

*White Castle Variable Retention Harvest*  
*Roseburg Secretarial Demonstration Pilot Project*  
*Environmental Assessment*  
DOI-BLM-OR-R050-2011-0006-EA

Bureau of Land Management  
South River Field Office, Roseburg District Office

**Background:**

The White Castle Variable Retention Harvest (White Castle VRH) timber sale represents the second of two sales analyzed in the Roseburg Secretarial Demonstration Pilot Project environmental assessment (EA). The Secretary of the Interior directed three Bureau of Land Management (BLM) Districts in southwest Oregon to develop Demonstration Pilot Projects for the purpose of illustrating the principles of ecological restoration developed by Drs. Jerry F. Franklin and K. Norman Johnson.

**Decision:**

It is my decision to authorize the White Castle VRH timber sale, conducting variable retention harvest of 187 acres in the General Forest Management Area and Adaptive Management Area, in Sections 31, 32 and 33, T. 28 S., R. 2 W.; Sections 23, 25 and 26, T. 28 S., R. 3 W.; and Section 4, T. 29 S., R. 2 W., Willamette Meridian. The project will be implemented as described in Alternative Two, Sub-Alternative B in the EA (pp. 22-24).

Nine units will be harvested, yielding an estimated 6,395 thousand board feet of timber, all chargeable to the Roseburg District annual allowable sale quantity (ASQ).

Units 5, 6, 7, 8 and 9 will be subject to seasonal restriction from February 1 through June 15, both dates inclusive, subject to completion of spot checks for the northern spotted owl within ¼-mile of the units. These restrictions may be waived earlier if it is determined the northern spotted owls are not present, have not attempted to nest, or have failed in nesting attempts. If it is determined that northern spotted owls are present and nesting within ¼-mile, operations will be discontinued and full seasonal restrictions for habitat modification will be employed.

Harvest will be accomplished with a combination of ground-based and cable yarding systems, subject to dry season restrictions, for activities noted below. The dry season is typically mid-May through mid-October, but may be either extended or shortened subject to weather conditions:

- Ground-based yarding;
- Cable yarding to unsurfaced roads; and
- Timber hauling on unsurfaced roads

Ground-based equipment will operate on designated skid trails, using pre-existing trails to the greatest extent practicable, and is generally restricted to slopes of 35 percent or less, but may be authorized on steeper inclinations and steeper pitches between gentler benches where appropriate.

Sub-soiling of designated landings, new skid trails, and associate equipment areas is required on portions of Units 1, 2, and 7 and 8 designated for ground-based harvest, and on all of Units 5 and 9. Sub-soiling of skid trails from previous stand entries is also required in Units 2 and 5. This shall occur within the same dry season in which harvest is conducted.

Cable yarding will be conducted with a skyline yarding system capable of maintaining a minimum of one-end log suspension, and equipped with a mechanical slack-pulling carriage having a minimum of 100-feet of lateral yarding capacity.

As stated in the EA (p. 22), all equipment used in logging and road construction will be steam cleaned or pressure washed prior to move-in to the sale area to remove soil and materials that could transport weed seed or root fragments.

As discussed in the EA (pp. 12-13), green tree retention requirements would be met by a combination of dispersed trees and qualifying trees within aggregated retention. In stands where trees greater than 20 inches diameter breast height are not present, the largest available trees would be reserved.

Sale unit numbers, corresponding EA designations, harvest acres, and green tree retention numbers are illustrated in Table 1.

**Table 1 – Unit Description**

Sale Unit Number	EA Designation	Harvest Acres	Aggregate Retention Acres	Green Tree Retention per Acre	Minimum Retention Tree Diameter Class*
1	28-2-32A	33	6	11	14
2	28-2-32A	13	3	11	14
3	28-2-32B	1	0	8	14
4	28-2-32B	13	2	8	14
5	28-2-32C	7	1.4	7	20
6	28-2-32D	16	3	8	20
7	28-2-31A	28	8	18	14
8	28-2-25A	73	50	25	20
9	28-3-23A	3	5	26	20
<b>Totals</b>		<b>187</b>	<b>78.4</b>		

\*The largest trees are either 20 inches diameter breast height or greater, or where there are insufficient, well-distributed 20 inch trees, selection was based on those among the largest 40 per acre in the stand.

Spot checks for northern spotted owls will be conducted concurrently with operations on Units 1, 2, 3 and 4. If it is determined that northern spotted owls are present and nesting within ¼-mile, full seasonal restrictions for habitat modification will be employed.

Existing access will be supplemented by the following:

- Renovation of 2,460 feet of old spur roads or unnumbered roads in Units 2 and 8, and construction of 5,990 feet of new spur roads. Spur Road Nos. 7, 8, 9 and 13, totaling 3,075 feet in length, will be surfaced with rock to provide winter logging opportunities. All remaining spur roads, whether constructed or renovated, will be unsurfaced and use will be restricted to the dry season.
- Improvement of 430 feet of Road No. 29-2-4.2 and 230 feet of Spur Road No. 12 by surfacing with rock.

All road construction, including optional operator spurs, road renovation and improvement is seasonally restricted to the dry season, typically mid-May through mid-October, but may be either extended or shortened subject to weather conditions.

All unsurfaced spur roads will be winterized at the end of dry season operations. Upon the completion of harvest, all spur roads and the improved segment of Road No. 29-2-4.2 shall be winterized. Upon completion of burning operations, decommissioning will be done as described in Table 2.

**Table 2 – Road Decommissioning**

Road or Spur No.	From Station	To Station	Method of Decommissioning
29-2-4.2	0+00	2+00	Water bar, block, slash mat, & remove culverts
29-2-4.2	2+00	4+30	Water bar
Spur 1	0+00	4+70	Water bar, block, subsoil & slash mat
Spur 2	0+00	5+00	Water bar, block, subsoil & slash mat
Spur 3	0+00	5+35	Water bar, block, subsoil & slash mat
Spur 4	0+00	13+15	Water bar, block, subsoil & slash mat
Spur 5	0+00	3+05	Water bar, block, subsoil & slash mat
Spur 6	0+00	3+00	Water bar, block & slash mat
Spur 6	3+00	11+20	Water bar
Spur 7	0+00	1+55	Water bar, block, & slash mat
Spur 8	0+00	3+30	Water bar, block, slash mat, & remove culverts
Spur 8	3+30	17+10	Water bar
Spur 9	0+00	3+35	Water bar, block, & slash mat
Spur 10	0+00	10+60	Water bar, block, & slash mat
Spur 11	0+00	0+70	Water bar, block, & slash mat
Spur 12	0+00	2+60	Water bar, block, slash mat, & remove culverts
Spur 13	0+00	8+75	Water bar & remove culverts

Three optional spur roads may be constructed/renovated at the operator's discretion. Two are located in Unit 7, and identified in the EA (p.17) as road segments WC 14 and WC 15, which may be rocked at the operator's expense. The third optional spur road is an existing unnumbered road segment which may be renovated by brushing and blading, but remain unsurfaced. If these optional spur roads are utilized, they will be decommissioned by waterbarring, slash mulching and blocking.

Except for logs sold and removed from the contract area, all logs greater than eight inches in diameter and eight feet in length within 50 feet of designated landings shall be segregated and decked or windrowed for firewood utilization.

Slash from ground-based harvest operations in portions of Units 1, 2, 7. And 8, and Units 5 and 7 will be machine piled and covered in the same dry season in which harvest operations occurs. Slash in cable-yarded portion of Unit 7, up to six inches in diameter and located within 100 feet southwest of Road No. 28-2-32.1, will be hand piled and covered. Machine piles and hand piles will be burned in late-autumn or early winter after periods of sustained precipitation. Except for the portion of Unit 7 southwest of Road No. 28-2-32.1 all other areas designated for cable yarding will be underburned.

As described in the EA (pp. 20 and 21) and illustrated in Table 2-3 (page 21), following site preparation the units will be planted to a density of 150 to 200 trees per acre, with a mixture of Douglas-fir, western redcedar, incense-cedar, sugar pine, and western white pine. Stand density will be monitored and density control treatments applied as needed to achieve stand density targets at age ten to 20 years at approximately 150 to 250 trees per acre

### **Public Involvement & Response to Comment:**

A presentation was made by Drs. Johnson and Franklin at Seven Feathers Convention Center, in Canyonville, Oregon on February 16 and 17, 2011 to introduce the public to their principles of ecological restoration forestry. This was followed by a series of public meetings at the Roseburg District Office and public field visits to the stands selected for treatment.

Letters were sent to landowners with property adjacent to BLM-administered lands where variable retention harvest is proposed, those whose property lies beside or astride identified haul routes and those with registered surface water rights for domestic use located within one mile downstream of any proposed harvest units. Recipients were encouraged to share any concerns or special knowledge of the project area that they may have.

Letters were also sent to the Cow Creek Band of Umpqua Indians, the Confederated Tribes of the Siletz, and the Confederated Tribes of Grand Ronde requesting identification of any special interests they might have in the lands in question.

The Roseburg District BLM provided a 30-day formal scoping period for public comment on the proposal between June 15 and July 15, 2011. Scoping comments were received from thirteen organizations, and several individuals (EA p. 4). Informal discussions were also held with the Oregon Department of Fish and Wildlife.

A small subset of comments was identified that might refine alternatives and project design, which were addressed in the EA (pp. 5 and 6). A larger body of comments which were generic in nature, outside the scope of the EA to consider, or expressive of issues commonly addressed in project EAs are summarized in Appendix G of the EA.

A 30-day period for public review was provided with release of the EA on April 3, 2012. Comments were received from three individuals and four organizations. Comments specific to this timber sale are noted in italics and addressed below.

*The number one purpose (and implied need) for this project is:*

*The first objective is to demonstrate a variable retention harvesting model designed to create complex, early-successional habitat that will function for up to 30 years and: support birds that depend on flowering and fruiting plants, provide forage for ungulates (deer and elk), provide habitat for cavity-nesting birds, provide forage for a variety of moths and butterflies, and provide forage and habitat for small mammals (wood rats, deer mice, brush hares, etc.) that may provide greater prey abundance for the northern spotted owl.*

There are three stated objectives in the EA (p. 2) for the Roseburg Secretarial Demonstration Pilot, these being the creation of early-successional habitat, design of a timber sale with participation of the U.S. Fish and Wildlife Service for the purpose of applying Recovery Actions from the Northern Spotted Owl Recovery Plan, and design and offering of timber sales that will provide jobs and contribute timber for manufacturing. The order in which they are discussed in does not confer or establish a hierarchy of importance among the three objectives. The need for this type of habitat is addressed in Chapter Three of the EA (pp. 67-70, 72-75; 83-86, and 87-88).

*The BLM is not working in a “moist forest” at all. This is a semi-dry forest, and it should be treated with the dry-forest restoration goals of Franklin and Johnson. For instance, the EA documents the fire-return interval in these forests is as frequent as 11 years, or 20 years. That frequent fire interval is not a moist forest, it’s a dry forest. Another example of dryness is that the EA claims many species are in peril because of fire suppression.*

Based on the prevailing plant series, this is a moist forest setting. As discussed in the EA (p. 36), classification is based on the concept of potential natural vegetation. Series is based on the dominant, most shade tolerant regenerating tree species on the site. The forest stands comprising the units in this sale are classified as western hemlock plant series.

