several times the EA says that the VRH units will create 140 acres of "concentrated harvest" and 100 acres of "retention aggregates", equaling 240 acres. The EA confirms (page 82) the "proposed 240 acre variable retention prescription". But Table 2-2 describes the GFMA portion of units 35 as being 176 acres, not 140 acres or 240 acres. What is the discrepancy?

BLM Response 1-2: *Table 2-2 column three shows 239.4 total unit acres in section 35. Acreage breaks down as follows: 139.2 acres (58%) within concentrated harvest in the uplands; 36.4 acres (15%) upland aggregate retention; 42.5 acres (18%) Riparian Reserve variable density thinning (VDT); 21.3 acres (9%) of Riparian Reserve no treatment areas. These figures do not account for 5-10% basal area retention in dispersed individual trees in the uplands. The 100 acres used in the Northern Spotted Owl analysis (EA, p. 82) includes upland aggregates, Riparian Reserve VDT, and Riparian Reserve no treatment areas. Table 1 in the decision document and Table 1-1 below are included to clarify specific treatments associated with variable retention harvest units.*

Table 2-2 also describes units in section 35 as having 64 acres of riparian reserves. This implies that about half of the Riparian Reserve acres are doubling as aggregate retention. Correct? Which half, and why only half? The Northwest Forest Plan does not allow double counting riparian reserves as retention areas for regeneration harvest in the matrix. Retention must be on matrix lands.

BLM Response 1-3: *We are applying a silvicultural treatment at a stand level. Riparian Reserves are a component of the stand and are, themselves, a silvicultural prescription. Acres of Riparian Reserves outside of the no treatment areas, established immediately adjacent to streams, would be subject to variable density thinning. Hence, no treatment areas are appropriately considered and function as aggregates within the larger stand.*

Approximately 43 acres of VDT would be applied to Riparian Reserves in section 35. There would be approximately 21 acres of no treatment areas within treated stands in section 35 (see Table 1 of the decision document). Retention in the variable retention harvest would average 20-30 percent of the stand (EA, p. 28). Table 1-1 shows the units in section 35 would exceed retention required by the Northwest Forest Plan. The percent of total stand acres untreated is 29 to 33 percent.

Table 1-1*: Retention in Camas Valley 2011 Harvest Plan section 35 units*

Stand Description	***Unit 29-9-35A***	***Unit 29-9-35B***	***Unit 29-9-35C***
Total Upland Acres (Treated and Untreated Acres)	*28.1*	*18.9*	*128.6*
Retained Trees per Acre greater than 14 inches DBH	*6*	*11*	*7*
Upland Variable Retention Harvest Acres (concentrated harvest area)	*20.9*	*17.5*	*100.8*
Upland Aggregate Retention Acres	*7.2*	*1.4*	*27.8*
Riparian Reserve Variable Density Thinning Acres	*1.7*	*12.4*	*28.4*
Riparian Reserve Untreated Acres	*0.2*	*7.2*	*13.9*
Total Treated Acres (Uplands and Riparian Reserves)	*22.6*	*29.9*	*129.2*
Total Untreated Acres (Uplands and Riparian Reserves)	*7.4*	*8.6*	*41.7*
Percent of Total Stand Acres Untreated	*33%*	*29%*	*32%*

The EA was unclear on why Sub-Alternative B unit 35B is considered for VRH regeneration harvest, but it can't be thinned because of "low relative stand density" (EA page 19).

BLM Response 1-4: *Thinning would be inappropriate for unit 35B because of the existing basal area and species composition. Based on field reconnaissance the stand would not be economically viable for commercial thinning due to commercial tree size, species composition, and density. The EA (p. 6) addresses scoping comments pertaining to the variable retention harvest units, including unit 35B.*

> *"In the Upper Middle Fork Coquille watershed analysis unit, grand fir in late-seral forest stands typically accounts for less than ten percent of total stem count, based on historical timber cruise data. The stands proposed for variable retention harvest average upwards of 50 percent grand fir and range as high as 80 percent in some areas. This abnormally high percentage of grand fir makes the stands less fire resilient, and more susceptible to insects and disease."*

Also, page 51 of the EA states:

"Areas dominated by grand fir are less resistant to disturbance than stands dominated by Douglas-fir. Targeting grand fir for removal in dispersed retention areas would move stand composition from approximately 60 percent grand fir to 15 and 25 percent, closer to levels found in natural stands within the area, making the stands more resistant to stand replacing disturbances."

Finally, Thinning would not reduce the representation of grand fir in the stand as a high percentage of grand fir would need to be marked for retention to maintain full-site occupancy.

Also unclear is the meaning of "High" vs "Low" Retention VRH. The map of section 35 shows most of unit 35B having a prescription of "High Retention VRH", as opposed to "Low Retention VRH" in other areas of section 35. Nowhere in the EA does it explain the difference between High and Low Retention VRH. Does this mean that the 100 acres of aggregate retention includes "High Retention VRH" and will be logged within?

BLM Response 1-5: *High retention is 10% basal area and low retention is 5% basal area.*

After thinning within the aggregate retention of 35B, how long will the remaining aggregate retention be retained for? In other words, when the aggregate retention be scheduled for more logging, either thinning or another regeneration harvest?

BLM Response 1-6: *The only thinning in Unit 29-9-35B would be in portions of Riparian Reserves proposed for variable density thinning. There is no thinning planned in upland aggregates. In the case of the thinned portions of Riparian Reserves, there would be no plan to return and conduct regeneration harvest as this is an action that is not sanctioned by management direction. As to the upland aggregates, there are no reasonably foreseeable plans to enter them.*

The BLM states in the EA that sub-alternative B is "not regeneration harvest" (EA 7). However, the BLM states the purpose of the VRH is so that "regeneration harvests may be scheduled in stands as young as 60 years old, in order to develop a desired age class distribution" (EA pg 2 and 54). How can the BLM claim VRH is not regeneration harvest, and then have the purpose be a regeneration harvest? The BLM is also using down wood requirements for regeneration harvests (EA page 8) and carbon calculations for regeneration harvest (appendix F page 4). To claim VRH is not a regeneration harvest is a difficult sematic exercise to twist the EA into.

BLM Response 1-7: *Variable retention harvest is modified reserve tree harvest when compared to NWFP regeneration harvest because retention is over 6-8 trees per acre. Variable retention harvest, as proposed in Camas Valley 2011 Harvest Plan, would retain 6-11 dispersed trees per acre in addition to aggregate retention (see Table 1-1).*

The BLM does not state that the purpose is regeneration harvest rather the EA notes the option of applying an alternative or modified prescription that will allow for conifer regeneration. The citations provided in the comment are management direction for snag, large wood and green tree retention that would be applicable in those portions of the units that are designated for harvest with dispersed retention.

The discussion cited on page 54 of the EA does not pertain to regeneration harvest. It describes growth rates of regenerated trees, whether natural or artificial (planted) and time to canopy closure.

The carbon calculations are based on variable retention harvest, and include the role of aggregates in sequestering carbon, as well as the role of the harvested areas to be managed at a conifer density of approximately 250 trees per acre (EA, p. 31).

In fact, after looking at the Variable Regeneration Harvest already cut in the Buck Rising timber sale, VRH looks very much like a clearcut. Not using the term regeneration harvest, or even "clearcut", has the appearance of trying to fool the public into thinking something about VRH is ecologically restorative.

BLM Response 1-8: *Buck Rising monitoring results are presented below.*

Buck Rising VRH (includes 10% contribution from Riparian Reserves)

Unit 1 – 25% of the pre-harvest stand was retained in aggregate and dispersed retention trees
Unit 2 – 28% of the pre-harvest stand was retained in aggregate and dispersed retention trees
Unit 3 – 34% of the pre-harvest stand was retained in aggregate and dispersed retention trees

Buck Rising NWFP Regeneration Harvest (only the largest conifers in uplands were counted)

Unit 1 – 20 trees per acre were retained
Unit 2 – 25 trees per acre were retained
Unit 3 – 18 trees per acre were retained

We encourage the BLM to choose Sub-Alternative A. Not only was the physical description of Sub-Alternative B lacking, as described above, the EA also failed to adequately describe a good reason for a regeneration harvest.

BLM Response 1-9: *The EA does not fail to give rational for variable retention harvest. The EA (p. 2) explains the ROD/RMP (p.61) specifies application of silvicultural systems that are planned to produce, over time, forests which have desired species composition, structural characteristics, and distribution of seral or age classes, as set forth in Appendix E of the ROD/RMP (pp. 150-153). Variable retention harvest is also consistent with O&C Lands Act. The O&C Lands Act requires the Secretary of the Interior to manage suitable O&C timber lands for permanent forest production in accordance with the principles of sustained yield (ROD/RMP, p. 15) (EA, p. 2).*

Variable retention harvest would help develop a desired age class distribution (EA, pp. 6) and also helps restore the stands to a more historic species composition (EA, pp. 6, 12, 20, 36, 40, 51). The last regeneration harvest on BLM-administered lands in the Upper Middle Fork Coquille watershed analysis unit was the 43-acre Battle Axe timber sale, completed in 1993. Consequently, there are no stands on BLM-administered lands that are in the 10-and-20-year age classes (EA, p. 6). Although the commenter claims a physical description of Sub-Alternative B is lacking, the marking prescription (EA, p. 28-29) specifically describes variable retention harvest. Further description of variable retention harvest is included in Table 1 in the decision document. See also BLM Response 1:3 and the map provided in the decision document.

The EA says that the units in section 35 are *needed* because "it would help develop a desired age class distribution and also help restore the stands to a more historic species composition." (EA 6). However, as also described on page 6, the watersheds are far under their historic condition for mature and old growth, and far above their historic condition for early-seral forests. It was historically 85% mature and old growth, and is now just 24% or less. A regeneration harvest is not needed to help restore the missing mature forests. What age class distribution is the BLM aiming for?

BLM Response 1-10: *On page 6 of the EA it does not say that the harvest of 70-year-old stands is needed, it states that it is allowable under management direction because it will help establish a more desirable age-class distribution on BLM-administered lands in the watershed. In this particular instance we are looking to re-establish a limited representation of the 0-10 year age class that is currently non-existent on BLM-administered lands in the Upper Middle Fork Coquille watershed analysis unit.*

Page 2 and 4 in the EA describes **the Purpose and Need for Variable Retention Harvests** in section 35, and how the BLM's Resource Management Plan (RMP) only allows regeneration harvest in stands under 80 years old. The EA claims a special RMP provision allows regeneration harvest in stands as young as 60 years old only "to develop a desired age-class distribution across the landscape." Therefor [sic], the EA claims, the purpose of VRH in this project would "contribute to the objective of establishing a desired age-class distribution on the landscape…"

BLM Response 1-11: *Neither page 2 or 4 of the EA described variable retention harvest as a Purpose and Need for action. Two purposes for action are stated on page 2; manage suitable O&C timber lands for permanent forest production in accordance with the principles of sustained yield (ROD/RMP, p. 15) and apply silvicultural systems to produce, over time, forests which have desired species composition, structural characteristics, and distribution of seral or age classes as set forth in appendix E of the ROD/RMP (pp. 150-153). Page 4 identifies variable retention harvest as an option by which this may be achieved.*

But the EA never quantified this purpose and need. How many acres of "early seral" is needed to develop a desired age-class distribution? Is it 240 acres that is needed, or is it an indefinite number that will allow an indefinite number of acres of young forests to be regenerated in the near future? If the purpose of VRH is to attain a desired age-class distribution, The BLM should have backed up that claim with specific goals.

BLM Response 1-12: *See BLM Response 1-10. There is limited or non-existent representation of the 0-10 and 10-20 year age classes on BLM-administered lands in the Upper Middle Fork Coquille watershed analysis unit. The 140 acres of concentrated harvest with dispersed retention would represent a contribution of about two percent early-successional habitat on BLM-administered lands (EA, p. 54).*

The EA only says, page 54, that "The BLM has not conducted any regeneration harvest within the watershed analysis unit in nearly two decades. Consequently, there has been a decline in the abundance of early-seral forest…". This appears the BLM has a goal of achieving the same acres of early-seral forest as before the advent of the Northwest Forest Plan, in the heyday of clearcutting BLM land. Is that the goal this VRH is working toward?

BLM Response 1-13: *There are appreciably no acres in the 10-year and 20-year age classes represented on BLM-administered lands, these being the age-classes that provide abundant flowering and fruiting plants that provide forage for pollinators, a wide range of bird species, and an array of small and large mammals. We have an obligation to manage for healthy populations of all native botanical and wildlife species, not just species listed under ESA, and there are many species dependent on early-successional conditions that are in decline.*

If there is not a clear goal of age-class distribution, the RMP does not allow regeneration harvests of forests less than 80 years old, and Sub-Alternative B cannot be chosen.

Specifically, the EA claims, page 2, that

> "In the General Forest Management Area, the ROD/RMP (p. 61) also provides that regeneration harvests may be scheduled in stands as young as 60 years old, in order to develop a desired age class distribution across the landscape."

The EA is incorrect. The loophole to log as young as 60-years-old to develop a desired age-class distribution only applies to C/D Blocks[1]. The Camas Valley Harvest VRH is in GFMA. For the GFMA, the RMP says:

> "Schedule regeneration harvests to assure that, over time, harvest will occur in stands at or above the age of volume growth culmination (i.e., culmination of mean annual increment). This refers to the age range which produces maximum average annual growth over the lifetime of a timber stand. In the planning area, culmination occurs between 80 and 110 years of age."[2]

There are no exceptions in the GFMA. The stand must meet CMAI, and the VRH proposal in section 35 does not meet that test.

BLM Response 1-14: *The commenter has incorrectly described the text of the ROD/RMP. The ROD/RMP (p. 61) clearly states the direction for all Matrix lands, both GFMA and C/D Blocks, under the* ***Matrix (General Forest Management Areas and Connectivity/Diversity Blocks)*** *heading: "Regeneration harvest may be scheduled in stands as young as 60 years, in order to develop a desired age class distribution across the landscape." The RMP also states that regeneration harvest will normally be scheduled at CMAI, but makes the exception noted for development of a desired age class distribution. It is also noteworthy, that the RMP states that regeneration harvest would not be scheduled in stands under 120 years of age in Connectivity/Diversity Blocks. None of the Here's Your Sign units are in Connectivity/Diversity Blocks.*

3. Reforestation

The EA assumes that canopy closure would not occur in the VRH units for 30 years. (EA page 54, as well as the goal for many wildlife species). The EA failed to explain why it will take so long.

BLM Response 1-15: *The EA does not assume that canopy closure would not occur for 30 years. The EA (p. 31) describes how the stands would be actively managed for a tree density of approximately 250 trees per acre which would delay the onset of full conifer canopy closure until the stands are approximately 30 years old, consistent with the objective of providing an extended period of early-successional conditions.*

The BLM is going to replant 250 trees per acre and expects prolific natural regeneration (EA page 31), in hopes of meeting the purpose and need to develop a desired age class distribution (not to provide for long-term early-seral habitat for wildlife). In 20 years the BLM expects there to be 324 trees per acre resulting from the planted and natural reforestation (EA page 53).

BLM Response 1-16: *The EA (p. 31) says nothing to the effects that "prolific" natural regeneration is expected. The EA describes an expectation that "natural regeneration would supplement stocking over time." The tabular data presented on page 53 of the EA reflects modeled growth of the stands. It is, first of all, an estimate, and secondly does not reflect density controls that would be applied to maintain stocking at approximately 250 trees per acre.*

[1] See page 61 of the Roseburg BLM RMP.
[2] Roseburg BLM 1995 RMP. Page 61.

But the EA also says "Stand density would be monitored and density control treatments applied as needed to promote an extended period of early-seral conditions, with stand density targets at age ten to 20 years of approximately 250 trees per acre." (EA page 31). Why does the EA say there will be 324 TPA in 20 years on page 53, but only 250 TPA on page 31? It is unclear why an extended period of early-seral condition was mentioned if the purpose and need is age class distribution. 324 TPA appear to actually meet the Purpose and Need for the VRH as described in the EA, not 250. Also, how can the BLM plant 250 trees per acre and expect more natural regeneration, and then only have 250 trees per acre at 20 years. Nothing in this section makes sense.

If the hidden agenda is to provide for early seral wildlife (not included in the purpose and need for this project), regeneration harvest is not allowed in stands under 80 years old even in CD blocks.

In fact, these are opposite needs: to provide for early-seral wildlife for 30 years, and to redistribute age classes. It has to be one or the other.

BLM Response 1-17: *There is no hidden agenda. The EA clearly describes the anticipated outcomes of variable retention harvest, and consistency with management direction and landscape objectives. As noted above, the commenter's interpretation of management direction on early regeneration harvest is in error.*

4. Other VRH issues:

Hardwoods: Bigleaf maples are clumped through unit 35C (EA 40), and Oregon white oak is in unit 35B. The EA was unclear on if these hardwoods would be clearcut along with the rest of the units. The EA listed the wildlife species that benefits from hardwoods like maples and oaks. But will they be retained? We know from the Buck Rising VRH that most hardwoods were cut down. No matter how big, old or beneficial to wildlife, madrone trees were removed from the clearcut portions of the VRH. Beneficial hardwoods were not even retained as dispersed retention in Buck Rising.

The Camas Valley EA should have been clearer on the fate of these hardwoods. If they will be cut down, the wildlife section should have shown a harm to those species who use hardwoods and other early-seral habitat components.

BLM Response 1-18*: All hardwoods that are located in "no-treatment" portions of Riparian Reserves are reserved. As described in the EA (p. 21), density management in Riparian Reserves greater than ten inches diameter breast height would be prioritized for retention where present and considered likely to survive thinning operations. As further described in the EA (p. 28), patches dominated by hardwoods would be candidate areas for the establishment of retention aggregates. The Here's Your Sign timber sale contract states no hardwoods will be cut unless they create a safety hazard.*

With respect to the fact that some hardwoods may be cut, the upland stands are in the General Forest Management Area which is designated for conifer timber production. There are no requirements for the retention of any hardwoods in these areas, yet we are choosing to do so to promote greater species and structural diversity.

