

Upper Cow Late Successional Reserve Project Environmental Assessment

Readers Guide February 2016

BLM

Medford District - Grants Pass Field Office



Dear Reader,

Thank you for your interest in public lands and welcome to the Upper Cow Late Successional Reserve Project. This Readers Guide is meant to help you understand the project and describes your opportunities to participate in the planning process. This guide describes the what, where, how, and why of the project.

This Readers Guide has been made available to supplement the Upper Cow Environmental Assessment (EA). This guide is a synopsis to the information contained in the EA. The purpose of an EA is to disclose the direct, indirect, and cumulative impacts that may result from the action alternatives. We are now in the EA comment period, part of which includes public involvement. During this process the BLM solicits your feedback on the proposed project.

Inside this Readers Guide you will find a Planning Area description, a discussion of the Purpose and Need for the project, a description of the action alternatives, a description of the proposed forest management treatments, a map of the Planning Area with potential treatment units, public involvement information, and a Forest Management Tour.

We hope this guide helps you understand the EA and the action alternatives. Please contact our office if you have questions. Your input is an important part of the management of your public lands.

Allen Bollschweiler, Grants Pass Field Manager

Planning Area Description

The Planning Area falls within the Middle Cow Creek, Upper Cow Creek, and Days Creek-South Umpqua River watersheds. These watersheds are part of the Umpqua River drainage in the Klamath Mountains province in southwest Oregon. All proposed project units are located on BLM-managed land within the Late Successional Reserve (LSR) Land Use Allocation. BLM lands are intermixed with private and county lands, creating a mosaic of ownership. This is a characteristic of Oregon and California (O&C) railroad lands of western Oregon.



BLM timbered lands interspersed with private clearcuts. Galesville Reservoir can be seen at the center of the photo.

Late Successional Reserves - What are they?

Late-Successional Reserves are lands that are set aside to protect and enhance conditions of old-growth forest ecosystems that serve as habitat for associated species such as the Northern Spotted Owl. They are managed to maintain biological diversity associated with native species and ecosystems.

Silvicultural practices may be used to accelerate the development of overstocked young plantations into stands with late-successional and old growth forest characteristics. Many of these practices are included in the project's silvicultural prescriptions.



The development of high value northern spotted owl habitat, such as this pictured above, is one of the goals of active management in Late-Successional Reserves.

Purpose and Need for this Project (EA, pp. 3-6)

Need (Issues and Problems)

There is a *need* for the project because the stands identified for treatment in the Planning Area lack late-successional characteristics – a management objective of late-successional reserves. The South Umpqua Galesville LSR is located within an area that serves as a connectivity corridor between the Coast Range Province and the Cascade Province - a critical East-West connectivity area between two large valley systems. North and south of the LSR, the lack of federal ownership on the I-5 Corridor increases the importance of this area as a vital link between the major provinces. The treatments being proposed would speed the attainment of late-successional forest conditions which have been identified as being beneficial for terrestrial wildlife habitat and watershed function to maintain aquatic habitat.



Stands in the Planning Area, such as this pictured above, lack late-successional characteristics. In this case, stand density prevents the development of large trees that act as important sources of wildlife habitat.

Purpose (Proposed Solutions)

This project's *purpose* is to enhance and/or maintain late successional forest conditions using silvicultural practices, prescribed fire and/or commercial and non-commercial treatments. This work would be done under the guidance of the 1995 Medford District Resource Management Plan (RMP) and the South Umpqua/Galesville Late Successional Reserve Assessment and the Northwest Forest Plan Standards and Guidelines (pages C-9 through C-20) which provides the framework for managing BLM-administered lands.

Project Alternatives

On the next few pages is a simple description of the No Action Alternative and two Action Alternatives. For a more in-depth discussion of the alternatives, see the Upper Cow LSR Project EA (pp. 15-27).

The No Action Alternative 1

The No Action Alternative provides a baseline for comparison of the Action Alternatives and describes the existing condition and the continuing trends within the Planning Area. Selection of the No Action Alternative would not meet the purpose and need of the project to maintain and enhance the late successional forest, reduce risk within the LSR from large-scale disturbances, and conserve federally listed species and their habitat.