As a result of frequent natural disturbances in southwestern Oregon, the overstory of forests in the western hemlock series is dominated by Douglas-fir. In terms of numbers, western hemlock is, or has the potential to be, the dominant tree species in the understory, and is particularly abundant in older stands with a low frequency of disturbance.

As described in the EA (p. 108) average annual precipitation in the analysis area ranges from approximately 41 to 77 inches. As illustrated on Map 21 (Average Annual Precipitation, p. 97) of the Myrtle Creek Watershed Analysis and Water Quality Restoration Plan, on an annual basis precipitation at the elevations where the units are located is in excess of 50 inches, and ranges as high as 70 inches.

A citation to page 140 of the EA, notes a fire return interval of as little as 11 years. This was with regard to the **drier south and west slopes** [emphasis added] where return intervals of 11 to 30 years are probably more the norm. This does not support the conclusion that these are dry forest sites, as this anomaly is largely attributable to the character of the soils, described in the EA (p. 132) as steep sideslopes with shallow sandy and sandy loam soils with high percentages of gravels and cobbles, indicative of poor water holding capacity. The presence of areas of droughty soils does not equate to “dry forest.”

The second citation to the EA (Appendix E, p. 4) regarding fire interval is also misrepresented. The discussion, pertaining to the Little River watershed, illustrates that fire return is variable across the landscape. Specifically, it identifies an estimated return interval, at the drainage scale, of 20 to 100 years, prior to the advent of fire suppression. The variability of return interval is easily attributable to lower precipitation in the valley bottoms (no snow pack), combined with a higher degree of human activity, versus higher precipitation on mountain ridge tops (heavy snow pack), and substantially less human activity.

Citing page 73 of the EA, the comment infers a claim by the BLM that many species are in peril because of fire suppression. No such conclusion exists on page 73. What was noted in the EA (p. 74) was that after decades of wildfire suppression in the Pacific Northwest, timber harvesting has created a majority of the early-successional plant communities. Without natural and/or induced disturbances, open habitats are becoming less common on the Federal landscape in western Oregon, and species that depend on them are becoming uncommon or rare.

*The EA clearly says this is a dry forest:*

*“The area in which the proposed project is located experiences a very high frequency of lightning storms in the summer and early-autumn. Fire has been actively excluded from these areas for many years, resulting in an accumulation of fuels that may exceed historic levels, resulting in the area being assessed as Fire Regime Condition Class (FRCC) 3.”*

The EA does not say that this is a dry forest, and the citation offered in the comment does not support the claim that it is. As noted above, the project area receives upwards of 50 inches of precipitation, annually. The reason that this area experiences a high frequency of lightning storms is a matter of topography. As moisture-laden systems approach these first ridges of the southern Cascade Mountains the air mass is forced upwards. The process, known as orographic lifting, creates uplifting and turbulence that under the right conditions and in association with convective uplift caused by solar heating may lead to development of thunderstorms. The system of intersecting ridge systems at the junction of three watersheds and solar heating of south and west slopes is especially conducive to the development of thunderstorms.

The second portion of the cited text has nothing to do with whether or not the project area is located in a moist or dry forest. This discussion pertains to the accumulation of fuels over time, and what this means in terms of the propensity of the area to experience wildfires of uncharacteristic severity, in comparison with historic condition preceding active fire suppression.

*Because this is a “restoration” project of early-seral habitat, the BLM should have provided for 100% of the woodpecker and cavity nesting population, not just 40%. Just the fact that 60% of the cavity nesters will lose their habitat due to this project means the Purpose and Need of this project, to provide for cavity nesting birds, is suspect.*

This observation truncates the full discussion contained in the EA (p. 13), which notes the immediate objective of providing a **minimum** [emphasis added] of 1.2 snags per acre, consistent with management direction. The EA describes establishing aggregates around concentrations of snags and clumping trees around individual scattered snags to reduce safety risks and increase the likelihood of survival during harvest operations as ways in which we will meet minimum snag requirements. The EA also discusses other ways in which recruitment of additional snags is expected to occur such as damage to retention trees during yarding, wind breakage, and mortality caused by burning. Additional snags could also be created, if necessary, by mechanical treatment where post-harvest assessment indicates a deficit in desired numbers.

*The EA claims, “there exists a relatively large number of butterfly and moth species that require open meadow-like habitats. About 30 species of rare or uncommon butterflies and moths have been identified that require open areas in the forest”*

*In fact, the EA even says that butterflies and moths will have increases in foraging just by extra light let in by thinning. “Following canopy closure, food resources for [butterflies and moths] maybe increased...”*

This is not a claim by the EA (pp. 73 and 74) which reports on the large number of butterfly and moth species that require open meadow-like habitat as published in the findings of Muir *et al.* (2002) in *Managing for biodiversity in young Douglas-fir forests of western Oregon*.

This discussion cited pertains to the effects of thinning described for Reference Analysis One. As described in the EA (p. 97), thinning would temporarily allow sunlight to penetrate the canopy, supporting development of hardwoods, flowering shrubs and forbs, providing temporary increases in foraging habitat for the majority of butterfly and moth species until canopies reclose. As discussed in the EA (p.93), with respect to the northern spotted owl, this condition would persist for 10 to 20 years. This is in contrast to the larger openings created by variable retention harvest where early-seral conditions are expected to persist for 30 years. The dependency of butterflies and moths is reported in the EA (pp. 73 and 74).

- Caterpillars of most butterflies and moths feed on angiosperms. In a study conducted on the H.J. Andrews Experimental Forest, on the west slope of the Oregon Cascades, researchers found that 57 percent of the species in light-trap samples fed on one species of hardwood or another, particularly species of Fagaceae (Beech), Salicaceae (Willow), Ericaceae (Heath), and Rhamnaceae (Buckthorn). Thirty-one percent fed on herbs and grasses; and only 9 percent fed on conifers in the forest canopy (Hammond and Miller 1998, Miller and Hammond 2003).
- Dense conifer forests, with fewer species of flowering plants, offer some of the most unsuitable habitat for most forest butterflies and moths (Muir *et al.* 2002).

- In sharp contrast to the few species that are dependent on late-seral forest, there exists a relatively large number of butterfly and moth species that require open meadow-like habitats. About 30 species of rare or uncommon butterflies and moths have been identified that require open areas in the forest where the environment favors either forage plants for the caterpillars or the nectar-producing plants for the adults.

*The BLM has presented no data, no studies, no findings that private lands are not expected to provide adequate habitat for species dependent on early-seral forests.*

The BLM has no authority to conduct population studies on private lands. The observation that private plantations support meager populations of flowering plants and shrubs, few song birds, and little wildlife is substantiated, however, by the observations of BLM wildlife biologists and botanists, and in numerous published scientific studies.

As addressed in the EA (p. 72), Oregon Department of Fish and Wildlife has identified a lack of quality early-seral, clearly not provided by private lands, in its 2003 findings that “. . . federal forestlands in Western Oregon are increasingly lacking in adequate forage conditions. . . Quality foraging habitat is considered to be the causal factor in declining herd health for Southwest Oregon.”

*The EA states that private lands do not provide quality early-seral habitat because of no-retention-clearcuts and herbicide use. However, private lands, by their sheer quantity of clearcuts in the project area, always provide some brush habitat for early seral species. Out of the hundreds of thousands of acres clearcut in the South Umpqua watershed, there are always some acres with growth after the herbicide spraying, with prolific brush, before young forests close their canopy. There are thousands of acres of private industrial land clearcuts. While each one might not provide a brush stage for long, collectively, thousands of acres of private land clearcuts will always provide a significant amount of brushy early-seral habitat. So much is available at any one time, the pilot project adds just a drop in the bucket. There is a far greater shortage of older forests needed for wildlife, late-seral forests that only public lands can provide. It makes no sense to convert forests over 100 years old, which are currently providing owl habitat, to an age-type that is obviously not needed by wildlife.*

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.

*Yet the EA claims that this “restoration of moist forests” project is “intended to accelerate the development of older complex forest...”. Nothing could be further from the reality of what this project does. It converts older forests to young forests, the opposite of accelerating the development of older forests.*

It was a conclusion of the Northwest Forest Plan that the retention of biological and structural legacies that included down wood, snags and large green trees would provide the basis for the replacement stands to achieve functionality supporting late-successional dependent species sooner than if no carry-over components were present.

In the biological opinion for this project (p. 59), the U.S. Fish and Wildlife Service also concluded that “VRH accelerates the development of multiple canopies and the development of minor species component.” Canopy stratification and species diversification are both characteristics of complex, older forest.

*The legacy component of large, soft pieces of down wood, left over from the first logging is usually protected in BLM thinning projects, so that component should not be considered a benefit over other thinning operations that would have occurred in the younger units of the Pilot Project. The same goes for the largest of trees, which are always retained in non-pilot regeneration harvest projects.*

Category 3, 4 and 5 down wood is reserved under all timber management prescriptions, not solely in commercial thinning.

Retention trees are to be selected from among the largest diameter classes present within a unit. To say that the largest of trees, implying all large trees, are always reserved is incorrect.

*The BLM claims that all old growth is protected in this project. The EA also claims that stands of “old-growth were eliminated because harvest was considered too controversial”, implying that old growth forests are protected. However, old growth is not protected. Regeneration harvests will occur right up to the roots and crowns of old growth trees hundreds of years old.*

As stated in the EA (p. 10) all stands considered old-growth were excluded from consideration. This is a true statement. It is the overall biological function, not the presence of a few older trees that confers old-growth status to a stand. All clumps of older forest present within the harvest units have been excluded from harvest by inclusion in retention aggregates.

*For the units that leave old growth trees as dispersed retention, such as unit 25, these old growth trees are also harmed by the virtual clearcuts between and around them. In fact, the EA confirms many will die because of their forced isolation.*

Trees with apparent old-growth characteristics are largely grouped in areas of aggregate retention. There are only 72 trees across 187 harvest acres, not included within aggregates which have been specially marked because they possess unique features or characteristics.

“Many” is a highly subjective term. The EA (p. 43) identifies an anticipated mortality among dispersed retention trees of ten percent per decade over the first two decades. This would translate to one to two trees per decade. If this does occur, it would not be inconsistent with providing snags at levels sufficient to support cavity nesters at 100 percent of potential population levels.

*This project will log suitable spotted owl habitat within the home ranges of 5 spotted owls.*

It is acknowledged that this timber sale will remove suitable nesting, roosting and foraging habitat from within the Blue Oyster Cultus, Curtin Creek, and Deadman Mountain northern spotted owl home ranges (EA pp. 79, 81 and 82). In all instances, suitable habitat levels will exceed the 50 percent and 40 percent viability threshold at the respective scales of core area and home range.

As noted on page 73 of the Biological and Conference Opinion (BiOp) for the White Castle VRH timber sale (Tails #: 01EOFW00-2012-F-0094)) the U.S. Fish and Wildlife Service stated that no incidental taking of spotted owls is anticipated due to implementation of the project.

