

# Chapter 2 – Alternatives



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## Introduction

This chapter describes the alternatives considered in this Draft RMP/EIS. The Council on Environmental Quality regulations direct that an EIS shall “... rigorously explore and objectively evaluate all reasonable alternatives ...” 40 CFR 1502.14. Guidance from the Council on Environmental Quality further explains, “When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS” (“Forty Most Asked Questions ...” 46 FR 18027). The purpose and need for action dictates the range of alternatives that must be analyzed, because action alternatives are not reasonable if they do not respond to the purpose and need for the action (USDI BLM 2008, pp. 35-36, 49-50).

For an RMP, there are potentially endless variations in design features or combinations of different plan components. The BLM has designed the range of alternatives in this Draft RMP/EIS to span the full spectrum of alternatives that would respond to the purpose and need for the action. The BLM has developed the alternatives to represent a range of overall management approaches, rather than exemplify gradations in design features. Nevertheless, the alternatives do not provide all possible combinations of plan components. There are components of the alternatives that are somewhat separable, and the BLM may combine management objectives and management direction from several of these alternatives in developing the eventual Proposed RMP. In addition, the BLM could consider components of the No Action alternative, which is analyzed in detail in this Draft RMP/EIS, for inclusion in the eventual Proposed RMP, along with any of the components of the alternatives and sub-alternatives.

This chapter describes the No Action alternative and the action alternatives that are analyzed in detail in this RMP/EIS, including identification of the preferred alternative. This chapter also discusses alternatives that the BLM considered but did not analyze in detail. Finally, this chapter presents a comparison of the alternatives, including a summary of the environmental effects of the alternatives.

## No Action Alternative

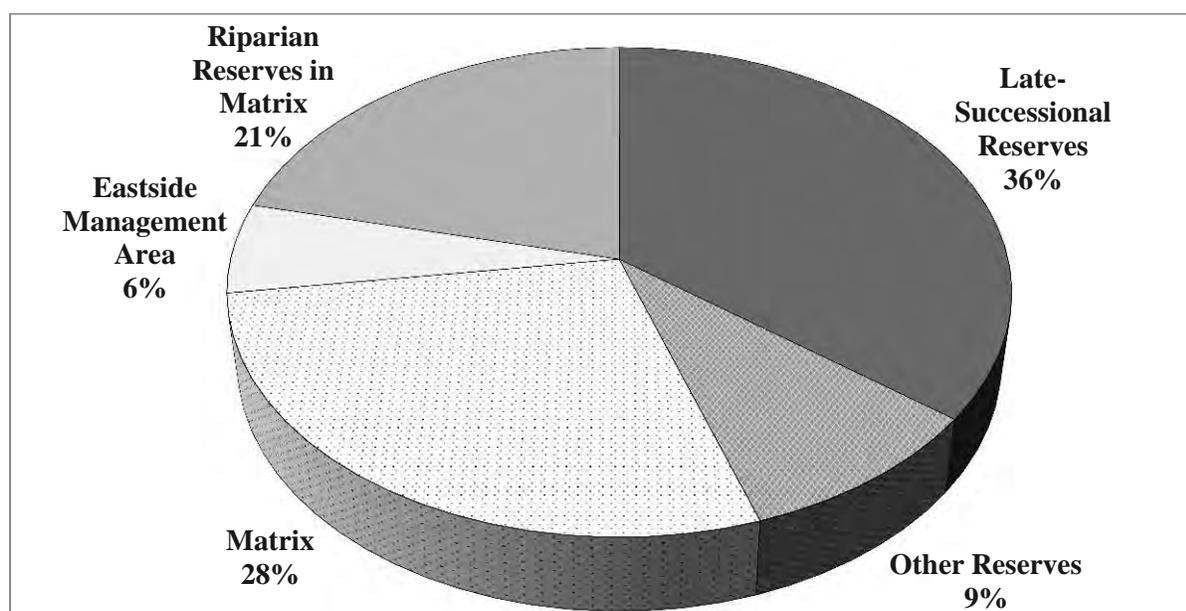
The Council on Environmental Quality NEPA regulations require that an EIS analyzes a No Action alternative (40 CFR 1502.14(d)). The Council on Environmental Quality guidance explains that, for plans such as this RMP revision, No Action means there is no change from current management direction or level of management intensity (CEQ 1981). The No Action alternative in this Draft RMP/EIS is implementation of the 1995 RMPs as written (in contrast to the BLM’s current implementation practices under the 1995 RMPs). A section later in this chapter, titled Alternatives Considered but not Analyzed in Detail, includes further discussion of an alternative that would seek to continue the current practices.

The land use allocations and management actions/direction in the 1995 RMPs for the Coos Bay, Eugene, Medford, Roseburg, and Salem Districts and the Klamath Falls Field Office of the Lakeview District, as amended and modified by court order, describe the No Action alternative (**Figure 2-1**, **Table 2-1**, and

**Map 2-1)** and are incorporated here by reference. The No Action alternative, as analyzed in this Draft EIS/RMP, includes Survey and Manage standards and guidelines, consistent with—

- The January 2001, Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl;
- The 2001, 2002, and 2003 Annual Species Review modifications to the Survey and Manage species list, except for the changes made for the red tree vole; and
- The Pechman exemptions.<sup>8</sup>

The BLM has documented all amendments and plan maintenance of the 1995 RMPs in the district annual program summaries and monitoring reports from 1996 through 2014.



**Figure 2-1.** No Action alternative land use allocations.

<sup>8</sup> The District Court for the Western District of Washington issued a remedy order on Feb. 18, 2014, in the case of *Conservation Northwest et al. v. Boonie et al.*, No. 08-1067-JCC (W.D. Wash.)/No.11-35729 (9<sup>th</sup> Cir.) that vacated the 2007 Records of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines. Vacatur of the 2007 RODs has the effect of returning the BLM to the status quo in existence prior to the 2007 RODs, which was defined by three previous legal rulings, as follows:

- Judge Pechman reinstated the 2001 ROD, including any amendments or modifications to the 2001 ROD that were in effect as of March 21, 2004 (CV-04-00844-MJP, Jan. 9, 2006), and this ruling incorporated the 2001, 2002, and 2003 Annual Species Reviews;
- The Ninth Circuit Court of Appeals in *KSWC et al. v. Boody et al.*, 468 F3d 549 (2006) vacated the 2001 Annual Species Review category change and 2003 Annual Species Review removal for the red tree vole in the mesic zone; and
- Judge Pechman ordered four categories of projects exempt from compliance with the Survey and Manage standards and guidelines (CV-04-00844-MJP, Oct. 11, 2006, “Pechman exemptions”): thinnings in forest stands younger than 80 years of age, culvert replacement/removal, riparian and stream improvement projects, and hazardous fuel treatments applying prescribed fire for noncommercial projects.

**Table 2-1.** No Action alternative land use allocations.

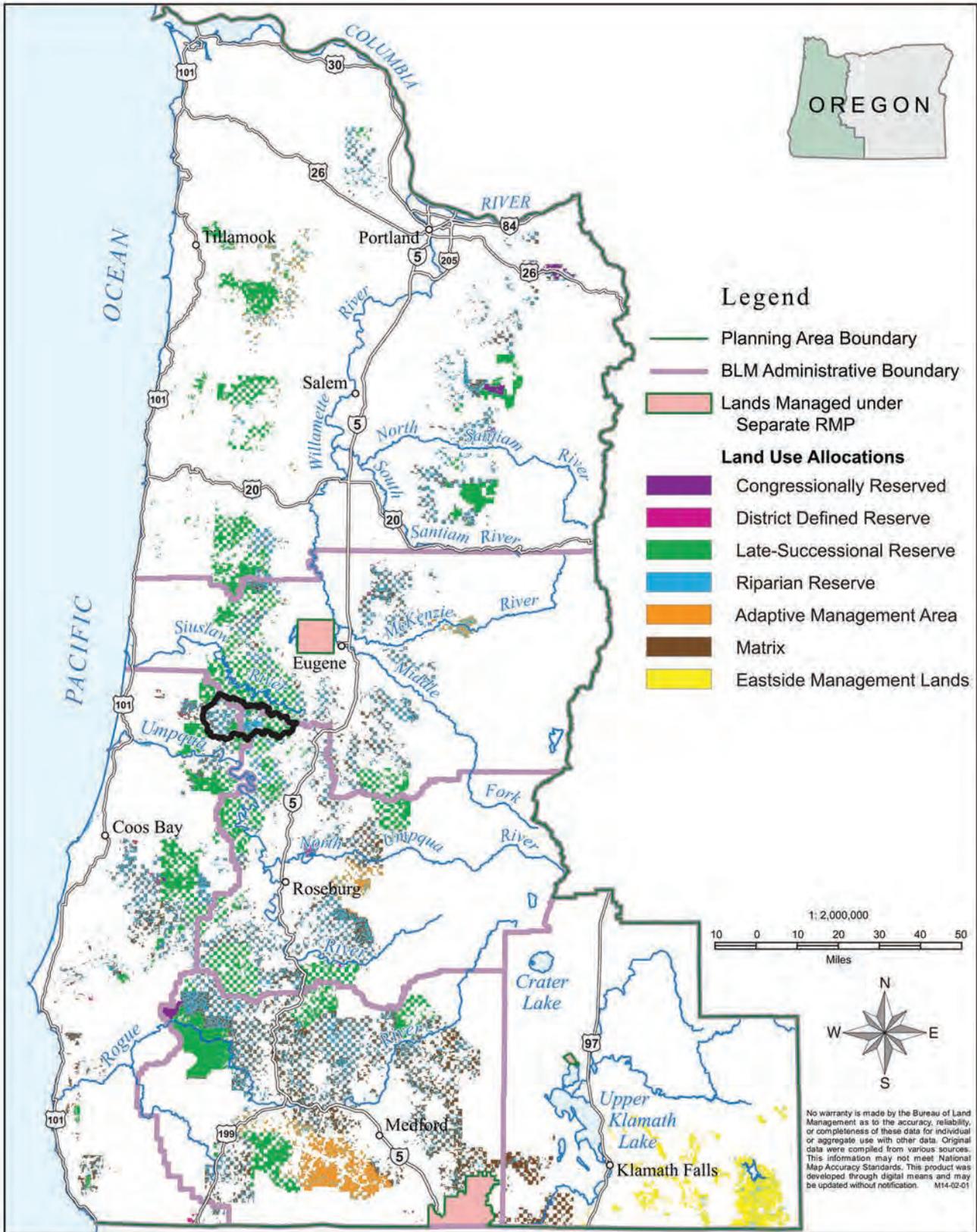
Allocation	Acres	Percentage of Total Acres
Late-Successional Reserves <sup>9</sup>	879,031	36%
Riparian Reserves in Matrix	527,550	21%
Other Reserves <sup>10</sup>	233,410	9%
Matrix <sup>11</sup>	691,998	28%
Eastside Management Area	146,867	6%

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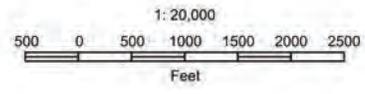
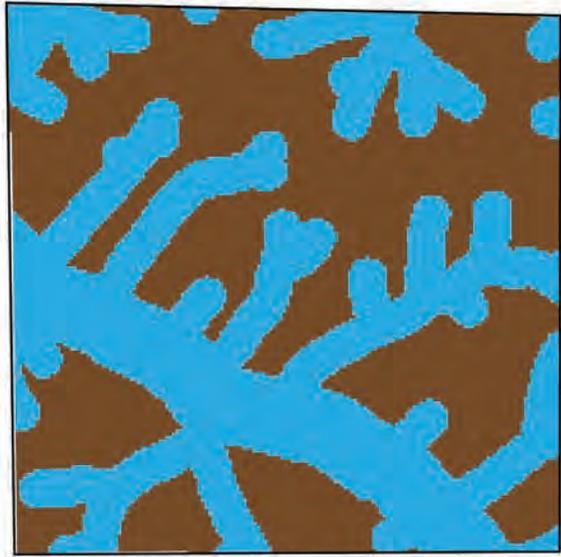
<sup>9</sup> Late-Successional Reserves include Adaptive Management Areas within the Late-Successional Reserves and predictions of the acreage of newly discovered marbled murrelet sites.

<sup>10</sup> Other Reserves in the No Action alternative include Congressionally Reserved lands, District-Designated Reserves, and lands reserved within the Matrix.

<sup>11</sup> Matrix includes Adaptive Management Areas.

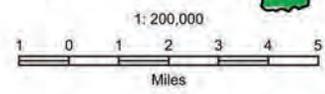
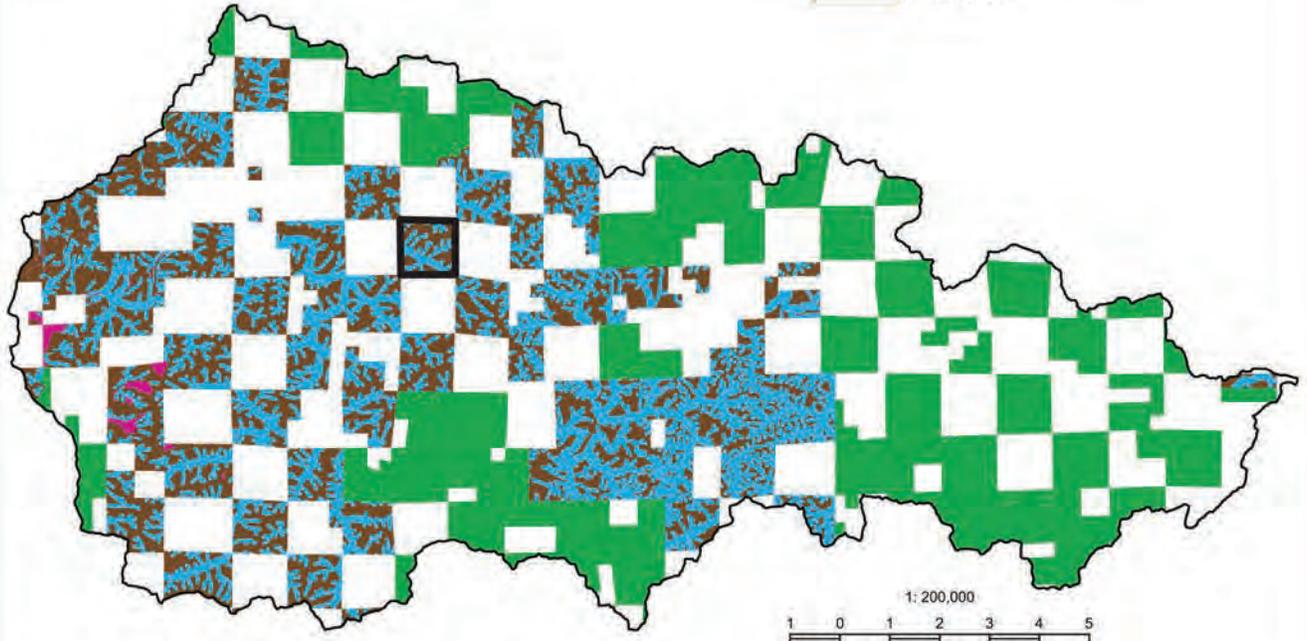


Map 2-1: The No Action Alternative Land Use Allocations



Township 20 South, Range 8 West, Section 23

- Land Use Allocations**
- District Defined Reserve
  - Late-Successional Reserve
  - Riparian Reserve
  - Matrix



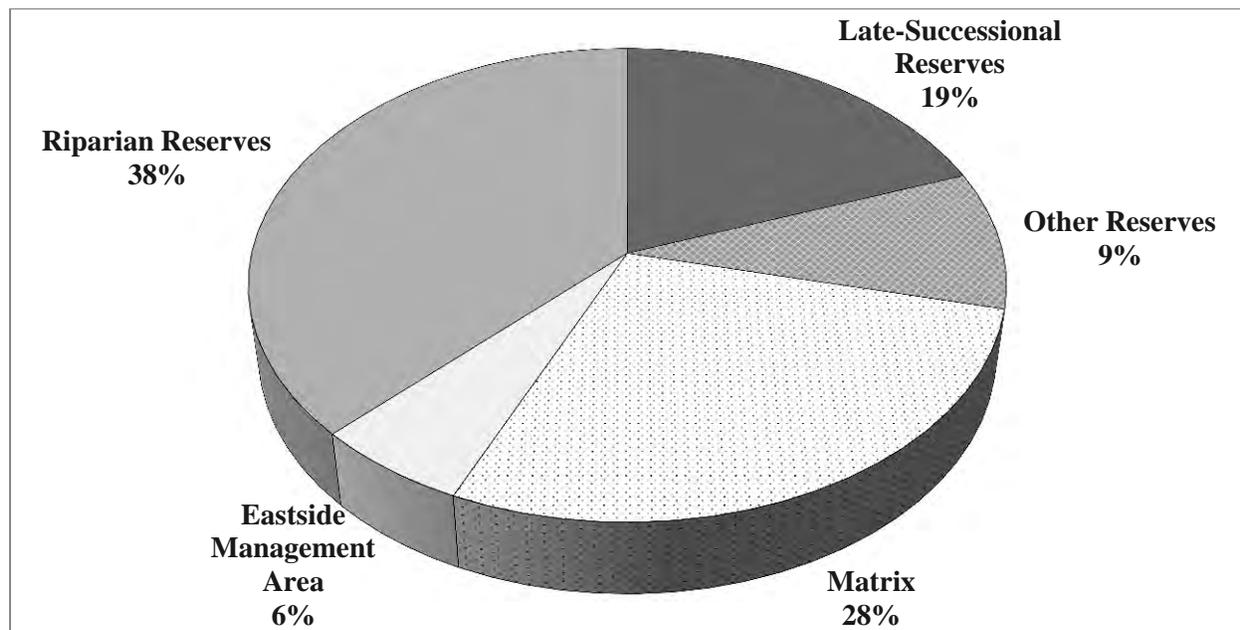
Upper Smith River Watershed

For comparing the acreage by land use allocation for the No Action alternative to the action alternatives, the Matrix land use allocation in the No Action alternative is comparable to the Harvest Land Base land use allocation in the action alternatives.

The Eastside Management Area in the No Action alternative comprises those BLM-administered lands in the Klamath Falls Field Office outside the range of the northern spotted owl. In the action alternatives, the Eastside Management Area comprises those BLM-administered lands in the Klamath Falls Field Office east of Highway 97. Because of these different boundaries, the acreage for the Eastside Management Area is slightly higher in the No Action alternative than in the action alternatives.

The Riparian Reserves acreage for the No Action alternative in **Figure 2-1** and **Table 2-1**, presents only the Riparian Reserves within the Matrix, which is how the 1995 RMPs presented the hierarchy of land use allocations. The Late-Successional Reserves acreage for the No Action alternative do not account for Riparian Reserves within the Late-Successional Reserves. In the No Action alternative, the Riparian Reserves would overlay the Late-Successional Reserves, and implementation in those overlapping areas would apply the management objectives and management direction for both land use allocations (USDA/USDI 1994, pp. A-5–A-6). As a result, the 1995 RMPs only accounted for the Riparian Reserves acreage in the Late-Successional Reserves as Late-Successional Reserves; the only Riparian Reserve acreage calculated were those in the Matrix. Thus, the acreage of Riparian Reserves and Late-Successional Reserves presented in the 1995 RMPs cannot be directly compared to the acreages presented in this analysis.