Action Alternative 2

The BLM is proposing a variety of treatments within the Upper Cow LSR Project Planning Area. The treatments are described on pages 6 through 9 of this Readers Guide. The proposed treatments in Alternative 2 meet the Purpose and Need of the project. Below is a summary of the treatments proposed under Alternative 2.

Action Alternative 3

Alternative 3 meets the purpose and need of this project, but some treatments may have limited effectiveness. Following guidance contained within the South Umpqua River / Galesville Late-Successional Reserve Assessment (1999), Alternative 3 would only treat stands that are 80 years of age and younger and would not cut trees greater than 20 inches in diameter at breast height. Road work and project design features would be the same as Alternative 2, with the exception that Alternative 3 would not allow for wet season dry condition ground-based operations, and would have more restrictions for wet season hauling. Below is a summary of the treatments proposed under Alternative 3.

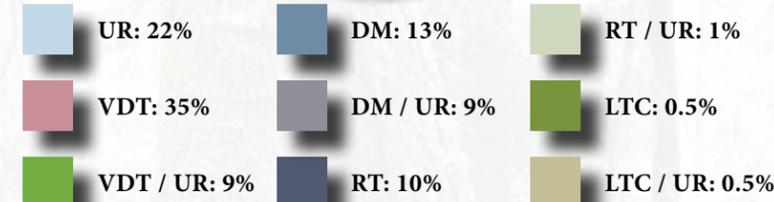
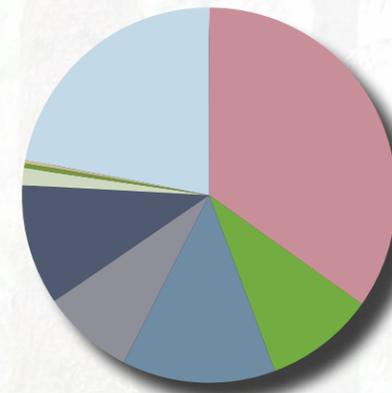
Summary of Proposed Action Alternatives 2 and 3 Project Activities

Treatment Type	Alt 2 Acres	Alt 3 Acres	Approximate Amount (miles)	
			Alternative 2	Alternative 3
Variable Density Thinning (VDT)	474	474		
VDT / Understory Reduction (UR)	132	130		
Density Management (DM)	182	12		
DM / UR	109	0		
Restoration Thinning (RT)	143	140		
RT / UR	20	20		
Legacy Tree Culturing (LTC)	7	0		
LTC / UR	4	0		
UR	302	415		
<i>(colors correspond to pie charts on page 5)</i>				
Total acres	1,373	1,191		
Number of units	79	60		

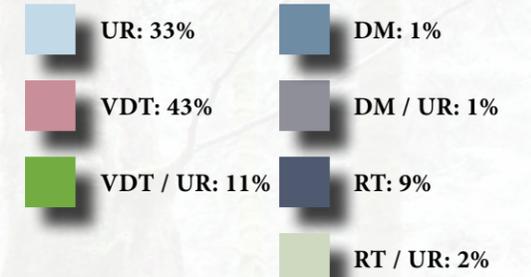
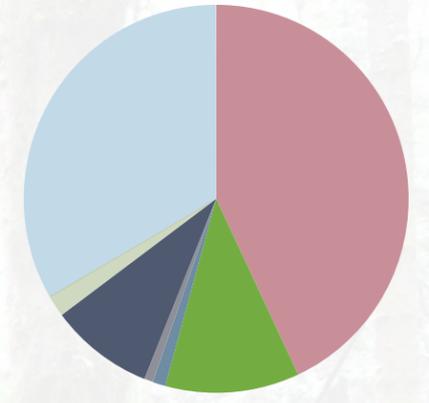
Road Work Summary	Approximate Amount (miles)	
	Alternative 2	Alternative 3
New Temporary Route Construction	0.60 miles	0.29 miles
Existing Temp Route Renovation/ Reconstruction	1.60 miles	1.42 miles
Road Maintenance	63.40 miles	57.11 miles