*It appears that at least 42 acres of suitable spotted owl habitat (100 year old forest in unit 25a) within the Core Area of the Curtin Creek owl, within proposed critical habitat, will be regenerated. More acres of younger forests in core areas will be regenerated.*

*Unit 25A is one of the largest NRF units impacted by this project. Because of rare interior forest conditions, it is especially valuable for the northern spotted owl. Yet the BLM proposes to virtually clearcut, within its core area. Half of 25A, 42 acres, is within the core area of Curtin Creek owl site. Logging even touches the owl's nest patch. The Endangered Species Act does not allow regeneration harvests within a core area for a spotted owl nest, in critical habitat.*

The EA (p. 81) clearly states that the proposed harvest would remove 42 acres within the core area of the Curtin Creek northern spotted owl home range. There will be no harvest within the nest patch. The level of suitable habitat within the core area, post-harvest, would 72 percent, well 50 percent threshold identified by the U.S. Fish and Wildlife Service as necessary to ensure site viability.

*All of the forests in this project have been proposed as critical habitat for the northern spotted owl. . . . The EA dismisses this concern by saying the critical habitat proposal is only a proposal, implying it's OK to degrade critical habitat so long as it's done in a hurry, before the final designation.*

The EA (p. 63) acknowledges that the project area is covered by the February 28, 2012 proposed Critical Habitat rule, but is not dismissive of the potential designation. In conjunction with consultation on the effects of the project on the northern spotted owl, the South River Field Office also requested a conference opinion from the U.S. Fish and Wildlife Service on effects to proposed critical habitat associated with the modification or removal of primary constituent elements. We are in receipt of both a biological opinion and conference opinion.

*The EA points out: “The harvest of 96 acres of suitable habitat [in units 23 and 25] could result in an increased risk of predation to resident or dispersing northern spotted owls as they move across the landscape.” Unit 32 impacts to owls are so bad it even converts “these areas from suitable habitat to unsuitable habitat.”*

As required by the National Environmental Policy Act, we are identifying the potential effects of the proposed action. Removal of forest cover has the potential for increasing the risk of predation on northern spotted owls. The likelihood is low as levels of suitable habitat in the Curtin Creek core area and home range will remain at 72 and 84 percent, respectively, and dispersal habitat will be unaffected.

As described above, we are required to acknowledge the potential effects of proposed actions. Harvest of suitable habitat would render those acres unsuitable for nesting, roosting and foraging by northern spotted owls. These acres would still be considered as habitat capable, because they are capable of supporting future forest stands that would again fulfill these functions. Harvest in Section 32 will not affect availability of suitable habitat in the core area of the Deadman Mountain northern spotted owl home range, presently at 64 percent. At the scale of the home range, suitable habitat would still represent 49 percent of all habitat acres in the home range, exceeding the 40 percent viability threshold.

*Table 3-31, page 63 of the EA, documents that the NSO habitat availability is counted only on federal lands within the home ranges of the five owl sites impacted by this project. By excluding private lands from the percentage of habitat within owl circles, it appears the table does not adequately represent the amount of suitable and dispersal habitat. If private land had been included, there would be a lower percent of suitable habitat.*

The table only characterizes the condition of federal land because (1) we do not have reliable data on the condition of private lands, and (2) due to the standard rotation practices, industrial private lands are not considered to be a dependable long-term source of habitat. The percentages of suitable and dispersal habitat provided on the federal lands are percentages of all of the acres within a home range, however. For example, there are 2,955 acres in a home range. There are 1,481 acres of suitable habitat in the Deadman Mountain home range. Divide 1,481 by 2,955 and the result is 0.501 or 50 percent. In contrast, Federal acres provide 968 acres of suitable habitat in the High Riser home range. Divide this by 2,955 and the result would be 0.327 or 33 percent. The conclusion that inclusion of private lands would yield lower percentages of suitable habitat is in error.

*The EA claims (page 82) it is consistent with the 2011 NSO recovery plan. We disagree. This project does not comply with Recovery Action 10, Recovery Action 32, and other recommendations.*

*The EA claims the BLM is following the Recovery Plan because the oldest, never-before-logged units in the project, units 23A, 25A, and 32D, “contain primarily simple structure, single canopy forest with limited understory diversity”. Nothing could be further from the truth!*

The U.S. Fish and Wildlife Service found the project to be consistent with recovery actions from the Northern Spotted Owl Recovery Plan (BiOp, pp. 70-71).

*This project will likely need an incidental take permit. We know that the owl is in significant decline and that we need extra habitat for mitigating the threat posed by the Barred Owl, especially since the LSRs have not yet recovered to provide suitable habitat for the Spotted Owl. Now is no time to “take” an owl pair.*

In the biological opinion (p. 73), the U.S. Fish and Wildlife Service found that no incidental taking of spotted owls is anticipated due to implementation of the proposed action.

*The EA states (page 71) that only unit 28-3-25A meets the protocol triggers for surveys. Unit 28-3-23A should also have been considered. Its QMD is 17.4, just .6 inches under the 18” suggested by the survey criteria. In fact, the 8 acres of unit 23A has a very large average DBH, far larger than 18”, because the 8 acres contains many old growth trees. Only the 3-acre hole in the middle of the old growth has an average of 17.4” DBH.*

The quadratic mean diameter of the stand comprising Unit 28-3-23A was determined based upon stand exams that covered the entire unit; harvest area and retention aggregates. This does not meet the definition of suitable red tree vole habitat identified in the “Survey Protocol For The Red Tree Vole” Version 2.1 (Biswell *et al.* 2002). Survey protocol is not triggered, and the text of the EA regarding Unit 28-3-25A being the only unit where red tree vole surveys are required is correct.

*A well-qualified citizens group did Red Tree Vole (RTV) surveys in this project. However, the EA states (page 71) “It is not known what criteria members of NEST used to select trees for climbing”. The EA failed to note that NEST reported to BLM their qualifications. Through their extensive experience, NEST is able to make accurate assessments of likely candidate trees. The criteria they used are less important than their findings. The BLM should have accepted their data. There is no good reason for the BLM not to have verified NEST’s data.*

The EA (p. 71) notes that in addition to Roseburg BLM efforts, an interested citizen group, the Northwest Ecosystem Survey Team (NEST) climbed trees within Unit 28-3-25A to look for evidence of red tree vole occupancy. They reported finding 14 active nest trees, and eight inactive nest trees, in addition to those identified by the BLM.

It was also noted that the criteria members of NEST used to select trees for climbing was unknown, and their reported sites have not been climbed by agency personnel for verification. Additionally, NEST members’ training, their credentials, and the chain of custody of the samples are self-reported and have not been verified. For these reasons, their reported site locations are included here for informational purposes, but are not considered to be protocol survey data.

The actual letter from NEST to South River Field Manager Steve Lydick, cited in the comment, was dated October 4, 2011, and was received by this office on October 11, 2011.

In the Standards and Guidelines (p. 15) of the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*, credible sources of new information are considered to include taxa experts, resource specialists, scientists, members of academia, and other publics.

The “Survey Protocol For The Red Tree Vole” Version 2.0 (Biswell *et al.* 2000) was designed for field biologists who would be analyzing red tree vole habitat and supervising surveys on federal lands. “Field biologists” are defined as individuals currently employed as professional biologists, biological technicians, or volunteers who are supervised by a professional biologist.

The letter from NEST describes qualifications that include “locating previously undiscovered red tree vole nests for 9 years and training by biologists or professionals working for biologists.” The letter also identifies training in the location and identification of red tree vole nests. The letter does not, however, indicate who the biologists or professionals working for biologists were that conducted the training, whether or not they were qualified to conduct the training, nor what the specific training was. There is also no indication of any supervision by a professional biologist that would attribute credibility to the work conducted by NEST.

*The EA states (page 86) that the Roseburg BLM proposes to designate a portion of the RTV sites as non-high priority. Out of 8 active nests that the BLM verified, and 14 active nests found by the citizen group that the BLM should have verified (22 total active nests), the BLM is only protecting 7 active nests, less than 1/3rd of the RTV sites. The EA states the BLM will designate: “(RTV MA) 1, 3, 6, 7 and portions of 5 as non-high priority sites, but to maintain RTV MA 2 and 4 in their entirety and a portion of 5”. This is not adequate protection. To begin with, RTV MA 2 is largely a wetland without RTV habitat.*

The comment misrepresents both the terminology and the text of the EA. The EA (p. 86) describes the creation of nine red tree vole sites, **not nests** [emphasis added], seven determined to be active, and two inactive. The inactive sites do not require protection. The seven active sites range in size from approximately three acres to 51 acres, and cumulatively total 97 acres, 75 acres of which are within unit boundaries.

Areas identified for management as high-priority sites contain a high density of identified nests, with a high percentage of active nests, and few or no inactive nests. Non-high-priority sites contained few identified nests, with a high percentage of these deemed inactive. The three high-priority sites established (RTV MA 2, 4 and 5a) and illustrated in Figure 4 of Appendix C of the EA account for 29 of the active nest trees identified. With respect to RTV MA 2, it is not “largely a wetland without RTV habitat” as it contains several acres of forested Riparian Reserve established around the fen.

*To maintain north-south connectivity, “the District is proposing additional land withdrawals”. The EA fails to describe where the additional land withdrawals are.*

The additional withdrawals include the retention of portions RTV MA 3 and 6, and all of RTV MA 6. All told, of the 69 active nests identified, 50 are protected.

*The FWS declared in its analysis of the red tree vole that “All sites on Federal land within the DPS are considered high-priority sites with the exception of 198,000 ac (80,130 ha) of the southernmost portion of the DPS. This does not include the area of the Pilot Project. Some tree vole sites on Federal land in this portion of the DPS would not be considered high-priority sites, depending on the amount of reserve land allocation in the watershed, habitat quality, number of active vole nest sites detected in survey areas, and the total survey effort (USDA and USDI 2003).”*

*Even if the Pilot Project area were within this southernmost portion, it cannot properly be considered a non high-priority site. The 2001 ROD maintains that:*

*“Manage High-Priority Sites: High-priority sites will be managed according to the Management Recommendation for the species. Professional judgment, Appendix J2 in the Northwest Forest Plan Final SEIS, and appropriate literature will be used to guide individual site management for those species that do not have Management Recommendations. Until a Management Recommendation is written addressing high-priority sites, either assume all sites are high priority, or local determination (and project NEPA documentation) of non-high priority sites may be made on a case-by-case basis with: (1) guidance from the Interagency Survey and Manage Program Manager; (2) local interagency concurrence (BLM, FS, USFWS); (3) documented consideration of the condition of the species on other administrative units as identified by the Program Manager - typically adjacent units as well as others in the species range within the province; and, (4) identification in ISMS. The Survey and Manage Program Manager will involve appropriate taxa specialists.”*

*The BLM wildlife biologist is not the Interagency Survey and Manage Program Manager. This process is only appropriate if he/she is the ISMP Manager. Secondly, although Roseburg BLM could be coordinating with FWS, they are also required to get concurrence from the Forest Service under the 2001 ROD, because this project is adjacent to Umpqua National Forest lands. Third, the agency must determine that there are healthy populations of the species on adjacent units and within the species range within the province. Therefore, all RTVs sites in this Pilot Project should be protected.*

As described in the EA (p. 70), populations of red tree voles found within the project area are not part of the North Oregon Coast distinct population segment identified as a candidate for Federal Endangered Species Act protection in October 2011 (USFWS. 2011b), and are well outside of their range. This project would have no impact on the North Oregon Coast red tree vole populations.