To facilitate more direct comparison of these acreages by land use allocation for the No Action alternative to the action alternatives, **Figure 2-2**, and **Table 2-2**, present a modified hierarchy of land use allocations in the No Action alternative to display the Riparian Reserves acreage regardless of the underlying land use allocation (**Figure 2-1** and **Table 2-1**). The results are a reduction in acreage identified as Late-Successional Reserves and a corresponding increase in acreage identified as Riparian Reserves that allows for direct comparative analysis in this Draft EIS/RMP.



**Figure 2-2.** No Action alternative land use allocations with modified hierarchy.

**Table 2-2.** No Action alternative land use allocations with modified hierarchy.

<b>Allocation</b>	<b>Acres</b>	<b>Percentage of Total Acres</b>
Late-Successional Reserves	478,860	19%
Riparian Reserves	927,721	38%
Other Reserves <sup>12</sup>	233,410	9%
Matrix	691,998	28%
Eastside Management Area	146,867	6%

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<sup>12</sup> Other Reserves in the No Action alternative include Congressionally Reserved lands, District-Designated Reserves, and lands reserved within the Matrix.

### **Action Alternatives**

The four action alternatives with two sub-alternatives comprise a range of management strategies that the BLM has designed to meet the purpose and need discussed in Chapter 1. In addition, the BLM has developed the action alternatives to be consistent with the guidance for the formulation of alternatives discussed in Chapter 1. These action alternatives examine potential management strategies through land use allocations, management objectives, and management direction. Some land use allocations, management objectives, and management direction are common to all action alternatives, and some vary by action alternative, as described below.

The BLM has developed the action alternatives in response to input received during external and internal scoping. Each of the action alternatives described below include land use allocations designed to respond to the purpose and need for action, including areas managed for sustained-yield timber production that would provide the annual productive capacity of timber and areas reserved from sustained-yield timber production for purposes such as the protection of clean water and the conservation and recovery of threatened and endangered species.

### **Sub-Alternatives**

Sub-alternatives are variations of an action alternative that modify an individual component of the alternative to explore how these changes would alter certain outcomes. These examinations provide the responsible official with information that is useful for both fully understanding the alternatives and for informing the eventual development of the Proposed RMP.

The BLM focuses and limits the analysis of the sub-alternatives to the specific analytical question that is associated with a sub-alternative: that is, how modifying a single component would alter the effects on the resources associated with that component. This is in contrast to the broader analysis that is associated with the No Action alternative and the four action alternatives, which explores the effects of the alternatives on all resources. The sub-alternatives are variations on the action alternatives and, as such, could be carried forward as the eventual Proposed RMP; their individual components could also be incorporated into the eventual Proposed RMP.

The BLM has developed two sub-alternatives in this Draft RMP/EIS, which vary individual components to test specific questions about alternative design based on input received during external and internal scoping. For both sub-alternatives, the BLM focuses analysis on how the changes in the sub-alternative would alter effects on timber production and northern spotted owls. The BLM focused the analysis of these sub-alternatives on these two resources, because the modification of the alternative component would vary the approach to an element of northern spotted owl conservation, and the change in the sub-alternatives would directly and explicitly alter the approach to timber production. The specific features of these sub-alternatives are described under the pertinent action alternatives.

### **Features Common to All Action Alternatives**

This section contains a summary of those features that are common to all action alternatives. The subsequent section contains a description of the features that differ among the action alternatives.

All action alternatives include the following land use allocations: Congressionally Reserved, District-Designated Reserves, Late-Successional Reserve, Riparian Reserve, Harvest Land Base, and Eastside Management Area. The location and acreage of these allocations, with the exception of Congressionally Reserved, vary by alternative. Within each action alternative, the Harvest Land Base, Late-Successional Reserve, and Riparian Reserve have specific, mapped sub-allocations with differing management

direction. The Harvest Land Base has multiple sub-allocations with differing management direction for forest management summarized in **Table 2-3**. Appendix B contains detailed descriptions of the management direction for the sub-allocations of the Harvest Land Base.

**Table 2-3.** Forest management practices by Harvest Land Base sub-allocation.

Sub-allocation	Alternatives That Include Sub-Allocation	Forest Management Practices
High Intensity Timber Area (HITA)	Alt. A Alt. C	Thinning and regeneration harvest with no retention
Moderate Intensity Timber Area (MITA)	Alt. B Alt. D	Thinning and regeneration harvest with retention of 5-15 percent of the pre-harvest basal area of the stand
Low Intensity Timber Area (LITA)	Alt. B	Thinning and regeneration harvest with retention of 15-30 percent of the pre-harvest basal area of the stand
Uneven-aged Timber Area (UTA)	All action alternatives	Prescribed fire, thinning, single tree selection harvest, and group selection harvest
Owl Habitat Timber Area (OHTA)	Alt. D	Thinning and uneven-aged timber harvest applied in a manner that would maintain and promote the development of northern spotted owl habitat

In the context of these land use allocations, the term “reserve” indicates that the BLM or Congress have reserved lands within the allocation from sustained-yield timber production. These reserve land use allocations—Congressionally Reserved, District-Designated Reserves, Late-Successional Reserve, and Riparian Reserve—are in contrast to the Harvest Land Base, which includes management objectives for sustained-yield timber production. This does not mean that the BLM is necessarily prohibiting active management in these reserve allocations. On the contrary, each action alternative includes management direction to conduct the management actions necessary to achieve the management objectives for these allocations.

***Congressionally Reserved Lands***

Congressionally Reserved lands are those lands that Congress has designated and defined management through law, such as designated Wilderness and Wild and Scenic Rivers. The mandated management of these lands requires that the BLM reserve these lands from sustained-yield timber production. The location and acreage of Congressionally Reserved lands does not vary among the alternatives, including the No Action alternative.

***District-Designated Reserves***

District-Designated Reserves<sup>13</sup> include lands that are reserved from sustained-yield timber production for a variety of reasons, including—

- Areas that the BLM has constructed for specific purposes (such as roads, buildings, maintenance yards, and other facilities and infrastructure);

<sup>13</sup> These areas have been termed Administratively Withdrawn in previous planning efforts. This RMP/EIS does not use the term withdrawn in this context to avoid confusion with the withdrawal of areas from operation of public land laws, location, and entry under mining laws, or application and offers under mineral leasing laws.

- Areas that the BLM has identified through the Timber Production Capability Classification<sup>14</sup> system as unsuitable for sustained-yield timber production (e.g., rock outcrops);
- Areas of Critical Environmental Concern, including Research Natural Areas; and
- Other reserves (e.g., special recreation management areas and areas protected for Bureau sensitive species).

Under all alternatives, the BLM would manage roads, maintenance yards, buildings, and other facilities for the purpose for which they were constructed. The BLM may manage areas identified as unsuitable for sustained-yield timber production through the Timber Production Capability Classification system for other uses, if those uses are compatible with the reason for which the BLM has reserved these lands (as identified by the timber production capability classification codes). The BLM will periodically add additional areas to those areas reserved through updates to the timber production capability classification system, when examinations indicate that an area meets the criteria for reservation. The BLM may also delete areas from those areas reserved and return the area to sustain-yield timber production through updates to the timber production capability classification system, when examinations indicate that an area does not meet the criteria for reservation. The BLM would reserve Areas of Critical Environmental Concern and other District-Designated Reserves on O&C lands consistent with the discussion in Chapter 1 under The O&C Act and the FLPMA.

### **Land Use Allocation Objectives that are Common to All Action Alternatives**

#### ***Late-Successional Reserve***

The Late-Successional Reserve in all action alternatives has management objectives to—

- Protect stands of older, structurally-complex, conifer forest;
- Maintain habitat for the northern spotted owl and marbled murrelet;
- Promote development of habitat for the northern spotted owl in stands that do not currently meet suitable habitat criteria; and
- Promote development of nesting habitat for the marbled murrelet in stands that do not currently meet nesting habitat criteria.

#### ***Riparian Reserve***

The Riparian Reserve in all action alternatives has management objectives to—

- Contribute to the conservation and recovery of listed fish species and their habitats and provide for conservation of special status fish and other special status riparian associated species;
- Maintain and restore riparian areas, stream channels and wetlands by providing forest shade, sediment filtering, wood recruitment, stability of stream banks and channels, water storage and release, vegetation diversity, nutrient cycling, and cool and moist microclimates;

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<sup>14</sup> The Timber Production Capability Classification is an analytical classification system by which the BLM inventories and identifies sites as capable of supporting sustained-yield timber production without degrading the site's productive capacity. This classification considers factors such as soil depth, available moisture, slope, drainage, and stability. Sites that are not capable of supporting sustained-yield timber production are not included in the Harvest Land Base.

- Maintain water quality and stream flows within the range of natural variability, to protect aquatic biodiversity, and provide quality water for contact recreation and drinking water sources;
- Meet ODEQ water quality targets for 303(d) water bodies with approved Total Maximum Daily Loads (TMDLs);
- Maintain high quality water and contribute to the restoration of degraded water quality downstream of BLM-administered lands; and
- Maintain high quality waters within ODEQ designated Source Water Protection watersheds.

### ***Harvest Land Base***

The Harvest Land Base in all action alternatives has management objectives to—

- Manage forests to achieve continual timber production that can be sustained through a balance of growth and harvest;
- Offer for sale the declared annual productive capacity of timber;
- Recover economic value from timber harvested after a stand-replacement disturbance, such as a fire, windstorm, disease, or insect infestation;
- Ensure the establishment and survival of desirable trees appropriate to the site and enhance their growth in harvested or disturbed areas; and
- Enhance the economic value of timber in forest stands.

### ***Eastside Management Area***

All action alternatives include an Eastside Management Area land use allocation, which applies to BLM-administered lands in the Klamath Falls Field Office east of Highway 97. This allocation includes management objectives to—

- Manage forest and non-forest lands with the intent of maintaining or improving wildlife habitat and rangeland conditions based on ecological site parameters;
- Manage forest and non-forest lands for multiple uses in addition to those listed above including: recreational needs, community stability, and commodity production;
- Promote development of fire-resilient forests;
- Provide for the conservation of BLM Special Status Species; and
- Meet Oregon Department of Fish and Wildlife management goals for wildlife on public domain lands.

In addition, the design, management objectives, and management direction for the Riparian Reserve on BLM-administered lands in the Klamath Falls Field Office east of Highway 97 do not vary among action alternatives (*Appendix B*).

## **Resource-Specific Objectives that are Common to All Action Alternatives**

For many programs or resources, the management objectives and management direction differ from the No Action alternative, but do not vary among the action alternatives. For some of these resources or programs, the management objectives and management direction do not vary among the action alternatives, but the management of the resource is tied to allocations that do vary among action alternatives. For example, the management objectives and management direction for designated Areas of Critical Environmental Concern do not vary among action alternatives, but which specific areas the BLM

would designate as Areas of Critical Environmental Concern would vary with the land use allocations of each alternative. The following section summarizes the resource-specific management objectives that are common to all action alternatives. Appendix B contains detailed descriptions of the management objectives and management direction that are common to all action alternatives.

**Air Quality:** The BLM would follow the Clean Air Act by protecting air quality in Class 1 areas, such as wilderness areas, and preventing exceedances of National, State, or local ambient air quality standards.

**Areas of Critical Environmental Concern (ACECs):** The BLM would manage designated ACECs to maintain and restore their relevant and important values (though the array of ACECs that the BLM would designate varies by alternative).

**Cultural/Paleontological Resources:** The BLM would protect significant cultural resources and ensure that all land and resource uses comply with the National Historic Preservation Act. The BLM would protect and preserve significant localities from natural or human-caused deterioration or potential conflict with other resources.

**Fire and Fuels:** In responding to wildfires, the BLM would provide for public and firefighter safety while meeting land management objectives. The BLM would also manage the land to restore and maintain resilience to wildfires and to decrease the risk of catastrophic wildfires.

**Fisheries:** The BLM would manage riparian areas to maintain and improve the aquatic habitat across the landscape.

**Forest Management:** The BLM would enhance the health, stability, growth, and vigor of forest stands. The BLM would not allow management activities that would disrupt the Density Management study sites until data collection is complete.

**Hydrology:** The BLM would manage to provide water that meets Oregon Department of Environmental Quality water quality standards for drinking water, contact recreation, and aquatic biodiversity.

**Invasive Species:** The BLM would prevent the introduction and spread of non-native invasive species.

**Lands, Realty, and Roads:** The BLM would adjust land tenure zones to facilitate potential changes in ownership to improve the management of resources and enhance public resource values. It would also provide legal access to BLM-administered lands and facilities and rights-of-way, permits, leases, and easements in a manner that is consistent with Federal and State laws.

**Minerals:** The BLM would manage mineral resources in a manner that allows for their orderly and efficient development.

**Rare Plants and Fungi:** The BLM would manage to contribute toward the recovery of Federally-listed plant and fungi species. It would also manage for an array of natural communities including oak woodlands, shrublands, grasslands, cliffs, rock outcrops, talus slopes, meadows, and wetlands, and would support ecological processes and disturbance mechanisms to allow for a range of seral conditions.

**Recreation:** The BLM would provide diverse recreational opportunities.

**National Landscape Conservation System:** The BLM would conserve, protect, and restore areas that Congress has designated for their outstanding values.

**Travel and Transportation:** The BLM would maintain a travel network that best meets the full range of public, resource management, and administrative access needs.

**Visual Resource Management:** The BLM would protect the quality of the scenic values on public lands where visual resource management is an issue or where high value visual resources exist, and protect areas having high scenic quality, visual sensitivity, and public visibility.

**Soils:** The BLM would manage to maintain the overall soil capacity of BLM-administered lands.

**Sustainable Energy:** The BLM would allow for the development of sustainable energy resources to the maximum extent possible without precluding other land uses.

**Wild Horses:** The BLM would maintain a healthy population of wild and free-roaming horses in the Pokegama Herd Management Area.

**Wildlife:** The BLM would manage to contribute to the conservation and recovery of Federally-listed wildlife species. It would also implement proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing of these species under the Endangered Species Act.

Under all action alternatives, the BLM would implement administrative actions at approximately the same levels as during the past decade. Administrative actions are routine transactions and activities that are required to serve the public and to provide optimum management of resources, including:

- Competitive and commercial recreation activities
- Special forest product collection permit issuance
- Lands and realty actions (including the issuance of grants, leases, and permits)
- Trespass resolution
- Facility maintenance
- Facility improvements
- Road maintenance
- Hauling permit issuance
- Recreation site maintenance
- Recreation site improvement
- Hazardous materials removal
- Law enforcement
- Legal land or mineral estate ownership surveys
- Engineering support assistance in mapping
- Field visits for the design of projects, include clearance inventories
- Tree sampling (including using the 3P fall, buck, and scale sampling method)
- Project implementation and plan effectiveness monitoring
- Incidental live or dead tree removal for safety or operational reasons
- Wildlife, fisheries, or plant population monitoring

## **Potential Mitigation Measures that are Common to All Action Alternatives**

### ***BLM Participation in Barred Owl Management***

The U.S. Fish and Wildlife Service is currently authorizing the removal of barred owls from four study areas in California, Oregon, and Washington to evaluate the feasibility, cost, and effectiveness of barred owl removal and the resulting effects to northern spotted owl populations (USDI FWS 2013). In the Revised Recovery Plan for the Northern Spotted Owl, Recovery Action 29 describes the design and implementation of large-scale barred owl control experiments to assess the effects on spotted owl site occupancy, reproduction, and survival (USDI FWS, 2011, p. III-65). Recovery Action 30 calls for management to reduce the negative effects of barred owls on spotted owls so that the recovery criterion for a stable population trend can be achieved. In the Revised Recovery Plan for the Northern Spotted Owl, the U.S. Fish and Wildlife Service acknowledges the need for aggressive strategies to address the threat from barred owls in the face of scientific uncertainty, and will employ an active program of adaptive management in order to deal with uncertainty and risk (USDI FWS 2011, p. II-6–II-10).

Based on information in the Revised Recovery Plan for the Northern Spotted Owl (USDI FWS 2011), the analysis in the U.S. Fish and Wildlife Service EIS for Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls (USDI FWS 2013), and preliminary results from experimental removals (Diller 2013, Diller *et al.* 2014), barred owl management may result in decreased competition between barred owls and northern spotted owls, increased site occupancy by northern spotted owls, and increased northern spotted owl survival and reproduction. These outcomes may increase the likelihood of recovery of the northern spotted owl. As such, the experimental removals represent an inquiry into the best manner in which barred owl management can contribute to the recovery of the northern spotted owl.

As a potential mitigation measure, the BLM would cooperate with the U.S. Fish and Wildlife Service and provide financial support for this experimental removal of barred owls. Further, when the U.S. Fish and Wildlife Service determines the best manner in which barred owl management can contribute to the recovery of the northern spotted owl, the BLM would participate in, cooperate with, and provide support for an interagency program for barred owl management to implement Recovery Action 30. Barred owl management actions on BLM-administered lands within the range of the northern spotted owl could include BLM participation in scheduling, funding, and implementing such actions. These actions would be implemented pursuant to appropriate NEPA analysis and decision-making. To the extent the BLM funds implementation of the Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls (USDI FWS 2013), the NEPA analysis for that action is already completed. The EIS prepared by the U.S. Fish and Wildlife Service describes and evaluates nine alternatives for an experimental removal of northern barred owls on a scale sufficient to determine if the removal would increase northern spotted site occupancy and improve population trends. Results from these experiments would be used by the U.S. Fish and Wildlife Service to inform future decisions on potential long-term management strategies for barred owls (USDI FWS 2013). That analysis is hereby incorporated by reference.

### **Action Alternative Descriptions**

This section includes a summary of those features that differ among the action alternatives. Appendix B contains detailed descriptions by alternative of the management objectives and management direction that differ among the action alternatives.

### Alternative A

Alternative A has a Late-Successional Reserve larger than the No Action alternative (Figure 2-3, Table 2-4, and Map 2-2; compare to Figure 2-2, Table 2-2). The Harvest Land Base is comprised of the Uneven-Aged Timber Area and the High Intensity Timber Area. The High Intensity Timber Area includes regeneration harvest with no retention (clear cuts).