Cumulative Impacts: The EA failed to consider cumulative impacts for a regeneration harvest. For instance, there is a recently thinned forest just across the road from unit 35. The EA failed to consider the impacts of a regeneration harvest on the recently thinned trees.

BLM Response 1-19: *As noted in the EA (p. 35), the analysis describes potential effects, how they might occur, and the incremental result of those effects, focusing on direct and indirect effects with a realistic potential for cumulative effects, rather than those of a negligible or discountable nature.*

The cumulative effects of the BLM timber management program on the Roseburg District have been described and analyzed in the PRMP/EIS (pp. 4-7 to 99), incorporated herein by reference.

The EA (p. 54) also described the cumulative effects of the proposed variable retention harvest on age-class distribution, noting that variable retention harvest would convert approximately 140 acres of mid-seral forest to an establishment state, reducing the amount of mid-seral forest on BLM administered lands in the Upper Middle Fork Coquille WAU by approximately two percent.

The thinned units referred to, were treated nearly five years ago. Trees are most susceptible to blow down in the first three years following harvest. At this point in time, given their position below the crest of Signal Tree ridge and prevailing wind patterns in the area the likelihood of these trees blowing down is judged to be low.

The EA is proposing to thin in riparian reserves adjacent to the regeneration harvest. The EA failed to consider the impact to the riparian reserve retained trees. Just thinning could jeopardize their wind-firmness. Add on an adjacent regeneration harvest, and blow down could be increased.

BLM Response 1-20: *As is the case described above, the position of the Riparian Reserves on the slope and the prevailing wind patterns in the area indicate a low likelihood that the thinned portions of Riparian reserves would be at risk of substantial blowdown.*

The EA also failed to consider how a regeneration harvest, and new roads, would contribute to peak flow increases.

BLM Response 1-21: *The EA (p. 92) explains the average road density is 5.65 miles per square mile, representing about 4.28 percent of the analysis area. Increases in peak flow can occur when roads and other impermeable areas occupy more than 12 present of a catchment scale watershed (Harr, et al. 1975). Road decommissioning under Alternative Two Sub-Alternative B would result in a reduction in read density compared to the No Action Alternative. After implementing Alternative Two Sub-Alternative B, total roaded area would be 4.24 percent of the analysis area, well below the 12 percent threshold for risk of peak flow enhancement reported by Harr et al. (1975) (EA, p. 104). Variable density thinning would create small canopy gaps in Riparian Reserves that would have little effect on forest hydrology (EA, p. 104). Variable retention harvest would be the only locations where canopy gaps would be created of a size that could potentially impact peak flows (EA, p. 104). With the addition of approximately 140 acres of concentrated harvest in the variable retention harvest areas, the Equivalent Clearcut Area (ECA) would increase to 10.8 percent. There would be no mechanism for peak flow enhancement due to a lack of response until ECA exceeds 29 percent of the subwatershed (Grant et al. 2008) (EA, p. 104).*

5. Northern Spotted Owls

The VRH units in section 35 are in Critical Habitat for the spotted owl. The BLM is not allowed to degrade critical habitat with a regeneration harvest, for the purpose of distributing age classes. The EA admits, that in critical habitat, VRH logging will downgrade 240 acres of habitat function from dispersal to unsuitable. (EA 82-83). Redistributing age classes to pre-Northwest Forest Plan early-seral acres is not

a good reason for degrading critical habitat. Also, Drs. Johnson and Franklin do not support VRH in Critical Habitat.

BLM Response 1-22: *The comment misrepresents the text of the discussion in the EA (p. 82), which describes the downgrade of 140 acres of dispersal habitat in areas of concentrated harvest where canopy closure would be reduced to between 10 and 15 percent. Existing levels of canopy closure would be maintained in retention aggregates.*

This project fails to comply with the 2011 recovery plan, which requires protection of existing owl sites. "Recovery Action 10 – Conserve spotted owl sites… to provide additional demographic support to the spotted owl population." The site conservation priorities include known and historic sites, of which this project logs within. BLM should prioritize vegetation management to enhance, not degrade habitat.

BLM Response 1-23: *Here's Your Sign timber sale does not occur in a nest patch or core area of any known northern spotted owl sites (EA, p. 82). The EA (p. 83) states, "The project and its effects would be consistent with recommendations of the 2011 Northern Spotted Owl Recovery Plan because it would implement disturbance-based management within the range of the northern spotted owl with the goal of maintaining or restoring forest ecosystem structure, composition, and processes so they are sustainable under current and future climate conditions (USDI/FWS 2011, p. III-13)." The Biological Opinion (USFWS 2013, Tails # 01EOFW00-2013-F-0200, p. 1) for the project found the proposed action would not jeopardize the continued existence of the northern spotted owl and will not adversely modify critical habitat for the spotted owl. As indicated on page 119 of the Biological Opinion (Tails # 01EOFW00-2013-F-0200), there is no incidental taking of spotted owls associated with Here's Your Sign Timber Sale. Here's Your Sign Timber Sale will remove habitat features important to spotted owl dispersal, including horizontal and vertical structure, canopy cover, and hardwood trees. Stand-level canopy cover will fall below 40 percent, a value widely used as a dispersal function threshold (Thomas et al. 1990). Stands where variable retention harvest is conducted will remove dispersal habitat, and therefore downgrade it to capable habitat because it will no longer contain habitat elements required for spotted owls (USDI BLM, 2013, p. 107)*

The BLM should eliminate any proposed thinning in spotted owl nest patches, or wait to thin these areas until the NSO population has stabilized. Thinning within the nest patch is "considered likely to affect the reproductive success of nesting northern spotted owls" (EA 48). 24 of the 25 nest patches being thinned have less than 70 acres of suitable habitat. About 24 acres of thinning would be done in nest patches of two northern owl sites known to be occupied 2010 through 2012, and in the core area of five sites, all below the minimum viability thresholds. "Northern spotted owls at these sites would be most vulnerable to effects from thinning" (EA page 76).

BLM Response 1-24: *There is an error on page 76 of EA. The first sentence should be replaced with the following: Approximately 24 acres of thinning would be conducted in the nest patches of two northern spotted owl sites (2747O and 0540A), known to be unoccupied since 1991 and 2008, respectively (see Table 3-10), and in the core areas of five sites (0378B, 0540B, 4508O, 2047B, 2747O) which are below one or more of the minimum viability thresholds (Tables 3-9 and C-3).*

Page 48 of the EA includes Figures 3-11 and 3-12 within the Timber Resources section. BLM would modify dispersal habitat in two nest patches (0540A and 2747O). Table 3-10 (EA, p. 58) shows site 0540A has been unoccupied since 2008 and site 2747O has been unoccupied since 1991. Because owls

are absent from these sites, there would be no effect to the reproductive success of nesting northern spotted owls.

Improving an LSR for spotted owls that are already successfully using the area, and who will be harmed by the thinning, does not make sense. Spotted owls are struggling to survive as a species now. Temporarily harming them could be irreversible.

BLM Response 1-25: *The Camas Valley EA proposes thinning in 24.4 acres of dispersal habitat in two known northern spotted owl nest patches (EA, Appendix C, Table C-3). The two nest patches (Sites 0540A and 2747O) are unoccupied (EA, Table 3-10, p. 58). The owl(s) at Site 0540A relocated to another site over seven years ago. The last record at Site 2747O was a single owl in 1991. The Camas Valley 2011 Harvest Plan EA (Table C-3) proposes thinning in dispersal habitat in the core area of four owl sites (0378B, 0540B, 2747O, 4508O). All of these sites are below the nesting, roosting, and foraging (NRF) habitat threshold at the owl home range scale (EA, Table 3-9, p. 57). Site 0378B is within the NRF core area threshold, while the other three sites are below the threshold. The occupancy history is summarized in Table 3-10 of the EA (p. 58). Site 2747O has been unoccupied since 1991 and site 4508O has been unoccupied since 2011 while sites 0378B and 0540B are occupied sites. After initial avoidance of the area, owls would return to use the sites and thinned dispersal habitat would continue to function as dispersal habitat because canopy cover would remain over 40%. Thinning would help develop more NRF in these deficient home ranges (EA, pp. 74, 75) whereas NRF conditions would not develop as quickly under the No Action Alternative. Figures 3-13 and 3-14 of the EA (p. 49) show anticipated habitat conditions in stands were variable density thinning is applied. Contrasting thinned stand conditions with untreated stand conditions, as depicted in Figures 3-1 through 3-4 (EA, pp. 39, 41 and 42), one can see the benefits of variable density thinning. Most notably, variable density thinning would promote tree regeneration, shrub growth and development of multistoried stands; allow regeneration of conifers and hardwood species; allow growth of larger trees with full crowns and large limbs; aid in differentiation of tree sizes and crown characteristics associated with mature and late-successional forest; and generate larger snags and larger down wood (EA, pp. 46, 47 and 49). As noted on page 119 of a Biological Opinion (Tails #: 01EOFW00-2013-F-0200), the U.S. Fish and Wildlife Service indicates that no incidental taking of known northern spotted owls is anticipated due to implementation of Camas Valley 2011 Harvest Plan Alternative Two Sub-alternative B which is consistent with the 2011 Northern Spotted Owl Recovery Plan (EA, p. 83).*

Thinning should not occur in any stand when NSO suitable habitat in the home range is below 40% on federal lands. All of home ranges within the project area are below 40%. Units with residual older trees near owls should not be thinned. The EA failed disclose not only where owl activity centers are, but also the actual foraging locations. If foraging locations are within units, those units should have been dropped from thinning at this time – and not reconsidered for thinning until the spotted owls have recovered in the short-term.

BLM Response 1-26: *The known owl sites relative to the harvest units are listed in Appendix C, Table C-3 of the EA. Habitat conditions of those sites is summarized in Table 3-9 of the EA (p. 57) and occupancy of the owl sites is summarized in Table 3-10 of the EA (p. 58). A map of owl activity centers is in the project record and available for review. Foraging occurs in NRF and dispersal habitats. Data on the actual foraging locations is not collected because it is prohibitively expensive and time consuming.*

Just because a site appears to be unoccupied, it doesn't mean the spotted owl is not present. It could be remaining quiet due to barred owls. Spotted owls are using these younger forests more since barred owls have pushed them out of the best habitat.

6. Marbled Murrelet

Incredibly, the BLM claims in the EA that regeneration harvest is good for marbled murrelets. The BLM should correct this misstatement. Page 83 says "Variable retention harvest would create additional habitat for the marbled murrelet in the long term (100-150 years) as it would release trees on the periphery of retention aggregates and dispersed retention trees…" In fact, it would be better for murrelets if the present stand would be allowed to mature, not set back by 70 years.

And a VRH doesn't release trees 150 years in the future – the BLM has every intention of clearcutting this stand again in 80 years, including the aggregates and dispersed retention. There is nothing that preserves these retained areas permanently. The BLM will always claim the O&C act requires intensive forestry management. The BLM must remove these misleading, Orwellian claims.

BLM Response 1-27*: *The EA refers to specific (individual) trees and does not say that the open area is "good" for marbled murrelets. At this time the area is not suitable murrelet habitat (EA, Appendix C; Table C-4).

As described in the EA (p. 60), the marbled murrelet nests in trees in older coastal forests with canopies dominated by large overstory trees. Mossy branches of large diameter, dwarf mistletoe brooms, natural depressions on large limbs, and old stick nests can serve as platforms for egg laying. Availability of platform trees is critical for nesting. The quality and abundance of trees with platforms and the number of platforms per tree are more apparent in stands over 150-years-old, but they may be present in younger stands. Some proposed thinning units have scattered trees with suitable platforms, but are not considered to provide suitable nesting habitat because the numbers and distribution of the trees are below thresholds outlined in the Residual Habitat Guidelines.

As further discussed (EA, p. 71), under no action, canopy cover and stand relative density would remain high which would retard crown differentiation and expansion which would, in turn, delay the development of large, full tree canopies with large limbs and other crown structure that provide nesting platforms for the marbled murrelet. Conversely, treatments would release trees allowing for crown expansion and differentiation that would result in greater limb growth and platform development (EA, pp. 77 and 83).

Given current stand density and species composition, development of suitable nesting habitat is unlikely to occur absent some manner of disturbance. Trees will grow in height, but with little canopy expansion. As this occurs, natural pruning of limbs will occur and crowns will become narrow. The stands will continue to be dominated by grand fir, a species not favored for nesting by the marbled murrelet partly because of its narrow, conical crown and small limbs.

The BLM should eliminate the VRH units because of impacts to marbled murrelet. Unit 35C is only .1 miles from an occupied site (EA 60). Doing a regeneration harvest so close to an occupied site will significantly increase the risk of predation due to the reduction of interior forest. The south boundary of 35C is also adjacent to suitable murrelet habitat. The BLM is reducing the chances of it becoming occupied by creating a new edge accessible to predators.

***BLM Response 1-28:** *As discussed in the decision, the Here's Your Sign variable retention harvest project will not directly affect the marbled murrelet because the murrelet site is across and adjacent to an existing opening created by the Middle Fork of the Coquille River and Highway 42. Unit 35C is not adjacent to the occupied site. The EA (p.83) discloses that the proposed action could subject the marbled murrelet to an*

increased risk of predation where reduction or removal of forest canopy decreases cover for nest trees and increases the presence of crows, jays, and ravens. However, variable retention harvest would not occur in suitable or occupied habitat for the marbled murrelet.

The EA says, "Residual trees within units possessing potential nest structure for the marbled murrelet would be marked for retention and *may* be buffered to reduce the potential for tree injury and provide cover for nest structure…" (EA 20). Why is it speculative that retained trees will be buffered? What is maybe about it? Why would a retained tree with nest structure not be buffered, and how many will not be buffered?

7. New Roads:

This project will build 2.68 miles of new roads. The BLM failed to consider which new roads could be eliminated by doing a non-commercial treatment instead of putting logs on a log truck, especially in the riparian or late successional reserves.

BLM Response 1-29: *As described on page 1 of the EA, some stands were eliminated as candidates for thinning because they lacked suitable access and did not have sufficient volume to off-set road construction costs. Doing non-commercial treatments would not meet the purpose and need of the proposal (EA, p. 2-4).*

Even so-called temporary roads are damaging. For instance, right-of-ways will cut down trees not included in the EA's described prescriptions, and could cut down some of the largest trees in a unit. The EA does admit that "road construction… would have the potential to remove suitable nesting habitat" (EA page 78). The BLM should disclose how many suitable nesting habitat trees road will be removed. By decision-time, the BLM will have this information.

BLM Response 1-30: *Given stand origin and age, trees in the units are more or less uniform in size, and as noted in the description of the alternatives (p. 19), stand exam data reported the presence of older remnant trees, primarily Douglas-fir, in some of the proposed units, at densities of generally less than one per acre. These trees are not the focus of thinning and would be retained to the greatest degree practicable with cutting limited to clearing road rights-of-way and landings, and providing for operational safety. All but 26 feet of temporary road construction in Here's Your Sign Timber Sale is within harvest units. None of the temporary road construction in Here's Your Sign Timber Sale enters NRF habitat.*

8. Riparian Reserves

The BLM should leave more trees in the Riparian Reserves so that more snags can be created in the future. The BLM is taking out too many trees. Blow-down could be an issue, especially next to the regeneration harvest units.

The BLM is required to:

"Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics *needed* to attain Aquatic Conservation Strategy objectives."[3]

The EA failed to document under the no-action alternative which of the riparian reserves would attain desired vegetation characteristics on their own or with just a non-commercial treatment. Commercial treatments are not be needed everywhere in the project area, as some of the reserves could meet ACS objectives on their own. Just because it would take a little longer does not mean thinning is needed to get there. Perhaps a lighter thinning, and more snag creation, would be adequate.

BLM Response 1-31: *There is no need to disprove the negative. As described on page 1 the EA, units were dropped from consideration where stand development is on the desired trajectory for the given land use allocation and would not benefit from treatment. The same holds true for portions of units, which would include Riparian Reserves, not carried forward for treatment.*

Removing as many trees as the BLM is removing is also not needed to attain ACS objects, leaving as few as 60 trees per acre in the reserves. Leaving double that would allow double the snag habitat to form in the future, doubling the wildlife value of the reserves.

BLM Response 1-32: *Table 3-6 (EA, p. 50) indicates Riparian Reserve reference Unit 29-8-9A would have 80 trees per acre (TPA) post treatment, 75 TPA 20 years later, and 69 TPA after50 years. Snag habitat was addressed throughout the EA (pp. 3, 4, 19, 21, 22, 28, 29, 46, 49, 69, 70, 72, 73, 76, 79, 84, 85, 104, 115, 116, and Appendix F).*

9. Forest Carbon and global warming.

Sub-Alternative B will release 87 tonnes more carbon into the atmosphere than doing nothing. It will also release more tonnes of carbon than sub-alternative A, but we don't know how much more, because sub-alternative A was not included in Table 3-16. Why not? In any case, the BLM should not cumulatively increase global warming, even in small increments, by returning to regeneration harvests.

BLM Response 1-33: *There is nothing in the EA that describes the release of 87 tonnes of carbon under Sub-Alternative B compared to no action. The EA (p. 117) clearly states that thinning under Sub-Alternative A would result in the direct release of between 5,325 and 7,100 tonnes of carbon, on the order of three to four tonnes per acre. Under Sub-Alternative B, thinning of 1,575 acres would result in direct release of between 5,037 and 6,453 tonnes (EA, p. 118), a figure still approximating three to four tonnes per acre. When the 52 tonnes per acre of carbon directly released by the variable retention harvest are added to this, direct carbon release under Sub-Alternative B is 55 to 56 tonnes per acre.*

The EA carbon analysis for Sub-Alternative A is also suspect. It claims (page 117) that carbon stores in the units would return to pre-harvest levels in just one or two years, after over 70% of the carbon is removed from the forest via log trucks. The EA failed to document how this questionable calculation was reached. For sub-alternative B, with a large regeneration harvest, the carbon emitted will be reabsorbed within 12 years, also a suspect calculation with fuzzy, non peer-reviewed documentation.