The protocols require that guidance from the Interagency Survey and Manage Program Manager be used. The Roseburg District sought the guidance of the Interagency Survey and Manage Program Manager in the development of the non-high-priority site designation. Written concurrence for the proposed designation was received from the Umpqua National Forest and the Roseburg Field Office of the U.S. Fish and Wildlife Service.

As depicted in Table 3, Appendix C of the EA, population data at regional and local scales, and data for adjoining watersheds on the Umpqua National Forest was considered.

*For instance, the EA claims that federal forestlands are lacking in adequate forage conditions for Elk. There is nothing presented to substantiate that claim. In fact, Elk populations could be higher now than pre-European times. Instead the EA should have said that Elk population numbers have decreased since the 1980's heyday of clearcutting. It is not BLM's obligation to increase elk population number higher than historic averages. The same goes for black-tailed deer.*

As previously discussed on page 7 of this Decision Document, this is clearly not the case. This timber sale is located in an area identified in the ROD/RMP (p. 39) as an emphasis area for the management of Roosevelt elk. The EA (p. 72) specifically identifies the findings of the Oregon Department of Fish and Wildlife in Oregon's Elk Management Plan (2003) that "... federal forestlands in Western Oregon are increasingly lacking in adequate forage conditions...Quality foraging habitat is considered to be the causal factor in declining herd health for Southwest Oregon."

*The BLM's claim that this project is good for top predators is also off base. While visiting units 23 and 25 in April 2012, we found recent cougar scat and old bear scat. The big predators are already there, and they already enjoy all of the open, recently logged areas, as well as the cover the rare 100+ year-old forest provides. Removing those 100+ year-old forests is not going to increase their population numbers. Anyway, increasing populations of black bear and mountain lions will upset Myrtle Creek residents, and could also result in increased killing of bears and lions by Wildlife Services.*

The EA did not say that the harvest would increase mountain lion and black bear populations. The text of the EA (p. 87) states that improved deer forage in the harvest areas would increase the number of deer that could be supported in the area. This, in turn, would increase the potential for use of these areas by mountain lion. As black-tailed deer are a favored prey species for mountain lions, this is an accurate assessment.

As noted in the EA (p. 73), black bears are omnivorous, depending mostly on succulent grasses, sedges and forbs in the spring and summer, and berries, nuts, roots, and insects in the summer and fall. Logging stimulates forage production for foods such as salmonberry, blackberry, hazel, and huckleberry, and improves foods like grasses and forbs for up to 15 years.

Based in part on hunting restriction for bear and mountain lion enacted by the State of Oregon in the early 1990s, populations of these species have grown with an increasing strain on available habitat and prey/forage.

Mountain lions utilize relatively large territories, and juvenile males must move from their natal territories to establish territories of their own, frequently bringing young lions into contact with humans. Studies by the Oregon Fish and Wildlife indicate that populations of Columbian black-tailed deer are in decline. As a consequence, it is reasonable to expect that mountain lions that are crossing the landscape could look to livestock and small animals for sustenance.

Likewise, if foraging habitat for black bears is largely absent, they may move into populated areas where orchards, gardens and food waste are abundant.

*Under the section of Early-Seral Obligates, the BLM states several times that increased fire-suppression is a cause of their decline. However, this project is supposed to be the “moist forest” pilot project. Fire suppression is not supposed to be an issue in moist-forests, according to Drs. Norm Johnson and Jerry Franklin. Therefore, any early-seral species that is in decline because of fire-suppression is not relevant to this project.*

What the EA (p. 74) states, with respect to butterflies and moths, is that after decades of wildfire suppression in the Pacific Northwest, timber harvesting is principally responsible for creating early successional plant communities. Without natural and/or induced disturbances, open habitats are becoming less common on the Federal landscape in western Oregon, and species that depend on them are becoming uncommon or rare.

*The BLM should eliminate most of the new roads proposed by this project. Many of the new roads go through old growth forests, compromising the roots and crowns of old growth trees, and causing many old trees to be cut down as “hazard trees”.*

*New roads, especially decommissioned roads, attract Off Highway Vehicle (OHV) use in the White Rock area. The OHVs have demolished a closed road in the project area, road 35.1. The BLM admits it is hopeless trying to keep off-road enthusiasts off of 35.1, even though the OHV users have destroyed Yellow Jacket Springs (only ½ mile south of unit 25), and other wetlands in the area.*

*OHVs have asked for the White Rock area to be designated as an OHV emphasis area. Even though the BLM lists the OHV designation in every quarterly update, the OHV users are not waiting for the BLM to reach a decision. They already consider the area their playground, including a trail they made into the middle of unit 25, above road 26.0.*

*The BLM claims they will pull slash over the temporary roads (but over illegal trails) and construct waterbars and other blocks, and that will solve the problem. We disagree. The OHVs have taken a chain saw to road 35.1, and gone to great lengths to keep that road open for themselves. Waterbars and other road blocks are routinely breached. The BLM is helpless to enforce the law because there are not enough law enforcement personnel.*

Many of the “new roads” are actually old spur roads from the Curtain Creek and Red Top Salvage II timber sales, or old jeep roads. None of the new construction will occur in old-growth forest stands. Making existing roads useable by blading out the road surfaces should not result in any harm to trees astride these roads.

The BLM has previously acknowledged difficulty controlling unauthorized off-road vehicular use. One such instance is Road No. 28-3-35.1 where attempts to block the lower end of the road have been unsuccessful because of the terrain and ability of off-road recreationists to by-pass the berm and log barrier.

Current work load and staffing do not allow us to move forward with the NEPA analysis of the White Rock proposal at this time. This does not mean that the BLM has authorized off-road use and trail construction in the interim. While there are decommissioned spur roads and an old jeep road in Section 25, Road 28-2-26.0 does not pass through Unit 28-3-25A, making it unclear what trail is being discussed.

When we speak of slash mulching as part of decommissioning, it is the placement of a layer of slash, including logs and root wads. This is not something that a chainsaw would easily clear.

*Table 2-4 includes only 117 acres of thinning. The EA should have included everything in the Rise and Fall decision that needs no further NEPA work, as well as other young stands in the watershed. There are a lot more than 117 acres of thinning that need to be done.*

Table 2-4 is a general description of units for Reference Analysis One. It is not part of this decision. As described in the EA (p. 24), this reference analysis is not a selectable alternative as it does not meet the purpose and need for action. As noted in the previous Buck Rising VRH Decision Document, the 2007 decision for the Rise and Fall Commercial Thinning sale was withdrawn following mutual cancellation of the contract in 2010.

*The BLM often includes gaps and skips in their thinning project. The EA failed to consider the contribution of gaps to early-seral habitat.*

The EA considered the contribution of gaps in the creation of early-seral habitat. Spatially, the benefits would be small as the gaps would allow limited additional sunlight to reach the forest floor. As described in the EA (p. 97), and already discussed on page 6 of this document, any benefits would be limited to a period of 10 to 20 years. Skips are not included as the retention of areas of fully-closed canopy would not promote understory development.

*The No-Action alternative should have considered what would happen if no commercial logging occurred in stands over 100 years old.*

Effects of No Action on stand growth and development were modeled and reported in Table 3-7 of the EA (page 39).

*The reforestation issue directly impacts the purpose and need. At question is, does the BLM really want to create quality early-seral habitat, or is this simply an excuse for going back to regeneration harvests in mature forests? Because there is so much reforestation, 200 TPA plus natural regeneration, the objectives of the project are suspect. This is especially true when one considers the use by the BLM of such phrases as “up to 30 years” instead of “at least 30 years”.*

As discussed in the EA (p. 46), with respect to Alternative Two, The rate at which forest canopy recloses depends on individual site productivity and the density of tree regeneration. Closure is most rapid on more productive sites; while some low productivity forest stands never achieve canopy closure (Franklin *et al.*, 2002). Canopy closure for the proposed action, where the intent is to actively manage for a conifer density of 150 to 250 trees per acre, is estimated at 30 years or more based on growth modeling.

*In this case, planting 200 TPA is not very different from traditional reforestation because the increased retention trees will also contribute to reforestation. Planting 200 TPA, plus natural regeneration, will produce a dense tree plantation, as usual, that will quickly shade out brush species and result in a project similar to, not different from, traditional regeneration harvests. Planting 200 TPAs is like a bait-and-switch trick. We were told of a need for early-seral habitat on the landscape. Instead we have just another fiber farm with artificial reforestation, using nursery stock seedlings planted on a grid. We are disappointed with this turn of events, a turn toward just more regeneration harvests and away from experimental forestry.*

Planting at a density of 200 trees per acre is substantially different from intensive efforts practiced in traditional reforestation where trees are commonly planted on a spacing of approximately eight feet by eight feet, resulting in a density of approximately 700 trees per acre.

The potential for natural regeneration is noted in the EA (p. 20), but the BLM will also be monitoring stand densities and apply density management treatments, as described in the EA (p. 21), to maintain conifer density in the range of 150 to 250 trees per acre.

*On page 154, Monitoring, the EA only references the monitoring required by the RMP, which does not include monitoring for the purposes, goals, and objectives of this Pilot Project. Instead, the Pilot Project itself must be monitored to see if it meets early-seral objectives. Otherwise, it cannot be used as a “pilot”.*

*For a pilot project designed to be replicated over thousands of public land acres, on lands that are our next-best-old growth, monitoring is important to make sure the creation of early-seral habitat is doing what it is supposed to do, especially when rare owls have to sacrifice their home in the process. But the EA failed to describe any monitoring for this specific project. Our scoping comments went into great detail on the importance of monitoring the Pilot project. We are disappointed that the EA did not respond to them. Please consider them again. We include them in these comments by reference.*

The BLM will be conducting implementation monitoring as required by the ROD/RMP. As discussed above, the BLM will also be monitoring and managing stand densities, as noted above, to maintain conifer density in the range of 150 to 250 trees per acre.

In a public open house on October 11, 2011, the BLM sought to engage members of the public in the development of a monitoring plan for the Pilot Projects, but there was no expressed agreement on what would constitute useful monitoring, and no desire expressed by members of the public to participate in a community monitoring effort.

*The EA, page 146, states that May 14, 2008, is the “latest science on greenhouse gas emissions”. The BLM should look again. In the last 4 years, OSU has increased our knowledge of forest carbon science. For instance, science has found that old growth forests continue to sequester carbon, that plantations can never store as much carbon as the original forests, and that wildland fire releases relatively little carbon into the atmosphere.*

The text of the EA (p. 146) is taken out of context. The EA discusses the findings of the U.S. Geological Survey that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate impacts at a specific location. The paper cited in the comments is with respect to the ability of forests in the Pacific Northwest to store more carbon, a subject clearly separate from what the U.S. Geological Survey was addressing.

*Our scoping comments went into detail on why the 2008 WOPR EIS was not appropriate to use in calculating the impacts of this project on climate. For instance, the 2008 EIS considered normal reforestation in carbon calculations. The BLM insists this pilot project reforestation prescription is not normal. Therefore, carbon calculations cannot assume it is. With fewer planted trees, there will be less carbon sequestration after the harvest. Appendix F, page 3, confirms the BLM is considering that stands 5-34 years old will sequester 67.8 tonnes of carbon per year. It is likely this is not using the reduced reforestation proposal in this calculation.*

As discussed in the EA (page 147), the net carbon balance was derived by calculating: the amount of carbon held in live trees and other components (snags, down wood, soil carbon, etc.), carbon held in wood products and logging slash that gradually release carbon over time, and the carbon released by the burning of fossil fuels and slash under the proposed action alternatives.