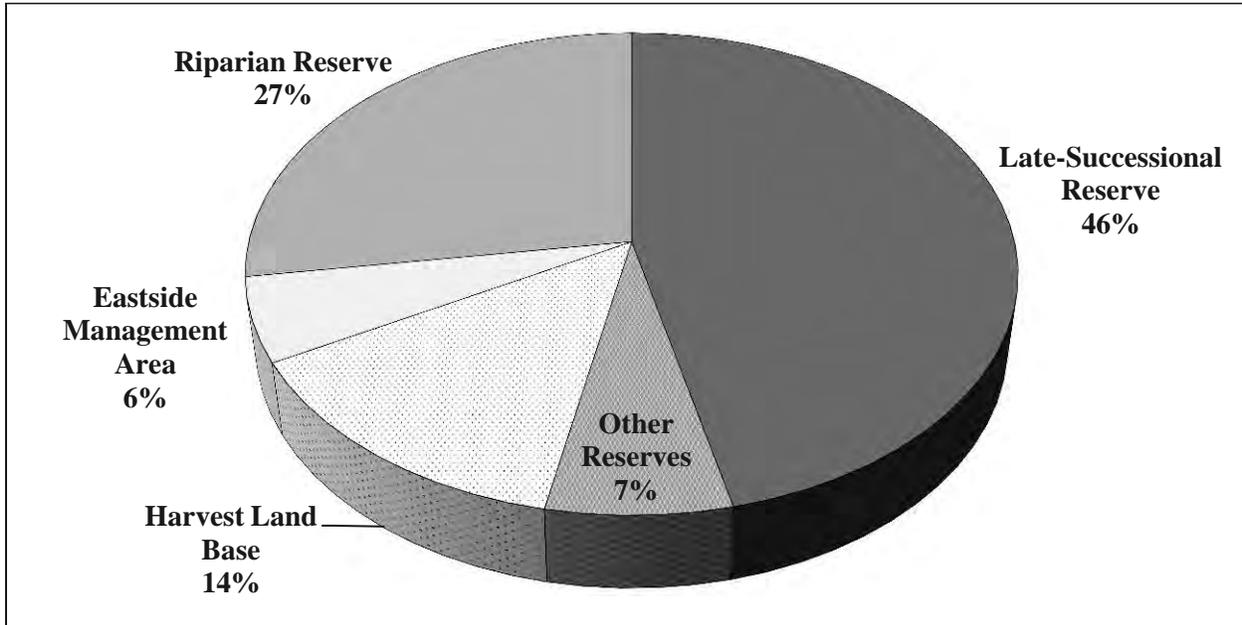
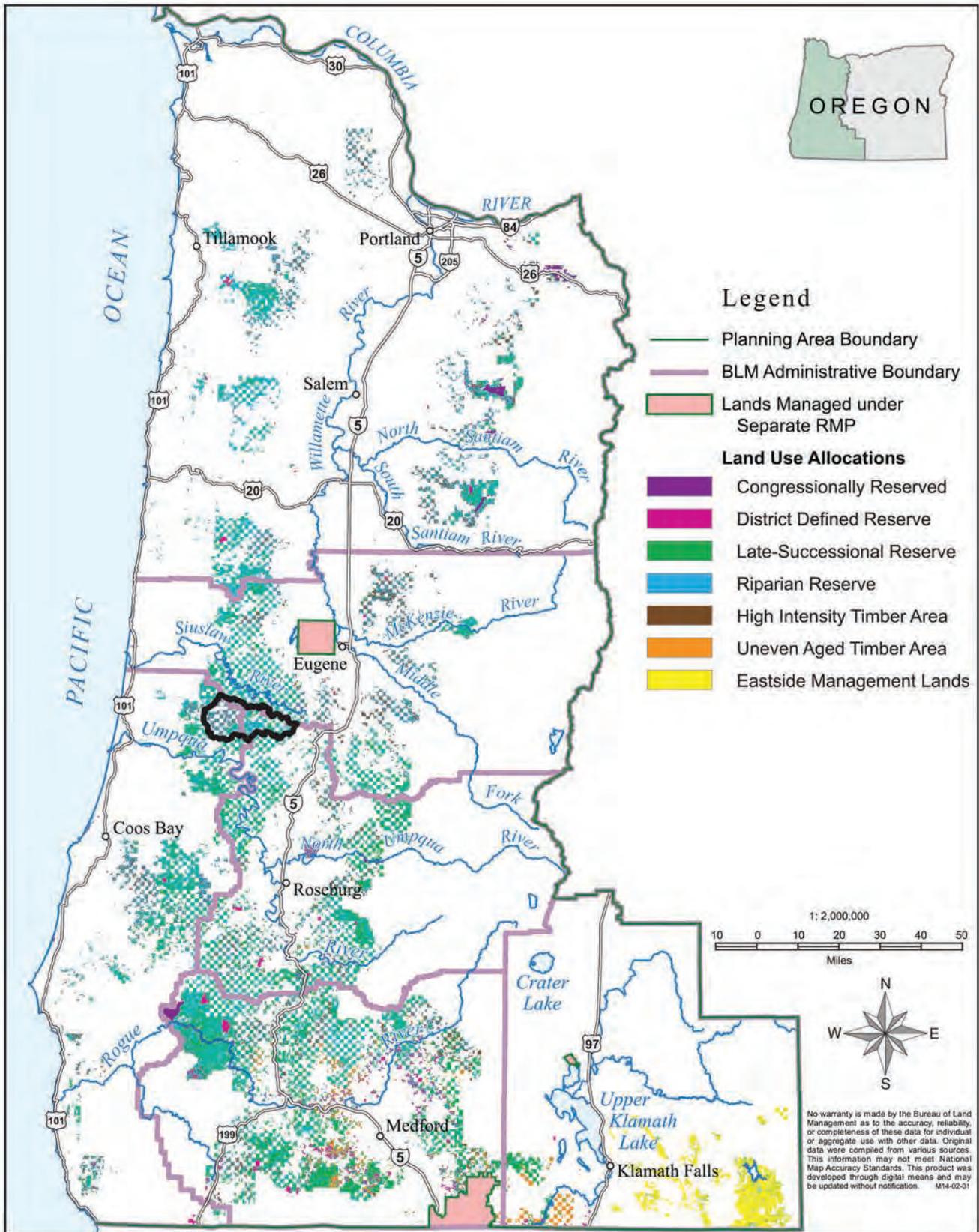


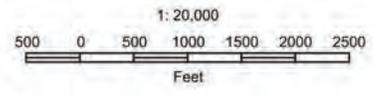
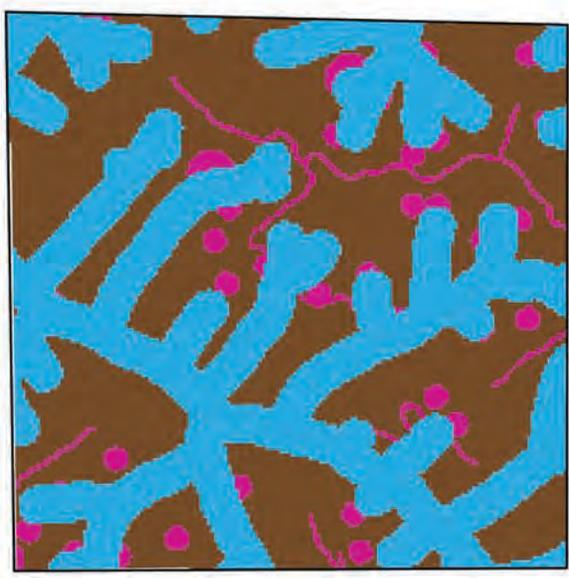
Figure 2-3. Alternative A land use allocations.

Table 2-4. Alternative A land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	1,147,527	46%	Structurally-Complex Forest	655,125	26%
			Late-Successional Reserve (Moist)	265,376	11%
			Late-Successional Reserve (Dry)	188,440	8%
			Existing Marbled Murrelet Sites	38,312	2%
			Existing Red Tree Vole Sites	274	<1%
Riparian Reserve	676,917	27%	Riparian Reserve (Moist)	441,603	18%
			Riparian Reserve (Dry)	235,313	9%
Other Reserves	170,540	7%	Congressionally Reserved	40,537	2%
			District Designated Reserves	130,003	5%
Harvest Land Base	343,900	14%	High Intensity Timber Area	289,060	12%
			Uneven-Aged Timber Area	54,840	2%
Eastside Management Area	139,972	6%	-	139,972	6%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>



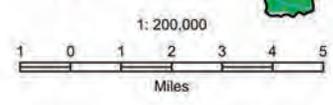
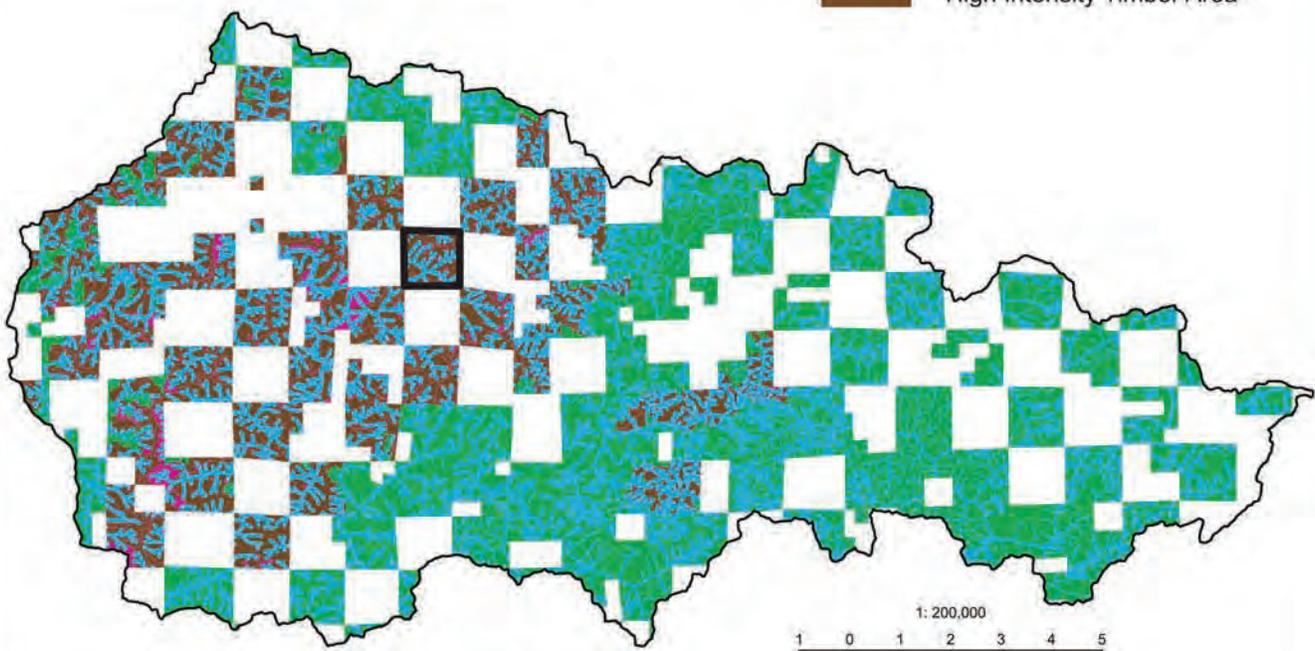
Map 2-2: Alternative A Land Use Allocations



Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  District Defined Reserve
-  Late-Successional Reserve
-  Riparian Reserve
-  High Intensity Timber Area



Upper Smith River Watershed

### **Late-Successional Reserve**

The Late-Successional Reserve includes, primarily, Structurally-Complex Forest, Large Block Forest Reserves (Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)), and much smaller acreages from existing occupied marbled murrelet sites and existing sites of the North Oregon Coast Distinct Population Segment of the red tree vole. Within the Late-Successional Reserve, the BLM would not conduct timber salvage after disturbance, except when necessary to protect public health and safety, or to keep roads and other infrastructure clear of debris.

#### **Structurally-Complex Forest**

Alternative A includes within the Late-Successional Reserve all stands 120-years old and older, based on the current age of stands in the BLM forest operations inventory.

#### **Large Block Forest Reserves: Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)<sup>15</sup>**

Alternative A includes within the Late-Successional Reserve all northern spotted owl critical habitat designated in 2013 and marbled murrelet critical habitat designated in 2011. In moist forests, the BLM would conduct restoration thinning to promote the development of structurally-complex forest, but without commercial removal of timber (i.e., coarse woody debris and snag creation only). In dry forests, the BLM would conduct restoration activities including thinning and prescribed burning to promote the development of structurally-complex forest and to improve resilience to disturbance. In dry forests, restoration thinning would include removing cut trees, including commercial removal, as needed to reduce the risk of uncharacteristic high-severity or high-intensity fire.

### **Riparian Reserve**

In Alternative A, the Riparian Reserve encompasses lands within one site-potential tree height<sup>16</sup> on either side of all streams.

The Riparian Reserve includes an inner zone in which thinning is not permitted. Inner zone widths are—

- 120 feet on either side of perennial and fish-bearing intermittent streams; and
- 50 feet on either side of non-fish-bearing, intermittent streams.

Outside of the inner zone, the BLM would conduct restoration thinning as needed to ensure that stands are able to provide trees to form stable instream structures. In moist forests, the BLM would conduct restoration thinning without commercial removal of timber (i.e., coarse woody debris and snag creation only). In dry forests, restoration activities would include prescribed burning and thinning that would include removal of cut trees, including commercial removal, as needed to reduce the risk of uncharacteristic high-severity or high-intensity fire.

### **Harvest Land Base**

The Harvest Land Base is comprised of the Uneven-Aged Timber Area and the High Intensity Timber Area. The allocation of the Uneven-Aged Timber Area in Alternative A is based on areas below an average annual precipitation threshold. Timber management in the High Intensity Timber Area includes

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<sup>15</sup> For the purpose of Late-Successional Reserve and Riparian Reserve management in Alternative A, dry forests are defined by dry and very dry forest types identified by potential vegetation types.

<sup>16</sup> Site-potential tree height is the average maximum height of the tallest dominant trees (200 years or older) for a given site class. Site-potential tree heights generally range from 140 feet to 240 feet across the decision area, depending on site productivity.

thinning and regeneration harvest with no retention (clear cuts). The High Intensity Timber Area has no snag or coarse woody debris retention requirements.

### **Wildlife**

Within the Harvest Land Base, Alternative A does not include—

- Specific protections for northern spotted owl known or historic sites;
- A requirement for surveys for the marbled murrelet prior to management actions;
- Specific management requirements for trees capable of providing marbled murrelet nesting structures in younger stands; or
- A requirement for surveys for North Oregon Coast Distinct Population Segment of the red tree vole prior to management actions.

### **Rare Plants and Fungi**

The BLM would create new populations and augment existing populations of Federally-listed and other special status plants and fungi to meet recovery plan or conservation strategy objectives.

### **Invasive Species**

Alternative A does not include treatment of sudden oak death infection sites.

### **Grazing**

The BLM would manage allotments in compliance with Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington (USDI BLM 1997). The BLM would adjust grazing levels and management practices when needed to meet or make progress toward meeting the standards for rangeland health. The BLM would make unavailable to grazing those allotments that have generally been vacant or inactive for 5 years or more.

### **Minerals**

Under Alternative A, the BLM would recommend for withdrawal from locatable mineral entry 268,981 acres and would close 232,367 acres to salable mineral development.

### **Areas of Critical Environmental Concern**

Under Alternative A, the BLM would designate 119 Areas of Critical Environmental Concern.

### **Recreation Management Areas**

Alternative A includes designation of Special Recreation Management Areas at developed recreation sites. In the rest of the decision area, the BLM would not manage specifically for recreation, but recreation could occur to the extent that the BLM has legal public access and recreation is not in conflict with the primary uses of these lands.

### **Lands with Wilderness Characteristics**

Alternative A includes management for wilderness characteristics of all lands with wilderness characteristics that are not within the Harvest Land Base.

### **Wild and Scenic Rivers**

Under Alternative A, the BLM would not find any of the eligible Wild and Scenic River segments suitable for inclusion in the National Wild and Scenic River System.

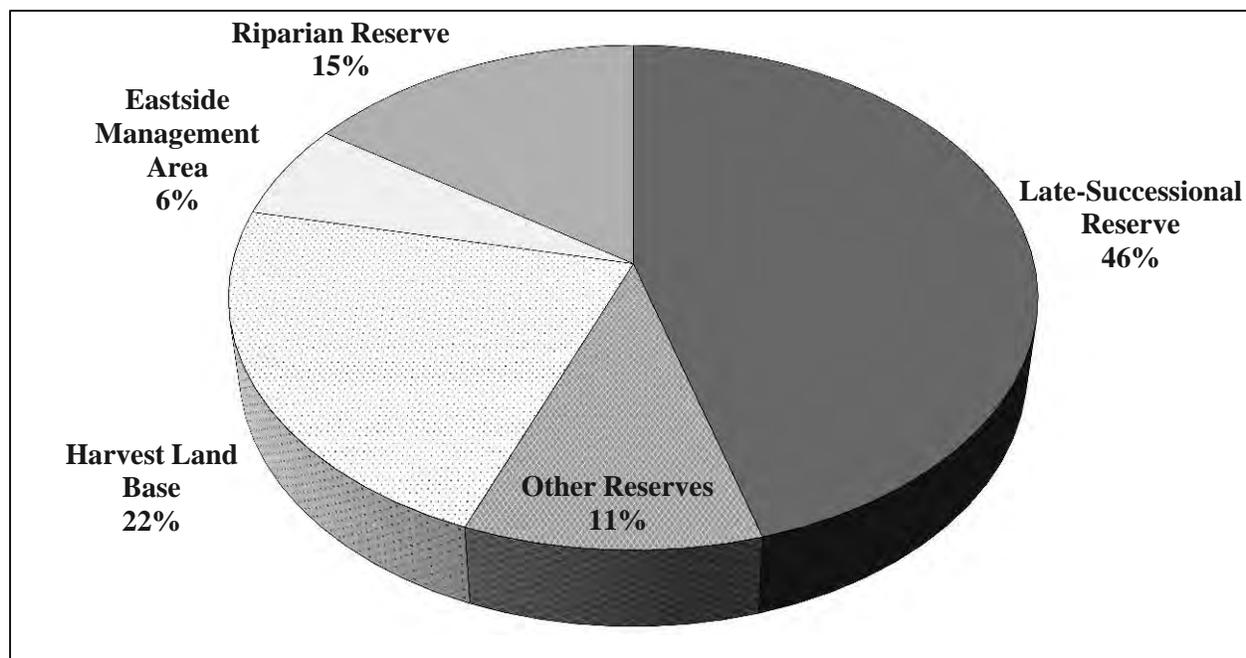
### **Visual Resource Management**

Under Alternative A, the BLM would manage Congressionally Reserved lands where decisions have been made to preserve a natural landscape (e.g., designated Wilderness Areas and the wild sections of Wild and Scenic Rivers) as Visual Resource Management Class I and scenic sections of Wild and Scenic Rivers as Visual Resource Management Class II. The BLM would manage ACECs according to their visual resource inventory class. The BLM would manage all other lands as Visual Resource Management Class IV.