[3] Northwest Forest Plan C-32

BLM Response 1-34: *The methodology used in the carbon calculations for the Camas Valley 2011 Harvest Plan EA is the same that has been used by the BLM for the past four or five years. The assumptions and analytical methodology are all documented in Appendix F of the EA.*

The BLM cannot do the usual measurement of carbon sequestration in seedling growth (as figured in Appendix C of the WOPR and elsewhere) because reduced reforestation will occur than what Appendix C considered.

BLM Response 1-35: *The methodology for calculating carbon sequestration does not change, only the variables fed into the modeling. In the case of the variable retention harvest, for those areas of concentrated harvest, carbon sequestration was modeled based on the assumption of 250 trees per acre.*

The EA failed to consider that the BLM manages an especially valuable carbon resource. The Oregon's Coast Range has been found to have the ability to store more carbon per acre than virtually any other place in the world, including tropical rain forests. Because private forestlands cannot be forced to help protect the earth's climate, public forests in the coast range are even more important for sequestering carbon.

BLM Response 1-36: *The EA did not fail to consider the value of forests in carbon sequestration. As noted in the EA (p. 116), land use, land use change and forestry nationally resulted in a net sequestration of 940 million tons of CO_2 in 2008 (EPA, 2010; Table 2-3). Forest management in the U.S., alone, resulted in net CO_2 sequestration of 792 million tonnes (EPA, 2010; Table 2-9), an offset of approximately 11 percent of total U.S. CO_2 emissions*

This concludes our EA comments on the Camas Valley 2011 Harvest Plan. Also consider our scoping comments. We agree with the comments submitted by Oregon Wild.

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---------- Forwarded message ----------
From: **Doug Heiken** <dh@oregonwild.org>
Date: Tue, Jul 16, 2013 at 4:42 PM
Subject: Camas Valley 2011 Harvest Plan EA - comments
To: or100mb@blm.gov
Cc: Francis Eatherington <francis@cascwild.org>

FROM: Doug Heiken, Oregon Wild | PO Box 11648, Eugene, OR 97440 | 541-344-0675 | dh@oregonwild.org
TO: or100mb@blm.gov
ATTN: South River Field Manager AND Camas Valley 2011 Harvest Plan Project Leader
DATE: 16 July 2013
RE: Camas Valley 2011 Harvest Plan EA - comments

Please accept the following comments from Oregon Wild regarding the proposed Camas Valley 2011 Harvest Plan. The proposed action includes:

- 1007 acres of thinning in LSR (includes some undisclosed amount of logging in riparian reserves)
- 643.9 acres of thinning in Matrix (includes 142 acres in Connectivity/Diversity Blocks)
- 191.3 acres of thinning in riparian reserves (adjacent to matrix)
- 2.68 miles of new road construction
- 4.47 miles of road improvements
- 14 miles of road maintenance
- Sub-Alternative B proposes variable retention (regen) harvest On 140-240 acres in three units (approx. 70 years old)

Table 2-2 in the EA leaves the impression that BLM is considering regen in 60 acres of riparian reserves. We hope this is a typo. If this is true, we are very concerned that this would violate the Aquatic Conservation Strategy of the Northwest Forest Plan. Also, note that the NWFP does not allow double counting riparian reserves as retention areas for regen in the matrix. All required retention must be applied on matrix lands.

BLM Response 2-1: *The BLM is not proposing regeneration harvest in Riparian Reserves. The variable density marking prescription for Riparian Reserves under the action alternatives is described on pages 20-21 of the EA.*

The EA carbon analysis is flawed. It is highly improbable that the carbon emitted will be reabsorbed within 12 years after harvest. NEPA requires that BLM avoid "before-and-after" carbon accounting. It is highly misleading when the NEPA analyses implies that logging is *carbon neutral* after 12 years because the forest captures and stores the same pre-harvest amount of carbon after a period of regrowth. The proper analysis requires comparison of the amount of carbon *with*the [sic] project and *without* the project, not *before* and *after* logging. This is not only required to accurately determine the effect of vegetation removal on forest carbon storage but it is also consistent with NEPA requirements to compare *action* and *no action* alternatives.

BLM Response 2-2: *See BLM Response 1-34.*

> The only way to properly evaluate the net carbon impacts of energy from forest biomass [or any vegetation management] is to estimate … net change in atmospheric CO_2 levels over time *with* and *without* the harvest of wood biomass for energy. …[I]t is necessary to construct a baseline, or control, scenario (that is no biomass harvest). … Once a baseline is established, one can assess how switching to wood biomass would change atmospheric carbon levels. … [T]he information provided by only comparing forest carbon stocks before and after biomass harvest could be a very misleading indicator of the impact of biomass energy on the atmosphere.

Carellichio, P., Walker, T. 2010. Commentary: The Manomet Study Got the Biomass Carbon Accounting Right. The Forestry Source. 4 Nov 2010.http://www.nxtbook.com/nxtbooks/saf/forestrysource_201011/index.php#/4. Also, carbon does not "sublimate." It either combusts or it is decomposed and respired by a living organism.

BLM Response 2-3: *The Carellichio and Walker (2010) commentary focuses on carbon analysis needed to show the difference between using fossil fuels and forest biomass energy in Massachusetts. The proposed project is not analyzing a substitution of biomass for fossil fuels, and consequently the paper cited would not be considered relevant to a forest management action.*

Variable retention harvest is clearcutting. This is not appropriate, especially in critical habiat [sic].

We object to regen harvest because it is based on several flawed premises. Contrary to the stories being told these days,

(1) Early seral forests are not rare. They are vastly over-abundant on private lands and still abundant on public lands, and still being created by fire and other natural proceses [sic];

BLM Response 2-4: *See BLM Response 1-10. Habitat components generally deficient on clearcut industrial forest lands include large defective trees, snags and coarse wood. As a consequence of intensive management, that includes herbicide application, young forest stands on private lands are largely deficient in flowering plants and shrubs that provide nectar, berries, and mast that support insect populations, birds, and a variety of large and small mammals (EA, p. 7). This topic is addressed in Johnson, K. N. and J. Franklin. 2009. Restoration of Federal Forests in the Pacific Northwest: Strategies and Management Implications. Institute of Applied Ecology. Corvallis, OR. See BLM Response 2-15.*

One of the primary objectives of the Purpose and Need is to manage suitable O&C timber lands for permanent forest production in accordance with the principles of sustained yield (ROD/RMP, p. 15) as required by the O&C Lands Act (EA, p. 2 and 3).

(2) We don't need to log to enhance early seral forest. There are a variety of ways to enhance early seral forest that do not require increased logging of maturing forests, such as: modify outdated practices on private lands; change the way we manage during and after fire; embed patches of heavy thinning when conducting variable density thinning in young stands; extend the early seral character of existing very young stands. Also, climate change will probably create than than [sic] we know what to do with;

BLM Response 2-5: *BLM has no jurisdiction to dictate forest management on private lands. Variable retention harvest is included in the proposed project, and part of the purpose and need of this proposal is to create and maintain early seral character for up to 30 years. All stands analyzed in the Camas Valley EA are under 80 years old (EA, p. 37 and 38) and are not in the mature seral stage. See BLM Response 2-81.*

Fire suppression policy is established at the national scale, not locally, and not a subject capable of addressing in the EA. How stands are managed post-fire is largely dictated by decisions made in the ROD/RMP, which again need not be revisited following each and every wildfire event.

As described in the EA (p. 47), gaps of the size proposed would allow for establishment of understory growth that would persist for up to 20 years, In regard to the suggestion that the early seral conditions could be extended by variable density thinning in very young stands there are two points to be noted. As noted in the EA (p. 54), there has been no regeneration harvest on lands in the portions of the watersheds managed by the Roseburg District BLM. The Roseburg District has also conducted an active program of young stand management over the past four decades. Consequently, there are no very young stands available for the manner of treatment suggested.

(3) The agencies are meeting the timber targets established by Congress. BLM should continue to focus on less controversial activities like thinning dense young planted stands to restore the forest, create jobs, and product woods products as a by-product;

BLM Response 2-6: *The target referred to in the comment is one of two annual targets for timber sale volume for the Roseburg District BLM. The referenced target is the budgetary workforce accountability target. This differs from the annual allowable sale quantity (ASQ) declared by the District's 1995 ROD/RMP.*

The Roseburg District BLM has not been selling the volume of timber declared to be the annual ASQ established in the District's 1995 ROD/RMP. The declared annual ASQ for the Roseburg District identified in the 1995 ROD/RMP (pp. 8 and 60) is 45 million board feet. In the past decade (2003-2012), 2006 was the only year that the Roseburg District met the ASQ.

As suggested, thinning young (less than 80 years old) stands is proposed. Alternative 2 Sub-Alternative A is entirely thinning and Alternative 2 Sub-Alternative B is nearly 90% thinning.

(4) Boosting timber harvest on federal lands is a foolish way to improve Oregon's economy. Economic development should focus on growth industries, not timber. The timber industry is in long-term decline. While the small mills close, the big mills demand more trees and employ fewer workers. The future of Oregon's economy depends on protecting our quality of life that attracts high quality workers and clean industries that wan [sic] to employ them.

The EA says that variable retention harvest is not regeneration harvest method. This is incorrect and misleading. VRH removes enough trees to start a new cohort of early seral trees. In fact, "variable retention harvest" sounds too much like "variable density thinning" which is widely supported and non-controversial when applied to dense young stands. VRH, on the other hand, is controversial and unsupported by the public and unsupported ecologically. The most accurate (and least misleading) way of describing VRH is "clearcutting with reserves." The Society of American Foresters defines "clearcut" as "1. a stand in which essentially all trees have been removed in one operation —note depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration …" http://dictionaryofforestry.org/dict/term/clearcut. Johnson & Franklin like to call their system "variable retention harvest" but as implemented it is more accurately described as "clearcut with reserves."
See http://dictionaryofforestry.org/dict/term/regeneration_method and http://dictionaryofforestry.org/dict/term/variable_retention_harvest_system

BLM Response 2-7: *See BLM Response 1-7.*

The commenter's opinion of the importance of Federal timber to the forest products industry, and the contribution of the forestry and forest products industry to the economy of Oregon is one that is unsupported by statistical studies.

The role of Federal timber is crucial to small companies in the forest products industry. In its 2012 report, the Oregon Forest Resources Institute[4] found that in eastern Oregon 49 primary manufacturers have gone out of business since 2003, primarily due to a lack of timber from Forest Service lands. The report noted the following regarding employment and revenues generated by the forest/forest products sector in Oregon:

- *The forest sector which includes forest management, timber harvest, and forest products manufacturing accounts for 76,000 jobs, representing 5.3 percent of all Oregon jobs;*

[4] Oregon Forest Resources Institute. 2012. http://www.theforestreport.org

- *11 forest sector jobs are retained or created for each million board feet (~ 40 acres) of timber harvested;*
- *In rural counties such as Clatsop, Douglas and Lake, the forest sector accounts for 20-to-30 percent of economic output and 12-to-18 percent of all employment;*
- *The forest sector provides approximately five percent of annual state and local government revenues;*
- *The forest sector represents 6.8 percent of the total economic base for the State of Oregon and contributes 12.7 billion dollars in industrial output; and*
- *Average mill wages in the western U.S. are $19.00/hour*

The Dictionary of Forestry defines harvesting method as, "a procedure by which a stand is logged; emphasis is on meeting logging requirements while concurrently attaining silvicultural objectives — synonym cutting method —see regeneration method, variable retention harvest system[.]"(SAF website accessed on 8/14/13; http://dictionaryofforestry.org/dict/term/harvesting_method). At the end of this definition the reader is directed to information in two additional definitions: "regeneration method" and "variable retention harvest system".

The Dictionary of Forestry defines Variable Retention Harvest System as "an approach to harvesting based on the retention of structural elements or biological legacies (trees, snags, logs, etc.) from the harvested stand for integration into the new stand to achieve various ecological objectives —note the major variables in the variable retention harvest system are types, densities, and spatial arrangement of retained structures; aggregated retention is the retention of structures or biological legacies as (typically) small, intact forest patches within the harvest unit; dispersed retention is the retention of structures or biological legacies in a dispersed or uniform pattern[.]" (SAF website accessed on 8/14/13; http://dictionaryofforestry.org/dict/term/variable_retention_harvest_system). This definition accurately describes the proposed harvest in Section 35, T. 29 S., R. 9 W., W.M.

This project proposes regen harvest in critical habitat for the northern spotted owl. This is not appropriate. Critical habitat must be managed for recovery of listed species, not just to avoid jeopardy. BLM must follow the 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. Norton 378 F.3d 1059 (9th Circ August 6, 2004). http://web.archive.org/web/20041101124018/http://www.ca9.uscourts.gov/ca9/newopinions.nsf/57987D956468797888256EE800581847/$file/0335279.pdf?openelement

BLM Response 2-8: *See BLM Response 1-24. The environmental effects to northern spotted owl critical habitat were analyzed in the EA (p. 70, 76, 78, and 83) and acknowledge short-term effects but no modification of long-term function in thinned stands. Approximately 140 acres of dispersal habitat would be downgraded to potential habitat in Alternative 2 Sub-Alternative B (EA, p. 82) with implementation of variable retention harvest, an ecological forestry and restoration prescription based on Johnson and Franklin (2009). The Revised Recovery Plan for the Northern Spotted Owl (USFWS 2011) recommends active management of spotted owl habitat (II-11, III-10, III-11, III-13, III-17, III-42). The Recovery Plan specifically identifies ecological forestry and restoration as described by Johnson and Franklin (2009) as appropriate:*

> "…we propose applying "active forest management" as part of a spotted owl recovery strategy that includes "ecological forestry and restoration" as described by Franklin *et al.* (2007), Carey (2007), Johnson and Franklin (2009), Long (2009), and Spies *et al.* (2010a), among others. We recommend that land managers consider implementing forest restoration activities where the best available science suggests ecosystems and spotted owls would benefit in the long-term (III-11)."

In a Biological Opinion (USFWS 2013) the U.S. Fish and Wildlife Service indicates the activities in Alternative Two, Sub-Alternative B of the Camas Valley 2011 Harvest Plan will not incidentally take any known northern spotted owls (p. 119), and finds that the action would not jeopardize the continued existence of the northern spotted owl and would not adversely modify critical habitat for the spotted owl (p. 1).

Regen harvest will not improve spotted owl habitat. Regen harvest will remove trees that are on their way to becoming suitable owl habitat. Regen logging will delay development of owl nesting, roosting and foraging habitat, and expose spotted owls to increased risk of predation and fire.

BLM Response 2-9: *The effects to northern spotted owls, including the risk of predation and downgrading dispersal habitat, are disclosed in pages 70-71, 74-77, and 82-83 of the EA. Potential effects include beneficial understory habitat development for a wide range of species that provide prey base for the northern spotted owl (EA, p. 76). While it is not possible to avoid effects to the northern spotted owl while maintaining consistency with project purpose and need, northern spotted owl nesting, roosting and foraging habitat was completely avoided (EA, Appendix C, Table C-3) and effects to the owl have been minimized to the degree practicable. BLM efforts to minimize effects to northern spotted owl habitat contribute to conditions that allow Lint[5] (2005) to conclude the percent of existing northern spotted owl habitat removed by harvest during the first decade of the Northwest Forest Plan was considerably less than expected (EA, p. 59).*

The EA claims benefits to populations of owl prey species. The EA should distinguish between species that are active during the day vs night, and between those that are arboreal vs non-arboreal. Owls get more benefit from prey that are nocturnal and/or arboreal. Will logging harm or benefit these?

The EA says that VRH helps with "the objective of establishing a desired age-class distribution on the landscape."

BLM Response 2-10: *See BLM Response 1-10. The EA explains that woodrats and flying squirrels are the primary prey species in the analysis area (p. 76) and acknowledges many other prey species are associated with early- to mid-seral habitats (p. 59). Impacts and benefits of the treatments on prey species were addressed on pages 76 and 82.*

There is no basis for the conclusion that the northern spotted owl benefits more from prey species that are nocturnal and arboreal in nature. The northern spotted owl is diurnally opportunistic in its foraging. Only two prey species, the flying squirrel and red tree vole, are arboreal dwellers. Other species such as woodrats, the principal prey species in the Oregon Klamath Province, and red-back voles, brush hares, chipmunks and deer mice are terrestrial.

This is odd because, 20 years of science behind the NWFP shows that we already have too many young forests and we have a shortage of older forests. That mean [sic] that VRH will move the landscape in the wrong direction, not in the desired direction. Figure 51 from WOPR (below) shows the vast over-abundance of young forest age classes. This table does not show the even more significant over-abundance of very young forests on non-federal lands. Regen is not solving any legitimate problem with age class distribution.