As described on page 2 of Appendix F of the EA, the carbon pool of “Standing, Live Trees” represents live trees that are developing currently and would develop in the future within the proposed units. Future standing live tree carbon is modeled in Organon using the site-specific harvest prescription and conditions (i. e. trees per acre, species composition, and site class). Consequently, the model used in the 2008 FEIS is valid regardless of the prescription, as the proper variables are input.

*The BLM modeled the project for carbon impacts extending out 50 years. Why 50 years? These forests are over 100 years old now. They cannot be clearcut again for about 80 years. What relevance does 50 years have?*

*If the BLM were to show the full lifetime carbon impact of these forests, 200-300 years, carbon stored in wood products would be much lower, while the standing, live carbon calculation would be higher.*

Time intervals of 10, 20 and 50 years were selected for comparative purposes in the modeling of carbon sequestration between alternatives and reference analyses. This was done to illustrate trends over time. The BLM has the discretion to determine modeling intervals and the extent to which growth through time is sufficient to characterize these trends.

*The EA says that in the first 50 years: “carbon storage would increase approximately 22,450 tonnes, or an average of about 4,490 tonnes per decade, representing a 23 percent increase over the current condition, and a 31 percent increase over post-harvest conditions.” Does the BLM mean that in the first 30 years of brush, that the brush fields will generate over 4,000 tonnes per decade? That would be about 12,000 metric tons stored by brush in 30 years. Correct? This is not a rhetorical question. We ask for the BLM to respond to this issue.*

Carbon sequestration was modeled based on the continued growth of trees retained in aggregates and as dispersed retention, allowing for anticipated mortality described in the EA (p. 43), combined with the growth of 150 to 200 young trees per acre, the target stand densities. Brush is included in the category “other than Live Trees”, and not in the figures cited in the comment.

Based upon this modeling, the pool of Standing, Live Carbon represented by trees is projected to increase by approximately 22,450 tonnes in the first 50 years following harvest, under Alternative Two, Sub-Alternative A. Under the Alternative Two, Sub-Alternative B, which is being implemented, the net accumulation of carbon is modeled to be 23,415 tonnes.

*What is more mysterious is that under Reference Analysis Two, a traditional regeneration harvest, there would be “an increase at an average rate of about 4,104 tonnes per decade...” How can a traditional regeneration harvest sequester less carbon than the proposed alternative?*

*This might be an EA misprint, as the next paragraph seems to say the same thing, but uses a 7,450 tonnes per decade figure. But this raises another question. How can a traditional regeneration harvest sequester almost 40% more carbon than the proposed alternative, even though it extracts less volume over less acres?*

The 4,104 tonnes per acre for Reference Analysis Two is incorrect. The second set of numbers is correct as reflected in Table 3-27 of the EA (p. 153).

*Our scoping comments asked the BLM to consider that thinning these forests provided more jobs than regeneration harvests. The EA failed to directly address this issue. However, the BLM did respond by saying:*

*“The proposed project area lies within the General Forest Management Area, Connectivity/Diversity Block and Adaptive Management Area land use allocations as designated by the Roseburg District Record of Decision and Resource Management Plan. Timber production is an important component.”*

*If jobs are so important, then why is the BLM abandoning their great job-creating thinning projects (of which this area already has a decision to thin that the BLM could just implement), and do a regeneration harvest instead? There is nothing in the RMP that requires the BLM to do a regeneration harvest, or do it now, at a job-loss.*

There is no basis for making a conclusion that thinning provides more jobs than regeneration harvest. In fact, there is a strong case to be made that it does not. Regeneration harvest may provide a range of timber species, log sizes and grades that thinning traditionally does not. This, in turn, may provide opportunities to manufacture a wider array of higher value products which allow for greater utilization of manufacturing capacity and higher employment levels. Site preparation provides employment to contractors and crews who conduct broadcast burning.

Reforestation requires the production of seedlings in nurseries, forestry crews to plant the seedlings, and forestry crews to conduct pre-commercial thinning at the appropriate stage of stand development.

Thinning in smaller diameter stands provides wood that has limited manufacturing options, and does not provide the job opportunities associated with intensive silvicultural management for sustainable production of future harvestable timber rotations.

*Please refer to our scoping comments about our mill jobs being exported due to the high rate of raw log exports. If this pilot project is tied to local jobs while local jobs are being lost through the export market, the export market is relevant to this project and should have been considered in the EA.*

Mill jobs are not being exported. Private landowners and timber buyers are exporting logs that are manufactured into products by citizens of the countries that import them. The Federal government prohibits export of federal timber or substitution of federal timber for export of private timber, but has no control over non-Federal purchasers who choose to export logs obtained from private sources.

*The BLM has been meeting their timber targets through non-controversial thinning projects and even exceeded its target volume of trees offered for sale in Oregon and California in 2010. The EA should have been clear on how many more jobs the BLM expects to be able to maintain by turning away from successful thinning projects, and toward more controversial sales, such as converting NRF owl habitat into managed plantations.*

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 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 allowable sale quantity established in the District's 1995 resource management plan. The declared annual allowable sale quantity for the Roseburg District identified in the 1995 ROD/RMP (pp. 8 and 60) is 45 million board feet. In fiscal year 2010, the Roseburg District offered approximately 37.6 million board feet at auction and sold approximately 3.3 million board feet of miscellaneous volume, for a total of 40.9 million feet. Only 24.5 million board feet was harvested on Matrix lands, and thus was creditable against the annual allowable sale quantity.

### **Rationale for the Decision:**

In addition to Alternative One - No Action (EA pp.10-11), the Roseburg Secretarial Demonstration Pilot Project EA proposed Alternative Two-The Proposed Action, containing two sub-alternatives (EA pp. 11 to 24), and described two reference analyses for commercial thinning only (EA pp. 24-28) and regeneration harvest (EA pp. 28-31) consistent with the Northwest Forest Plan.

Alternative One will not achieve the objectives enumerated in the EA (pp. 1-2), because it will not:

- Demonstrate a variable retention harvesting model designed to create complex, early-successional habitat that will function for up to 30 years and: support birds that depend on flowering and fruiting plants, provide forage for ungulates (deer and elk), provide habitat for cavity-nesting birds, provide forage for a variety of moths and butterflies, and provide forage and habitat for small mammals (wood rats, deer mice, brush hares, etc.) that may provide greater prey abundance for the northern spotted owl;
- Design a sale with participation of the U.S. Fish and Wildlife for the purpose of applying Recovery Actions from the Northern Spotted Owl Recovery Plan; and
- Design and offer timber sales that will provide jobs and contribute timber for manufacturing.

Reference Analyses One and Two are provided for illustrative purposes, and are not selectable alternatives because they do not meet the stated purpose and need for action. They are intended to provide a generalized description of the outcomes if other traditional treatments were applied.

Both Sub-Alternative A and B of Alternative Two will achieve the stated objectives. Sub-Alternative B is selected because it affords the opportunity to treat selected areas in Riparian Reserves with simplified structural complexity, consistent with the objectives of the Aquatic Conservation Strategy, allowing diversification of the riparian plant community, providing greater structural complexity for aquatic and terrestrial wildlife, and accelerating development of late-successional forest characteristics.

### *Wildlife*

No effects to the **northern spotted owl** from noise disruption are expected because all harvest operations will meet the minimum disruption threshold distances, as established by the U.S. Fish and Wildlife Service (chainsaw: 65 yards, heavy equipment: 35 yards), from any known northern spotted owl site, estimated site, or unsurveyed suitable nesting habitat. Operations will be seasonally restricted from March 1 to July 15, unless surveys indicate northern spotted owls are not present, have not attempted to nest, or have failed in nesting attempts, in which case early waiver of the seasonal restrictions may be granted. This will ensure that noise disruption will not cause northern spotted owls to abandon nests or fledge prematurely.

As described in this Decision Document (p. 2):

Spot checks for northern spotted owls will be conducted concurrently with operations on Units 1, 2, 3 and 4. If it is determined that northern spotted owls are present and nesting within ¼-mile, operations will be discontinued and full seasonal restrictions for habitat modification will be employed.

Units 5, 6, 7, 8 and 9 will be subject to seasonal restriction from February 1 through June 15, both dates inclusive, subject to completion of spot checks for the northern spotted owl within ¼-mile of the units. These restrictions may be waived earlier if it is determined the northern spotted owls are not present, have not attempted to nest, or have failed in nesting attempts. If it is determined that northern spotted owls are present and nesting within ¼-mile, operations will be discontinued and full seasonal restrictions for habitat modification will be employed.

As described in the EA (pp. 79 and 80), the **Blue Oyster Cultus** home range currently has 2,045 acres of suitable habitat and 427 acres of dispersal habitat, making up 69 and 14 percent of the home range, respectively (Table 3-19, p. 61). Within the 500-acre core area, there are 412 acres of suitable habitat and 45 acres of dispersal habitat, making up 82 and nine percent of the core area, respectively. Compared to the estimated site viability thresholds of 50 percent suitable habitat within the core area and 40 percent suitable habitat within the home range, both the core area and home range contain sufficient suitable habitat to maintain site viability.

Units 28-2-31A and B, 28-2-32C and D are located entirely or partially within the home range, but entirely outside of the core area. Variable retention harvest would remove 54 acres of suitable habitat. Removal of standing timber and reduction of canopy closure to an estimated 10 to 15 percent in areas of dispersed retention area would convert these areas from suitable habitat to unsuitable habitat.

The harvest of 54 acres of suitable habitat could result in an increased risk of predation to resident or dispersing northern spotted owls as they move across the landscape. Harvest would also reduce suitable habitat within the home range to approximately 67 percent. No changes to levels of suitable habitat would occur within the core area. The home range would be expected to remain viable, however, as suitable habitat would remain above the 40 percent threshold.

As noted in the EA (p. 81), the **Curtin Creek** home range currently has 2,235 acres of suitable habitat and 227 acres of dispersal habitat, making up 75 and eight percent of the home range, respectively (Table 3-19, p. 61). Within the 500-acre core area, there are 467 acres of suitable habitat and 19 acres of dispersal habitat, making up 92 and four percent of the core area, respectively. Compared to estimated site viability thresholds of 50 percent suitable habitat within the core area and 40 percent suitable habitat within the home range, both the Curtin Creek core area and home range contain sufficient suitable habitat to maintain site viability

Units 28-3-23A and 28-3-25A are located entirely within the home range, and partially within the core area. Variable retention harvest would remove 96 acres of suitable habitat from within the home range. Of these 96 acres, 42 would be removed from within the core area. Removal of standing timber and reduction of canopy closure to an estimated 10 to 15 percent in areas of dispersed retention area would convert these areas from suitable habitat to unsuitable habitat. Aggregate retention blocks would continue to provide conditions suitable for dispersing owls, but dispersed retention would not. Long term, aggregate retention blocks would provide important structural diversity elements, potentially accelerating the re-attainment of suitable habitat conditions.