### Alternative B

Alternative B has a Late-Successional Reserve similar in size to Alternative A, though of a different spatial design (see **Figure 2-4**, **Table 2-5**, and **Map 2-3**). The Harvest Land Base is comprised of the Uneven-Aged Timber Area, Low Intensity Timber Area, and Moderate Intensity Timber Area. The portion of the Harvest Land Base in Uneven-Aged Timber Area is the largest of all action alternatives. The Low Intensity Timber Area and Moderate Intensity Timber Area include regeneration harvest with varying levels of retention.

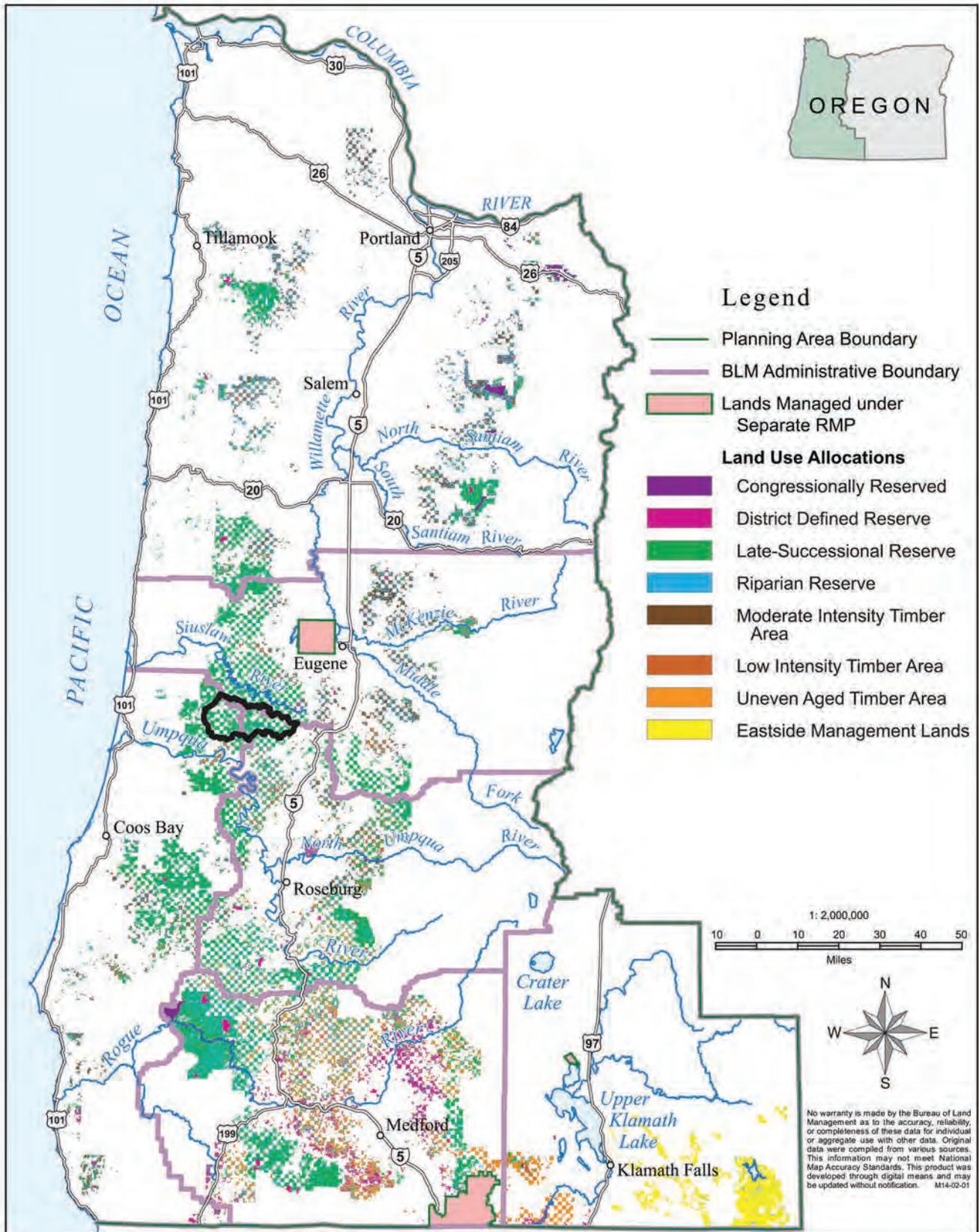
A sub-alternative of Alternative B (hereafter Sub-alternative B) includes reserving all known and historic northern spotted owl sites that would be in the Harvest Land Base in Alternative B. All other features of Sub-alternative B are the same as Alternative B. The description of Sub-alternative B, including the acreage of each land use allocation and a map, follows the description of Alternative B.



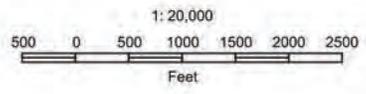
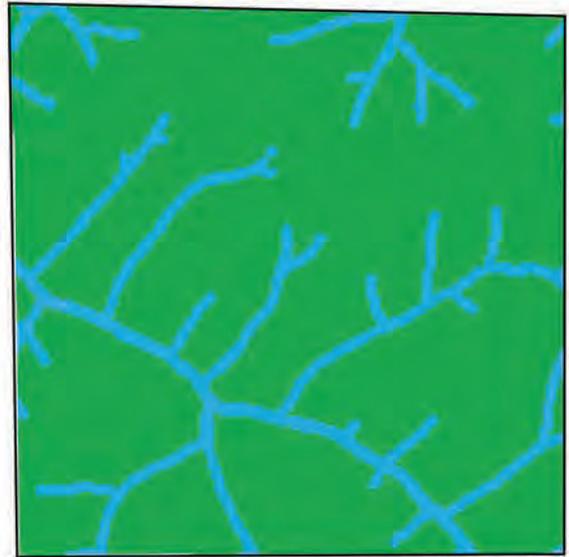
**Figure 2-4.** Alternative B land use allocations.

Table 2-5. Alternative B land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	1,127,320	46%	Structurally-Complex Forest	463,910	19%
			Late-Successional Reserve (Moist)	371,305	15%
			Late-Successional Reserve (Dry)	223,399	9%
			Occupied Marbled Murrelet Sites	41,633	2%
			Predicted Marbled Murrelet Sites	13,738	<1%
			Occupied Red Tree Vole Sites	297	<1%
			Predicted Red Tree Vole Sites	13,039	<1%
Riparian Reserve	382,805	15%	Riparian Reserve (Moist)	215,231	9%
			Riparian Reserve (Dry)	167,574	7%
Other Reserves	260,510	11%	Congressionally Reserved	40,537	2%
			District Designated Reserves	219,973	9%
Harvest Land Base	556,335	22%	Moderate Intensity Timber Area	210,087	8%
			Low Intensity Timber Area	72,358	3%
			Uneven-Aged Timber Area	273,890	11%
Eastside Management Area	151,885	6%	-	151,885	6%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>



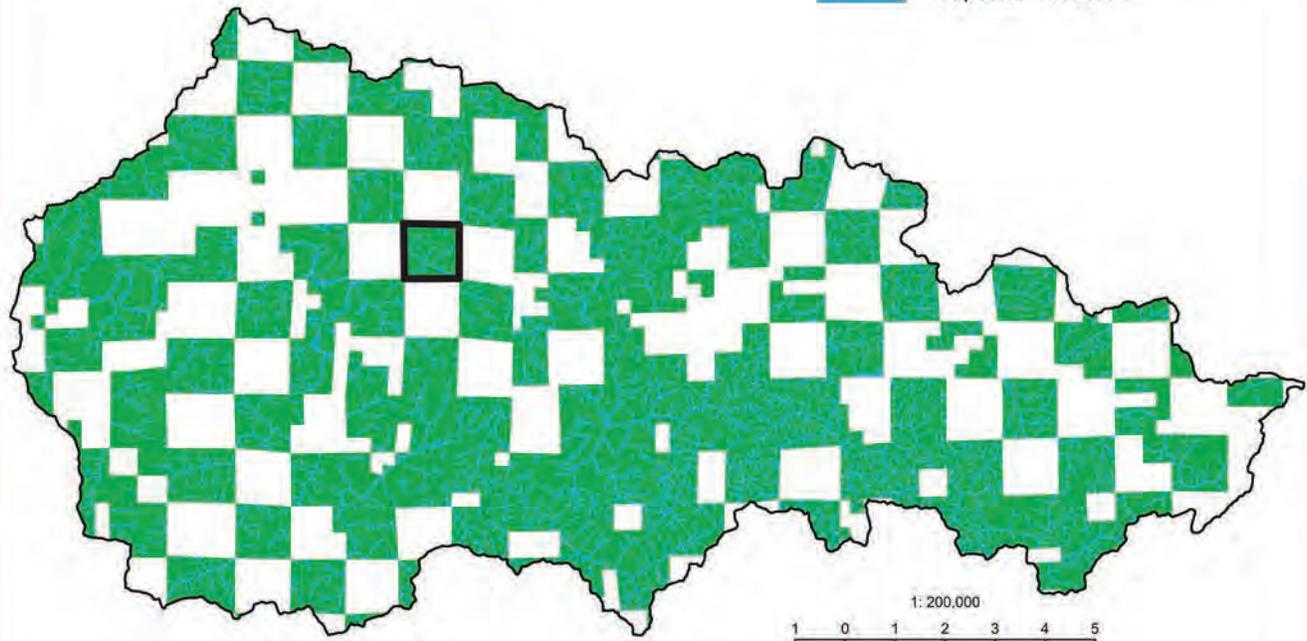
Map 2-3: Alternative B Land Use Allocations



Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  Late-Successional Reserve
-  Riparian Reserve



Upper Smith River Watershed

### Late-Successional Reserve

The Late-Successional Reserve includes, primarily, Structurally-Complex Forest, Large Block Forest Reserves (Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)), and much smaller acreages from existing occupied marbled murrelet sites and existing sites of the North Oregon Coast Distinct Population Segment of the red tree vole. In addition, Alternative B includes requirements for surveys for the marbled murrelet and the North Oregon Coast Distinct Population Segment of the red tree vole, as described below; newly discovered sites would be included in the Late-Successional Reserve. Thus, this description of the Late-Successional Reserve includes predictions of the acreage of newly discovered marbled murrelet and red tree vole sites. Within the Late-Successional Reserve, the BLM would not conduct timber salvage after disturbance, except when necessary to protect public health and safety, or to keep roads and other infrastructure clear of debris.

**Structurally-Complex Forest** Alternative B includes within the Late-Successional Reserve all stands identified by existing, district-specific information on structurally-complex forests.

### Large Block Forest Reserves: Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)<sup>17</sup>

Alternative B includes within the Late-Successional Reserve blocks of functional and potential northern spotted owl habitat, sufficient to meet block size and spacing requirements (Thomas *et al.* 1990, pp. 24, 28) in all provinces except the Coast Range province, where reserves include blocks of habitat without limitations for size and spacing. In moist forests, the BLM would conduct restoration thinning to promote the development of structurally-complex forest, which may include commercial removal of cut trees. In dry forests, the BLM would conduct restoration activities including thinning and prescribed burning to promote the development of structurally-complex forest and to improve resilience to disturbance, which may include commercial removal of cut trees.

### Riparian Reserve

In Alternative B, the Riparian Reserve encompass lands within—

- One site-potential tree height on either side of fish-bearing and perennial streams;
- 100 feet on either side of debris-flow-prone, non-fish-bearing, intermittent streams; and
- 50 feet on either side of other non-fish-bearing, intermittent streams.

The Riparian Reserve includes an inner zone in which thinning is not permitted. Inner zone widths are—

- 60 feet on either side of perennial and fish-bearing intermittent streams; and
- 50 feet on either side of non-fish-bearing, intermittent streams.

Outside of the inner zone, the BLM would conduct restoration thinning, which may include commercial removal, as needed to develop diverse and structurally-complex riparian stands.

### Harvest Land Base

The Harvest Land Base is comprised of the Uneven-Aged Timber Area, Low Intensity Timber Area, and Moderate Intensity Timber Area. The allocation bases the Uneven-Aged Timber Area in Alternative B on dry and very dry forest types identified by potential vegetation types. The portion of the Harvest Land Base outside of the Uneven-aged Timber Area is divided between the Low Intensity Timber Area in

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<sup>17</sup> For the purpose of Late-Successional Reserve and Riparian Reserve management in Alternative B, dry forests are defined by dry and very dry forest types identified by potential vegetation types.

designated northern spotted owl critical habitat and the Moderate Intensity Timber Area outside of designated northern spotted owl critical habitat. Timber harvest in the Low Intensity Timber Area includes thinning and regeneration harvest with retention of 15 to 30 percent of the stand. In the Low Intensity Timber Area, the BLM would rely on natural tree regeneration after timber harvest. Timber harvest in the Moderate Intensity Timber Area includes thinning and regeneration harvest with retention of 5 to 15 percent of the stand. In the Moderate Intensity Timber Area, the BLM would use either natural tree regeneration or replanting after timber harvest, but would maintain early seral habitat conditions for several decades after harvest.

### **Wildlife**

Within the Harvest Land Base, Alternative B includes—

- No specific protections for northern spotted owl known or historic sites;
- A requirement for surveys for the marbled murrelet prior to management actions in marbled murrelet Zone 1 and protection of habitat within 300 feet around newly discovered occupied sites;
- The protection of trees capable of providing marbled murrelet nesting structures in younger stands in marbled murrelet Zone 1; and
- A requirement for surveys for North Oregon Coast Distinct Population Segment of the red tree vole prior to management actions and protection of habitat areas around newly discovered nest sites

### **Rare Plants and Fungi**

The BLM would manage mixed hardwood and conifer communities outside of the Harvest Land Base to maintain and enhance oak persistence and structure.

### **Invasive Species**

Alternative B includes treatment at all sudden oak death infection sites outside of the Riparian Reserve and no treatment at infection sites in the Riparian Reserve.

### **Grazing**

The BLM would manage allotments in compliance with Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington (USDI BLM 1997). The BLM would adjust grazing levels and management practices when needed to meet or make progress toward meeting the standards for rangeland health. The BLM would make unavailable to grazing those allotments that have generally been vacant or inactive for 5 years or more.

### **Minerals**

Under Alternative B, the BLM would recommend for withdrawal from locatable mineral entry 266,473 acres and would close 226,367 acres to salable mineral development.

### **Areas of Critical Environmental Concern**

Under Alternative B, the BLM would designate 114 Areas of Critical Environmental Concern.

### **Recreation Management Areas**

Alternative B includes designation of Special Recreation Management Areas at currently developed recreation facilities. Alternative B includes designation of Extensive Recreation Management Areas where the BLM has developed and currently manages recreation activities outside of developed facilities, primarily where the BLM has authorized motorized and non-motorized trails, and where the BLM currently manages dispersed recreation activities. In the rest of the decision area, the BLM would not

manage specifically for recreation, but recreation could occur to the extent that the BLM has legal public access and recreation is not in conflict with the primary uses of these lands.

### **Lands with Wilderness Characteristics**

Alternative B includes management for wilderness characteristics of all lands with wilderness characteristics that are outside of the Harvest Land Base and are compatible with existing and potential recreation opportunities.

### **Wild and Scenic Rivers**

Under Alternative B, the BLM would recommend for inclusion in the National Wild and Scenic River System the eligible Wild and Scenic River segments with recreation identified as an Outstandingly Remarkable Value and the eligible river segments that the BLM found suitable during its administrative process (as outlined in BLM Manual 6400, USDI BLM 2012b).

### **Visual Resource Management**

Under Alternative B, the BLM would manage Congressionally Reserved lands where decisions have been made to preserve a natural landscape (e.g., designated Wilderness Areas and the wild sections of Wild and Scenic Rivers) as Visual Resource Management Class I and scenic sections of Wild and Scenic Rivers as Visual Resource Management Class II. The BLM would manage ACECs according to their visual resource inventory class. The BLM would manage all other lands as Visual Resource Management Class IV.

### Sub-Alternative B

Sub-alternative B is identical to Alternative B, except that it includes protection of habitat within the home ranges of all northern spotted owl known and historic sites that would be within the Harvest Land Base. This single change in design increases the Late-Successional Reserve to 57 percent of the decision area, which is larger than any other alternative, and reduces the Harvest Land Base to 12 percent of the decision area, which is smaller than any other alternative (Figure 2-5, Table 2-6, and Map 2-4).

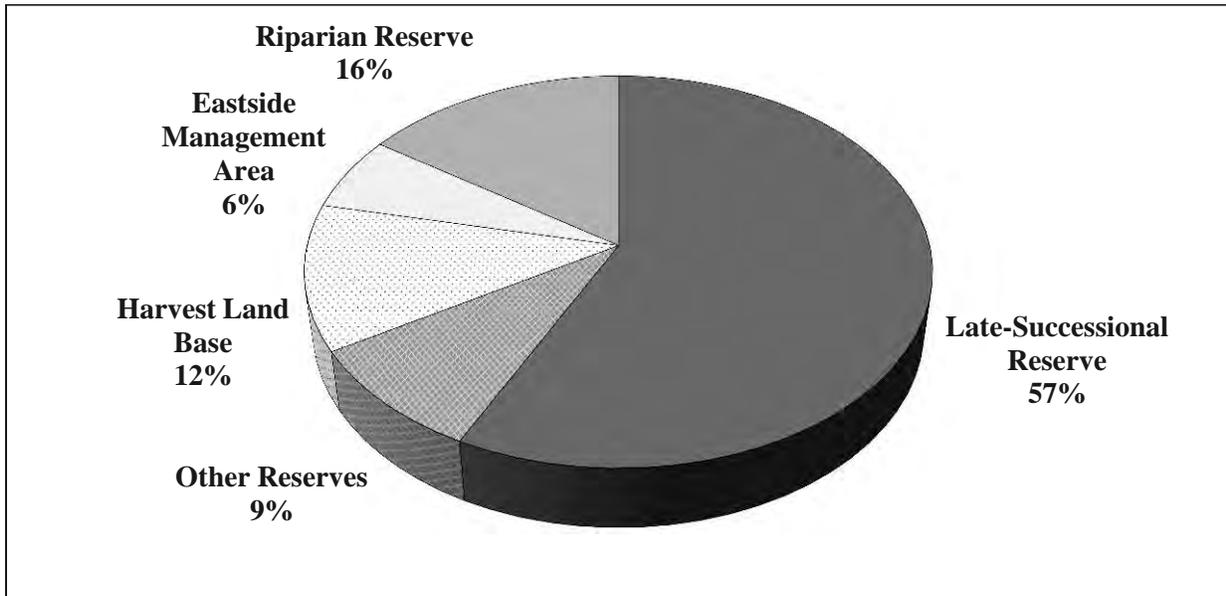


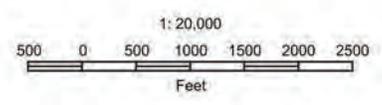
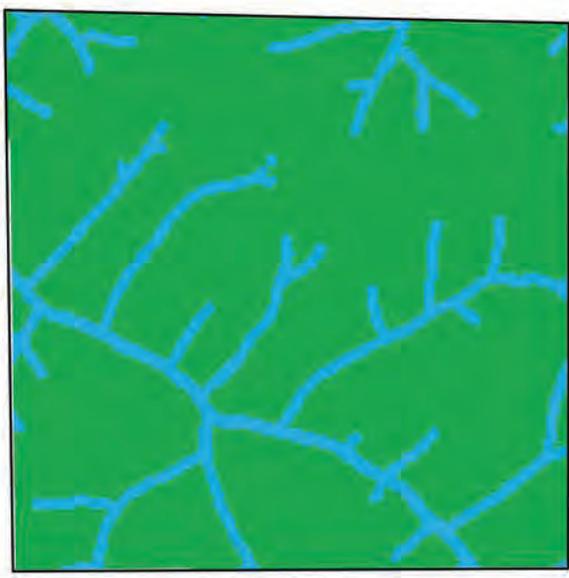
Figure 2-5. Sub-alternative B land use allocations.