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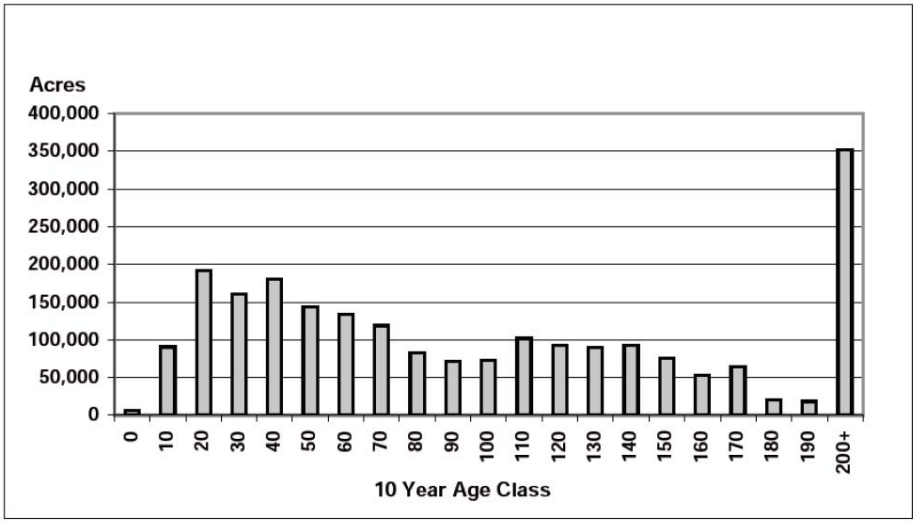
[5] *Lint, J. 2005. Population status and trends. Pages 7-19 in J. Lint, technical coordinator. Northwest Forest Plan – the first 10 years (1994-2003): status and trends of northern spotted owl populations and habitat. U.S. Forest Service General Technical Report PNW-GTR-648. Pacific Northwest Research Station. Portland, Oregon.*

BLM Response 2-11: *During the time period from 2006 to 2012 no regeneration harvest or large fires occurred on the Roseburg District. Adjusting the 2006 WOPR age class distribution data provided by the commenter to 2012 indicates only a small fraction of forested lands are in the first two 10-year age classes and there has been an increase in the 200+ age class. The bar graph provided by the commenter shows the abundance of older habitats. In 2012, habitats over 80 years old comprise over 60% of the landscape whereas less than 15% is in habitats less than 30 years old. See BLM Response 1-10 and BLM Response 2-81.*

The BLM has no control over the management of private forest lands. These lands were not considered by the Northwest Forest Plan as likely to provide anything more than dispersal habitat, and even then in limited quantity. As described in the EA (p. 69), for species dependent on early-successional habitat, private lands are not expected to provide quality habitat, because of intensive management practices such as heavy replanting and repeated herbicide application that are intending to exclude competing vegetation that includes flowering plants, shrubs and hardwood trees.

Figure 51. Acres of forested lands within the planning area for 2006 by 10-year age class



Regen harvest is far worse than thinning (and thinning worse than no action) in terms of: habitat destruction and fragmentation, soil erosion, soil compaction, degraded soil foodweb, degraded water quality, future snag recruitment, edge effects including blowdown, rain-on-snow effects including peak flows, degraded scenic values, release of sequestered carbon pools, lost wilderness potential, and increased fire hazard. The NEPA analysis must make these distinctions crystal clear to the public and the decision maker.

There are a variety of problems with clearcutting:

BLM Response 2-12: *None of the alternatives analyzed in the Camas Valley project contain clearcutting.*

- Does not mimic natural disturbance – creates novel structures and patterns on the landscape
- Fragmentation: tiny, disconnected islands of habitat
- Inadequate retention of legacy structures –> lost continuity
- Reduces biodiversity – in all dimensions
- Inadequate protection of fish, streams, and water quality, and unstable slopes
- Too many roads cause pollution, peak flows, and block movement of: organisms, wood, spawning gravel
- Soil damage: compaction, nutrient loss, erosion, landslides
- Chemicals are toxic to fish and biodiversity

- Depletes carbon stores
- Degrades scenic views, recreation, quality of life

Even if part of each stand is reserved from clearcutting, the effects described above still apply to the portion of the stand that is clearcut.

BLM Response 2-13: *The EA (p. 28-29) describes the marking prescription for variable retention harvest and indicates 20-30 percent of the pre-harvest stand would be retained. Areas of high biodiversity will be candidates for aggregate retention (EA, p. 28). See BLM Response 1-3 for additional discussion about aggregate and dispersed retention.*

Alternative Two Sub-Alternative B variable retention harvest would have no effects to any fish species (EA, p. 102). Removing trees in the uplands of variable retention harvest units would not create circumstances that would result in sediment being transported to streams, or reduce large wood sources for future instream recruitment (EA, p. 103). No measureable sedimentation would be expected with application of Best Management Practices and project design features (p. 103). Existing unstable areas and areas with a high risk of instability were excluded from harvest or protected by retaining high levels of trees (EA, pp. 109 and 111). Steeply incised and seasonally saturated slopes would be protected in established Riparian Reserves (EA, p. 111). Variable retention harvest in upland areas is not likely to increase risk or frequency of slope failures and landslides. The units contain mainly gentle to moderate slopes of 35 percent or less and there are no signs of slope failures or landslides in these areas (EA, p. 111).

Peak flows were discussed in BLM Response 1-17. Most in-stream wood comes from within one site potential tree height of the channel (Naiman et al. 2002). Thinning would, over time, accelerate growth and development of larger trees close to stream channels with the potential to contribute habitat forming in-stream wood. Trees within the "no-treatment" areas would continue to provide adequate small wood as large trees develop in treated areas. Gaps and openings created in riparian stands outside of the "no-treatment" areas would mimic natural disturbance events, favor development of large trees, and allow development of understory vegetation that would provide deciduous leaf litter for stream invertebrates. (EA, p. 97)

Soils in variable retention harvest units have low amounts of rock, and moderate to high amounts of clay, resulting in moderate to high risk of compaction. In areas of ground-based yarding, landings, new or re-used skid trails, previously compacted areas, and areas compacted by machine piling of slash will be tilled to reduce compaction (EA, p. 110). In areas to be cable yarded, one-end log suspension will help minimize surface and soil disturbance (EA, p. 111). The variable retention harvest units have deep and productive soils that are low in rock. They would revegetate fairly rapidly. Erosion rates will be low over time and any erosion of exposed soils that occurs will principally remain within the boundaries of the units (EA, p. 112).

The Camas Valley 2011 Harvest Plan does not propose any use of chemicals (i.e. herbicides). When the BLM does us herbicides, use is specifically targeted at noxious weeds; individual plants are treated as opposed to broadcast applications.

In the first 50 years post-harvest, the active forest management proposed under Alternative Two Sub-Alternative B makes a positive contribution to CO_2 sequestration, as described in the EA. Carbon storage will increase 94 to 114 percent over the current condition (EA, p. 118).

There are no developed recreation sites or facilities in the project area. Recreation activities are limited to dispersed recreation which would continue to be provided in the project area as well as on the Roseburg District and adjoining U.S. Forest Service lands. (EA, p. 32)

Visual quality was addressed. As described in the EA (pp. 32-33), a visual buffer will be applied along portions of the Signal Tree Road (No. 29-9-36.0) where it passes through unit 29-9-35c to visually screen the harvest units in an area designated as Visual Resource Management (VRM) Class II, where the objective is to retain the existing character of the landscape.

Please review and consider the following resources describing the ecological and other problems with clearcutting:

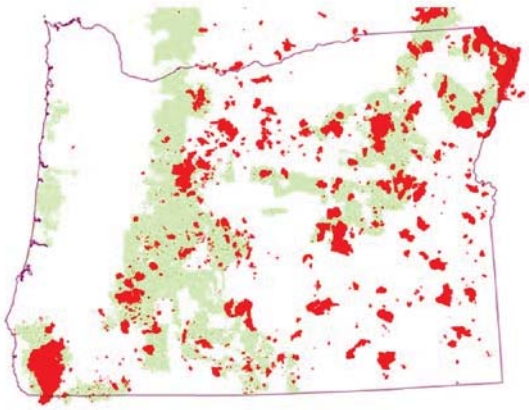
FEMAT Chapter V - Aquatic Ecosystem Assessment, pp V-12 - V-29.
"Cumulative Effects of Forest Practices..." by Beschta et al. (its 33 Mb)
http://www.forestry.oregonstate.edu/cof/fr/facultypages/CumulativeEffectsofForestPractices.pdf.
WA DNR Forest Practices HCP EIS
http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesRules/Pages/fp_rules_eis.aspx
http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesHCP/Pages/fp_hcp_feis.aspx
IMST Report
http://www.fsl.orst.edu/imst/reports/1999-1.pdf
FPAC Report:
http://web.archive.org/web/20050210221951/http://159.121.125.11/FP/FPAC/TOC.htm
NMFS Position Paper of Oregon Forest Practices:
http://web.archive.org/web/20090211024048/http://umpqua-watersheds.org/local/nmfs_on_ofpa.

Independent Multidisciplinary Science Team. 1999. Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the Measures in the Oregon Plan for Salmon and Watersheds. Technical Report 1999-1 to the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon; http://www.fsl.orst.edu/imst/reports/forestry.html, and

> National Marine Fisheries Service 1998. A Draft Proposal Concerning Oregon Forest Practices.http://www.coastrange.org/documents/NMFS_FP_pdf.pdf. and 1993

Buchanan, J.B. 2005. Challenges of Avian Conservation on Non-Federal Forests in the Pacific Northwest. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191.
2005. http://www.fs.fed.us/psw/publications/documents/psw_gtr191/psw_gtr191_0419-0428_buchanan.pdf

Johnson and Franklin (2009 and 2012) assert that clearcutting with reserves makes an “ecological contribution.” This vague assertion is premised on two incorrect assumptions – first, that early seral forests are underrepresented on the landscape, and second, that logging can mimic natural disturbance processes. Neither of these premises are well supported. Early seral forest is extremely abundant across the forest landscape as a result of extensive clearcutting on non-federal lands, plus fires and other disturbances that occur across the federal and non-federal landscape. This map of fire perimeters across Oregon over recent decades reveals that natural processes are still at work creating early seral habitat.



BLM Response 2-14: *The map provided shows fire perimeters across Oregon over recent decades. We do not know how many decades are represented, but it would be incorrect to assume all of the mapped fire perimeters represent early seral forest conditions. Fires create a mosaic on the landscape and substantial portions of land within a fire perimeter may be unburned, underburned with little tree mortality, moderately burned with a mixture of fire-killed and live trees, and stand replacing. Stands in western Oregon that were regenerated from fires would only remain in the early seral condition for 30-40 years, depending on burn severity, natural regeneration, and rehabilitation/replanting post-fire.*

Nonaka et al. (2007) show that young forests with little structure (i.e. clearcuts) are vastly over-represented in the Oregon Coast Range, while structure-rich early seral habitat are [sic] under-represented.[1] Clearcutting creates the wrong kind of early seral habitat, while natural disturbance is more likely to create optimal structure-rich early seral habitat.

BLM Response 2-15: *The concentrated harvest associated with variable retention harvest, and to a lesser extent portions of Riparian Reserves with variable density thinning, would create the under-represented complex early-successional habitat noted by Nonaka et al. (2007).*

Nonaka et al (2007) state their simulation indicated the historical range of variability (HRV) varied widely in time and space and did not consider human influence. Additionally, the simulated HRV may be underestimated due to modeling limitations, thus a broader HRV than depicted is likely. They also acknowledge that managing within HRV is not necessarily a management goal. The desired conditions for the landscape being analyzed are described in the Roseburg ROD/RMP (1995). Nonaka et al (2007) reference studies indicating 50% to 70% of the Oregon Coast region was historically in mature and old-growth forest with low coverage of areas with high to very high dead wood. WOPR (2006) age class distribution, provided by the commenter, shows lands have been managed within this range; over 60% of the area is older than 80 years old (mature or older). Very low dead wood conditions occurred in the simulated landscape, sometimes with levels as low as forest plantations. Nonaka et al. (2007) conclude that live and dead biomass under intensive forest management (<40 year rotations) may fall outside of HRV. Rotation age for BLM lands is over 40 years and harvest methods are not intensive clearcuts as one would observe on industrial forest lands. Nonaka et al (2007) state that retaining live and dead trees in harvest areas could lead to conditions within the HRV. In the Camas Valley EA (Alternative 2 Sub-Alternative B), BLM proposes retention of 20-30% in three variable retention harvest units (approximately 239 acres) and much higher retention in thinned units (approximately 1,775 acres). Priority retention trees in variable retention harvest units would include the largest trees in the stand, large existing snags, and large down wood (EA, pp. 28-29).

There are no ESA-listed species that rely exclusively on early seral forest conditions. In fact, early seral associated species tend to be mobile, generalists, and opportunists, finding suitable habitat in the wake of fire and other relatively infrequent disturbances.

BLM Response 2-15a: *It is incorrect to characterize species that utilize early-successional habitat as opportunists and generalists. Many species of native flora and fauna have narrow ecological niches, and are not generalists as suggested by the commenter.*

It is true that natural disturbances create early-successional habitat, but these are unpredictable in terms of timing and location and one primary process, wildfire, has been effectively minimized by fire suppression. For species with a narrow distribution, these infrequent events may no longer be sufficient to provide habitat.

The NWFP EIS explained:

> Any species that find optimum habitat in burned forests must have had the dispersal and reproductive capabilities to find and reproduce in these dispersed and infrequent patches of habitat. In general, species associated with early-successional conditions are good dispersers, have high reproductive rates, and are able to persist in small patches of habitat that result from small-scale disturbance (Hunter 1990, Smith 1966)....

BLM Response 2-16: *In general, the citation provided by the commenter is true; primarily for animals that are highly mobile such as ungulates and birds. However, the citation fails to consider species with limited mobility and species with small home ranges such as pollinators that have limited dispersal capabilities.*

> Compared to their historic populations, species associated with these early-successional conditions have increased in abundance. For example, Raphael et al. (1988) estimated that populations of 11 species of birds have probably tripled over historic numbers, and another 4 species have more than doubled. Raphael et al. (1988) and Raphael (1988) compared the estimated abundance of amphibians, reptiles, birds, and mammals from historic times to their present abundance and concluded that the early-successional associates that have increased over time were associated with more open, drier conditions; were widely distributed (larger total geographic ranges than species associated with late-successional conditions); and, had wider ecological tolerances (i.e., they occupy a greater variety of habitat types). As noted by Harris (1984), birds associated with early-successional forest are more often migrants whereas late-successional associates are generally permanent residents. These studies also show that whereas some species associated with early-successional conditions reach their maximum abundance in early-successional forest, none of the species were restricted to that successional stage.
> ...
> The creation of early-successional conditions as a result of logging has produced a different pattern on the landscape than the pattern that likely would have resulted solely from natural disturbance. Patches of early-successional forest are now more evenly distributed across the landscape, and sizes of patches are smaller. This pattern may have resulted in a more widespread distribution of early-successional species than in the past.[2]

BLM Response 2-17: *This finding assumes that all early-successional habitat is created and managed equally, which is not the case. Intensive management practices, particularly the repeated application of herbicides, reduce or eliminate vegetative complexity that provides nectar, fruits and mast that many of the early-successional associates are dependent upon. The EA (p. 7-8) briefly explains some of the differences between intensive industrial forest management and actions proposed in Alternative Two, Sub-Alterative B of the Camas Valley 2011 Harvest Plan EA. Most notably, early seral industrial forest lands are deficient in large defective trees, snags, coarse wood, flowering plants, and shrubs.*

Since BLM is claiming ecological benefits from regen logging, they must consider a full range of NEPA alternatives for achieving that objective without sacrificing maturing forests, including but not limited to:

BLM Response 2-18: *The alternatives developed for the Camas Valley 2011 Harvest Plan were based on meeting the purpose and need for action (EA, p. 2-4) and addressing resource issues (EA, p. 13-15). The purpose and need of this project are to: 1) manage O&C lands for forest production (EA, p. 2); 2) manage forests with desired species composition, structural characteristics, and distribution of seral or age classes (EA, p. 2); 3) aid in attainment of Aquatic Conservation Strategy objectives (EA, p. 3); and 4) create and maintain late-successional forest conditions (EA, p. 3). The suggestions listed below either do not meet the above stated purpose and need, are beyond the scope of the analysis, are beyond local agency authorizes, or are already addressed in the EA.*

- Modify the way we fight fire and how we react after fire, e.g., leave areas to recover naturally after fire instead of salvage logging and replanting which more closely resembled industrial clearcutting;

BLM Response 2-19: *Changing fire- fighting practices is beyond the scope of this analysis. As previously noted, the manner in which we respond to the aftermath of fires is largely driven by the management direction and objectives set forth by the land use allocations designated in the RMP.*

- Modify practices on non-federal lands to encourage greater retention of live and dead trees during harvest, tolerate slower conifer re-establishment and greater diverse of native vegetation, e.g., discourage herbicide spraying to control competing native vegetation;

BLM Response 2-20: *Modifying how non-federal lands are managed is beyond the scope of this analysis and beyond the authority of this agency.*

- Embed structure-rich "gaps" (e.g. patches of very heavy thinning) in our young stand thinning projects.

BLM Response 2-21: *The variable density thinning and VRH units incorporate "gaps" into the marking prescription (EA, pp. 19-23, 28-29).*

- Extend the early seral character of existing very young stands that are starting to become dominated by conifers.

BLM Response 2-22: *BLM proposes to maintain openings created by variable retention harvest for up to 30 years (EA, p. 31).*

Also, climate change may well solve the need for complex early seral forest without the need for logging: "Ecologically, increased distribution and frequency of disturbances may result in increased distribution and dominance of early successional ecosystems dominated by fire adapted species..." Lemieux, Christopher J., Daniel J. Scott, Rob G. Davis and Paul A. Gray. 2008. Changing Climate, Challenging Choices: Ontario Parks and Climate Change Adaptation. University of Waterloo, Department of Geography: Waterloo, Ontario http://web.archive.org/web/20101023221023/http://www.fes.uwaterloo.ca/geography/faculty/danielscott/PDFFiles/NRCAN-Report-FINAL.pdf. Conversely, it may become harder to maintain existing late-seral ecosystems and species, so existing late-successional old-growth forests should be retained in order to avoid making the LSOG shortage worse.