The harvest of 96 acres of suitable habitat could result in an increased risk of predation to resident or dispersing northern spotted owls as they move across the landscape. Harvest would also reduce suitable habitat within the home range and core area to approximately 72 and 84 percent, respectively. The home range and core area would be expected to remain viable, however, as suitable habitat would remain above the 40 and 50 percent thresholds.

As discussed in the EA (pp. 81 and 82), the **Deadman Mountain** home range currently has 1,481 acres of suitable habitat and 926 acres of dispersal habitat, making up 50 and 31 percent of the home range, respectively (Table 3-19, p. 61). Within the 500-acre core area, there are 318 acres of suitable habitat and 113 acres of dispersal habitat, making up 64 and 23 percent of the core area, respectively. Compared to estimated site viability thresholds of 50 percent suitable habitat within the core area and 40 percent suitable habitat within the home range, both the core area and home range contain sufficient suitable habitat to maintain site viability

Units 28-2-32A, B, C and D are located entirely or partially within the home range, and Unit 28-2-32A partially within the core area. Variable retention harvest would remove 21 acres of suitable habitat and 70 acres of dispersal habitat. Removal of standing timber and reduction of canopy closure to an estimated 10 to 15 percent in areas of dispersed retention area would convert these areas from suitable habitat to unsuitable habitat. Aggregate retention blocks would continue to provide conditions suitable for dispersing owls, but dispersed retention would not. Long term, these aggregate retention blocks would provide important structural diversity elements, potentially accelerating the re-attainment of suitable habitat conditions.

The harvest of 21 acres of suitable habitat and 70 acres of dispersal habitat could result in an increased risk of predation to resident or dispersing northern spotted owls as they move across the landscape. Harvest would also reduce suitable habitat within the home range from 50 percent to approximately 49 percent. No measurable changes levels of suitable habitat would occur within the core area. The home range and core area would be expected to remain viable, however, as suitable habitat would remain above the 40 and 50 percent thresholds.

In a Biological and Conference Opinion (BiOp ((Tails #: 01EOFW00-2012-F-0094)), the U.S. Fish and Wildlife Service made the following findings.

- (p. 61) Disruption associated with VRH harvest and Density Management Thinning, and associated road building, will be minimized by application of PDC [project design criteria] that prescribe operating restrictions during the critical breeding season within disruption distances of unsurveyed suitable habitat, known spotted owl sites, and estimated spotted owl sites. Therefore, adverse effects to breeding spotted owls are unlikely to occur within the disruption threshold distance of this activity.
- (p. 62) Variable retention harvest will result in a decrease in trees per acre and a reduction of canopy cover within the dispersed retention areas to approximately 10 to 15 percent, well below 40 percent canopy cover for dispersal habitat and the 60-70 percent canopy cover suggested in providing for NRF [nesting, roosting, foraging] habitat. It is loss of this NRF habitat within the home ranges associated with KPACs [known or predicted activity centers] that is expected to *likely adversely affect* spotted owls.

- (p. 63) Five of the affected KPAC home ranges and core use areas currently have NRF habitat amounts greater than 40 and 50 percent habitat (respectively), likely supporting spotted owl habitat-fitness on occupied sites. All five home ranges and core use areas associated with those five KPACs will remain above these values by at least 9-10 percent post-harvest. The two KPAC core use areas and home ranges which currently have less than the literature suggested amounts of habitat will not be subjected to NRF habitat removal, but will experience dispersal-only habitat losses in the outer peripheral portions of the core-use areas.

Although adverse effects are expected due to outright removal of NRF and dispersal-only habitat along with the likely reduction of primary prey species, such as the northern flying squirrel within treated stands and portion of certain KPAC home ranges, it is not anticipated that those effects will cause measurable reductions in spotted owl habitat-fitness on five out of the seven affected KPACs.

Nor, is it anticipated that any KPACs will be abandoned, because available habitat amounts will either remain stable or not be reduced to amounts conferring decreased likelihood of occupancy. Thus, the number of occupied KPACs and spotted owl distribution are not expected to change within the Action Area due to implementation of the proposed action.

- (p. 63) Approximately 63 percent dispersal or better quality spotted owl habitat currently occurs across the 19,000 acre Action Area. The Action Area will lose NRF and dispersal-quality habitat, resulting in 61 percent of the area in a dispersal habitat condition. It is the Service's opinion that dispersal connectivity across the landscape post-treatment will be sufficient to facilitate spotted owl landscape-scale movements and *not adversely affect* spotted owls.
- (p. 63) Spotted owl primary prey species, such as northern flying squirrels will likely avoid regeneration harvested NRF habitat areas post-harvest. This is anticipated due to the reduction in tree densities, canopy closure, and mid-story canopy, as well as impacts to existing snags and down coarse wood in harvested areas, all are key habitat features of primary prey. These harvested areas will become much more inhospitable to flying squirrels which are tied to complex mid-story canopies. Red tree vole populations will be impacted as well, due to removal of nest structures, intact canopies and their food source, although this effect is difficult to quantify. Other mammalian (e.g. mice, woodrats) and avian secondary prey species may respond positively to the new forest openings, or to the newly-created ecological edges.
- (p. 69) The portion of the Action Area that is proposed for designation as spotted owl critical habitat is currently 82 percent NRF or dispersal-quality habitat, which will be reduced by 197 acres to leave 80 percent of this area with habitat of high enough quality to facilitate spotted owl landscape-scale movements. It is the Service's opinion that the connectivity purpose of the subunit will not be adversely affected by this small change in habitat amount.

Previous analyses herein indicate that KPACs in the Action Area will either retain sufficient amounts of NRF habitat to maintain high likelihood of continued occupancy, or those two KPACs currently below target levels of NRF habitat will not experience any further loss of this habitat due to implementation of the proposed action. Therefore, the Service believes that occupancy and habitat-fitness levels of the spotted owls utilizing the KPACs in the Action Area will not be changed to an extent that any currently occupied sites will be abandoned or that current fitness levels will be significantly decreased.

- (p. 73) No incidental taking of spotted owls is anticipated due to implementation of the proposed action.

The U.S. Fish and Wildlife Service also found the project to be consistent with recovery actions from the Northern Spotted Owl Recovery Plan (BiOp, pp. 70-71), concluding that the project will not result in destruction or adverse modification of proposed critical habitat.

Protocol surveys for the **Chace sideband snail** (*Monadenia chaceana*), **Oregon shoulderband snail** (*Helminthoglypta hertlieni*), and **Crater Lake tightcoil snail** (*Pristiloma articum crateris*) were conducted. No occurrences of Oregon shoulderband or Crater Lake tightcoil snails were identified. A single Chace sideband snail was identified in Unit 8 (28-3-25A) and the site is being managed within a retention aggregate, which provides the recommended buffer.

#### *Botany*

As described in the EA (p. 32), surveys were conducted for all Threatened or Endangered, Bureau Sensitive, and Survey & Manage species, documented in *Appendix C – Botany*, considered to have the potential to be present in the proposed harvest units. No Threatened or Endangered species or Bureau Sensitive species were identified where suitable habitat exists. As further discussed, pre-disturbance surveys for Survey and Manage species were conducted in the summer of 2011, resulting in the identification of two species of pin lichens.

Four occurrences of *Chaenotheca chrysocephala*, a Category B species, were located and are protected in accordance with the Conservation Planning Species Fact Sheet. Two sites in Unit 7 (28-2-31A) are incorporated into retention aggregates, while the two sites in Unit 5 (28-2-32C) are protected within Riparian Reserves.

A single *Chaenotheca subrocida*, a category E species, was located Unit 7 (28-2-31A) and is protected in accordance with the Conservation Planning Species Fact Sheet which recommends a 100-foot radius “no disturbance” buffer to maintain site microclimate. The site is incorporated into a retention aggregate.

#### *Aquatic Habitat, Fish, and Essential Fish Habitat*

Harvest and timber hauling associated with the White Castle VRH timber sale will have no effect on the threatened Oregon Coast coho salmon (*Oncorhynchus kisutch*), critical habitat designated for the Oregon Coast coho salmon, or Essential Fish Habitat for the Oregon Coast Chinook salmon (*O. tshawytscha*) and Oregon Coast coho salmon for the following reasons.

As described in the EA (p. 113), most of the proposed units are generally located along ridges or do not border fish-bearing streams. In the case of the White Castle VRH timber sale, all of the units are located along the principal ridges that divide the Myrtle Creek, Little River and Middle South Umpqua River-Dumont Creek watersheds.

As noted in the EA (p. 104), the only stream in this portion of the project area that is inhabited by Oregon Coast coho salmon is South Myrtle Creek. Upstream migration by Oregon Coast coho salmon is blocked by a waterfall barrier below the Tater Hill Area of Critical Environmental Concern in Section 1, T. 29 S., R. 3 W. All of the timber sale units are a minimum of 1.5 stream miles above this point.

Riparian Reserves of 160-feet to 180-feet in width have been established on all intermittent streams within or adjacent to harvest units, and Riparian Reserves 360-feet in width on those portions of Units 1 and 2 that border headwaters of South Myrtle Creek occupied by resident trout. No harvest activities will occur within any of these Riparian Reserves. As discussed in the EA (p. 113), non-compacted forest soils in the Pacific Northwest have very high infiltration capacities and are not effective in transporting sediment overland by rain splash or sheet erosion (Dietrich et al. 1982) and vegetated buffers 33-feet or greater in width have been shown as effective in trapping and storing sediment (Rashin et al. 2008).

As a consequence, timber harvest will have no effect on Oregon Coast coho salmon, critical habitat designated for the Oregon Coast coho salmon, or Essential Fish Habitat for the Oregon Coast Chinook salmon and Oregon Coast coho salmon downstream of the timber sale area.

Where haul routes are paved or well-removed from streams, or in instances where timber haul is limited to the dry-season, there is no mechanism for mobilization and transport of sediment to stream channels that could result in increased turbidity. To further reduce the potential for sediment reaching streams and being transported from headwater streams to downstream fish-bearing reaches, the following project design features may be implemented (EA p. 114):

- Following road renovation actions, but prior to wet season haul, areas of potential sediment delivery (stream crossings) would be identified by fisheries, hydrology, and/or engineering staff to determine if additional sediment retention devices are warranted. These devices could include the following: silt fences, straw bales, or geo-fabric rolls. If deemed necessary, these devices would be installed prior to commencement of wet season haul activities.
- The contract administrator would suspend operations before and after periods of rainfall that would result in saturated road surfaces, or create standing water in the ditchline. This is to prevent road surface degradation and generation of sediment from haul actions.
- During wet season haul, road conditions would be periodically inspected by fisheries and hydrology staff during use to assess conditions and make recommendations for sediment reduction when and where necessary.

As a consequence, timber harvest will not affect Oregon Coast coho salmon, critical habitat designated for the Oregon Coast coho salmon, or Essential Fish Habitat for the Oregon Coast Chinook salmon and Oregon Coast coho salmon downstream of the timber sale area.

### *Water Quality and Quantity*

As discussed in the EA (pp. 118-119), forest roads can be a major contributor of fine sediment to streams, through down cutting of ditch lines and erosion of unprotected road surfaces by overland flow. Timber hauling could occur in both the dry and wet seasons. During the dry season there are no mechanisms for sediment mobilization and transport from roads to streams.