Table 2-6. Sub-alternative B land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	1,422,933	57%	Structurally-Complex Forest	463,910	19%
			Late-Successional Reserve (Moist)	371,305	15%
			Late-Successional Reserve (Dry)	223,399	9%
			Northern Spotted Owl Sites	295,614	12%
			Occupied Marbled Murrelet Sites	41,633	2%
			Predicted Marbled Murrelet Sites	13,738	<1%
			Occupied Red Tree Vole Sites	297	<1%
Predicted Red Tree Vole Sites	13,039	<1%			
Riparian Reserve	382,805	15%	Riparian Reserve (Moist)	215,231	9%
			Riparian Reserve (Dry)	167,574	7%
Other Reserves	223,111	9%	Congressionally Reserved	40,537	2%
			District Designated Reserves	182,574	7%
Harvest Land Base	298,121	12%	Moderate Intensity Timber Area	129,120	5%
			Low Intensity Timber Area	30,761	1%
			Uneven-Aged Timber Area	138,239	6%
Eastside Management Area	151,885	6%	-	151,885	6%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>

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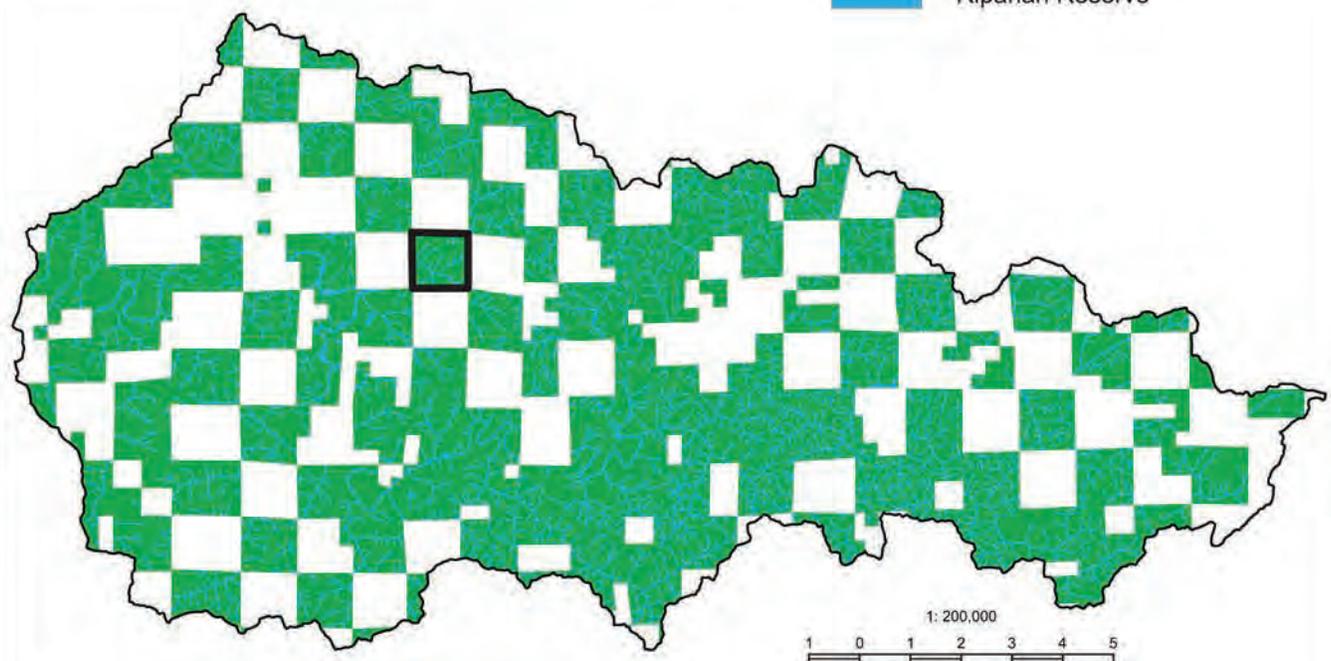




Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  Late-Successional Reserve
-  Riparian Reserve



Upper Smith River Watershed

### Alternative C

Alternative C has the largest Harvest Land Base of any of the alternatives (**Figure 2-6, Table 2-7, and Map 2-5**). The Harvest Land Base is comprised of the Uneven-Aged Timber Area and the High Intensity Timber Area. The High Intensity Timber Area includes regeneration harvest with no retention (clear cuts). Alternative C has the smallest acreage in the Riparian Reserve of all of the alternatives.

A sub-alternative of Alternative C (hereafter Sub-alternative C) includes reserving all forests 80-years old and older, based on the current age of stands in the BLM Forest Operations Inventory. All other features of Sub-alternative C are the same as Alternative C. The description of Sub-alternative C, including the acreage of each land use allocation and a map, follows the description of Alternative C.

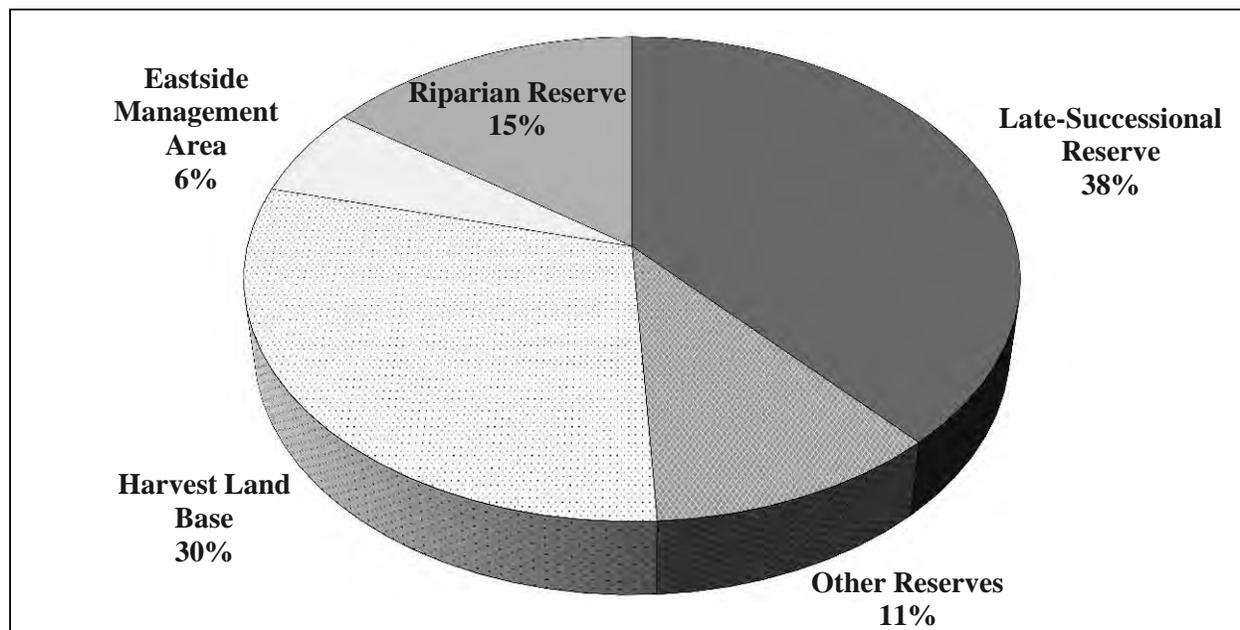
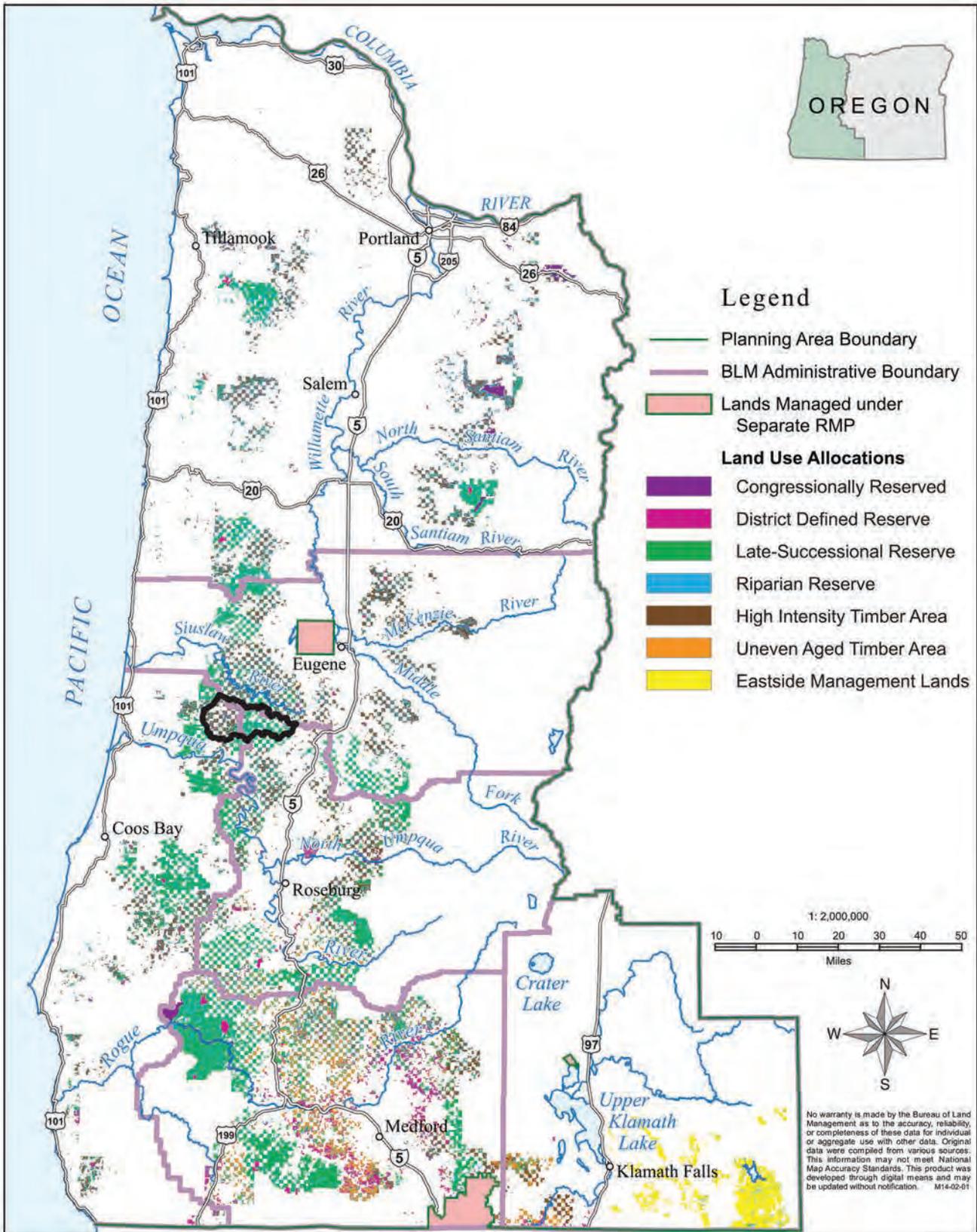


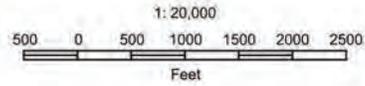
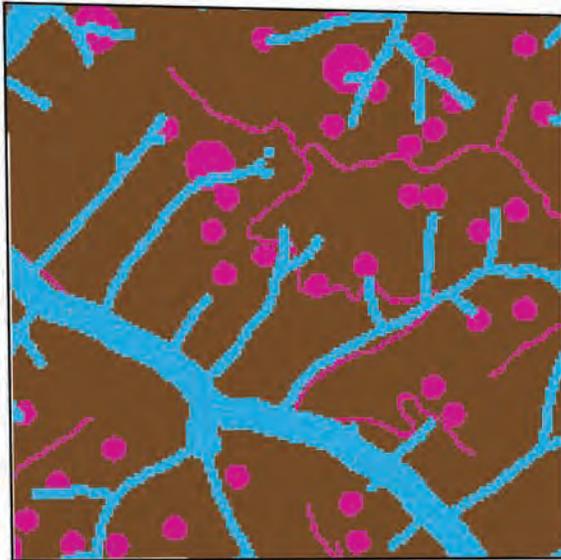
Figure 2-6. Alternative C land use allocations.

Table 2-7. Alternative C land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	949,279	38%	Structurally-Complex Forest	428,522	17%
			Late-Successional Reserve (Moist)	331,224	13%
			Late-Successional Reserve (Dry)	148,776	6%
			Occupied Marbled Murrelet Sites	40,468	2%
			Predicted Marbled Murrelet Sites	2,761	<1%
			Occupied Red Tree Vole Sites	287	<1%
Riparian Reserve	372,739	15%	Riparian Reserve (Moist)	244,694	10%
			Riparian Reserve (Dry)	128,045	5%
Other Reserves	267,678	11%	Congressionally Reserved	40,537	2%
			District Designated Reserves	227,141	9%
Harvest Land Base	741,332	30%	High Intensity Timber Area	553,857	22%
			Uneven-Aged Timber Area	184,715	7%
Eastside Management Area	147,828	6%	-	147,828	6%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>



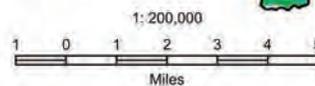
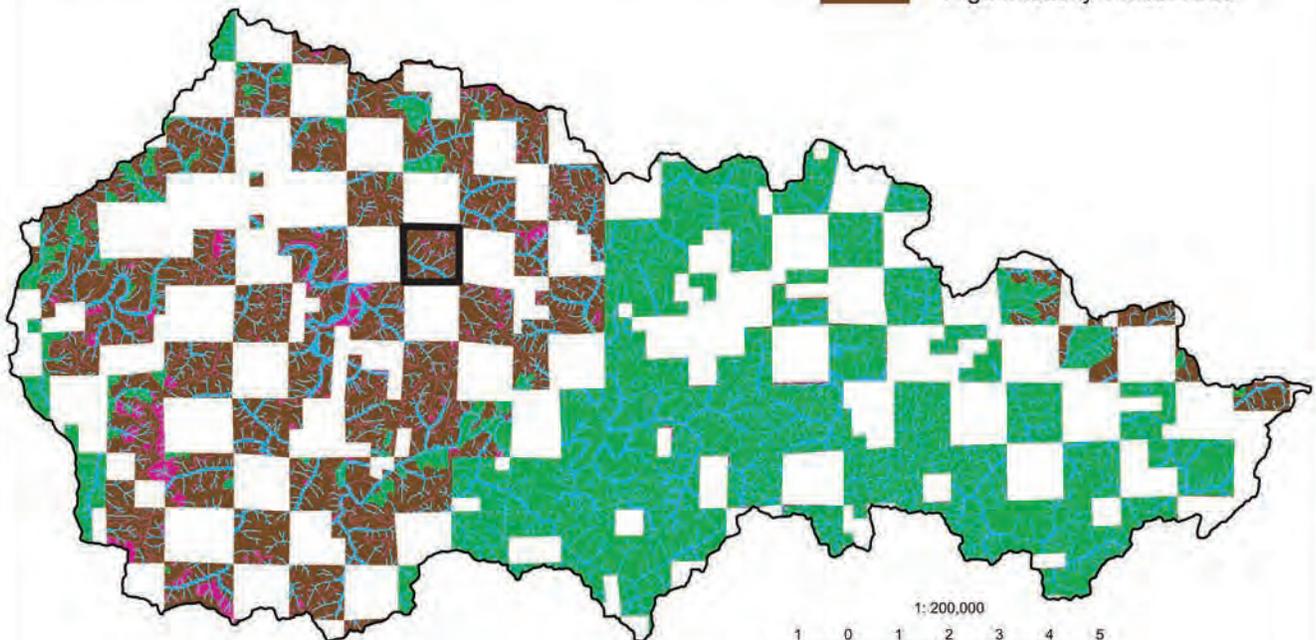
Map 2-5: Alternative C Land Use Allocations



Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  District Defined Reserve
-  Late-Successional Reserve
-  Riparian Reserve
-  High Intensity Timber Area



Upper Smith River Watershed

### **Late-Successional Reserve**

The Late-Successional Reserve includes, primarily, Structurally-Complex Forest, Large Block Forest Reserves (Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)), and much smaller acreages from existing occupied marbled murrelet sites and existing sites of the North Oregon Coast Distinct Population Segment of the red tree vole. In addition, Alternative C includes requirements for surveys for the marbled murrelet and the North Oregon Coast Distinct Population Segment of the red tree vole, as described below, and newly discovered sites would be included in the Late-Successional Reserve. Thus, this description of the Late-Successional Reserve includes predictions of the acreage of newly discovered marbled murrelet and red tree vole sites. Within the Late-Successional Reserve, the BLM would conduct timber salvage after disturbance to recover economic value, to protect public health and safety, or to keep roads and other infrastructure clear of debris.

### **Structurally-Complex Forest**

Alternative C includes within the Late-Successional Reserve all stands 160-years old and older, based on the current age of stands in the BLM forest operations inventory.

### **Large Block Forest Reserves: Late-Successional Reserve (Moist) and Late-Successional Reserve (Dry)<sup>18</sup>**

Alternative C includes within the Late-Successional Reserve blocks of functional and potential northern spotted owl habitat, sufficient to meet block size and spacing requirements (Thomas *et al.* 1990, pp. 24, 28) in all provinces. In moist forests, the BLM would conduct restoration thinning to promote the development of structurally-complex forest, which may include commercial removal of cut trees. In dry forests, the BLM would conduct restoration activities including thinning and prescribed burning to promote the development of structurally-complex forest and to improve resilience to disturbance, which may include commercial removal of cut trees.

### **Riparian Reserve**

In Alternative C, the Riparian Reserve encompass lands within—

- 150 feet on either side of fish-bearing and perennial streams; and
- 50 feet on either side of non-fish-bearing, intermittent streams.

The Riparian Reserve includes an inner zone in which thinning is not permitted. Inner zone widths are—

- 60 feet on either side of fish-bearing and perennial streams; and
- 50 feet on either side of non-fish-bearing, intermittent streams.

Outside of the inner zone, the BLM would conduct restoration thinning, which may include commercial removal, as needed to develop diverse and structurally-complex riparian stands.