BLM Response 2-23: *The referenced document could not be reviewed because it is not accessible.*

The following excerpt from Oregon Wild' scoping comments on BM's [sic] Secretarial Pilot Projects provide a productive framework to evaluate whether clearcutting riparian reserves serves valid ecological restoration objectives:

BLM Response 2-24: *The comments of Oregon Wild on the Roseburg District Secretarial Demonstration Project EA are not relevant to the Camas Valley 2011 Harvest Plan EA, and furthermore the BLM is not proposing to clearcut Riparian Reserves.*

Complex early seral forest

One of the primary restoration objectives we keep hearing for these projects is the need to restore *complex early seral forest*. This may well be an important goal. However, this goal needs to be validated and if valid, alternative means of meeting the goal must be explored. With a little thought and creativity one can see that many ways to increase rare early seral habitat without sacrificing rare mature & old-growth forests.

BLM Response 2-25: *Restoring complex early seral forest is not an objective of this analysis. Although the EA, under Need (EA, p. 4), states variable retention harvest would contribute to the objective of establishing a desired age-class distribution on the landscape, with desired species composition and structural characteristics.*

The age class distribution presented previously by the commenter indicates mature and old growth forests (over 80 years of age) are not rare. They represent over 60 percent of the analyzed landscape, whereas early seral conditions represent less than 15 percent. The assertion that this project sacrifices rare mature and old growth forests is incorrect. This project does not proposed treatment in mature or old growth forest. See BLM Response 2-81.

Validation of the early seral habitat objective requires, among other things, asking if the current and projected amount of early seral habitat might be adequate to meet the needs of the opportunistic and generalist species that tend to occur in those areas. Only the interior valleys (and a few ridgetops) of western Oregon likely had persistent early seral conditions, while most of the federal forest landscape had transient early seral conditions associated with disturbances. Early seral wildlife species likely evolved to take advantage of early seral conditions when and where it could be found in the shifting mosaic of seral conditions.

BLM Response 2-26: *We agree that many of the early seral conditions on the Roseburg District are transient, lasting approximately 30 years before tree canopy closure begins suppressing understory vegetation. Discontinuing regeneration harvest for approximately 20 years, continued fire suppression, and succession of previously regenerated stands have reduced the amount of early seral habitat on the Roseburg District. Nonaka et al (2007) concluded there is a lack of complex early-seral habitat; Alternative 2 Sub-Alternative B would begin addressing that issue.*

The commenter requests validation of the adequacy of existing early seral habitat to meet the needs of early-seral associated species. Nonaka et al. (2007), referenced by the commenter, concluded the current availability of complex, early-successional habitat in the Oregon Coast Range is deficient. The Camas Valley wildlife analysis addressed 10 species associated with early-seral habitats, some which have been placed on special status lists due to population concerns indicating the need to address the deficiency.

Historically, the interior valleys of western Oregon would have provided abundant early-successional habitat, but this is no longer the case as changes in land use practices have fragmented habitat through urbanization and agricultural use, in most instances supplanting native plant communities with non-native species of cultivars and ornamentals that have displaced native flora and do not support native fauna.

It is incorrect to characterize species that utilize early-successional habitat as opportunists and generalists. Many species of native flora and fauna, examples of which are described below, utilize narrow ecological niches, and are not generalists as suggested by the commenter.

It is true that natural disturbances create early-successional habitat, but these are typically of short duration (30 years) and unpredictable in terms of timing and location. Additionally, human efforts, such as fire suppression, have effectively minimized the most common vector for creation of early-seral

habitats. For species with a narrow distribution, these periodic events may no longer be sufficient to provide habitat.

Natural disturbance processes continue to operate across the landscape, including fire, wind, ice storms, landslides, floods, volcanoes, native insects, native disease, etc. Each of these helps create various sized patches of early seral forests every year. Many predict that climate change will increase the frequency of these natural events, suggesting that any shortage of early seral conditions might just take care of itself. "Ecologically, increased distribution and frequency of disturbances may result in increased distribution and dominance of early successional ecosystems dominated by fire adapted species..." Lemieux, Christopher J., Daniel J. Scott, Rob G. Davis and Paul A. Gray. 2008. Changing Climate, Challenging Choices: Ontario Parks and Climate Change Adaptation. University of Waterloo, Department of Geography: Waterloo, Ontariohttp://web.archive.org/web/20101023221023/http://www.fes.uwaterloo.ca/geography/faculty/danielscott/PDFFiles/NRCAN-Report-FINAL.pdf [fn/

BLM Response 2-27: *The referenced document could not be reviewed because it is not accessible.*

Conversely, it may become harder to maintain existing late-seral ecosystems and species, so existing late-successional old-growth forests should be retained in order to avoid making the shortage of late seral forest worse.]

BLM Response 2-28: *The Camas Valley 2011 Harvest Plan EA does not propose to harvest any late-successional forest, as all the stands proposed for treatment are less than 80 years of age. The BLM is proposing variable density thinning in Late-Successional Reserves to maintain and improve habitat conditions (EA, p. 3). See BLM Response 2-11.*

There is widespread recognition that early seral forest is produced in abundance on non-federal lands (through industrial clearcutting). Current industrial forest practices does not produce *high quality* or *long-lasting*early [sic] seral forest. It is also true, but not widely recognized that the *absolute abundance* of early seral forest on non-federal lands might partially mitigate for its lack of quality.

BLM Response 2-29: *The standard objective on private industrial forest lands is to maximize future fiber production by establishing a conifer dominated monoculture as soon after harvest as possible. Through early and frequently repeated application of herbicides, any development of flowering plants is limited and short-lived. This is borne out by the professional experience of BLM Forestry Staff, many of whom worked for private industry before coming to the BLM, and further substantiated by the observations of BLM wildlife biologists and botanists, and in numerous published scientific studies.*

It should also be noted that it is not merely the overall quantity of forage that is important, but more so, the nutritional quality necessary to support the physical and reproductive health of wildlife.

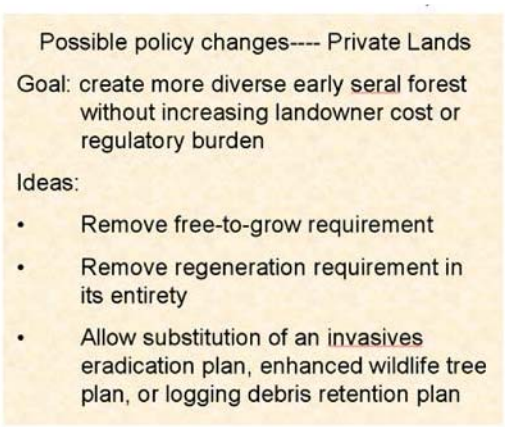
Early seral vegetation also exists along many streams, rock outcrops, meadows, as well as roadsides, landings, and other disturbed sites throughout the forest. An honest assessment of the early seral shortage must account for the quantity, quality and functionality of all these early seral forest elements.

BLM Response 2-30: *In the Upper Middle Fork Coquille watershed analysis unit, only 169 acres are classified as non-forested lands, representing less than 0.7 percent of BLM-administered*

lands. Roads and landings would not be considered suitable early-successional habitat as compaction, and in many instances rock surfacing, would preclude most vegetative growth. Where roads pass through timbered stands, shading and regular brushing also preclude substantial vegetative growth.

If there is indeed a shortage of complex early seral forest, we must evaluate a full range of alternative ways of increasing either the quantity and/or quality of such features. Alternatives that have been suggested include:

(a) Reform forest practices on non-federal lands to retain more legacy structures and allow a longer period of conifer establishment and more vegetation diversity after harvest, as suggested by Norm and Debora Johnson in 2007 —



K. Norm Johnson, Debora L. Johnson. 2007. Policies to Encourage Diverse, Early Seral Forest in Oregon: What Might We Do?http://www.reo.gov/ecoshare/ccamp/good_forest_opening/powerpoints/Early%20seral%20talkrevfinal.ppt

(b) Rely on natural processes such as fire, wind, insects, etc. Since the public has been misinformed that natural forest mortality processes are undesirable, this approach would work best if we increase public tolerance for natural processes. This approach may also require reform of fire suppression policies and post-fire salvage logging and replanting, as suggested by Norm Johnson, Jerry Franklin, and others in 2007 Early Seral Forest Symposium. http://www.reo.gov/ecoshare/ccamp/Good_Forest_Opening.shtml.

BLM Response 2-31: *Many of the lands managed by the BLM in the project watersheds are designated for commodity timber production. Additionally, BLM-administered lands are interspersed with private timber lands and agricultural lands, including many Christmas tree farms. Allowing wildfire, wind damage and insect infestation to go unchecked or unremediated would place the value of the adjoining private lands in jeopardy, as well as the intended roles, be they habitat or commodity production, of the BLM-administered lands. As such, this is not an option to be considered.*

(c) Aggressive pre-commercial thinning in existing very young stands or failed plantations to extend the early seral stage, as suggested in the Chalk Parker Project on the Middle Fork District of the Willamette NF;

BLM Response 2-32: *The Roseburg District practices pre-commercial thinning on a regular and extensive basis. Given that there has been no regeneration harvest in the project watersheds in two decades, in concert with the intensive reforestation efforts employed at the time, there are no "failed plantations" such as the comment refers to.*

(d) Create patches of heavily-thinned, structure-rich "gaps" in variable density thinning projects in dense planted stands <80 years old, as suggested by numerous projects around the region.

BLM Response 2-33: *This is a component of the variable density thinning proposed in Late-Successional Reserves under both sub-alternatives of the proposed action (EA, p. 22).*

All these alternative methods would allow meaningful restoration of early seral forest conditions without unnecessarily sacrificing mature forests.[3]

These comments make the case that there is no compelling ecological need to create more sub-optimal early seral forests through logging, especially when there are so many ways to enhance early seral habitat that do not require sacrificing rare mature forests, and when these mature forests are our best candidates for recruitment as future old growth and meet the restoration goals of the NWFP.

BLM Response 2-34: *See BLM Responses 2-18 through 2-22 and 2-81. The proposed action would thin 53 units (approximately 1,775 acres). An alternative to the proposed action would thin 51 units (1,575 acres) and apply variable retention harvest on 3 units (approximately 240 acres) (EA, p. 2).*

Plantations are a fire hazard

The EA discussion of fire hazard does not disclose the increased fire hazard posed by young conifer plantations that will grow up after regen harvest and will persist in a hazardous condition for years to follow. This increased fire hazard is a threat to development and maintenance of spotted owl critical habitat as well as a threat to private property.

BLM Response 2-35: *The EA (pp. 27 and 30) describes the manner in which activity fuels will be treated to reduce fire risk. The EA (pp. 113 and 114) also describes the effects of these treatments in reducing the risk of ignition and spread, principally through the reduction of fine fuels that post the greatest risk for ignition. The analysis indicator used in the Fuels Analysis (EA, pp. 112-114) was fuel loading (tons/acre). Alternative 1 (No Action/Existing Condition) = 11-20 tons per acre; Alternative Two Sub-Alternative A = 20-28 tons per acre; Alternative Two Sub-Alternative B = 20-28 tons per acre in thinned units and 7 tons/acre in variable retention harvest units.*

The EA (p. 31) further describes how conifer trees in the concentrated areas of harvest in the variable retention harvest areas would be managed at a density of approximately 250 trees per acre and stand density would be monitored and density control treatments applied as needed to prolong the period of time until full conifer canopy closure is reached. At this density, canopy conditions will be discontinuous in contrast to typical tree densities of 600 trees per acre or greater. Under these conditions the likelihood of fire spread would be reduced, and by the time full canopy closure is reached in 30 years, tree growth and natural pruning of lower limbs will greatly reduce the likelihood of ground fire being conducted into the crowns of trees.

"Large blocks of old-growth forests – rather than large contiguous blocks of young growth or highly simplified forests – are the best scenario for reducing catastrophic wildfire." Jerry Franklin, David Perry, Reed Noss, David Montgomery, Christopher Frissell. Simplified Forest Management To Achieve

Watershed And Forest Health: A Critique. National Wildlife Federation. http://www.coastrange.org/documents/forestreport.pdf.

BLM Response 2-36: *This may hold true in an area of consolidated ownership, but is not adaptable in the checkerboarded and fragmented ownership pattern typical of the O&C lands administered by the BLM.*

Dense young plantations are more susceptible to severe fire effects than unmanaged older forests (DellaSala et al. 1995, Weatherspoon & Skinner 1995). The increased susceptibility of plantations to severe fire is due to:

- Structural characteristics that promote high heat energy output by fire (Sapsis & Brandow 1997).
- Warm, windy and dry microclimates compared to what would exist in an unlogged burned forest that possessed more structural diversity and ground shading (Countryman 1955, van Wagtendonk 1996).
- Accumulations of large volumes of fine logging slash on the ground surface (Weatherspoon & Skinner 1995).

BLM Response 2-37: *Young plantations (less than 20 years old) are not present in the analysis area. Thinning would reduce tree density on 1,575 to 1,775 acres of forest which would reduce fire effects. Susceptibility to stand replacing fire would increase in the short-term, on approximately 239 acres where variable retention harvest is proposed, but would be largely reduced by the prescribed burning that is proposed. Additionally, these units would be managed for low stand densities not comparable to those described by DellaSalla, which would reduce the risk of crown-to-crown spread should there be a fire.*

In thinned units, crown fire initiation wind speed would increase, spacing between tree crowns would increase, ladder fuels would decrease, and critical surface flame length would increase resulting in a decrease in risk of crown fires.

In a study of fire severity in northwest California, researchers found that tree plantations of any age were “more receptive to combustion” than other forests (Odion et al., 2004). Perry (1995) suggested that once even-age tree plantations are established on a proportion of forest landscape, “the potential exists for a self-reinforcing cycle of catastrophic fires.” Extensive networks of roads constructed to facilitate logging and planting also increase the risk of human-caused ignitions during hot, dry conditions (USDA 2000).[1]

Two fires in 2002 on the Umpqua National Forest were evaluated for their effect on the forest. Excerpts from the March 2003 Wildfire Effects Evaluation Project by the Umpqua N.F. are [sic] make clear the impact of creating more tree plantations:

> "Plantations had a tendency to increase the rate of fire spread and increased the overall area of stand-replacement fire effects by spreading to neighboring stands." Page 4
>
> "Fire burned most plantations with high intensity and spread rapidly through the canopy of these young stands." Page 20.
>
> "Plantation mortality is disproportionately high compared to the total area that plantations occupied within the fire perimeter. Page 26-27.
>
> "Crown fire spreads readily through these young stands: rates of fire spread can be high, and significant areas or mortality can occur in and adjacent to these stands." Page 32.

Finally, the report says that the fire behavior in forest that had not been converted to tree farms was normal. "The pattern of mortality in the unmanaged forest resembles historic stand-replacement patch size and shape." Page 64.http://web.archive.org/web/20041118062947/http://www.fs.fed.us/r6/umpqua/publications/weep/weep.html.

New Information Requires Modification of Matrix Objectives.

The EA relies on the matrix land allocation in the NWFP to support the need for regen harvest. Significant new information brings into question regen logging in the matrix. Most importantly, (1) spotted owls are facing significant new competition from barred owls and more habitat needs to be developed in the matrix (or on private lands) so these two species can co-exist, (2) global climate change is a new and significant threat that requires additional forests be set aside to store carbon and keep it out of the atmsphere [sic]. Regen logging moves in the wrong direction from the conservation needs indicated both of these new developments.

***BLM Response 2-38**: The EA states the purpose and need for the project on pages 1-4. See BLM Response 1-11. The action alternatives presented in the EA are consistent with the Revised Recovery Plan for the Northern Spotted Owl[6] (EA, pp. 76 and 83). Although the U.S. Fish and Wildlife has recommended conservation of additional suitable habitat, there is no published literature supporting the notion that this would allow for co-existence of the barred owl and northern spotted owl, as the two species compete directly for the same prey and habitat. Barred owls were considered in the EA (pp. 59-60, 71, 77, and 83). Carbon Storage and Release was considered in the EA (pp. 115-119 and Appendix F).*

This project is based on part on the need to produce timber to meet RMP objectives. There is a trade-off between ecological objectives and timber objectives, and new information indicates that these trade-offs are becoming more acute. Before sacrificing older forests in order to produce timber, the FS needs to carefully consider new information developed since the Northwest Forest Plan was adopted in 1994.

***BLM Response 2-39:** The Camas Valley EA proposes harvest in stands less than 80 years old and does not "sacrifice" older forests. See BLM Response 2-81.*

Several significant new developments indicate a need to increase emphasis on conservation and restoration of more mature & old-growth forests, and reduced emphasis on Matrix objectives such as timber production from logging of mature & old-growth forets [sic]. Unfortunately, the agencies have not taken steps to account for new information and adjust Matrix objectives accordingly.

A few of the most important new issues include:

(a) **Barred owls** — The threatened spotted owl faces a significant new threat in the form of the barred owl which has recently invaded the range of the spotted owl, uses and similar habitat, and uses many of the same food sources. Hundreds of thousands of acres of suitable owl habitat that were assumed in the NW Forest Plan to be available for spotted owl nesting, roosting, and foraging are now occupied and defended by territorial barred owls to the exclusion of spotted owls. There is an urgent need to protect additional suitable owl habitat (and reduce the loss of existing habitat) in order to increase the likelihood that threatened spotted owls can coexist with newly invading barred owls instead of facing competitive exclusion.

[6] *U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Northern Spotted Owl.*

FWS has recommended protection of a subset of high quality owl habitat, but whether this subset of habitat is enough to ensure species recovery has never been tested and validated. The habitat modeling done as part of the spotted owl recovery planning process assume that the barred owl population would remain constant, but it is more realistic to expect that the barred owl population will continue to increase for some time. We are a long way from an effective rangewide barred owl control program, and if the program ever gets fully implemented, failure to maintain the program in perpetuity will likely lead to a rapidly resurgent population of barred owls. There are too many preconditions that undercut FWS' modeling assumptions and the effectiveness of relying on a subset of suitable habitat. Spotted owls would be safer if all suitable habitat were protected.