During the wet season, sediment inputs from surfaced roads would be negligible because of durable road surfaces, and drainage systems that do not concentrate delivery of sediment-laden water to streams at stream crossings.

With the first seasonal rain there could be a small pulse of sediment at stream crossings, having the potential to briefly increase turbidity, but the amounts would not exceed levels from naturally occurring erosion and runoff. All streams would be expected to stabilize rapidly, and sediment delivery would be indistinguishable from background levels after a short distance.

Prescribed fire would be applied to Riparian Reserves in Unit 28-2-32B to accomplish multiple goals including promoting ecological diversity and creating snags. Ignition would only be conducted to the outer boundaries of the Riparian Reserves, and fire would be allowed to back downslope from there. If applied in the spring, as generally preferred, burn intensity would be low because of the cool and moist nature of Riparian Reserves. Moister, cooler microclimates can lower the intensity and severity of fires in riparian areas (Reeves et al. 2006). Similarly, fire intensity would not be high enough to remove all vegetation, and the Riparian Reserves would still provide an adequate filtering mechanism for any sediment generated from upslope activities.

The White Castle Variable Retention Harvest project area is located in the rain-on-snow hydroregion. As discussed in the EA (p. 120), peak flows in the rain-on-snow dominated hydroregion are not observed until the Equivalent Clearcut Area (ECA) reaches 19 percent respectively (Grant et al., 2008). As illustrated in Table 3-22 (EA p. 120), none of these thresholds would be exceeded in the affected subwatersheds by harvest of the White Castle VRH timber sale.

As described in the EA (p. 121), proposed road construction would not have any long-term effect to drainage density and flow routing. All of the new construction on the White Castle timber sale would be decommissioned after use, as described in this decision. Roaded area would remain relatively unchanged, at approximately 3.43 percent, well below the 12 percent threshold for risk of peak flow enhancement identified by Harr *et al.*, (1975).

High intensity fire removes vegetation and can reduce soil infiltration capacity, both of which can lead to enhancement of peak flows if the spatial extent is great enough. Application of prescribed fire in Riparian Reserves in Unit 2 would be managed at low intensity to minimize loss of vegetation and potential reductions in soil infiltration capacity. Peak flows are not expected to measurably increase as a result of the use of prescribed fire.

As a consequence, the White castle VRH timber sale is not expected to have any measurable effects on either water quality or quantity.

### *Aquatic Conservation Strategy*

**Riparian Reserves** were established. The 1995 ROD/RMP (p. 24) specifies Riparian Reserve widths 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. The site-potential tree heights for the Myrtle Creek, Middle South Umpqua River-Dumont Creek and Little River watersheds have been calculated at 160 feet, 180 feet, and 180 feet, respectively (EA p. 12).

**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).” There are no key watersheds within the Myrtle Creek and Little River watersheds. The Middle South Umpqua River–Dumont Creek watershed, which contains a small portion of Unit 1 (28-2-32A) of the White Castle VRH timber sale, is designated as a Tier 1 Key Watershed. The ROD/RMP (p. 20) prescribes that existing road mileage within Key Watersheds be reduced, and that if funding is insufficient to implement reductions, no discretionary road construction is to be undertaken or authorized. None of the road to be constructed in Unit 1 lies within the Tier 1 Key Watershed.

In developing the project, the Myrtle Creek, Little River, and Middle South Umpqua River–Dumont Creek **Watershed Analyses** were used to evaluate existing conditions, establish desired future conditions, and assist in the formulation of appropriate alternatives.

While the project is principally one of timber harvest, prescribed fire will be applied in Riparian Reserves in Unit 2 (28-2-32B) to maintain biological diversity, and the resilience and productivity of aquatic populations and communities and is considered to be a **watershed restoration** project consistent with the Watershed Restoration component of the ACS.

### *Cultural/Historical Resources*

As discussed in the EA (p. 31), cultural resource inventories were conducted with the resultant discovery of three sites that were determined to be ineligible for listing on the National Register of Historic Places. Unit boundaries were modified to avoid six other documented sites. If, during the course of road construction or timber harvest any objects of cultural value (e.g. historic or prehistoric ruins, graves, fossils, or artifacts) are found, operations will be suspended until the materials and site(s) have been evaluated to determine appropriate mitigation.

## *Noxious Weeds*

As described in the EA (pp. 22 and 33) all logging and road construction equipment will be pressure washed or steam cleaned prior to mobilization into the project area 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 equipment removed during the life of the contract must be cleaned and re-inspected before being returned to the project area.

Work will be scheduled in uninfested areas prior to work in any infested areas, and disturbed areas will be seeded and mulched with native grasses or revegetated with native plants to discourage establishment of noxious weeds and non-native plant species.

### **Monitoring:**

Implementation monitoring would be done in accordance with provisions contained in the ROD/RMP, Appendix I (p. 84-86 and 190-199), focusing on the effects of timber harvest on: Adaptive Management Areas, Matrix, Air Quality, Water and Soils, Wildlife Habitat, Fish Habitat, and Special Status Species Habitat.

### **Administrative Remedies:**

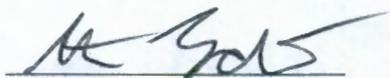
The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR Subpart 5003 Administrative Remedies, protests of this decision may be filed with the authorized officer, Steven Lydick, within 15 days of the publication of the notice of decision/timber sale advertisement on August 14, 2012, 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 (4:30 P.M., PST) within 15 days after publication of the decision notice, 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.



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

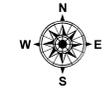
8/13/2012  
Date

'Final Decision' Document Map  
 'Secretarial Pilot Project' E.A.

