

# Pickett West Forest Management Project DOI-BLM-ORWA-M070-2016-0006-EA

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# Pickett West Forest Management Project

## Draft Chapter 1 of the Environmental Assessment

### Project Area Vicinity

The proposed planning area is mostly located within Josephine County; a small portion is within Jackson County. See Figure 1, Vicinity Map. The Pickett West Forest Management Project units are found within the following legal descriptions:

**Table 1:** Planning Area Location\*

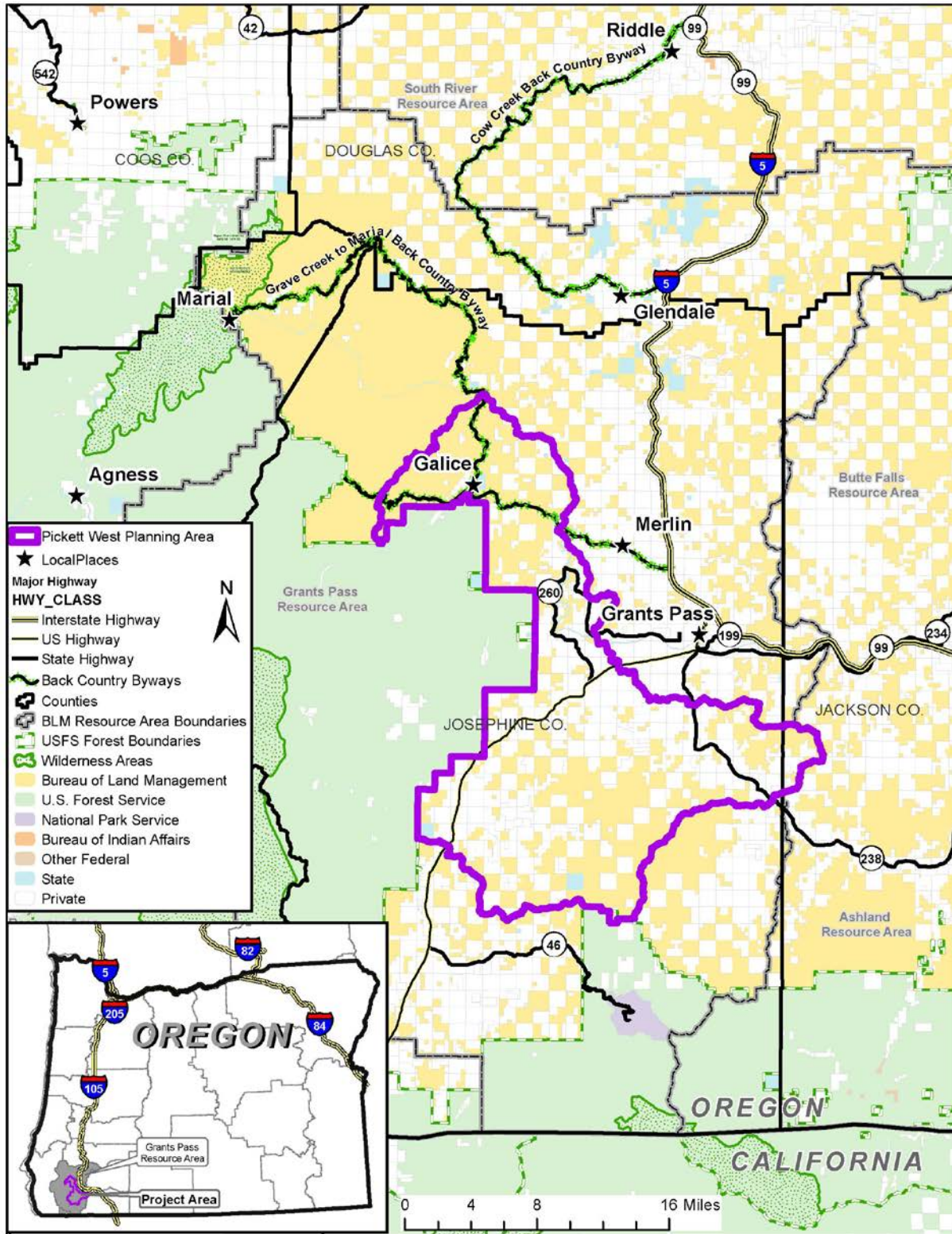
Township	Range	Sections
34 South	7 West	7, 15, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
34 South	8 West	10, 11, 24, 25, 26, 27, 34, 36
35 South	7 West	1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 15, 16, 20, 21, 22, 27, 28, 29, 30, 32, 31, 32, 33, 34
36 South	6 West	5, 8, 30
36 South	7 West	3, 11, 23, 27, 33, 34, 35
37 South	4 West	17, 18, 19, 20, 21, 30, 31
37 South	5 West	3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 23, 24, 25, 26, 27, 28, 29, 31, 36
37 South	6 West	7, 10, 11, 12, 13, 17, 20, 21, 23, 24, 26, 29
37 South	7 West	3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 20, 21, 22, 23, 25, 27, 28, 29, 33, 34, 35, 36
37 South	8 West	25, 35, 36
38 South	5 West	3, 4, 5, 7, 8
38 South	6 West	1, 7, 8, 11, 13, 14, 15, 17, 19, 20, 22, 23, 26, 27, 34
38 South	7 West	1, 3, 7, 11, 13, 14, 17, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
38 South	8 West	3, 13, 23, 25, 26
39 South	6 West	3, 4, 6, 10
39 South	7 West	3, 4, 5, 9, 10