### **Harvest Land Base**

The Harvest Land Base is comprised of the High Intensity Timber Area and the Uneven-Aged Timber Area. The allocation of the Uneven-Aged Timber Area in Alternative C is based on very dry forest types identified by potential vegetation. Timber management in the High Intensity Timber Area includes

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<sup>18</sup> For the purpose of Late-Successional Reserve and Riparian Reserve management in Alternative C, dry forests are defined by very dry forest types identified by potential vegetation types.

thinning and regeneration harvest with no retention (clear cuts). The High Intensity Timber Area has no snag or coarse woody debris retention requirements.

### **Wildlife**

Within the Harvest Land Base, Alternative C includes—

- No specific protections for northern spotted owl known or historic sites;
- A requirement for surveys for the marbled murrelet prior to management actions in stands 120-years and older and protection of habitat within 300 feet around newly discovered occupied sites;
- No specific management requirements for trees capable of providing marbled murrelet nesting structures in younger stands; and
- No requirement for surveys for North Oregon Coast Distinct Population Segment of the red tree vole prior to management actions.

### **Rare Plants and Fungi**

The BLM would create new populations and augment existing populations of federally listed and other special status plants and fungi to meet recovery plan or conservation strategy objectives.

### **Invasive Species**

Alternative C includes treatment at all sudden oak death infection sites.

### **Grazing**

The BLM would manage allotments in compliance with Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington (USDI BLM 1997). The BLM would adjust grazing levels and management practices when needed to meet or make progress toward meeting the standards for rangeland health. The BLM would make unavailable to grazing those allotments that have generally been vacant or inactive for 5 years or more.

### **Minerals**

Under Alternative C, the BLM would recommend for withdrawal from locatable mineral entry 269,963 acres and would close 246,584 acres to salable mineral development.

### **Areas of Critical Environmental Concern**

Under Alternative C, the BLM would designate 111 Areas of Critical Environmental Concern.

### **Recreation Management Areas**

Alternative C includes designation of Special Recreation Management Areas at currently developed recreation facilities. Alternative C includes designation of Extensive Recreation Management Areas where the BLM has developed and currently manages recreation activities outside of developed facilities, primarily where the BLM has authorized motorized and non-motorized trails, and where the BLM currently manages dispersed recreation activities. In addition, the BLM would designate Special Recreation Management Areas and Extensive Recreation Management Areas to address specific recreation demand and scarcity. In the rest of the decision area, the BLM would not manage specifically for recreation, but recreation could occur to the extent that the BLM has legal public access and recreation is not in conflict with the primary uses of these lands.

### **Lands with Wilderness Characteristics**

Alternative C includes management for wilderness characteristics of lands with wilderness characteristics that are not within the Harvest Land Base and are compatible with existing and potential recreation.

### **Wild and Scenic Rivers**

Under Alternative C, the BLM would recommend for inclusion in the National Wild and Scenic River System those eligible river segments that the BLM found suitable during the BLM's administrative process.

### **Visual Resource Management**

Under Alternative C, the BLM would manage Congressionally Reserved lands where decisions have been made to preserve a natural landscape (e.g., designated Wilderness Areas and the wild sections of Wild and Scenic Rivers) as Visual Resource Management Class I and scenic sections of Wild and Scenic Rivers as Visual Resource Management Class II. The BLM would manage ACECs according to their visual resource inventory class. The BLM would manage all other lands as Visual Resource Management Class IV.

### Sub-Alternative C

Sub-alternative C is identical to Alternative C, except that the Late-Successional Reserve includes all stands 80 years old and older, based on the current age of stands in the BLM forest operations inventory. This single change in design increases the Late-Successional Reserve to 55 percent of the decision area and reduces the Harvest Land Base to 20 percent of the decision area (Figure 2-7, Table 2-8, and Map 2-6).

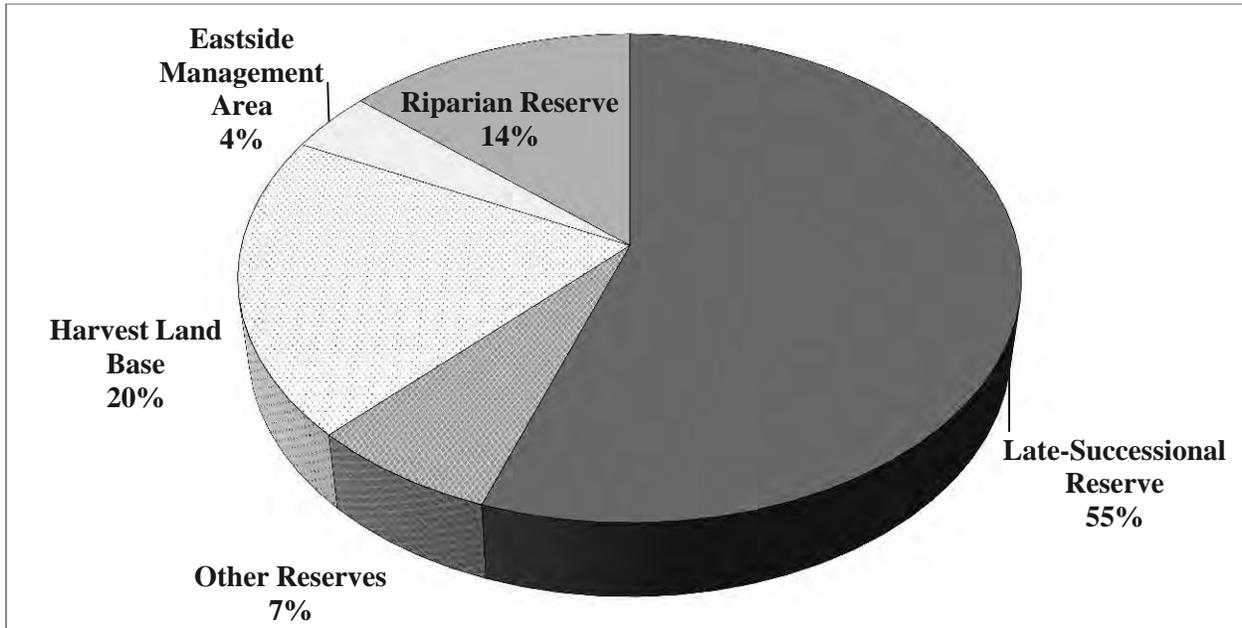
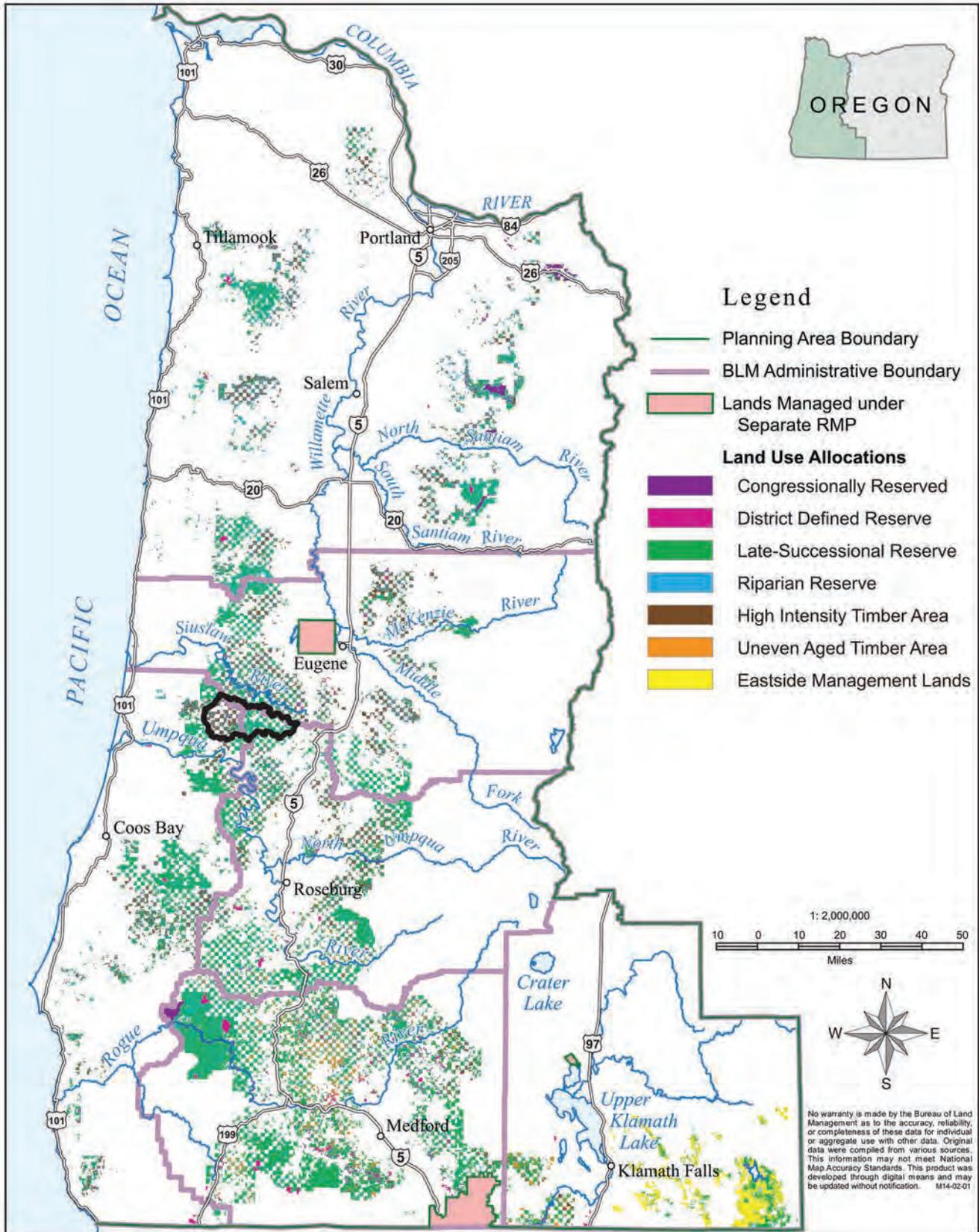


Figure 2-7. Sub-alternative C land use allocations.

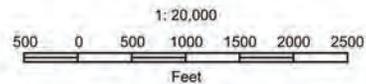
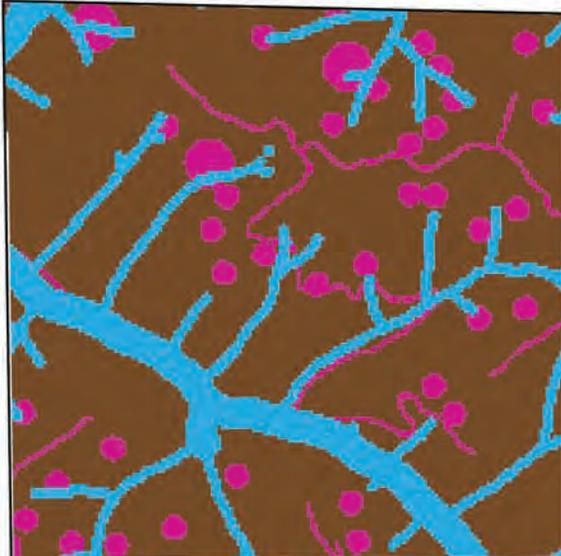
Table 2-8. Sub-alternative C land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	1,373,206	55%	Structurally-Complex Forest	1,036,218	42%
			Late-Successional Reserve (Moist )	233,967	9%
			Late-Successional Reserve (Dry)	61,525	2%
			Occupied Marbled Murrelet Sites	40,468	2%
			Predicted Marbled Murrelet Sites	740	<1%
			Occupied Red Tree Vole Sites	287	<1%
Riparian Reserve	337,701	14%	Riparian Reserve (Moist )	253,674	10%
			Riparian Reserve (Dry)	84,026	3%
Other Reserves	172,232	7%	Congressionally Reserved	40,537	2%
			District Designated Reserves	131,694	5%
Harvest Land Base	495,507	2%	High Intensity Timber Area	402,665	16%
			Uneven-Aged Timber Area	92,842	4%
Eastside Management Area	100,210	4%	-	100,210	4%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>

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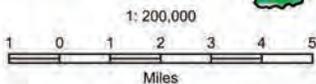
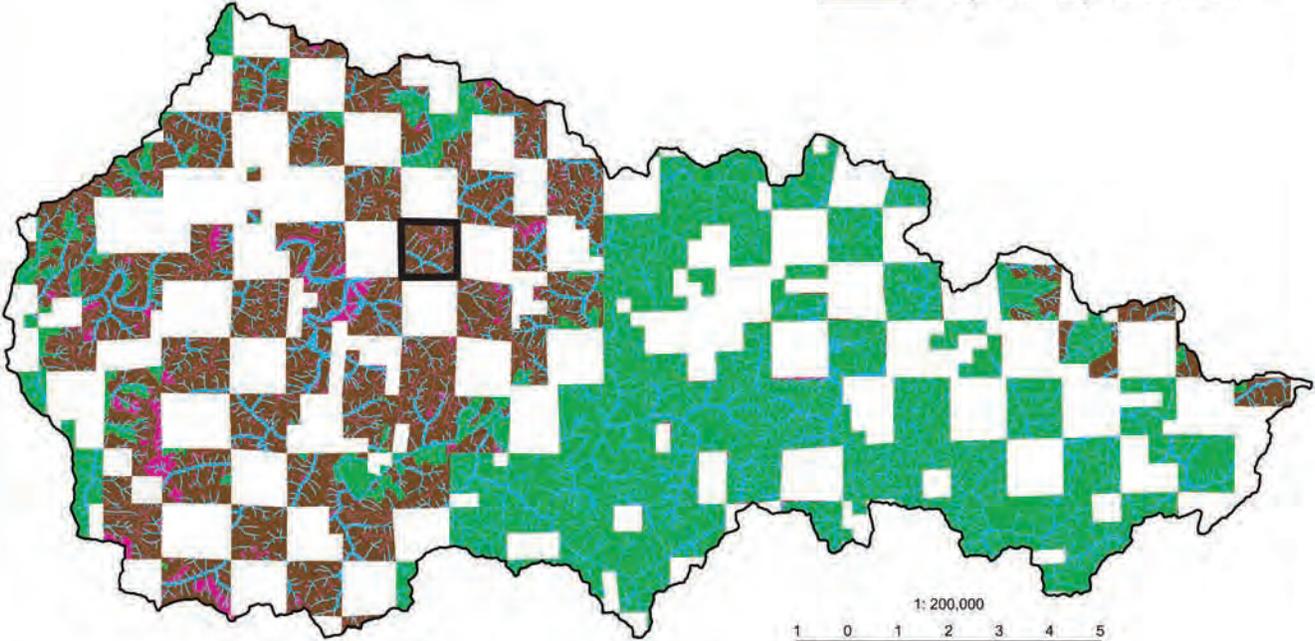
Map 2-6: Sub-Alternative C Land Use Allocations



Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  District Defined Reserve
-  Late-Successional Reserve
-  Riparian Reserve
-  High Intensity Timber Area



Upper Smith River Watershed

### Alternative D

Alternative D has the smallest Late-Successional Reserve of any of the action alternatives (Figure 2-8, Table 2-9, and Map 2-7). The Harvest Land Base is comprised of the Uneven-Aged Timber Area, Owl Habitat Timber Area, and Moderate Intensity Timber Area. The Owl Habitat Timber Area includes timber harvest applied in a manner that would maintain northern spotted owl habitat. The Moderate Intensity Timber Area includes regeneration harvest with retention. Alternative D has the largest acreage in the Riparian Reserve of all of the action alternatives.

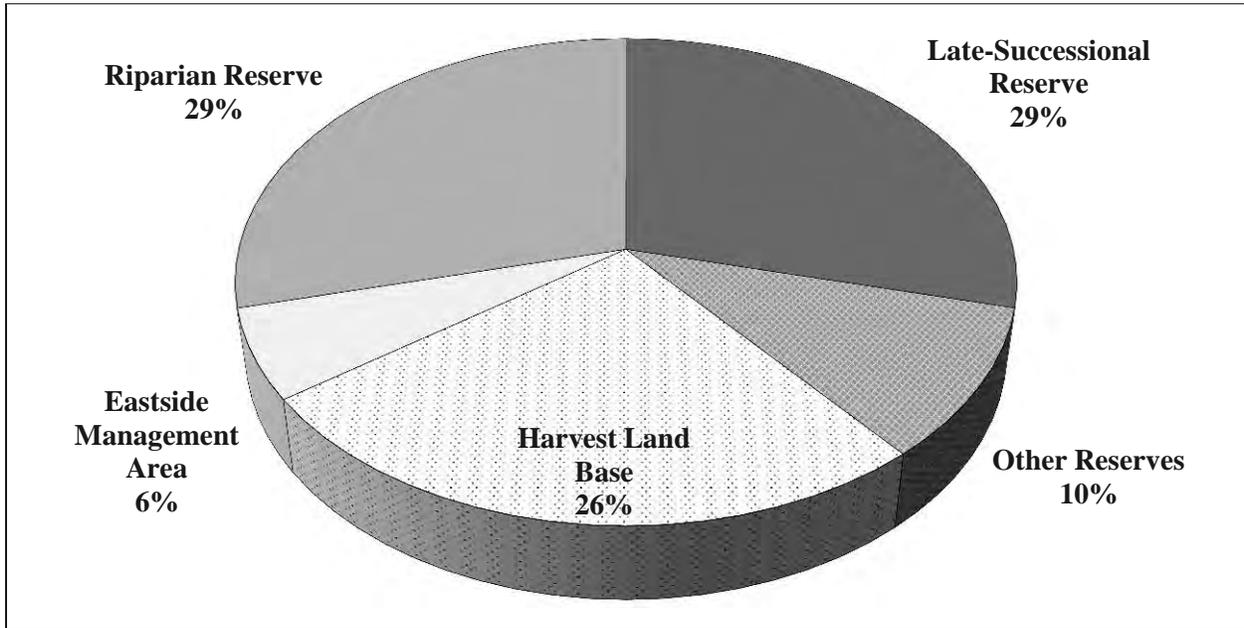
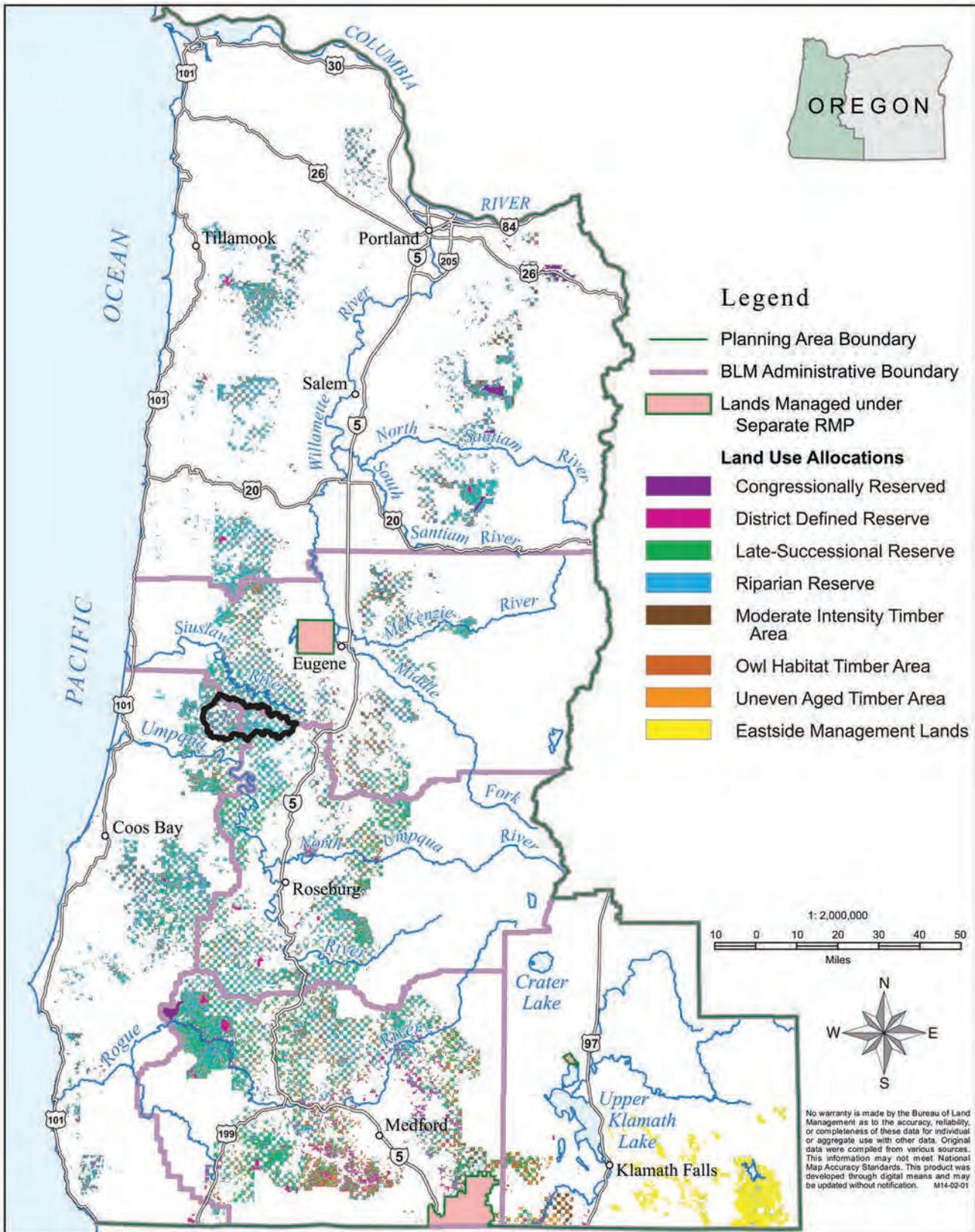