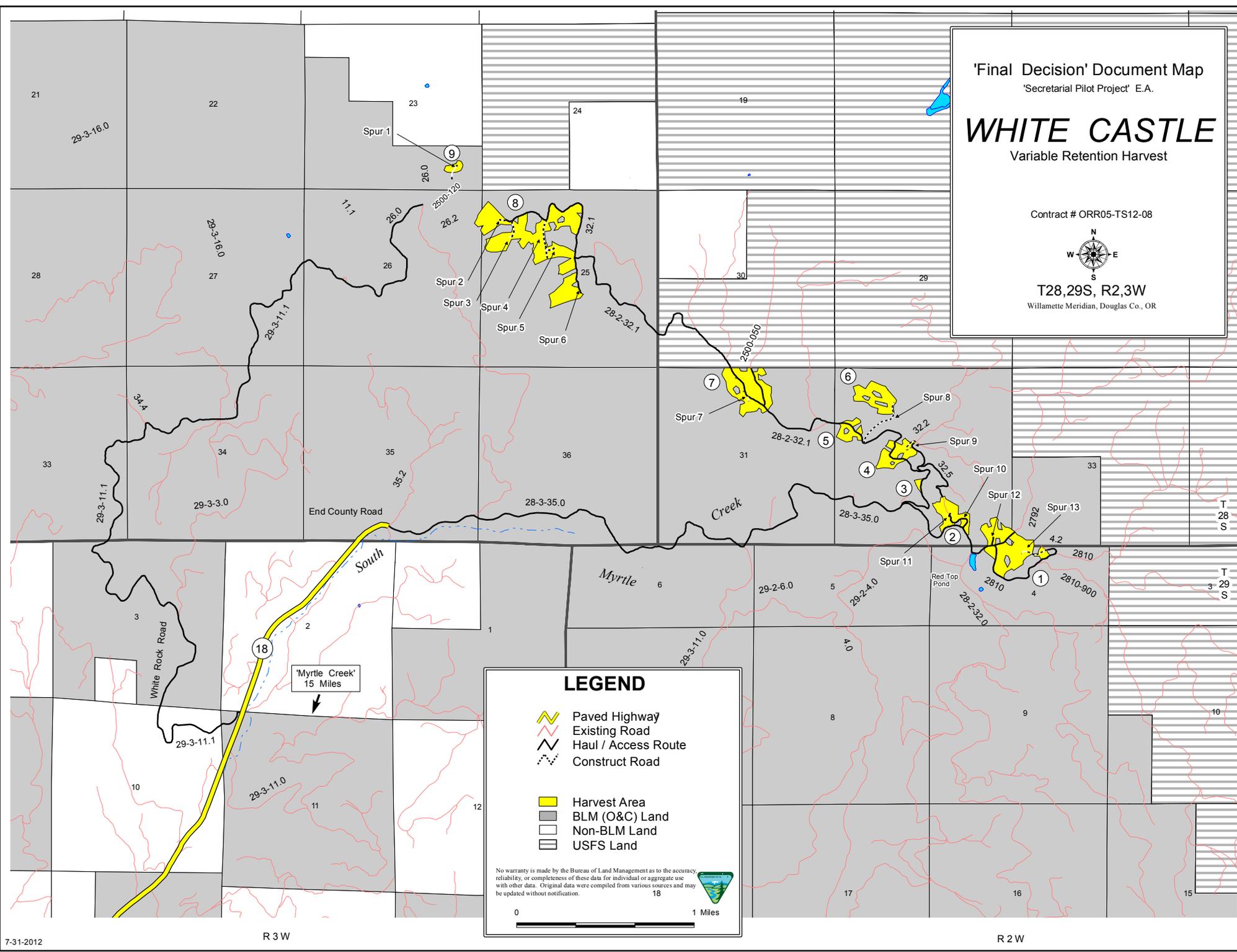
# WHITE CASTLE

Variable Retention Harvest

Contract # ORR05-TS12-08



T28,29S, R2,3W  
 Willamette Meridian, Douglas Co., OR



### LEGEND

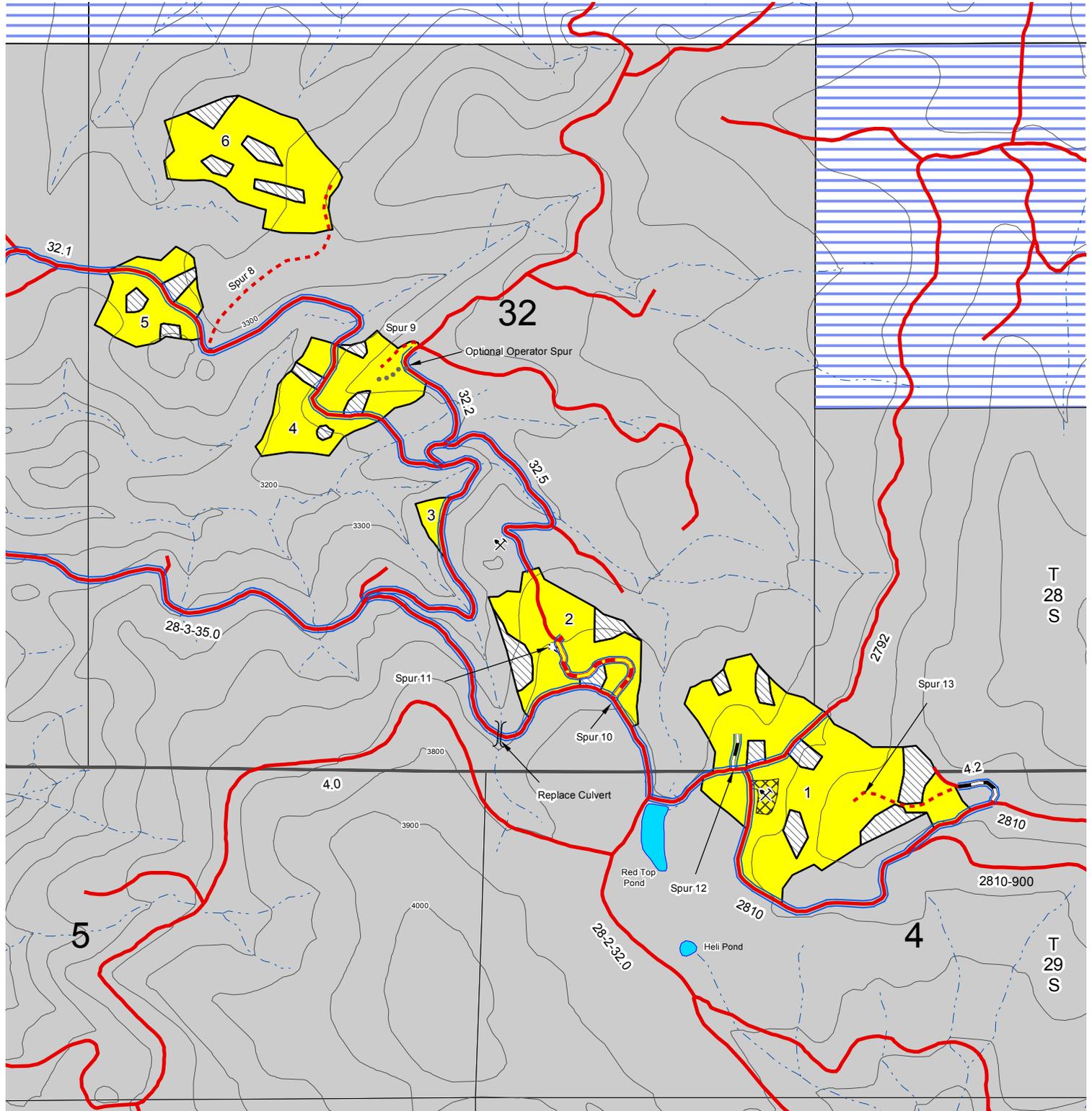
- Paved Highway
- Existing Road
- Haul / Access Route
- Construct Road
- Harvest Area
- BLM (O&C) Land
- Non-BLM Land
- USFS Land

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



# WHITE CASTLE

## Variable Retention Harvest



T28, 29S, R2W

Willamette Meridian, Douglas Co., OR.



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

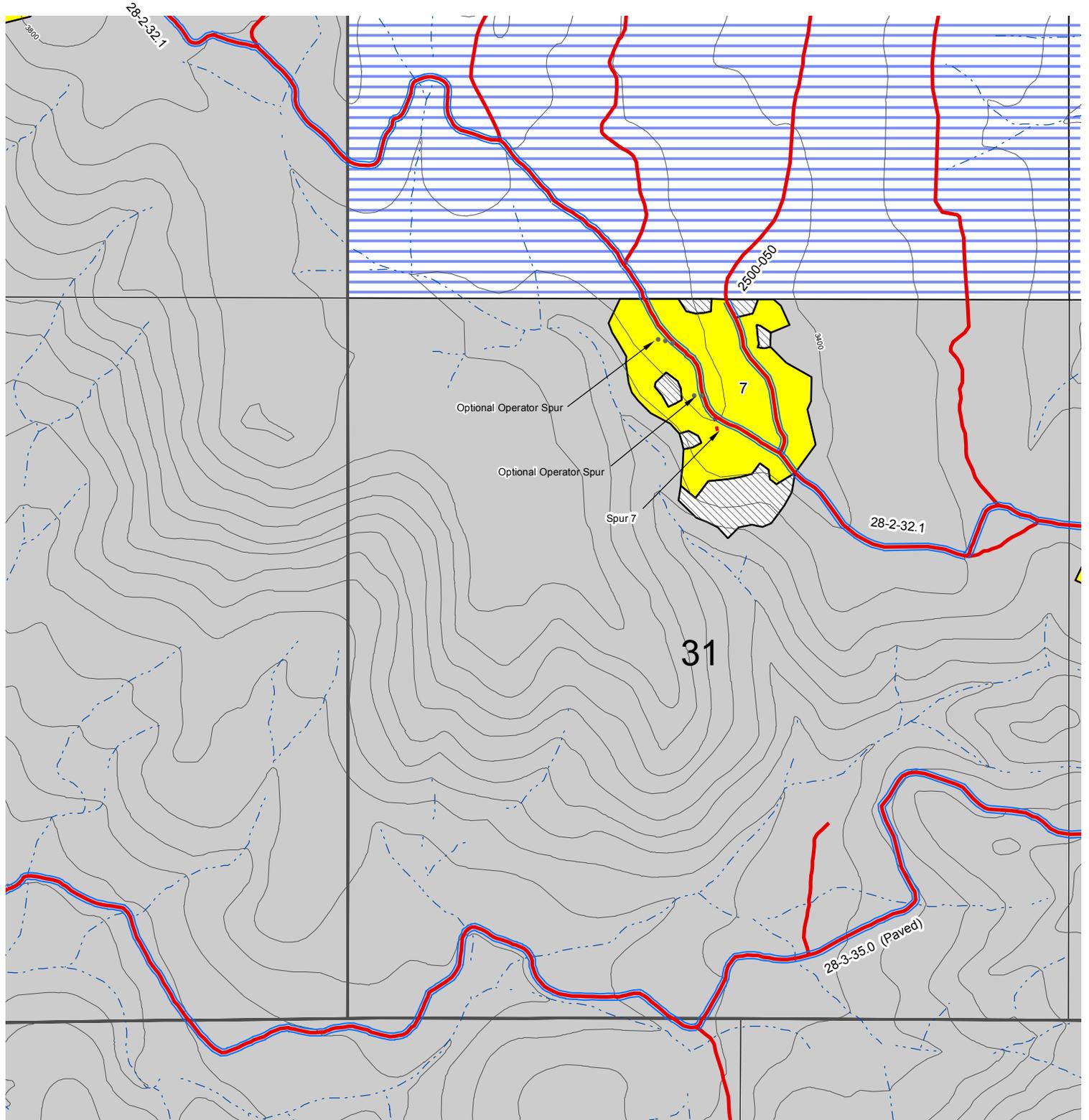


- Optional Operator Spur
- Existing Road
- Access/Haul Route
- Road To Improve, Rock
- Road To Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream
- 100' Contour

- Quarry / Stockpile Site
- Aggregate Retention Area
- Harvest Area
- BLM (O&C) Land
- USFS Land
- Non-BLM Land

# WHITE CASTLE

## Variable Retention Harvest



Optional Operator Spur

Optional Operator Spur

Spur 7

28-2-32.1

31

28-3-35.0 (Paved)



T28, R2W

Willamette Meridian, Douglas Co., OR.



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

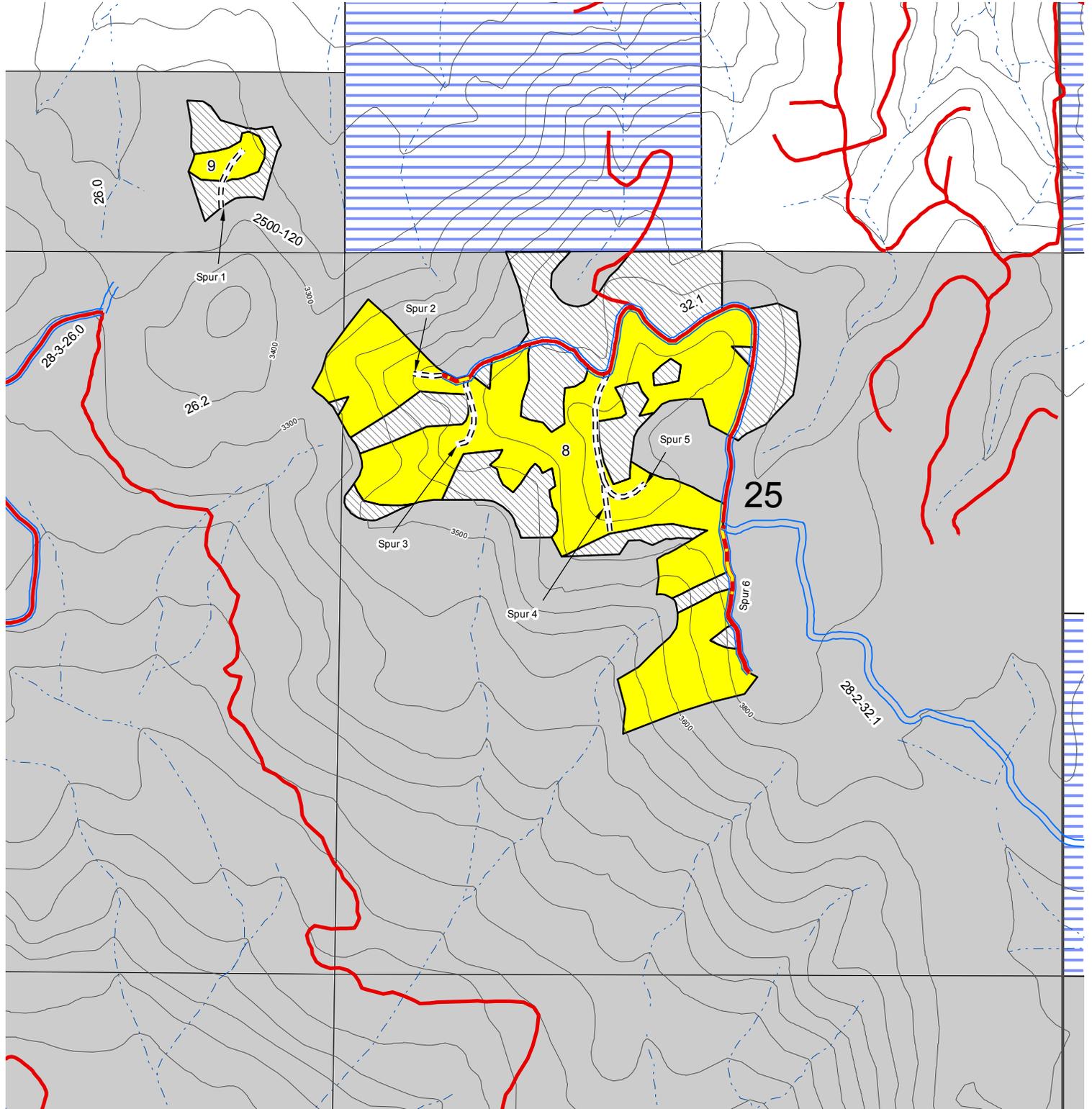


- Optional Operator Spur
- Existing Road
- Access/Haul Route
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream
- 100' Contour

- Quarry / Stockpile Site
- Aggregate Retention Area
- Harvest Area
- BLM (O&C) Land
- USFS Land
- Non-BLM Land

# WHITE CASTLE

## Variable Retention Harvest



T28, R3W

Willamette Meridian, Douglas Co., OR.



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



- Optional Operator Spur
- Existing Road
- Access/Haul Route
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream
- 100' Contour

- Quarry / Stockpile Site
- Aggregate Retention Area
- Harvest Area
- BLM (O&C) Land
- USFS Land
- Non-BLM Land