\*All locations are based off of the Willamette Meridian.

The planning area is located within the Hellgate-Rogue River, Deer Creek, and Lower Applegate Hydrologic Unit Code (HUC) 10-digit watershed (5<sup>th</sup> field). All proposed project units are located on BLM managed land within the Late Successional Reserve, Matrix, and Riparian Reserve Land Use Allocations (LUA). Late Successional Reserve lands include Adaptive Management Reserves and Matrix lands include Adaptive Management Areas. These LUAs are defined in the

1994 RMP/1995 ROD. BLM lands within the planning area are intermixed with private and state lands, creating a mosaic of ownership patterns.

Figure 1: Pickett West Project Vicinity Map



## **Background and Existing Conditions**

The Pickett West planning area totals just over 200,000 acres, of which approximately half is managed by the BLM. These forests are made up primarily of the Douglas-fir - Dry Potential Vegetation Types, which support diverse stand compositions of conifers such as ponderosa pine, sugar pine, incense cedar, and Douglas-fir as well as hardwoods such as black oak and Pacific madrone. Before the fire suppression and intensive management practices of the twentieth century, this area was characterized by high frequency, low severity fires that reduced fuel loadings and maintained a mosaic of open stand conditions which is different from what is seen today (LANDFIRE, 2012). Under such an active disturbance regime, stands at these lower elevations were dominated by drought-tolerant pines and oaks, as well as Douglas-fir that developed fire resistant, complex forms in open growing conditions. After missing several fire return cycles, the likelihood of uncharacteristic fire behavior and high severity fire has increased due to the buildup of fuels (Brown et al. 2004, Kauffman 2004, Reinhardt et al. 2008, Ryan et al. 2013). Haugo et al. (2015) categorized the forest restoration needs across Oregon and Washington, and found that not only does southwest Oregon demonstrate the highest need for active forest restoration in the region, but the three watersheds in the planning area are among the most in need of active management to promote forest resiliency.

While there has been a noticeable spike in mortality of Douglas-fir trees from 2015-2016 in the Rogue Basin due to flathead borer activity, aerial insect and disease surveys from 2005-2015 also show that a disproportionate amount of tree mortality is occurring in pine trees in the Pickett West planning area (USDA and ODF, 2016). This is an undesirable shift as ponderosa pine dominated forests have been described as among the rarest type of old growth in the region, and should be a high priority for fuels reduction and restoration (Hessburg et al. 2005).

Stands proposed for treatment exhibit a range of conditions due to the variety of past management activities or lack of disturbance. However, they can be categorized broadly as overly dense stands of Douglas-fir dominated, dry mixed conifer, often with residual large diameter ponderosa pine and hardwoods. Extremely high canopy cover across entire stands has reduced understory complexity and within-stand heterogeneity. This lack of light beneath the canopy has left little room for understory shrubs to grow and has also resulted in scarce tree regeneration. Where saplings are able to establish they are primarily Douglas-fir, with few pines to be found. Without active management, these stands are on a trajectory that will result in reduced species diversity, diminishing structural complexity and an increasing risk for high severity fire.