BLM Response 2-40: *Under Recovery Action 32, Listing Factor E, the U.S. Fish and Wildlife has suggested that older and more structurally complex forest should be maintained and restored There is no recommendation that all forest habitat suitable for nesting, roosting and foraging should be conserved. Additionally, although the U.S. Fish and Wildlife has recommended conservation of additional suitable habitat, there is no published literature supporting the notion that this would allow for co-existence of the barred owl and northern spotted owl, as the two species compete directly for the same prey and habitat.*

(b) **Carbon storage** — Global climate change is a new and significant threat not only to imperiled species, but also whole forest ecosystems and human communities. To reduce the severity of global climate change requires, among other things, that the global carbon cycle be managed to store more carbon. Carbon-rich ecosystems like mature & old-growth forests of western Oregon present a tremendous opportunity to increase carbon storage and mitigate climate change.

Commercial logging in stands over 80 years old likely comes with significant costs in terms of forgone carbon storage. Given the significant threat posed by climate change, it is difficult to imagine anything to justify logging mature & old-growth forests, especially when the need for wood products can be met by thinning young stands. Conservation of older forests not only helps mitigate climate change but also provides a variety of other benefits, including clean water, habitat imperiled species, as well as sport fish & game, and quality of life that helps diversify the economy and stabilize communities.

Even though the amount of carbon stored in the forests affected by this project seems small in a global context, that does not mean the carbon in these forests is not important. There is no single sink or source of carbon that can be addressed to "fix" the climate problem, while smaller emissions are ignored. The global carbon cycle is spatially distributed across the globe and the atmosphere is well mixed. The global trend toward warming are caused by the cumulative effects of millions of decisions in millions of locations around the world. The decision whether or not to log this site can be part of the problem or part of the solution.

BLM Response 2-41: *As described in the EA (p. 116), In 2008, fossil fuel combustion accounted for 94.1 percent of CO_2 emissions in the U.S. (EPA, 2010; Executive Summary p. 6). Land use, land use change and forestry nationally resulted in a net sequestration of 940 million tons of CO_2 in 2008 (EPA, 2010; Table 2-3). Forest management in the U.S., alone, resulted in net CO_2 sequestration of 792 million tonnes (EPA, 2010; Table 2-9), an offset of approximately 11 percent of total U.S. CO_2 emissions.*

The O&C Act mandates that BLM manage for permanent forest production, watershed protection, and community stability, all of which are threatened by climate change. BLM therefore has a duty to make meaningful efforts to mitigate climate change by optimizing carbon storage in long-lived mature & old-growth forests.

(c) **Climate change** — A warmer world with more seasonal extremes of wet and dry also creates uncertainty about our ability to sustain older forests, and about whether we can recreate functional old

forests starting from young, planted stands. If climate change brings increasing frequency and severity of drought and natural disturbance, it may be harder to sustain existing older forests and harder to establish new forests and sustain them through long periods of forest succession required to reach habitat goals for imperiled species like spotted owls, marbled murrelet, and salmon. This highlights the old adage that "a bird in the hand is worth two in the bush." We should retain all the older forests that we currently have (and carefully nurture likely recruitment forests). Climate uncertainty alone represents an increased risk for spotted owl recovery.

BLM Response 2- 42: *NEPA requires that agencies consider significant effects of proposed actions on the human environment. The purpose of this environmental assessment is, in part, to determine whether there may be significant effects resulting from the proposed actions that warrant the preparation of an environmental impact statement (40 CFR 1508.9). General or encyclopedic discussions of other environmental topics are not required.*

Additionally, global climatic warming has been ongoing for many decades and the trend is expected to continue into the distant future (IPCC, 2007[7]). The existing project area conditions and trends are an expression of the local climate (which may or may not parallel ongoing regional, continental, or global trends) as it has interacted with other local natural and anthropomorphic influences. As such, the ongoing effects of climate change were considered in developing the proposal.

Analysis of the effects of the proposed action on broad continental and regional scale trends and implications are not appropriate because discernible effects cannot be determined. Given the limited scope, scale, and duration of this proposal, we believe the carbon analysis in the EA (p. 115-119 and appendix F) provides relevant and reliable context for understanding this particular proposal's effects.

(d) **Dead wood standards** — Large accumulations of dead wood are essential for meeting objectives for fish & wildlife habitat, water quality, and carbon storage. Past and ongoing forest management has greatly reduced the prevalence of large snags and dead wood. Northwest Forest Plan standards for dead wood are based on an outdated "potential population" methodology which greatly underestimates the amount of snags and down logs needed to meet the needs of a variety of species associated with dead wood.[1] Forests are a dynamic system where the population of all live trees represent the recruitment pool for all dead trees, so if more dead trees are needed over time, that means more live trees need to be retained for long-term recruitment. Before conducting activities like commercial logging (especially regen logging) that will result in long-term reduction in recruitment of snags and dead wood, the agencies should follow NEPA procedures to amend their management plans, consider alternatives, and adopt new standards that assure objectives are met over time and across the landscape.

BLM Response 2-43: *The project was designed to meet RMP requirements for snags and large down wood (ROD/RMP, pp. 38, and 65-66). This topic was addressed on page 8 of the EA and in the marking prescriptions on pages 22, 28, and 29. Down wood was discussed in Chapter 3 of the EA on pages 46, 49, 51, 64, 67, 68, 70, and 115.*

(e) **Wood Products depression** - Another aspect of new information is that the market for wood products is quite depressed as a result of the inter-related financial, housing, and wood products bubbles. In the post-bubble economy there is little justification for sacrificing public forests to produce

[7] *IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.*

wood products. Withholding wood from the market may help improve log prices for owners of non-federal timber who rely on selling some trees for periodic income. As recently stated by the Supervisor of the Bitteroot [sic] NF:

> "Some of you may be wondering why timber is not being sold as it was in previous decades when the Bitterroot routinely produced 20 million board feet or more. One of the main reasons is that no one is buying the wood. For example, the Bitterroot National Forest recently offered two different timber sales on land that is easy to access near paved roads, and neither sale received any offers. These were not isolated incidents. In 2011, the forest brought four timber sales to the public that did not receive one bid from an interested buyer. Why is this happening? Much like the housing crisis, the answers can be found in the market. Many of the problems occurring in the timber market today are not due to a lack of supply, but rather a lack of demand. Logs that were selling for $80 a ton during the housing boom, are worth less than $45 a ton today. This loss of demand has had a significant local impact on acres harvested. Poor market conditions have also forced us to use scarce taxpayer dollars to pay to remove timber to meet our forest fuel reduction goals in areas adjacent to private property."[2]

BLM Response 2-44: *The Roseburg District has continuous requests by industry to provide a sustainable supply of timber from BLM lands at quantities projected in the RMP.*

The commenter's assertion regarding the current need for forest products in Oregon based on 2011 information from Montana is only an opinion. As the economy improves, residential construction starts will increase, as is already the case over the past few months. Demand for lumber and other construction materials will likewise increase. If not produced in the United States, these materials will be imported from other countries. Adverse consequences of such dependence could include: loss of domestic jobs; loss of revenues to states and the Federal government; and introduction of pathogens with the potential to seriously harm native plant communities as has been the case with Dutch elm disease, chestnut blight, white pine blister rust, Port-Orford-cedar root disease and Sudden Oak Death Syndrome.

When we bring all these lines of evidence together one realizes that since the NWFP and the matrix land allocation was adopted there are many more reasons to protect forests and fewer reasons to log them. This needs to be considered in a new EIS. Since these significant new issues were not properly considered in the Northwest Forest Plan FEIS, the agency needs to address them in project level NEPA analyses. Since these significant new issues were not properly considered in the Northwest Forest Plan FEIS, BLM needs to address them here.

A few things BLM should consider before conducting regen harvest to enhance early seral forest:

a) we might already be on a trajectory to restore early seral habitat via natural disturbance alone, accompanied by increase in fire (and insects) due to climate change.
b) early seral species tend to be generalists/opportunists, and that few early seral obligate species are truly at risk,
c) the great abundance of low quality early seral habitat resulting from clearcutting on non-federal lands at least partially mitigates for the lack of high quality early seral resulting from fire suppression;
d) there are opportunities to enhance early seral habitat by modifying non-federal forest practices, such as legacy retention, tolerating more vegetation diversity and longer periods of conifer re-establishment;
e) there are opportunities to harmonize the goals of restoring both young and old forest by including structure rich gaps in variable density thinning projects and experimenting with variable regen in a portion of the young stem-exclusion stands which are over-represented relative to the historic range; and
f) the historic extent of early seral habitat was artificially increased by cultural burning practices.

The Forest Service recently commission [sic] a science synthesis on early seral forests: Swanson, M.E., 2012. **Early Seral Forest in the Pacific Northwest: A Literature Review and Synthesis of Current Science**. Prepared under contract for USFS, Central Cascades Adaptive Management Partnership.

Excerpts:

> "… disturbances create snags and down woody debris (Harmon et al. 1986), volatilize nutrients and biomass (Campbell et al. 2007), and open growing space for the establishment of new cohorts of shrubs, trees, and forbs (Oliver and Larson 1996)." (p 2)

BLM Response 2-45: *The EA (pp. 3, 4) states, density management will promote development of old-growth forest characteristics that include snags, logs on the forest floor, large trees, and canopy gaps that enable establishment of multiple tree layers and diverse species composition (ROD, p. B-5). Creating gaps would encourage development of structural and species diversity; increase structural heterogeneity; introduce fine scale variation in treated stands; promote the establishment and growth of herbaceous plants, forbs and shrubs; aid in differentiation of tree sizes and crown characteristics associated with mature and late-successional forest; release trees that would allow for accelerated tree growth that would provide large wood for future instream recruitment; create edge habitat, create early-successional plant communities that support insect populations; (EA, pp. 21, 47, 50, 74, 76, 77, 79, 81, 100)*

> "Wind as a disturbance agent tends to superimpose a fine-scale mosaic pattern (Lertzman et al. 1996), frequently on a coarser mosaic created by large fire-created patches (Spies and Franklin 1989)." (p 2)

> "An important operation of most types of natural disturbance is that biological legacies are created or retained in the disturbance phase, and these enrich the developing stand (Franklin et al. 2000, Franklin et al. 2002)." (p 4)

BLM Response 2-46: *See BLM Response 1-3 which addresses aggregate and dispersed retention. The marking prescriptions in the EA (p. 19-23 and 28-29) clearly describe efforts to retain existing biological legacy trees. The EA describes one of the benefits of proposed treatments is the accelerated development of large trees, large snags, large down wood, and nesting platforms for marbled murrelets (pp. 47, 74, 83).*

> "The percentage of the regional landscapes of the Pacific Northwest in early succession was a highly variable parameter, …" (p 4)

> "Time to crown closure (and therefore the cessation of the early seral phase) is highly variable in Northwestern forests (Franklin et al. 2002). Assuming a very conservative low-end estimate of 30 years to crown closure (see Tappeiner 1997 and Poage et al. 2009 for context on this assumption), this would suggest that at any one point in recent history, 5-20% of a given landscape would have been in an early seral condition.: (p 4)

> "Even following clearcutting, burning, and planting with a commercial conifer tree species such as Douglas-fir, there may be a period of enhanced shrub and forb cover. On clearcut sites in the western Oregon Cascades, Schoonmaker and McKee (1988) identified a peak in cover at stand age 10-20 of ecologically important shrubs…" (p 7)

BLM Response 2-47*: The EA findings are consistent with the commenter's citation. Proposed vegetative treatments would produce shrub and forb cover (EA, pp.47, 50, 74, 76, 77, 81, 84, 85, 87).*

"Many of these are important for nutrient fixation or cycling (e.g., nitrogen fixation by Ceanothus), forage (Ceanothus, Bromus, Salix, Rubus), and other values (e.g., nectar provision to pollinators by E. angustifolium). … Many of the shrubs and forbs, especially, are important fruit and forage producers. … Provision of food resources via fruit and seed production is a very important role of early seral forest ecosystems." (p 8).

BLM Response 2-48: *The EA is consistent with the citation provided by the commenter and acknowledges some of the benefits of the proposed treatments include the production of flowering plants and fruit (EA, pp. 65, 72, 74, 81, 82, 84, 85).*

"Biological legacies, living or dead residual structures from the pre-disturbance ecosystem (Franklin et al. 2000), are crucially important to early seral functionality." (p 8)

BLM Response 2-49: *The EA (pp. 19-23, 28-29) includes detailed marking prescriptions that describe how biological legacies would be retained.*

"Down woody debris and snags are key structural elements of highly functional early seral forest ecosystems (Swanson et al. 2011). The early seral phase following disturbance often represents a period of peak volumes for down wood and snags (Harmon et al. 1986); …" (p 8)

"Over longer time periods, spatially irregular development initiated early in succession, accompanied by a diversity of life-forms, may lead to structurally complex forests (Zenner 2005). Furthermore, the recently proposed 'precocity' pathway (Donato et al. 2011) states that diverse structure and spatial heterogeneity in early seral stands may actually accelerate the onset of structural and compositional attributes associated with late seral forests." (p 9)

"It is fitting to note that few species are absolutely obligate in early seral communities, but robust populations of many species are primarily found in early seral communities." (p 9)

"Many birds are characteristic of early seral habitats (Hagar et al. 1997). In the northern Rockies, Hutto (1995) found fifteen bird species occurring primarily in recently burned areas, with one species, the black-backed woodpecker (Picoides arcticus), relatively restricted to early seral post-fire environments. He also found that many species are relatively more abundant in post-fire environments, although they may not specifically select for them. Woodpeckers, especially, often have a limited period of high abundance during the first few years following severe wildfire (Covert-Bratland et al. 2006). Bosakowski (1996) examined breeding birds in relation to stand types and ages on an industrial forest landscape in southwest Washington. From a total of 78 species observed, he identified eight birds associated with early seral conditions that declined as harvested stands matured: white-crowned sparrow, song sparrow, rufus-sided towhee, willow flycatcher, black-headed grosbeak, orange-crowned warbler, yellow-rumped warbler, and American kestrel." (p 10)

"Insects contribute tremendously to species diversity in ecosystems worldwide (Wilson). In the Pacific Northwest, a number of insects are associated with early seral habitats." (p 12)

"The western bluebird (Guinan et al. 2008) and the black-backed woodpecker (Hutto 1995) are bird species almost emblematic of early seral habitat, and are on several state-level conservation lists. … A significant number of state-listed organisms associated with early seral habitats are lepidoptera (butterflies and moths), since their larval stages depend on herbs, shrubs, or broadleaf trees that occur primarily in early seral habitats, and adults may require floral nectar as a food source." (p 12)

"Disturbances of greater spatial extent cover a wider range of edaphic and topographic conditions, engendering diverse recovery pathways in ways a smaller opening could not. Turner and Dale (1998) emphasize that large disturbances have persistent effects on ecosystems, present tremendous internal heterogeneity …" (p 14)

"Smaller disturbance patches tend to fill in more rapidly, since dispersing plant propagules (especially from trees) can access most or all of the disturbed area, decreasing time to recovery (Foster et al. 1998). Furthermore, small patches are generally still under the microclimatic control of the adjacent forest, and experience an array of biotic and abiotic edge effects. However, they may still generate substantial ecological benefits associated with early seral habitats. Hagar (2007) indicates the need to conserve non-conifer vegetation in forest understories, including in gaps across a broad range of sizes. Maintenance of areas of low tree density in young plantations may promote persistence of shrubs into later seral stages.

… In general, thinning and gap creation are important for revitalizing or initiating understory development (Bailey and Tappeiner 1998, Chan et al. 2006) and creating certain types of wildlife habitat (Hayes et al. 1997), especially when accomplished in a spatially variable manner (Carey 2003). However, for many processes and organisms, these activities do not substitute for the physical and biological changes engendered by a large disturbance that creates a spatially heterogeneous template for ecosystem development. " (p 15)

"The early seral habitat produced by clearcutting is highly variable in its resemblance to naturally occurring early seral conditions. Woody debris and snags in clearcuts is frequently less abundant than in legacy-rich forest (Pedlar et al. 2002), with attendant consequences for wildlife. Clearcutting can recreate some of the natural processes associated with fire, but is not a functional substitute with regard to many ecosystem attributes (Means et al. 1996). … However, even retention approaches may not provide the functionality of naturally-created early seral habitats." (p 16)

"Salvage logging can result in reductions in available habitat structure, increased erosion, and other negative effects (Lindenmayer and Noss 2006, Lindenmayer et al. 2008). Salvage, especially when followed by dense replanting of conifers, can substantially curtail the early seral phase. … In a very substantial review, Russell et al. (2006) found that salvage logging tends to reduce snag longevity." (p 16)

BLM Response 2-50: *The Camas Valley 2011 Harvest Plan EA does not propose any salvage.*

"Compositional simplification of young stands via pre-commercial thinning and herbicide application can reduce or eliminate ecologically important processes." (p 16)

BLM Response 2-51: *The BLM is prohibited by court order and by recent records of decision from applying herbicides for the purpose of forage or fiber production.*

"Potential management responses may include:

- Deferring salvage and dense replanting across all or parts of major disturbed areas (Lindenmayer and Noss 2006, Lindemayer et al. 2008))

- When salvaging, practice variable retention to retain significant structural elements such as large-diameter live trees, snags, and down woody debris (Franklin et al. 1997, Eklund et al. 2009).

BLM Response 2-52: *As previously noted, Camas Valley 2011 Harvest Plan EA does not proposes any salvage. Regeneration of harvested areas will be accomplished through a combination of natural regeneration and limited planting, and future stand management will target a conifer density of approximately 250 trees per acre which is not consider dense stocking.*

• Avoiding reseeding with exotic plant species such as perennial ryegrass (Lolium perenne) following fire or volcanic eruption (see Dale et al. 2005b).