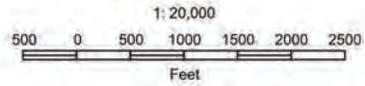
Figure 2-8. Alternative D land use allocations.

Table 2-9. Alternative D land use allocations.

Allocation	Acres	Total Acres (%)	Sub-Allocation	Acres	Total Acres (%)
Late-Successional Reserve	714,292	29%	Structurally-Complex Forest	482,920	19%
			Northern Spotted Owl Sites	96,666	4%
			Occupied Marbled Murrelet Sites	33,037	1%
			Predicted Marbled Murrelet Sites	91,816	4%
			Occupied Red Tree Vole Sites	245	<1%
			Predicted Red Tree Vole Sites	9,608	<1%
Riparian Reserve	714,629	29%	Riparian Reserve (Moist)	459,145	19%
			Riparian Reserve (Dry)	255,484	10%
Other Reserves	250,523	10%	Congressionally Reserved	40,537	2%
			District Designated Reserves	209,986	8%
Harvest Land Base	650,382	26%	Moderate Intensity Timber Area	160,575	6%
			Owl Habitat Timber Area	427,556	17%
			Uneven-Aged Timber Area	62,251	3%
Eastside Management Area	149,030	6%	-	149,030	6%
<b>Totals</b>				<b>2,478,856</b>	<b>-</b>



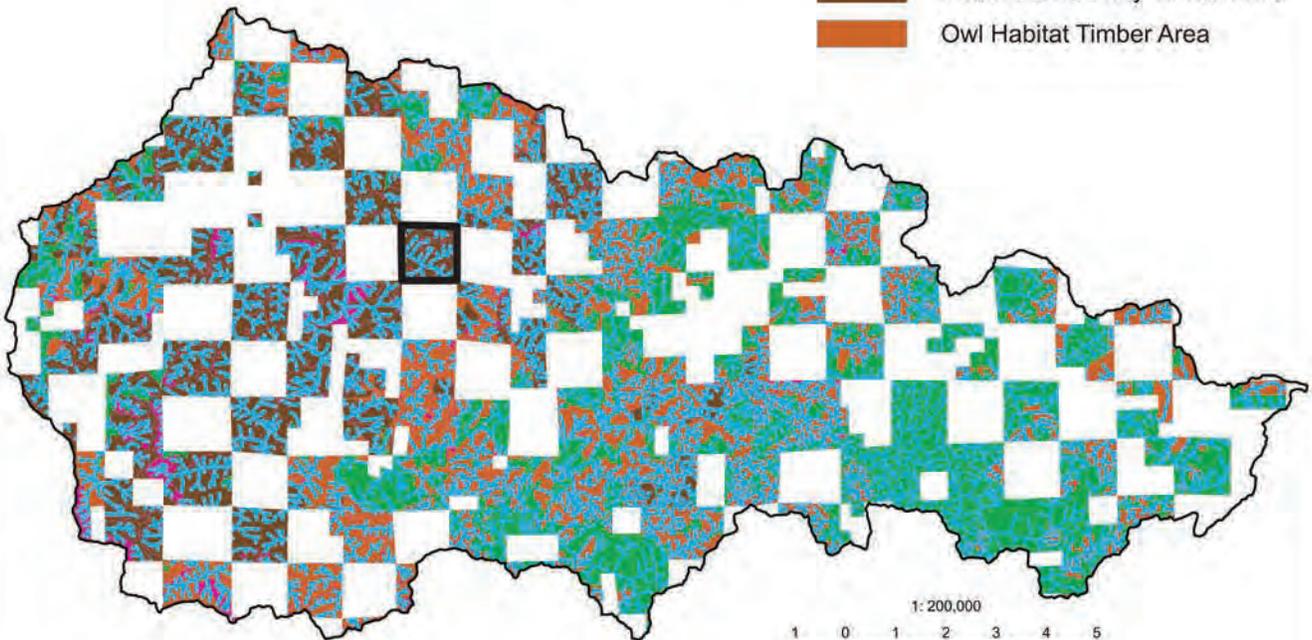
Map 2-7: Alternative D Land Use Allocations



Township 20 South, Range 8 West, Section 23

**Land Use Allocations**

-  District Defined Reserve
-  Late Successional Reserve
-  Riparian Reserve
-  Moderate Intensity Timber Area
-  Owl Habitat Timber Area



Upper Smith River Watershed

### **Late-Successional Reserve**

The Late-Successional Reserve includes, primarily, Structurally-Complex Forest/Large Block Forest Reserves, and much smaller acreages from nest patches of known and historic northern spotted owl sites, existing occupied marbled murrelet sites, and existing sites of the North Oregon Coast Distinct Population Segment of the red tree vole. In addition, Alternative D includes requirements for surveys for the marbled murrelet and the North Oregon Coast Distinct Population Segment of the red tree vole, as described below, and newly discovered sites would be included in the Late-Successional Reserve. Thus, this description of the Late-Successional Reserve includes predictions of the acreage of newly discovered marbled murrelet and red tree vole sites. Within the Late-Successional Reserve, the BLM would conduct no timber salvage after disturbance, except when necessary to protect public health and safety, or to keep roads and other infrastructure clear of debris.

### **Structurally-Complex Forest/Large Block Forest Reserves**

Alternative D includes within the Late-Successional Reserve all stands 120-years-old and older on high productivity sites, 140 years old and older on moderate productivity sites, and 160-years-old and older on low productivity sites, based on the current age of stands in the BLM forest operations inventory. This structurally-complex forest also constitutes the Large Block Forest Reserves under Alternative D.

### **Riparian Reserve<sup>19</sup>**

In Alternative D, the Riparian Reserve encompasses lands within one site-potential tree height on either side of all streams. The Riparian Reserve includes a no-thin inner zone of 120 feet on either side of all streams. Outside of the inner zone, the BLM would conduct restoration thinning, which may include commercial removal, as needed to ensure that stands are able to provide stable wood to the stream.

### **Harvest Land Base**

The Harvest Land Base is comprised of the Owl Habitat Timber Area, Uneven-Aged Timber Area, and Moderate Intensity Timber Area. Alternative D includes the Owl Habitat Timber Area in all designated northern spotted owl critical habitat and within the home ranges of known and historic owl sites within the Harvest Land Base (though the nest patches themselves are included in the Late-Successional Reserve). Timber harvest in the Owl Habitat Timber Area includes thinning and uneven-aged timber harvest applied in a manner that would maintain northern spotted owl habitat. The portion of the Harvest Land Base outside of designated northern spotted owl critical habitat is divided between the Uneven-aged Timber Area and the Moderate Intensity Timber Area. The allocation of the Uneven-Aged Timber Area in Alternative D is based on very dry forest types identified by potential vegetation. The remainder of the Harvest Land Base in Alternative D is in the Moderate Intensity Timber Area. Timber harvest in the Moderate Intensity Timber Area includes thinning and regeneration harvest with retention of 5 to 15 percent of the stand.

### **Wildlife**

Within the Harvest Land Base, Alternative D includes—

- Specific protections to maintain habitat within the home ranges of all northern spotted owl known and historic sites;
- A requirement for surveys for the marbled murrelet prior to management actions in marbled murrelet Zones 1 and 2 and protection of habitat within ½ mile around newly discovered occupied sites;

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<sup>19</sup> For the purpose of Riparian Reserve management in Alternative D, dry forests are defined by very dry forest types identified by potential vegetation types.

- Protection of trees capable of providing marbled murrelet nesting structures in younger stands in marbled murrelet Zones 1 and 2; and
- A requirement for surveys for North Oregon Coast Distinct Population Segment of the red tree vole prior to management actions and protection of habitat areas around newly discovered nest sites

### **Rare Plants and Fungi**

Under Alternative D, the BLM would protect known Bureau sensitive species sites from adverse impacts where protection does not conflict with sustained-yield forest management in the Harvest Land Base

### **Invasive Species**

Alternative D includes treatment at all sudden oak death infection sites.

### **Grazing**

Under Alternative D, the BLM would eliminate livestock grazing by terminating existing grazing authorizations and making the allotments unavailable for grazing.

### **Minerals**

Under Alternative D, the BLM would recommend for withdrawal from locatable mineral entry 307,308 acres and would close 239,618 acres to salable mineral development.

### **Areas of Critical Environmental Concern**

Under Alternative D, the BLM would designate 118 Areas of Critical Environmental Concern.

### **Recreation Management Areas**

Alternative D includes designation of Special Recreation Management Areas where the BLM recognizes recreation opportunities and setting characteristics for their unique value, importance, and distinctiveness on public domain lands and acquired lands and on O&C lands not available for sustained-yield timber production (“The O&C Act and the FLPMA” in Chapter 1). Alternative D would include designation of Extensive Recreation Management Areas on all lands within the decision area where existing recreation use is occurring and the BLM has legal public access. In addition, Alternative D would include designation of Special and Extensive Recreation Management areas where the BLM is seeking to address activity-specific demand and to increase travel and tourism opportunities.

### **Lands with Wilderness Characteristics**

Alternative D would not include the management for wilderness characteristics of any lands with wilderness characteristics.

### **Wild and Scenic Rivers**

Under Alternative D, the BLM would recommend all eligible river segments for inclusion in the National Wild and Scenic River System.

### **Visual Resource Management**

Under Alternative D, the BLM would manage Congressionally Reserved lands where decisions have been made to preserve a natural landscape (e.g., designated Wilderness Areas and the wild sections of Wild and Scenic Rivers) as Visual Resource Management Class I and scenic sections of Wild and Scenic Rivers as Visual Resource Management Class II. The BLM would manage ACECs according to their visual resource inventory class. The BLM would manage all other lands according to their visual resource inventory class, except that in the Harvest Land Base, lands inventoried as Visual Resource Inventory Class II would be managed as Visual Resource Management Class III.

### **Preferred Alternative**

Consistent with the BLM planning regulations (43 CFR 1610.4-7) and as part of the BLM's commitment to an open and transparent planning process, the BLM is identifying Alternative B as its preferred alternative at the Draft RMP/EIS stage. In identifying the BLM preferred alternative, the BLM evaluated how well each of the alternatives in the Draft RMP/EIS would respond to the purpose and need for action and the guidance for the formulation of alternatives, as well as the effects of each of the alternatives relevant to the issues identified for detailed analysis. In this evaluation, the cooperating agencies provided feedback that the BLM considered in identifying the preferred alternative.

The identification of the preferred alternative does not constitute a commitment or decision. Nor does it mean that the BLM will necessarily present the preferred alternative as the Proposed RMP in the Proposed RMP/Final EIS. Instead, the BLM is simply identifying that Alternative B provides the most useful starting point from which to construct a Proposed RMP based on the analysis in this Draft RMP/EIS.

The BLM has identified Alternative B as the preferred alternative because the effects analysis demonstrates that it would—

- Create a network of large blocks of northern spotted owl habitat across the landscape;
- Provide active management with designated northern spotted owl critical habitat consistent with the recovery plan for the northern spotted owl;
- Increase marbled murrelet habitat over time;
- Create habitat for species associated with complex early-successional habitat;
- Speed the redevelopment of structurally-complex forest conditions after regeneration harvest;
- Protect the river values associated with the six river segments that the BLM has identified as meeting the Wild and Scenic River suitability requirements;
- Provide more sustained-yield timber harvest than the current Allowable Sale Quantity declared in the 1995 RMPs; and
- Provide more payments to counties from timber harvest on BLM-administered land than the counties would receive at the current Allowable Sale Quantity declared in the 1995 RMPs.

However, Alternative B does not provide the best possible response to the purpose and need for action and the guidance for the formulation of alternatives. Recognizing this, the BLM will seek to develop a Proposed RMP that would also—

- Reduce the risk of adverse effects to listed fish and water quality;
- Increase protection of unique recreation settings and increase recreation use;
- Increase protection of identified lands with wilderness characteristics; and
- Minimize the spread of Sudden Oak Death.

In developing the Proposed RMP, the BLM may therefore make modifications to the design of Alternative B; make modifications to the design of a different alternative analyzed in the Draft RMP/EIS; or develop a new alternative from within the spectrum of alternatives considered in the Draft RMP/EIS. In developing the Proposed RMP, the BLM will also consider public comments on the Draft RMP/EIS and feedback from cooperating agencies.

## **Alternatives Considered but not Analyzed in Detail**

An EIS must rigorously explore and objectively evaluate all reasonable alternatives. The BLM may eliminate from detailed analysis alternatives that are not reasonable. As explained in the BLM NEPA Handbook (USDI BLM 2008, p. 52), an alternative need not be analyzed in detail if–

- It does not meet the purpose and need (see Chapter 1 for the purpose and need);
- It is technically or economically infeasible;
- It is inconsistent with the basic policy objectives for the management of the area (see Chapter 1 for the guidance for the formulation of alternatives);
- Its implementation is remote or speculative;
- It is substantially similar to an alternative being considered in detail; or
- It would have substantially similar effects to an alternative being considered in detail.

The BLM considered the following alternatives but eliminated them from detailed analysis, as explained below.

### **No Timber Harvest**

This alternative would prohibit all timber harvesting on BLM-administered lands. The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need, which includes providing a sustained yield of timber.

This Draft RMP/EIS does make use of a reference analysis of no timber harvest on BLM-administered lands. This reference analysis is not a reasonable alternative. Instead, this Draft RMP/EIS includes discussion of this reference analysis to provide context and a point of comparison as needed to analyze and interpret the effects of the alternatives.

### **Continuation of the Current Practices**

This management approach would seek to continue the varying current practices that the BLM has been implementing since the adoption of the 1995 RMPs. The BLM cannot analyze continuation of the current practices as the No Action alternative. Additionally, the BLM has eliminated from detailed analysis the continuation of the current practices as an action alternative.

As discussed earlier in this chapter, the No Action alternative in this Draft RMP/EIS is implementation of the 1995 RMPs as written (in contrast to using one of the variable years representing how the BLM has been implementing the 1995 RMPs). It is not possible to analyze continuation of the current practices within the decision area as the No Action alternative for two reasons. First, implementation of the timber management program has departed substantially from the outcomes predicted in the 1995 RMPs, and the manner and intensity of this departure has varied substantially over time and among districts (USDI BLM 2012, pp. 6-12). There is no apparent basis on which the BLM might select and project into the future continuation of the practices from a specific year (or set of years) since 1995. Second, continuing to harvest timber at the declared annual productive capacity level for multiple decades into the future would not be possible using the current practices (USDI BLM 2012, pp. 6-12). The No Action alternative provides a benchmark to compare outputs and effects, even though this alternative does not meet the purpose and need of the project. Because of the inherent unsustainability of current practices, the BLM cannot project their implementation into the future; thus, continuation of the current practices would not serve the essential function of the No Action alternative of providing a baseline for comparison of outputs and effects. In contrast, it is possible for the BLM to project the implementation of the 1995 RMPs for multiple decades into the future and provide a baseline for comparison to the action alternatives.

The BLM will not present the implementation of the 1995 RMPs as written and continuation of the current practices as two, separate No Action alternatives. The BLM developed two separate No Action alternatives in a previous planning effort to amend the 1995 RMPs, and the District Court for the Western District of Washington determined this approach was inconsistent with NEPA. The District Court for the Western District of Washington stated that agencies are "... obligated to provide a single, comprehensive no-action alternative that accurately represented the status quo ..." *Conservation Nw. v. Rey*, 674 F. Supp. 2d 1232, 1251 (W.D. Wash. 2009). The status quo at this time is that the BLM must implement actions in conformance with the 1995 RMPs, consistent with 43 CFR 1610.5-3. Therefore, implementation of the 1995 RMPs as written, amended, and modified by court orders, represents the single No Action alternative for this RMP revision.

The BLM also eliminated continuation of the current practices from detailed analysis as an action alternative, because it would not be a reasonable alternative, in that it would not meet the purpose and need for this planning effort. The purpose and need includes providing a sustained yield of timber, which requires that the management of the forest provide a continuous volume of timber at the current intensity of management without decline. The current implementation practices in the timber program are not sustainable (USDI BLM 2012, pp. 6-12).