## **Purpose and Need for the Action**

The BLM has a statutory obligation under the Federal Land Policy Management Act of 1976 which directs that “[t]he Secretary shall manage the public lands . . . in accordance with the land use plans developed by him under section 202 of this Act when they are available . . .” The

Medford District's Record of Decision and Resource Management Plan (1995 ROD/RMP) guides and directs management on Medford District BLM lands.

One of the primary objectives identified in the RMP is implementing the O&C Lands Act that requires the Secretary of the Interior to manage O&C lands for permanent forest production in accordance with sustained yield principles.

Existing forest stand conditions demonstrate there is a need for active management to meet objectives under the Medford District RMP and other regulatory directives. The proposed treatments are designed to provide a sustainable supply of timber, improve stand resiliency, and enhance or maintain northern spotted owl habitat. There is a need to apply silvicultural treatments that reduce the long-term risk of disturbances such as catastrophic wildfire or unacceptable mortality from moisture stress, insects, and disease.

Any action alternative that is to be given serious consideration as a viable alternative must meet objectives provided for in the RMP. The RMP and statutes specify the following objectives that are to be accomplished in managing the various land use allocations (LUAs) for this project on the Medford District:

Within the Matrix LUA project objectives include but are not limited to:

- The production of a sustainable supply of timber and other forest commodities to provide jobs and contribute to economic sustainability in the Matrix LUA (RMP, p. 38);
- Contributing to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies (RMP, p. 80);
- Preserving or retaining the existing character of landscapes on BLM-administered lands allocated for VRM Class I and II management (RMP, p. 240). Class I is the congressionally-designated Rogue River Wild and Scenic River Corridor; Class II is “the seen area” from the Rogue National Wild and Scenic River (wild section) (RMP, p.69).

Within the Late Successional Reserve LUA, objectives include:

- The protection and enhancement of conditions of late-successional and old growth forest ecosystems, which serve as habitat for late-successional and old growth forest related species including northern spotted owl (RMP, p. 32).

Within the Adaptive Management Reserves and the Adaptive Management Areas, objectives include:

- Developing and testing new management approaches to integrate and achieve ecological and economic health and other social objectives. Specific emphasis for the Applegate Adaptive Management Area includes “development and testing of forest management

practices including partial cutting, prescribed burning, and low impact approaches to forest harvest that provide for a broad range of forest values, including late-successional forest and high quality riparian habitat” (RMP, p. 36);

Objectives common to all LUAs include:

- Improving the health of the forest and associated habitats to reduce tree mortality, and restore the vigor, resiliency, and stability of forest stands that are necessary to meet LUA objectives (RMP, p. 62);
- Managing timber stands to reduce the risk of stand loss from wildfires, animals, insects, and diseases (RMP, p. 72);
- Managing and maintaining road systems that reduce hazards to public health and safety, fire risks, and vandalism to public and private property (RMP, p. 88) in an environmentally sound manner (RMP, p. 84);
- Minimizing negative effects to Threatened and Endangered species within the planning area; endeavor to contribute to the recovery of federally listed and proposed plant and animal species and their habitat (RMP, p.52).
- Maintaining or restoring components of the Aquatic Conservation Strategy in Riparian Reserves (RMP, p. 22);
- Maintaining haul roads to accommodate the safe movement of vehicles and machines (Oregon OSHA Chapter 437, Division 7, Section F);
- Maintaining or improving habitat conditions for *Fritillaria gentneri* within the Fritillaria Management Area (Conservation Agreement for Gentner’s Fritillary in Southwestern Oregon);

The inability to proceed with a given sale in the Medford District Sale plan for any particular fiscal year has the potential to prevent the district from meeting Allowable Sale Quantity targets, as directed in the O&C Act and the 1995 ROD/RMP.

## **Alternatives**

### *Alternative 1 - No Action Alternative*

The No Action Alternative serves as a baseline to compare the effects of the actions between the Alternatives. Under the No Action Alternative, silvicultural treatments would not be applied within the planning area. No forest management or fuels maintenance activities would be implemented to accomplish project goals in the foreseeable future. The No Action Alternative would not meet the purpose and need of the project.