BLM Response 2-53: *BLM policy prohibits reseeding or revegetation with anything other than native seed and plants.*

• Attempt to incorporate elements of natural disturbance regimes into landcape-scale management (Lindenmayer and Franklin 2002)

• Deliberate creation of large, early seral areas via silviculture (Swanson 2010).” (p 17)

“It is hoped that the diversity and value of early seral conditions, from clearcuts to structurally and compositionally complex early seral habitat, will come to be recognized and widely incorporated into contemporary land management.” (p 18)

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On Wed, May 11, 2011 at 3:34 PM, Doug Heiken <dh@oregonwild.org> wrote:
FROM: Doug Heiken, Oregon Wild | PO Box 11648, Eugene, OR 97440 | 541-344-0675 | dh@oregonwild.org
TO: or100mb@blm.gov
ATTN: South River Field Manager AND Camas Valley 2011 Harvest Plan Project Leader
DATE: 11 May 2011
RE: Camas Valley 2011 Harvest Plan - scoping comments

Please accept the following scoping comments from Oregon Wild regarding the proposed Camas Valley 2011 Harvest Plan, which may include: 678 acres of thinning in matrix, connectivity/diversity blocks, and riparian reserves, 1135 acres of thinning in LSR and riparian reserves, 266 acres of regen harvest in 60-70 year old stands.

BLM Response 2-54: *The BLM is not required by regulation or policy to provide a formal scoping period in preparation of an EA. However, informal scoping comments were received and were addressed in the EA (pp. 5-13). Specific and relevant comments were used to identify issues (pp. 13-15) which were considered in alternative development.*

Comments explicitly incorporated into the design of the alternatives, those of a philosophical nature, those outside the scope of the EA to consider, and those suggesting actions that would not meet the stated Purpose and Need for the project were not addressed.

Please consider the following issues as significant issues in the development of alternatives for this project:

BLM Response 2-55: *Issues were identified on pages 13-15 of the EA.*

1. whether regen harvest is advisable when there are more reasons than ever to maintain the forests we have and grow more, e.g., the need to mitigate for the effect of the barred owl on the spotted owl by providing more (not less) habitat for the two species to co-exist within, and the need to mitigate for climate change by storing more (not less) carbon in forests, etc.

BLM Response 2-56: *See BLM Response 2-38. Barred owls were addressed in Chapter 3 of the EA (pp. 59-60, 71, 77, and 83). Carbon storage and release were addressed in the EA (pp. 115-119 and Appendix F).*

2. whether to construct any new roads, and use inaccessible areas as untreated areas that provide dense forest habitat and natural levels of dead wood recruitment;

BLM Response 2-57: *The pool of candidate units was refined by five factors including access limitations (EA, p. 1).*

3. the appropriate mix of treated and untreated areas to obtain the most optimal mix of the benefits from both thinning and not thinning;

BLM Response 2-58: *The purpose and need for the treatments was described in the EA (pp. 2-4). The "optimal mix" of treatments is subjective based on the resources being managed.*

4. whether thinning will maintain or retard ACS objectives, including the recruitment of desired levels of dead wood; [sic]

BLM Response 2-59: *Appendix E (Consistency of the Proposed Action with Objectives of the Aquatic Conservation Strategy) of the EA shows treatments would maintain or contribute toward meeting ACS objectives. The EA describes the desirability of treatments in Riparian Reserves (p. 100). Alternative 1 (No Action) would not meet ACS objectives (EA, p. 42).*

Thinning Recommendations

Oregon Wild makes the following recommendations to enhance the quality of restoration-thinning prescriptions:

1. When conducting commercial thinning projects take the opportunity to implement other critical aspects of watershed restoration especially pre-commercial thinning, restoring fish passage, reducing the impacts of the road system, and treating invasive weeds.

BLM Response 2-60: *This would require augmentation of funds which is not permissible. The Roseburg District addresses pre-commercial thinning, fish passage restoration, and invasive weed treatments in separate environmental analyses available at http://www.blm.gov/or/districts/roseburg/plans/index.php .*

2. Use projects as an opportunity to learn by conducting monitoring and research on the effects of thinning. There are many information gaps that need filling. Every project should generate useful information to inform future projects.

BLM Response 2-61: *Monitoring will be conducted in accordance with provisions contained in the ROD/RMP, Appendix I (pp. 84-86, 190-199). Monitoring efforts will focus on consideration of the following resources; Riparian Reserves, Late-Successional Reserves, Matrix, Air Quality, Water and Soils, Wildlife Habitat, Fish Habitat, and Special Status Species Habitat (EA, p. 120). Conducting research is beyond the scope of this analysis.*

3. Young stands do not exist in isolation, so be sure to consider the effects of thinning on adjacent mature & old-growth habitat which may provide habitat for spotted owls, marbled murrelets, and other species. Spotted owls may use young stands for dispersal, foraging, and security from predators. It may be helpful to create a spotted owl "risk map" that identifies areas that are more or less suitable for thinning based on criteria such as: existing habitat characteristics, proximity to activity centers, proximity to NRF habitat, and

proximity to recently thinned areas, non-habitat, and roads. The agency should also consider adjusting both the location and timing of thinning to minimize the cumulative effects of widespread thinning on the sensitive and listed species.

BLM Response 2-62: *The effects of thinning habitat for species associated with mature and older forests were analyzed in the EA (pp. 74-86).*

4. Focus on treating the youngest stands that are most "plastic" and amenable to restoration.

BLM Response 2-63: *The pool of candidate harvest stands was refined based on stand age, stand development, site conditions, and logistical considerations (EA p. 1). The need for treatment was discussed on pages 3 and 4 of the EA.*

5. Generally retain all the largest trees, then “thin from below.” Some of the smaller trees in all age-size classes should be represented in untreated “skips” embedded within the stand.

BLM Response 2-64: *The marking prescriptions are in Chapter 2 of the EA (pp. 19-23, 28-29). Harvest in all land use allocations would retain large trees (EA, p. 19). Harvest in Riparian Reserves, Connectivity/Diversity Blocks and Late-Successional Reserves include “skips” and “gaps” (EA p. 12, 21-22). Aggregates and dispersed trees would be retained in three variable retention harvest units (EA, p. 28-29). See BLM Response 2-15 and 2-69.*

6. Retain and protect under-represented conifer and non-conifer trees. Protect shrubs as much as possible, especially deciduous and tall shrubs, and those that produce berries and mast.

BLM Response 2-65: *Harvest in all land use allocations would retain where available western hemlock, western redcedar, Port-Orford-cedar, and incense cedar (EA, p. 11, 20) and reforestation would include minor species (EA, p. 31). Hardwoods would be retained (EA, pp. 21, 22, and 28).*

7. Strive for a variable density outcome. Be creative in establishing diversity and complexity both within and between stands. Use skips and gaps within units to help achieve diversity. Gaps should be small, while skips should be a little larger, but even small clumps and patches of trees are desirable. Gaps should not be clearcut but rather should retain some residual structure in the form of live or dead trees. Landings do not make good gaps because they are clearcut, highly compacted and disturbed, more likely subject to repeated disturbance, and directly associated with roads. Using “designation by description” results in a small amount of within stand variability, but it is a significant compromise compared to the amount of variability that is ecologically desired both within and between stands and that could reasonably be accomplished with a little more effort.

BLM Response 2-66: *Prescriptions for variable density treatments, including gaps, skips, aggregate retention and dispersed retention, are described in the EA (pp. 19-22, 28-29). See BLM Response 2-64.*

8. The scale of patches in variable density thinning regimes is important. Ideally variability should be implemented at numerous scales ranging from small to large, including: the scale of tree fall events; pockets of variably contagious disturbance from insects, disease, and mixed-severity fire; soil-property heterogeneity; topographic discontinuities; the imprint of natural historical events; etc.

BLM Response 2-67: *Increased structural heterogeneity and introduction of fine scale variation into treated stands would be achieved by varying the spacing of reserve trees and creating gaps and skips (EA, p. 21). See BLM Response 2-64.*

9. Retain abundant snags and course wood both distributed and in clumps so that thinning mimics natural disturbance. Retention of dead wood should generally be proportional to the intensity of the thinning, e.g., heavy thinning should leave behind more snags not less. Retain wildlife trees such as hollows, forked tops, broken tops, leaning trees, etc.

BLM Response 2-68: *Snags would be retained where operationally feasible and safe. Retention of snags and course wood are discussed in the EA (pp. 3, 4, 8, 19, 21, 22, 28, 29).*

10. Continuous recruitment of snags is critical to development of old growth forest habitat. Think not only about existing snags but more importantly about the processes that grow and recruit snags, including: a large pool of green trees from which to recruit snags and the existence of competition and other agents of mortality. Commercial logging will significantly harm both of these snag recruitment factors. Green tree retention, including generous unthinned "skips" where density dependent mortality will play out, is necessary to support this process. This is especially critical in previously logged uplands that are already short of snags and in riparian areas where recruitment of large wood is important to stream structure. It is often asserted that thinning grows big trees faster and therefore results in more rapid recruitment of large snags, but FVS and other tools show this NOT to be true. In fact, thinning both reduces and delays recruitment of snags, first by removing trees that would otherwise suffer suppression mortality, and second by increasing stand vigor and postponing overall mortality. See this online slideshow which shows the modeled effects of thinning on dead wood habitat. http://www.slideshare.net/dougoh/effects-of-logging-on-dead-wood-habitat The implications are that heavy thinning should be used sparingly and generous unthinned patches should be retained WITHIN thinned stands in order to continue the snag recruitment process and mitigate for captured mortality. To inform the decision, please conduct a stand simulation model to fully disclose the adverse effects of logging on dead wood, especially large snags >20" dbh, and then mitigate for these adverse effects by identifying areas within treated stands and across the landscape that will remain permanently untreated so they can recruit adequate large snags and dead wood to meet DecAID 50-80% tolerance levels as soon as possible and over the long-term.

BLM Response 2-69: *Relative density of retained trees would range from 25 to 30 in treated Riparian Reserves and Connectivity/Diversity Blocks (EA p. 21); 35 to 40 in GFMA (EA, p. 21); and 25 or more in Late-Successional Reserves (EA, p. 22). Over 50 percent green tree canopy cover would be retained in thinned units (EA, pp. 21, 22). Green tree retention in three VRH units would be 20-30% of the stand (EA, p. 28). Snags needed to support 40 percent of potential population levels would be retained (EA, p. 29). See BLM Responses 2-15, 2-64, 2-65, 2-66, and 2-67.*

11. Thin heavy enough to stimulate development of understory vegetation, but don't thin too heavy. Recognize that thinning captures mortality and that plantation stands are already lacking critical values from dead wood due to the unnatural stand history of all clearcut and planted stands. Tom Spies made some useful observations in the Northwest Forest Plan Monitoring Synthesis Report: "Certainly, the growth of trees into larger diameter classes will increase as stand density declines (Tappeiner and others 1997). At some point, however, the effect of thinning on tree diameter growth levels off and, if thinning is too heavy, the density of large trees later in succession may be eventually be lower than what is observed in current old-growth stands. In some cases, opening the stand up too much can also create a dense layer of regeneration that could become a relatively homogenous and dominating stratum in the stand. Furthermore, if residual densities are too low, the production of dead trees may be reduced (Garman and others 2003). Thinning should allow for future mortality in the canopy trees." http://www.reo.gov/monitoring/10yr-report/documents/synthesis-reports/index.html

BLM Response 2-70: *The marking prescriptions are in Chapter 2 of the EA (pp. 19-23, 28-29). See BLM Response 2-69.*

12. If using whole tree yarding or yarding with tops attached to control fuels, the agency should top a portion of the trees and leave the greens in the forest in order to retain structure and nutrients on site.

BLM Response 2-71: *Many branches break off when trees fall or during yarding. There were no issues associated with soil nutrients identified.*

13. Avoid impacts to raptor nests and enhance habitat for diverse prey species. Train marking crews and cutting crews to look up and avoid cutting trees with nests of any sort and trees with defects.

BLM Response 2-72: *Gaps and skips would be established based on habitat features such as hardwood trees, snags, large down wood, and trees possessing uncommon or unique structural characteristics (EA, p. 22, 28). Retained trees include trees displaying defects and physical characteristics that my provide wildlife habitat (EA, p. 22).*

14. Take proactive steps to avoid the spread of weeds. Use canopy cover to suppress weeds. Avoid soil disturbance and road construction.

BLM Response 2-73: *Logging and road building equipment would be washed prior to moving into the contracted area (EA, 23, 27, 34). There is an ongoing District-wide weed management program.*

15. Buffer streams from the effects of heavy equipment and loss of bank trees and trees that shade streams. Mitigate for the loss of LWD input by retaining extra snags and wood (and green trees for recruitment) in riparian areas. Recognize that thinning "captures mortality" and results in a long-term reduction in recruitment of functional down wood, and that effect is not mitigated by future growth.

BLM Response 2-74: *Riparian Reserves and riparian management areas would be one site-potential tree height (EA, p. 20). "No-treatment" areas would be established within Riparian Reserves and riparian management areas based upon the nature of individual streams (EA, p. 20). The marking prescription in Riparian Reserves includes retention of snags and large down wood including all decay class 3, 4, and 5 large woody debris (EA, p. 21). Relative density of green trees would range from 25 to 30 and average minimum canopy cover would be 50 percent in the treated portion of Riparian Reserves (EA, p. 21).*

16. Avoid road construction. Where road building is necessary, ensure that the realized restoration benefits far outweigh the adverse impacts of the road. Carefully consider the effects of roads on connectivity, especially at road/stream crossings, across ridge tops, and midslope hydrological processes (such as large wood delivery routes). The NEPA analysis should rank new road segments according to their relative costs (e.g. length, slope position, soil type, ease of rehabilitation, weed risk, native vegetation impacts, etc.) and benefits (e.g. acres of restoration facilitated), then use that ranking to consider dropping the roads with the lowest ratio of benefits to costs. Avoid log hauling during the wet season. Once the relative acres accessed per mile of road is determined, take the analysis one step further and determine the "effective road density" of each segment. In other words, extrapolate as if that much road were required to reach each acre of the planning area, then compare the resulting road density to standards for big game, cumulative hydrological impact, etc? For example, if a new spur road accesses thinning opportunities at a rate of 200 acres of forest per mile of road, then divide 640 acres per section by 500 acres per mile to determine the effective road density of 3.2 mi/mi^2.

BLM Response 2-75: *Road construction would be minimized (EA, pp. 10-11). The effects of road construction were analyzed in the EA (Port-Orford-cedar, p. 23 and Appendix B; Cultural Resources, p. 31; Botany, p. 34; Wildlife, p. 66, 77, 78, 80, 81, 87; Aquatics, p. 88, 91-106 and Appendix E; Soils, p. 106, 108; Carbon Storage and Release, p. 116, 117 and Appendix F). Ground-based yarding would be restricted to the dry season (EA, p. 23) and use of unsurfaced roads for timber hauling would be limited to the dry season (EA, p. 24).*

17. If this project involves biomass utilization, the impacts need to be clearly disclosed. How will the biomass be moved from the remote corners of the treatment areas to the landings? Will there be extra passes made by heavy equipment? Will the landings be enlarged to make room for grinders, chip vans, and other equipment? Can the local forest roads accommodate chip vans? Will the roads be modified to make them passable by chip vans? What are the impacts of that? What are the direct, indirect, and cumulative impacts on soil, water, wildlife, and weeds?

BLM Response 2-76: *This project does not involve biomass utilization.*

18. Develop an alternative that addresses carbon and climate by (a) deferring harvest of older forests to store carbon and provide biodiversity and connectivity and (b) thin younger stands to increase forest resilience and diversity and connectivity. Recognize that there is a carbon cost associated with thinning. As stands develop from young to mature to old, they recruit large amounts of material from the live tree pool to the dead wood pool and this pool continues to accumulate large amounts of carbon for centuries. Logging, even thinning, can dramatically affect the accumulation of carbon in the dead wood pool by capturing mortality, diverting it from the forest, and accelerating the transfer of carbon to the atmosphere. Carbon stays out of the atmosphere much longer if it remains in the forest as live and/or dead trees, instead of being converted to wood products and industrial and consumer waste.

BLM Response 2-77: *Carbon storage and release were analyzed in the EA (pp. 115-119 and Appendix E).*

19. If the stand is younger than 80 years, the agency may rely on the Pechman exemption and not complete surveys for rare and uncommon species. However, this exemption is intended to apply to even-aged stands, and the agency should apply the survey protocol in any portion of units with two or more predominant trees per acre. See Red Tree Vole Survey Protocol Version 2.1.

BLM Response 2-78: *Survey and manage requirements were addressed in the EA (p. 13, 33, 65-68). All stands proposed for treatment are less than 80 years old (EA, pp. 37 and 38). The minimum quadratic mean diameter necessary to trigger protocol surveys for red tree voles is 18 inches diameter breast height. The maximum quadratic mean diameter of the proposed variable retention harvest units in Section 35, T. 29 S., R. 9 W., W.M. is 15.7 inches diameter breast height, which does not trigger the requirements for red tree vole surveys (EA, p. 13).*

20. Descriptions of the effect of NOT thinning dense young stands should incorporate the information presented in Lutz. J.A. 2005. The Contribution of Mortality to Early Coniferous Forest Development. MS Thesis. University of Washington. http://faculty.washington.edu/chalpern/Lutz_2005.pdf This MS Thesis looked at long-term transect data from young forests in Western Oregon and found that non-competitive mortality and gap forming processes are very much in operation in dense young planted stands. This indicates that in young stands the homogenizing influence of stand growth and competitive mortality is significantly counter-balanced by non-competitive mortality that tends toward heterogeneity and structural diversification. This means that if young stand management is to effectively mimic natural patterns and processes, that variable density treatments must be the rule, and the scale of the mosaic must be very fine scale. Note: The study sites were located in the HJ Andrews Experimental Forest and were not naturally regenerated, so it is likely that in young stands that are naturally regenerating after disturbance such as fire, the heterogeneity and gap forming processees [sic] would be even more pronounced.