Timber harvest practices have varied since the adoption of the 1995 RMPs. Nevertheless, in recent years, all districts have implemented a timber harvest program that has been predominately thinning. The level of regeneration harvest has been substantially less than assumed in the 1995 RMPs for all districts, ranging from 4 percent to 16 percent of the assumed levels during the period from 2004 to 2010 (USDI BLM 2012, p. 7, Appendices 3-8). Thus, a management approach that would limit timber harvest to thinning would approximate the continuation of the practices of the past decade.

The 2008 RMP/EIS analyzed a sub-alternative of Alternative 1 that would limit timber harvest to thinning, which provides an approximation of the effects of continuation of the current practices. That analysis evaluated how long thinning alone could provide at least 90 percent of the annual productive capacity for Alternative 1. That analysis concluded that none of the sustained-yield units could maintain that harvest level for a decade. As concluded in that analysis, "This subalternative demonstrates that high levels of thinning cannot be maintained for extended periods to sustain an allowable sale quantity"<sup>20</sup> (USDI BLM 2007, p. 561). That analysis is incorporated here by reference (USDI BLM 2007, pp. 560-561). The timber harvest level of Alternative 1 would have been higher than the timber volume being produced under current practices. Thus, at the slower pace of harvesting under the current practices, compared to the harvest rates assumed under Alternative 1 in the 2008 RMP/EIS, it could be inferred that thinning might be able to support the current harvest volume for approximately one to two decades. However, during the years since the BLM conducted that analysis, the BLM has continued to harvest predominately with thinning, exhausting much of the thinning opportunities considered in that analysis. As a result, the overall analytical conclusion from the 2008 RMP/EIS that high levels of thinning can only be sustained for less than a decade is still applicable.

This analytical conclusion is consistent with the plan evaluations that the BLM conducted in 2012, which determined that the current timber harvest practices are "not sustainable at the declared ASQ level" due to reliance on predominately thinning (USDI BLM 2012, pp. 10-11).

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<sup>20</sup> As noted in Chapter 1, the terms "annual productive capacity," "annual sustained yield capacity," and "allowable sale quantity" are synonymous.

In summary, the BLM cannot analyze continuation of the current practices as the No Action alternative, because the current practices have been variable and are not sustainable, preventing the projection of the current practices into the future. The BLM has eliminated from detailed analysis the continuation of the current practices as an action alternative, because it would not be a reasonable alternative, in that it would not provide for a sustained yield of timber over the long term. The analysis of a thinning only sub-alternative in the 2008 RMP/EIS provides an approximation of the effects of this management approach, concluding that thinning levels can only be sustained for less than a decade.

### **“Natural Selection Alternative” - Harvest Only Dead and Dying Trees**

This alternative would remove only “naturally selected dead and dying trees, conditioned upon meeting the needs of other species.” Timber harvesting of such trees would be accomplished with small equipment from a network of narrow roads. The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need and the basic policy objectives described in the guidance for development of all action alternatives, in that it would not make a substantial and meaningful contribution to providing a sustained yield of timber. As explained in the Purpose and Need for Action in Chapter 1, O&C Act states that “[t]he annual productive capacity for such lands shall be determined and declared ...” and that volume of timber “... shall be sold annually.” To limit the harvest of timber to trees that die or are dying would not reflect the annual productive capacity for such lands. Furthermore, the timber volume in dead and dying trees from year to year would be inherently unpredictable and variable, and thus would not support sustained-yield timber production because the annual volume for sale would fluctuate unpredictably based on annual conditions. Therefore, limiting the harvest of timber to trees that die or are dying would not be consistent with the requirements of the O&C Act and would not respond to the purpose for the action.

### **Maximize Carbon Storage**

This alternative would maximize the storage of carbon on BLM-administered lands. This Draft RMP/EIS analyzes the effects of the alternatives on carbon storage. The BLM will consider those effects on carbon storage, as well as the effects on other resources, in the development of the Proposed RMP and the eventual selection of an RMP. However, the BLM has no specific legal or regulatory mandate or policy direction to manage BLM-administered lands for carbon storage, and carbon storage is not part of the purpose and need for action. Therefore, the BLM has not developed alternatives specifically and explicitly intended to maximize carbon storage.

The BLM has various climate-related policies, including the following:

- Executive Order 13514, which directs agencies to measure, manage, and reduce greenhouse gas emissions toward agency-defined targets for agency actions such as vehicle fleet and building management
- Executive Order 13653, which directs agencies to assess climate change related impacts on and risks to the agency's ability to accomplish its missions, operations, and programs and consider the need to improve climate adaptation and resilience
- Secretarial Order 3289, which establishes a Department of the Interior approach for applying scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts
- Departmental Manual 523 DM 1, which directs the Department of the Interior agencies to integrate climate change adaptation strategies into programs, plans, and operations

These policies address topics related to greenhouse gas emissions and climate change, but none directs the BLM to manage BLM-administered lands specifically for carbon storage. This Draft RMP/EIS is consistent with these policies to the extent they address topics within the scope of this planning effort.

### **Protect All Nesting, Roosting, and Foraging Habitat for the Northern Spotted Owl**

The BLM eliminated this alternative from detailed analysis because it would be substantially similar in design and effects to Sub-alternative C, which would reserve all forests 80 years of age and older. Although an age threshold of 80-years-old does not function as a *de facto* definition of nesting, roosting, and foraging habitat, the majority of forests over 80 years of age provide nesting, roosting, and foraging habitat for the northern spotted owl, and the majority of forests less than 80 years of age do not provide nesting, roosting, and foraging habitat. At the scale of analysis of the decision area, an alternative that would reserve all nesting, roosting, and foraging habitat for the northern spotted owl would not be sufficiently different from Sub-alternative C to warrant separate analysis.

### **Reserve All Forests 200 Years of Age and Older**

The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need and the basic policy objectives described in the guidance for development of all action alternatives, in that it would not make a substantial and meaningful contribution to maintaining older, more structurally-complex multi-layered conifer forest. Forests 200 years of age and older only constitutes about two-thirds of the structurally-complex forest, according to the structural stage descriptions used in this Draft RMP/EIS. This alternative would leave too much older, more structurally-complex multi-layered conifer forest available for timber harvest to constitute a substantial and meaningful contribution to maintaining older, more structurally-complex multi-layered conifer forest.

### **Do Not Reserve Older, More Structurally-Complex Forest**

The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need, which includes contributing to the conservation and recovery of listed species. As the purpose and need explains, contributing to the conservation and recovery of the spotted owl necessarily includes maintaining older and more structurally-complex multi-layered conifer forests. As such, any alternative that does not maintain older, more structurally-complex forest is not a reasonable alternative.

### **Increase Riparian Reserve Widths**

This alternative would include Riparian Reserves that would be wider than the Riparian Reserves in the No Action alternative (i.e., more than two site-potential tree heights on fish-bearing streams and more than one site-potential tree height on non-fish-bearing streams). Such an alternative would be substantially similar to the Riparian Reserves in the No Action alternative, because of its effect on the conservation and recovery of listed fish and the protection of clean water. Based on the results in the interagency Aquatic and Riparian Effectiveness Monitoring Program, which evaluated watershed condition and trend for a fifteen-year period (1994-2008) in the Northwest Forest Plan area, the protections provided, in part, by the Riparian Reserves are improving watershed conditions (Lanigan *et al.* 2012). Additional width of Riparian Reserves would not provide additional protections for fish habitat or water quality. Furthermore, the Riparian Reserves in the No Action alternative were designed to meet an array of objectives, including broad ecological objectives and riparian and terrestrial species habitat. In contrast, the Riparian Reserves in the action alternatives are designed to meet narrower objectives: conservation and recovery of listed fish and protection of clean water, consistent with the purpose and

need for action. Because of these narrower objectives, the action alternatives considered in detail do not include widening the Riparian Reserve widths.

### **2008 BLM RMPs (Western Oregon Plan Revisions)**

This alternative would manage BLM-administered lands consistent with the 2008 Records of Decision/RMPs. The U.S. District Court, District of Oregon (*Pacific Rivers Council et al. v. Shepard*, 03:11--CV--442--HU, 2012 WL 950032 (D. Or. Mar. 20, 2012)) vacated the 2008 Records of Decision/RMPs on May 16, 2012. The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need and therefore is not a reasonable alternative. Specifically, the 2008 RMPs would not maintain older and more structurally-complex multi-layered conifer forests, because they would only defer the harvest of older forests for 15 years and therefore would not meet the purpose of the action to contribute to the conservation and recovery of listed species.

### **Oregon Forest Practices Act**

This alternative would manage BLM-administered lands with only those protections required by the Oregon Forest Practices Act, such as riparian protections and retention requirements during timber harvest. The BLM eliminated this alternative from detailed analysis because it would not meet the purpose and need for action and therefore is not a reasonable alternative.

In the 2008 RMP/EIS, the BLM used a reference analysis of managing most commercial forest lands for timber production, which considered the effects of managing "... in a manner similar to private industrial lands" (USDI BLM 2008b, p. 484). The 2008 RMP/EIS used this reference analysis to provide context and a point of comparison where needed to analyze the effects of the alternatives, rather than as a reasonable alternative itself. Nevertheless, the information in the 2008 RMP/EIS on the effects of this reference analysis is sufficient to demonstrate that this management approach would not meet the purpose and need for action, in that it would not provide a substantial and meaningful contribution to the conservation and recovery of listed species, including the northern spotted owl, marbled murrelet, and listed fish. It would not meet the purpose and need for action because it would not provide a network of large blocks of forest to be managed for late-successional forests and maintain older and more structurally-complex multi-layered conifer forests and would not maintain marbled murrelet habitat (USDI BLM 2008b, p. 532). It would not meet the purpose and need for action because this management approach or similar management approaches would result in stream temperature increases after timber harvest, increased risk of sediment delivery to streams, and increased susceptibility to peak flows and subsequent adverse effects to fish habitat (USDI BLM 2008b, pp. 755-759; 762-764; 765).

### **Provide "Not Less Than One-Half Billion Feet Board Measure" of Timber**

This alternative would include providing an annual productive capacity of at least 500 million board feet of timber. Several commenters have asserted during the planning process that the O&C Act makes this requirement of the BLM. The O&C Act directs, "The annual productive capacity for such lands shall be determined and declared as promptly as possible after August 28, 1937, but until such determination and declaration are made the average annual cut therefrom shall not exceed one-half billion feet board measure: Provided, That timber from said lands in an amount not less than one-half billion feet board measure, or not less than the annual sustained yield capacity when the same has been determined and declared, shall be sold annually, or so much thereof as can be sold at reasonable prices on a normal market."

The purpose and need for action includes providing a sustained yield of timber but does not specify a target volume of timber. The basic policy objectives described in the guidance for development of all action alternatives stipulate that the alternatives must make a substantial and meaningful contribution to each of the purposes for action to be considered reasonable. The BLM has not specified a quantitative threshold for the amount of timber harvest that would constitute a substantial and meaningful contribution to sustained-yield timber production, and does not accept that “one-half billion feet board measure” (that is, 500 million board feet) is a relevant or appropriate threshold.

Moreover, the BLM does not accept that the O&C Act requires that this RMP provide an annual productive capacity of “not less than one-half billion feet board measure” of timber. The O&C Act requires that the BLM offer for sale annually “... not less than one-half billion feet board measure, or not less than the annual sustained yield capacity when the same has been determined and declared ...”(emphasis added). Previous BLM planning efforts, including the 1995 RMPs, determined and declared the annual sustained yield capacity, rendering obsolete the requirement to offer for sale “... not less than one-half billion feet board measure.” This RMP revision will likewise determine and declare the annual sustained yield capacity based on the eventual RMP selected, again rendering obsolete the requirement to offer for sale “... not less than one-half billion feet board measure.”

### **Change the O&C Act**

This alternative would change or repeal the O&C Act, changing or removing the mandate for the BLM to manage the O&C lands “for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities.” Changes to existing laws or repeal of existing laws are not within the authority of the BLM and would be beyond the scope of this action, which is to revise the current RMPs with management objectives, land use allocations, and management direction that best meet the purpose and need. The purpose and need specifically includes providing a sustained yield of timber as required by the O&C Act.

Bills have recently been introduced to Congress that would change or repeal the O&C Act, including H.R. 1526 (O&C Trust, Conservation, and Jobs Act, passed House September 20, 2013) and S. 1784 (Oregon and California Land Grant Act of 2013, introduced December 9, 2013). Neither of these bills has yet become law. If Congress passes and the President signs into law any legislation that would change or repeal the O&C Act, the BLM would reconsider the purpose and need for action in this RMP revision, as appropriate. However, any such changes to the O&C Act or the purpose and need at this time would be speculative.

### **Comparison of Alternatives**

**Table 2-10** summarizes key features of the alternatives. This table is not comprehensive and focuses on design features that vary substantially among the alternatives and are easily quantified and summarized. Appendix B provides detailed descriptions of the management objectives and management direction for each action alternative.

**Table 2-11** summarizes key effects of the alternatives. This table is not comprehensive and focuses on effects that vary substantially among the alternatives and are easily quantified and summarized. Inclusion or omission of effects from this table does not indicate the importance of the effects to the decision-making process. For example, the table does not include summarization of effects to northern spotted owls, because differences among the effects of alternatives cannot be summarized briefly or

quantitatively. Nevertheless, the effects on northern spotted owls are directly related to the purpose for the action and these effects will be relevant in the decision-making process. Chapter 3 provides detailed analysis of the environmental consequences of the alternatives.

Table 2-10. Key features of the alternatives.

Alt.	Total Late- Successional Reserve (Acres)	Protection of Structurally-Complex Forest	Riparian Reserve Total Width	Riparian Reserve Inner Zone Width	Marbled Murrelet Survey and Protection
No Action	478,860	None specified	2 SPTH <sup>21</sup> on fish-bearing streams; 1 SPTH on non-fish-bearing streams	None specified	Survey in Zones 1 and 2; protect contiguous recruitment and existing habitat within ½ mile of sites
Alt. A	1,147,527	≥120 years	1 SPTH on all streams	120' on fish-bearing and perennial streams; 50' on non-fish-bearing intermittent streams	None
Alt. B	1,127,320	District-defined map based on existing, district- specific information	1 SPTH on perennial and fish-bearing streams; 100' on debris-flow-prone non-fish-bearing intermittent streams; 50' on other non-fish- bearing intermittent streams	60' on fish-bearing and perennial streams; 50' on non-fish-bearing intermittent streams	Survey in Zone 1; protect contiguous habitat within 300' of sites
Sub. B	1,422,933				
Alt. C	949,279	≥160 years	150' on fish-bearing streams; 50' on non-fish-bearing streams	60' on fish-bearing and perennial streams; 50' on non-fish-bearing intermittent streams	Survey stands >120 years; protect contiguous habitat within 300' of sites
Sub. C	1,373,206	≥80 years			None
Alt. D	714,292	≥120/140/160 years on high/moderate/low productivity sites	1 SPTH on all streams	120' on all streams	Survey in Zones 1 and 2; protect habitat within ½ mile of sites

<sup>21</sup> Site-potential tree height

Alt.	Total Harvest Land Base (Acres)	Green tree retention	Areas of Critical Environmental Concern (# Designated)	Recreation Management Areas (SRMA <sup>22</sup> Acres ERMA <sup>23</sup> Acres)	Protection of Lands with Wilderness Characteristics (Acres)	Suitable Wild and Scenic Rivers (# of River Segments)
No Action	691,998	GFMA <sup>24</sup> : 6-8 trees per acre Connectivity/Diversity: 12-18 trees per acre Southern GFMA: 16-25 trees per acre	89 (and 53 potential)	168,968 2,397,460	None	9 (and 51 eligible)
Alt. A	343,900	No retention	119	20,065 0	88,070	0
Alt. B	556,335	Low Intensity Timber Area: 15-30% retention	114	24,972 139,320	50,727	6
Sub. B	298,121	Moderate Intensity Timber Area: 5-15% retention				
Alt. C	741,332	No retention	111	59,046 357,771	50,727	6
Sub. C	495,507					
Alt. D	650,382	Owl Habitat Timber Area: maintain owl habitat Moderate Intensity Timber Area: 5-15% retention	118	86,693 580,458	None	59

<sup>22</sup> Special Recreation Management Area  
<sup>23</sup> Extensive Recreation Management Area  
<sup>24</sup> General Forest Management Area

Table 2-11. Key effects of the alternatives.

Current Conditions	Payments to Counties	Jobs	Allowable Sale Quantity of Timber (MMbf/Year)	Total Timber Volume (MMbf/Year)	Carbon Storage (Teragrams)	Greenhouse Gas Emissions (Megagrams of CO <sub>2</sub> e/Year)
Current (2012)	\$11.7 million <sup>25</sup>	7,403	203	205 <sup>26</sup>	379	192,034
<b>Alternative</b>	<b>Payments to Counties, Mid-Point of First Decade (2012\$/Year)</b>	<b>Jobs, Mid-Point of First Decade</b>	<b>Allowable Sale Quantity of timber (MMbf/Year)</b>	<b>Total Timber Volume, Average of First Decade (MMbf/Year)</b>	<b>Carbon Storage in 50 years (Teragrams)</b>	<b>Greenhouse Gas Emissions in 10 Years (Megagrams of CO<sub>2</sub>e/Year)</b>
No Action	\$46.5 million	10,298	277	400	484	363,864
Alt. A	\$ 28.1 million	7,992	234	249	499	358,895
Alt. B	\$36.4 million	9,230	234	332	494	418,316
Alt. C	\$67.4 million	12,419	486	555	456	498,409
Alt. D	\$18.7 million	6,915	176	180	517	265,463
<b>Current Conditions</b>	<b>High Fire Hazard (Acres)</b>	<b>Marbled Murrelet High-Quality Nesting Habitat (Acres)</b>	<b>Existing Roads (Miles)</b>	<b>Existing Sediment Delivery to Streams (Tons/Year)</b>	<b>Potential Wood Supply to Streams (Trees Per Acre &gt;20" DBH)</b>	<b>Existing Detrimental Soil Disturbance (Acres)</b>
Current (2012)	232,686	233,219	14,330	51,988	18.8	139,299
<b>Alternative</b>	<b>High Fire Hazard in 50 Years (Acres)</b>	<b>Marbled Murrelet High-Quality Nesting Habitat in 50 Years (Acres)</b>	<b>New Road Construction in 10 Years (Miles)</b>	<b>Additional Sediment Delivery to Streams, Average of First Decade (Tons/Year)</b>	<b>Potential Wood Supply to Streams in 100 Years (Trees Per Acre &gt;20" DBH)</b>	<b>Additional Detrimental Soil Disturbance in 10 Years (Acres)</b>
No Action	177,492	294,666	950	367	36.3	34,669
Alt. A	137,722	305,620	311	120	39.2	18,138
Alt. B	127,526	308,023	688	267	34.0	35,020
Alt. C	152,941	276,789	806	294	31.5	41,506
Alt. D	126,458	310,055	254	50	39.4	27,476

<sup>25</sup> Payments counties would have received in 2012 if payments had been based on timber receipts instead of Secure Rural Schools payments

<sup>26</sup> Total timber volume offered for sale in 2012

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