### *Alternative 2 - Proposed Action Alternative*

Alternative 2 is proposed to meet the Purpose and Need of the project within the multiple use objectives and resource protection measures established by the 1994 Northwest Forest Plan and 1994 RMP/ 1995 ROD. Environmental effects from Alternatives 1 and 2 will be disclosed in

Chapter 3 of the EA. Alternative 2 proposes forest management activities on approximately 17,058 acres, which includes 4,091 acres of Late Successional Reserve, and 12,967 acres of Matrix LUA. Late Successional Reserve lands include Adaptive Management Reserves and Matrix lands include Adaptive Management Areas. Table 2 below summarizes the proposed action acreage.

**Table 2:** Alternative 2 – Proposed Action Summary

<b>Silvicultural Prescription</b>	<b>Matrix Acres</b>	<b>Matrix – Adaptive Management Area Acres</b>	<b>Late Successional Reserve Acres</b>	<b>Late Successional Reserve – Adaptive Management Reserve Acres</b>
Potential Treatment Units	3,670	2,233	2,023	1,425
Potential Fuels Maintenance Units	4,181	2,883	609	34
<b>Total acres</b>	7,851	5,116	2,632	1,459

*Forest Management Activities*

Silvicultural activities are being proposed to harvest timber, develop forest structure, and/or move stands towards desired conditions for multiple objectives. Treatments would reduce stand densities and may include the creation of small openings within stands and around large legacy trees and less prominent species. These treatments may also include the retention of untreated areas. Prescriptions would promote vertical and horizontal heterogeneity in stands, generally utilizing a thin from below strategy to maintain larger tree structure. Objectives would:

- Provide viable commercial products (volume);
- Enhance residual tree vigor and promote stand resiliency;
- Develop within-stand species diversity and structural complexity;
- Shift forest composition towards more drought and fire tolerant tree species
- Protect large older trees with complex forms that are important for wildlife; and
- Reduce fuel loadings that exacerbate high severity fire risk.

Restoration Thinning (RT):

This silvicultural approach will be used where the purpose is to reduce stand density and fuel loadings, increase vigor, and reduce insect and disease mortality similar to levels found in stands that have an intact fire regime in place. The desired condition is an open growing, structurally diverse stand with openings that allow the natural regeneration or low density planting of early seral trees such as pines and oaks as well as dense, shaded refugia for wildlife. Underburning would be considered after mechanical operations have been completed to further reduce fuel loadings, recycle nutrients and stimulate plant growth. A restoration thinning allows for the



protection and development of important Northern Spotted Owl (NSO) habitat features over the long term such as large diameter, open grown trees with large lower limbs, as well as reducing wildfire impacts.

Density Management (DM):

Where NSO habitat maintenance is the short term objective and habitat improvement is the longer term objective of treatment, density management will be used. Stands will be thinned or partially harvested to enhance forest health, stand structure and function. The desired condition is one that maintains at least 40% canopy cover for NSO dispersal, or 60% canopy cover for NSO nesting, roosting and foraging functions while protecting old growth trees and promoting a multi-layered complex stand. Underburning would be considered after mechanical operations have been completed to further reduce fuel loadings, recycle nutrients, and stimulate plant growth.

Regeneration Harvest (RH):

Regeneration harvest in the Southern General Forest Management Area (SGFMA) would be considered where stands have reached 150 years of age and the culmination of mean annual increment (CMAI) has been reached. After the CMAI has been reached, annual tree growth slows and the objective of stand regeneration is to provide growing space for vigorous young trees. Structural complexity would be preserved in the form of 16-25 large green trees per acre and coarse woody debris retention.

Mortality Salvage (MS):

In the event that stands are impacted by self-thinning or disturbances such as windstorms, fire, or insect and disease mortality, salvage may be warranted to reduce fuel loadings and retain economic value. Only mortality above the level needed to meet snag retention and other habitat goals and provide desired levels of coarse woody debris would be harvested.

Hazardous Fuels Reduction Maintenance (HFRM)

Hazardous fuels reduction maintenance (HFRM) treatments would be designed to reduce and maintain tree and brush densities in previously treated stands. These treatments would improve stand-level residual tree growth and vigor, and reduce the fire hazard (reduction in surface fuels and ladder fuels), potentially decreasing the risk of crown fire initiation. HFRM treatments are being considered on managed and naturally developed stands to maintain existing desired conditions.