BLM Response 2-79: *Over 70 percent of the treatments in the action alternatives are variable density thinning treatments (EA, pp. 18-19 and Appendix A) and fine scale variation was considered in project design (EA, p. 21).*

21. Make the NEPA analysis thorough, explicit, and transparent on all these issues.

BLM Response 2-80: *We strive for thorough, explicit, and transparent environmental assessments.*

Why Mature Forests Must be Protected.

BLM Response 2-81 (Items 1-15 below): *The RMP (p. 112) defines Mature Seral Stage as "The period in the life of a forest stand from culmination of mean annual increment to an old-growth stage or to 200 years." In general, stands in the analysis area reach culmination of mean annual increment no earlier than 80 years old. This project would not reduce mature forest because all of the harvest stands are younger than 80 years old (EA, p. 37-38).*

> "As recognized by FEMAT, a conservation strategy for the Pacific Northwest must consider mature forests as well as OG. Forests are considered to enter maturity when their mean annual increment culminates, following which time they begin developing the characteristics that ultimately produce OG. Mature forests serve various important ecologic functions. They serve as future replacements for old-growth, help protect existing OG by reducing the starkness of age-class boundaries, and provide landscape connectivity and transitional habitat that compensate to some degree for the low levels of OG. Moreover, they are almost certainly more resistant to crown fires than younger forests, and hence contribute to buffering the landscape."

Late-Successional and Old-Growth Forests in the Pacific Northwest. Statement of DAVID A. PERRY Professor Emeritus. Department of Forest Science, Oregon State University, before the Subcommittee on Public Lands and Forests of the Committee on Energy and Natural Resources, United States Senate. March 13, 2008

1997 Marbled Murrelet Recovery Plan, page 143

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

BLM Response 2-82: *Alternative Two, Sub-Alternative B of the Camas Valle 2011 Harvest Plan EA does not included vegetative treatments in stands of LSRs that are over 80 years of age. A feathered approach to thinning would be applied in some units abutting suitable nesting habitat (EA, 20 and 77).*

The agency must carefully review and document their consideration of all the reasons not to log mature forests set forth in this paper: Doug Heiken 2009. The Case for Protecting Both Old Growth and Mature Forests. Version 1.8 April 2009. http://dl.getdropbox.com/u/47741/Mature%20Forests%2C%20Heiken%2C%20v%201.8.doc

BLM should avoid regen harvest aprotect maturing forests because they are the best candidates to grow and develop into old-growth habitat in the shortest time frame.

1. There is a serious region-scale deficit in mature and old-growth forest habitat. Over time, the Northwest Forest Plan seeks to re-establish 3.44 million acres of mature and old-growth forest (http://www.fs.fed.us/land/fm/oldgrow/oldgrow.htm). But by continuing to log mature forests we are significantly delaying this recovery. If we are going to make a timely recovery from that deficit, and give struggling species a chance to survive the habitat bottleneck that we have created, we must protect mature forests so that they can become old-growth, and we must manage young forest so they can become mature.

BLM Response 2-83: *Regional-scale analysis is beyond the scope of this assessment. The revision of the western Oregon RMPs is ongoing and provides an opportunity to address landscape-level issues.*

Additionally, the Here's Your Sign variable retention harvest project is situated on lands allocated by the Roseburg RMP as General Forest Management Area where the dedicated purpose is for commodity production of timber. This is not a question that needs to be revisited every time a timber management action is proposed.

2. The transition from mature forest to old growth is a process that takes time and varies depending on factors such as location and species and disturbance events. In a mature forest, all the ingredients are there to make old growth (e.g., large trees) and the scientists agree that these forests need protection to help meet the current old-growth forest deficit.

3. The architects of the Northwest Forest Plan found that many of our best large intact forest landscapes are mature forests, not old-growth. Some large forest fires burned westside forests between 1840 and 1910 and many such areas were skipped over by the timber harvest planners because they were more intent on converting the very old forests to tree plantations. These former fire areas, now mature forests, offer some of our best hopes of recreating large blocks of intact older forest.

BLM Response 2-84: *The O&C lands are located in a fragmented ownership landscape, not large intact forest landscapes such as exist on National Forests with contiguous ownership and vast areas of wilderness. The General Forest Management Area, in which all of the proposed variable retention harvest is located, was allocated for commodity timber production which includes harvest of mature timber. This is a timber management decision made in a resource management plan that need not be revisted, other than in a plan revision, each time a timber management action is proposed.*

4. Cutting mature forests is not needed for ecological reasons. These forests are already exhibiting the characteristics that provide excellent habitat and they continue to develop and improve without human intervention. As recognized in the Northwest Forest Plan standards and guidelines for Late Successional Reserves, stands over 80 years old do not need to be manipulated to become old-growth. All the ingredients are there, they just need time.

BLM Response 2-85: *The purpose and need of this project is on pages 2-4 of the EA. Furthermore, the stands located in Section 35, T. 29 S., R. 9 W. that comprise most of the Here's Your Sign Timber Sale were allocated to the General Forest Management Area for the express purpose of timber production. Other land use allocations, specifically Late-Successional Reserves and Riparian Reserves were established for ecological reasons that include terrestrial and aquatic habitat objectives. See also BLM Response 2-81.*

Mature forests provide essential habitat for the species we are most concerned with such as: spotted owl, marbled murrelet, Pacific salmon, and most of the "survey and manage" species.

BLM Response 2-86: *The species listed were analyzed in Chapter 3 of the EA.*

5. Protecting mature and old-growth forest leads to a real ecological solution, while protecting only old-growth is merely a partial solution to an ecological problem that is bigger than just old-growth.

BLM Response 2-87: *See BLM Response 2-81 and BLM Response 2-85.*

6. Cutting mature forest will remain controversial and socially unacceptable. If we seek to resolve conflict over management of older forests, protecting the old-growth while leaving mature forests unprotected would be only half a solution and would lead to more conflict. Shifting to a restoration paradigm gets everyone at the table working toward the same goal.

7. If mature forest is left unprotected, some members of the environmental community will distrust the agencies and oppose them on many fronts.

8. Leaving mature forests unprotected would leave substantial areas of roadless lands subject to future conflict. Many westside roadless areas may not qualify as old-growth, but still provide important values as roadless and mature forests.

BLM Response 2-88: *Roadless areas are a construct of National Forest land management. This does not apply to BLM lands in western Oregon, and there are no vast tracts of O&C lands that possess comparable characteristics.*

9. Complicated environmental analysis will be required for logging mature forests compared to thinning plantations. Wildlife surveys will be needed. Environmental Impact Statements will more often be needed instead of abbreviated Environmental Assessments. Formal consultation under the Endangered Species Act will more often be triggered.

BLM Response 2-89: *Environmental analysis for thinning projects is no simpler than for logging older forests, as many of the same issues exist in either case. Age of a forest does not dictate that an environmental impact statement is required, where the analysis shows that impacts are not significant in the context of the environmental impact statement to which the EAs are tiered. Wildlife surveys are still required where indicated, in either instance, as is consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service.*

10. We do not need to log mature forest to provide jobs. Less than 2% of the jobs in Washington and Oregon are in the lumber and wood products sectors, and only a small fraction of those are on federal land and only a fraction of those are related to mature forest logging. Many more environmentally benign jobs are available in restoring roads, streams, thinning young plantations, and managing fire and recreation.

11. We do not need to log mature forest to prop up the economy. The NW economy has greatly diversified in the last decade. Our economy typically creates more new jobs every year than exist in the entire lumber and wood products sectors.

12. We do not need to log mature forest to prop up the timber industry. Less than 10% of the logging in Oregon and Washington in recent years has been on federal lands. Only a fraction of that is mature forest. Much more environmentally benign and socially acceptable timber can be derived from thinning young plantations or small diameter fuel reduction where it is appropriate.

BLM Response 2-90 (Items 11-13): *In its 2012 report[8], the Oregon Forest Resource Institute found the following:*

- *The forest sector which includes forest management, timber harvest, and forest products manufacturing accounts for 76,000 jobs, representing 5.3 percent of all Oregon jobs;*
- *11 forest sector jobs are retained or created for each million board feet (~ 40 acres) of timber harvested;*
- *In rural counties such as Clatsop, Douglas and Lake, the forest sector accounts for 20-to-30 percent of economic output and 12-to-18 percent of all employment;*
- *The forest sector provides approximately five percent of annual state and local government revenues;*

[8] *Oregon Forest Resources Institute. 2012. http://www.theforestreport.org*

- *The forest sector represents 6.8 percent of the total economic base for the State of Oregon and contributes 12.7 billion dollars in industrial output; and*
- *Average mill wages in the western U.S. are $19.00/hour;*
- *In eastern Oregon, 49 primary manufacturers have closed since 2003, primarily from a lack of logs traditionally provided by Forest Service lands.*

13. Since managing these stands is not "needed" for any ecological reason or any economic or social reason, what would be the objective?

BLM Response 2-91: *The purpose and need for this proposal are described on pages 2-4 of the EA. The ecological and economic needs have also been demonstrated.*

14. Standing in a mature forest, once gets the distinct feeling that “this beautiful place should not be destroyed by logging.”

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Please accept the following comments on the Camas Valley 2011 Harvest Plan EA.

Of the "action" alternatives proposed in this EA, Umpqua Watersheds (UW) favors Alternative 2, sub-alternative A over the others. Of the several sites visited, it seemed to us that most would benefit from application of those careful and thoughtful treatments, described in the EA, which appear to place environmental restoration ahead of, or at least equal to, simple resource extraction. That is, UW favors variable retention thinning (VRT) operations, with that model's included "skips", gaps and retention of significant structural features such as legacy old growth, hardwoods, snags (standing and down), etc. We favor the strict minimizing of new road construction and the complete decommissioning of any new roads required to conduct harvest/restoration activities. (UW only wishes such progressive forestry practices as VRT might be expanded to at least some of the district's matrix lands, as well.)

As documented by district personnel, units in section 5 include Marbled Murrelet (mamu) habitat and nests.

BLM Response 3-1: *One unit (29-8-5E) in Section 5, T.29. S., R. 8 W. has enough residual habitat trees to approximate habitat suitability for the marbled murrelet. Occupancy of the unit or the adjacent habitat was never documented during surveys done in 2011 and 2012 but a murrelet was heard east of the unit in 2012 (EA, Table 3-12, p. 61).*

Units 29-8-5A, 29-8-5B, 29-8-5C, 29-8-5D, 29-8-5F (EA Appendix C, Table C-4), are not considered suitable habitat for the murrelet, but are within 100 yards of suitable murrelet habitat. Surveys were done in and around these units in 2011 and 2012 but occupancy behaviors were not observed in the units.

Occupancy behavior by a murrelet is only known in the forest stand north of Unit 29-8-5D and adjacent to Unit 29-8-5C (EA, Table 3-12, p. 61). Occupancy by murrelets refers to observing murrelets flying in a circle above the stand, or flying at or below the tree canopy (EA, p. 61). This flying behavior indicates a high probability that murrelets may be nesting in a particular forest stand but nest sites are rarely found. The proposed units in Section 5, T. 29 S., R. 8 W. do not include a forest stand with a known murrelet nest nor has occupancy behavior been observed in any proposed units. Units 29-8-5C and 29-8-5D are within 100 yards of the stand where occupancy behavior was observed, as discussed above. The occupancy behavior was observed in 2011, but murrelets were not detected during subsequent surveys done in 2012 and 2013.

In units 29-8-5D and 29-8-9A every effort, as described in the EA, and more, needs to be expended to protect these increasingly important breeding refugia for this rapidly declining species. It strikes us as more than a little cavalier to state that proposed operations are intended to improve such habitat in two or more decades. Clearly, the mamu may not have decades to wait before its breeding numbers decline beyond what is biologically sustainable. This sentiment, of course, applies to the Northern Spotted Owl (NSO) as well.

One location we visitied, 29-8-5C impressed us with the number and variety of large and old trees. We noted the existing down wood, snags and hardwood component therein; the associated under story and the exceptional presence of "wildlife" trees. Try as we might, UW could find no good reason for the BLM to construct/improve portions of Road BN 6 and the entirety of BN 6A into the unit. It is UW's studied opinion that no management operations are presently needed in unit 29-8-5C for the improvement of mamu and NSO habitat that would not cause more harm than benefit to these declining species. Unit 29-8-5C and its associated road(s) should be dropped from this harvest plan.

BLM Response 3-2: *See BLM Response 3-1. The forest conditions in Unit 29-8-5C are summarized in Table 3-2 of the EA (p. 38). Stand exam data reported the presence of older remnant trees in some of the proposed units, at densities of generally less than one per acre. These trees, and snags, are not the focus of thinning and would be retained to the greatest degree practicable (EA, p. 19). Additionally, a feathered thinning treatment would be applied along Unit 29-8-5C where it is adjacent to older forest stands (EA, p. 20). Treating unsuitable marbled murrelet habitat in Unit 29-8-5C would accelerate development of suitable nesting habitat (EA, p. 77).*

Road BN6 and ridge spur BN6A are necessary to facilitate uphill yarding in Unit 29-8-5C as downhill yarding would be necessary without these two roads. Downhill yarding in a stand to be thinned would result in excessive stand damage that would prevent us from meeting treatment objectives for Late-Successional Reserves which are described in the EA (p. 3).

Unit 29-8-5C is not considered suitable habitat for the marbled murrelet (EA Appendix C; Table C-4) but a few scattered larger trees are present and down wood is abundant in some locations. The EA (pp. 40-42, 70-71) acknowledges the effects of "No Action" on the development of the forest stand as well as the foreseeable changes after the proposed treatments (EA, pp. 43-50). The EA describes the changes within the forest stands as a result of harvest and discusses (for example) that over the long term gaps created during the variable density thinning "would allow for the growth of larger trees adjacent to the openings, with full crowns and large limbs more typical of open-growth conditions. The increased growth rates, expected to persist for 30 years or longer, would aid in differentiation of tree sizes and crown characteristics associated with mature and late-successional forest more quickly than if left untreated." (EA, p. 46). These changes equate to better habitat development and better connection between habitat patches that are scattered throughout Section 5, T.29. S., R. 8 W.

The EA (pp. 74-78) also acknowledges the short term and long-term effects on the northern spotted owl and the marbled murrelet from thinning the proposed units.

UW does not favor the sub-alternative B, with its variable retention harvest (VRH). Having visited unit 35, I concur with the scoping comment on pg 7 of the EA which stated: *"Along with the adjoining forest that was recently thinned, unit 35 is close to providing a large block of the best owl habitat on the landscape, closer than younger stands in the LSR."* In its response to this comment, the BLM stated: *"Section 35 is not a large block of the best owl habitat on the landscape."* This response has improperly taken the commenter's remark out of context and thereby altered its meaning. The commenter opined that unit 35 is "close" to that improved condition and not that it is already there.

If variable retention or commercial thinning are not applicable to units in section 35, then UW prefers the "no action" alternative at this site.

Further, having visited the Buck Rising VRH site, following harvest activities, UW noted that, despite the emphasis Drs. Johnson and Franklin placed on hardwood retention in the clear cut areas, as part of their "early seral" prescription, most Big Leaf Maples and Madrones had been felled and not retained, except where they occurred in the retention blocks. This seems to cast doubt on the sincerity of the BLM's commitment to the ecological aspects of the good doctors' model.

BLM Response 3-3: *Unlike the Buck Rising contract, a provision to retain all hardwoods, with the exception of those that present safety concerns, is included in the Here's Your Sign Timber Sale contract which includes the variable retention harvest units in section 29-9-35.*

Leaving semantics aside, Buck Rising, in our opinion, might best be characterized as a "clear cut with retention patches." As BLM certainly is well aware, the Middle Fork Coquille Watershed is badly fragmented by past and current clear cut harvest practices. One doesn't need a degree from the OSU School of "Forestry" to realize that this beleaguered river and its tributaries have been, and continue to be, badly degraded over the decades and into the present. Water flows in the summer are pitiful. Water quality is poor in almost any season. The Middle Fork, as so

many others of Oregon's Coast Range watersheds, does not need more management undertakings that result in further fragmentation. Rather, this and all other Coast Range landscapes need restoration and protection from further insult, environmentally speaking.

BLM Response 3-4: *None of the subwatersheds in the analysis area are considered susceptible to increases in peak flow stemming from unrecovered canopy openings (EA, p. 92). No direct effects would be expected to any fish species inhabiting streams adjacent to or downstream of proposed harvest units, fish habitat, water quality or water quantity (EA, pp. 95, 102, 103, 104). There would be no cumulative degradation of water quality in the analysis area (EA, p. 104).*

While it is true that, for the most part, anadromous fish passage is blocked at about HWY 42 milepost 50, well above the falls just upstream of the now (sadly) closed Bear Creek Recreation Area (thanks Coos Bay BLM), it is also likely that, in the past, Camas Valley was open to salmon and steelhead migrations. It would be a wonderful addition to the low gradient stream habitat required to restore Coastal Coho Salmon if the BLM would direct its attentions to creating fish passage at this location, known by generations of recreationists from Camas Valley as “Jump Off Rock.”

BLM Response 3-5: *While there is some evidence of steelhead navigating the Middle Fork Coquille River falls around Bear Creek (Bradford Falls), there is no evidence that the Middle Fork Coquille River was open to salmon migration above Bradford Falls near Bear Creek. The National Marine Fisheries Service did not designate Critical Habitat or Essential Fish Habitat for the Oregon Coast Coho Salmon above Bradford Falls because the area was not considered to be historically used by the species due to the presence of this natural barrier.*