Treatments could include slashing, hand piling, hand pile burning, chipping, lop and scatter, biomass removal, and/or understory burning. Conifers would likely be spaced 16-20 feet apart while hardwoods would be spaced 25-45 feet apart. No trees greater than eight inches diameter at breast height (DBH) would be cut unless joined with another silvicultural prescription. Within

the Riparian Reserve, hand piling slash would be limited to six inches on the large end of the log to provide for soil protection and small wood recruitment.



**Figure 2:** Old growth Ponderosa pine are found in much of Pickett West, the young Douglas-fir that have encroached in the absence of fire have shaded the ground, resulting in sparse understories without tree regeneration or shrubs.



**Figure 3:** Old growth ponderosa pine mortality eventually occurs in such dense growing conditions. Tightly grown, small diameter Douglas-fir show poor live crown ratios, and slow basal growth rates; shade intolerant regeneration is rare.

### *Description of Yarding Systems*

Harvest yarding systems may include the use of skyline cable yarding, ground-based yarding, and helicopter yarding. The yarding systems listed below may utilize whole tree yarding or yarding with tops attached to minimize impacts to retained trees and soils. This means that the trees may be yarded to the landings with tops and limbs attached or with the limbs removed but with the tops attached. The remaining processing of the logs would occur at the landing; tops and limbs would be removed and logs would be cut into desired lengths.

Skyline cable yarding systems are in a fixed position, usually attached to a yarder or a tower from which cables, carriages, and winches originate. The yarder, tower, and cables utilized in this system may require the use of tail hold and/or guylines to remain erect. The carriage is a load-carrying device from which logs are suspended and rides into the interior of the unit and returns back to the landing along the skyline cable. The tail end of the cable yarding corridors will be at least 150 feet apart; cable yarding corridors may converge near the landing. In stands identified as any part of NSO nesting, roosting, and foraging habitat, where more than 3 landings converge, a skip area was designed to limit the extent of clearing near the landing, with the intent of reducing impacts to NSO habitat from logging systems. Landings are generally  $\frac{1}{4}$  acre in size when multiple yarding corridors converge, but can be smaller in size if servicing only one yarding corridor. Often no additional disturbance is created if the landing is located on a road and services one or two corridors. Depending on slope steepness, trees would either be manually or mechanically felled and processed.

Ground-based yarding systems utilize tracked or wheeled tractors to transport logs from the interior of units to landing areas. Trees are either manually or mechanically felled and processed, depending on resource concerns. Landing areas are generally  $\frac{1}{4}$  acre in size and are located outside of Ecological Protection Zones (EPZ). The equipment utilized with this system operates on designated skid trails or existing skid trails when possible which are required to be located 150 feet apart. Operations shall generally occur on ground that is less than 35% slope. Ground-based equipment is required to utilize an integral arch which is able to suspend logs on one end. This minimizes soil disturbance and compaction. Within the Adaptive Management Area and Adaptive Management Reserve, a tethered assist cut-to-length system may be used. This system utilizes a harvester and forwarder paired together to process logs in the woods and fully suspend them over the ground to the landing. A synchronized winch system allows the equipment to walk over slash on steep terrain with greatly reduced soil impacts.

Helicopter yarding uses a helicopter to transport logs from the interior of a unit to a landing. Trees are cut and usually limbed within the interior of the unit. A mechanized harvester may be used on slopes less than 35% to process and pre-bunch logs prior to yarding. A person within the unit attaches a choker to a group of trees which are then lifted and transported to a nearby

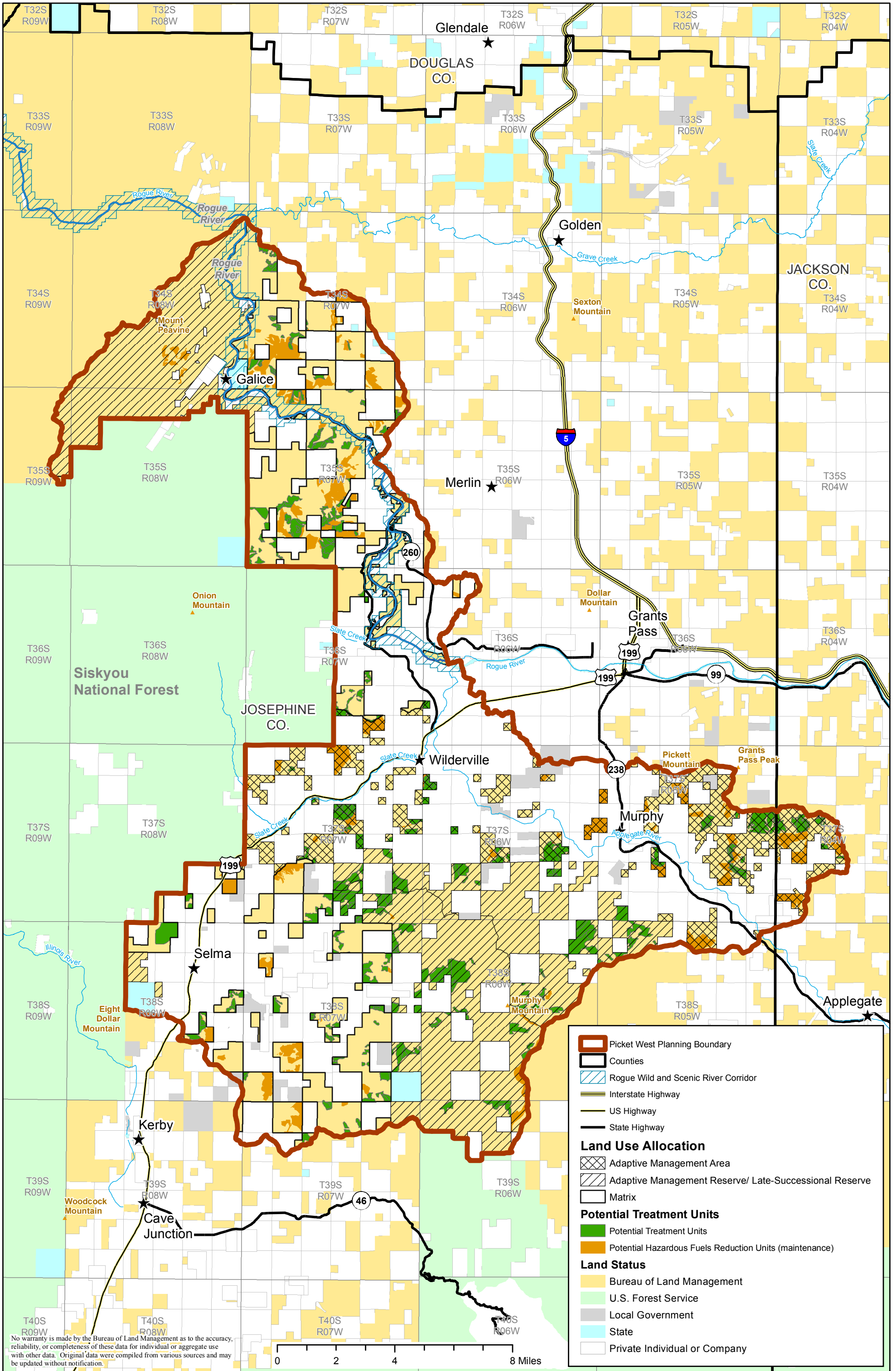
landing location. Helicopter landings are generally 1 acre in size. Existing landings are used where possible but new landings may be needed. Existing disturbance areas will be utilized when possible. No landings are proposed in EPZs or Riparian Areas.

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# Pickett West Planning Area



	Picket West Planning Boundary
	Counties
	Rogue Wild and Scenic River Corridor
	Interstate Highway
	US Highway
	State Highway
<b>Land Use Allocation</b>	
	Adaptive Management Area
	Adaptive Management Reserve/ Late-Successional Reserve
	Matrix
<b>Potential Treatment Units</b>	
	Potential Treatment Units
	Potential Hazardous Fuels Reduction Units (maintenance)
<b>Land Status</b>	
	Bureau of Land Management
	U.S. Forest Service
	Local Government
	State
	Private Individual or Company

0 2 4 8 Miles

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