Proposed Forest Management Activities by Percentages

Alternative 2



Alternative 3



At a Glance: Differences between Alternatives 2 and 3

Element	Alternative 2	Alternative 3
Ground Based Operations	With the proper waivers, ground based harvesting may be permitted in the wet season during dry conditions (See Section 2.4 BMPs and PDFs for a description).	No ground based harvesting in the wet season during dry conditions – October 15th through April 15th
Hauling	With the proper waivers and the implementation of applicable BMPs and PDFs, hauling may be permitted in all seasons.	Hauling during the wet season during dry conditions and ONLY on roads with All Weather Surfacing (See Roads Table, Appendix H).
Treatment in units that are greater than 80 years old	Harvesting of units greater than 80 years of age (with Regional Ecosystem Office approval)	No treatment in units greater than 80 years of age
Harvesting trees greater than 20 inches in diameter at breast height (DBH)	Cutting and harvesting of trees greater than 20 inches in DBH (with Regional Ecosystem Office approval).	No cutting of trees greater than 20 inches DBH for silvicultural purposes. Trees greater than 20 inches DBH may be cut to accommodate logging systems but would remain on site.
Silvicultural prescription differences	80+ year stands may include over-story silvicultural prescription (example: Legacy Tree Culturing and Understory Reduction)	80+ year stands, silvicultural prescriptions will be altered to include only Understory Reduction (example: Legacy Tree Culturing and Understory Reduction will be altered to include only Understory Reduction Treatments)
Differences between BMPs and PDFs	Proposal will utilize all BMPs/PDFs	Only PDF not included: wet season ground based harvesting and hauling would be limited to the dry season or all-weather roads (See Chapter 2.4 BMPs and PDFs for a description).

Action Alternative Treatments

Density Management (EA, p. 17)

Density management is a treatment applied to older stands that have a mixture of small trees and larger trees. The intent of this treatment is to remove some small trees and leave large trees. This treatment creates a stand with a greater average tree diameter. Density management objectives include:

- Reducing the density of the forest stand which will increase the available water, growing space, nutrients and sunlight for the remaining trees.
- Stimulating growth, improving tree crown densities and creating a more fire tolerant forest stand.
- Enhancing and promoting the longevity of the future forests by retaining drought tolerant species such as pine, cedar, oak and other large hardwoods.



Overstocked Stand in need of Density Management Treatment.

Legacy Tree Culturing (EA, p. 17)

This treatment involves the reduction of competing trees around super dominant old-growth Douglas-fir, ponderosa pine, and incense cedar. The latter two species are both thick barked fire resilient and drought tolerant tree species. Cultivating fire resilient trees would contribute to their persistence on the landscape for maintaining or improving biological diversity.

- Short and long-term benefits of reduced fire risks through radial thinning around legacy components.
- Openings between 1/4 to 3/4 acre would provide conditions for regeneration.
- Interplantings of fire-resilient and drought-tolerant ponderosa pine and incense cedar would help establish their long-term persistence on the landscape.



Response of understory to legacy tree culturing. The available sunlight stimulated this secondary tree layer.

Understory Reduction (EA, pp. 18-19)

Understory reduction is a treatment proposed in areas where wildfire presents a great risk to late-successional habitat. This was exemplified in the summer of 2015 with the Stouts Creek Fire. This treatment is designed to move these dry forest stands along a path to develop and retain resilience to adequately respond to change, such as wildfire.

Objectives of Understory Reduction include:

- Restoring the original forest structure and composition by including natural disturbances in the ecosystem such as fire.
- Encouraging the persistence of spotted owl habitat on the landscape as part of the fire-adapted community



Forest Stand in need of Understory Reduction Treatment.

Examples of Understory Reduction treatments as shown in these photos.

Treatments include slashing, hand-piling, pile-burning, chipping, lop and scattering, biomass removal, and/or under burning.



Chipping



Handpiles



This unit was underburned in 2009



Pile-burning



Underburning



Lop-and-scatter

Action Alternative Treatments (continued)

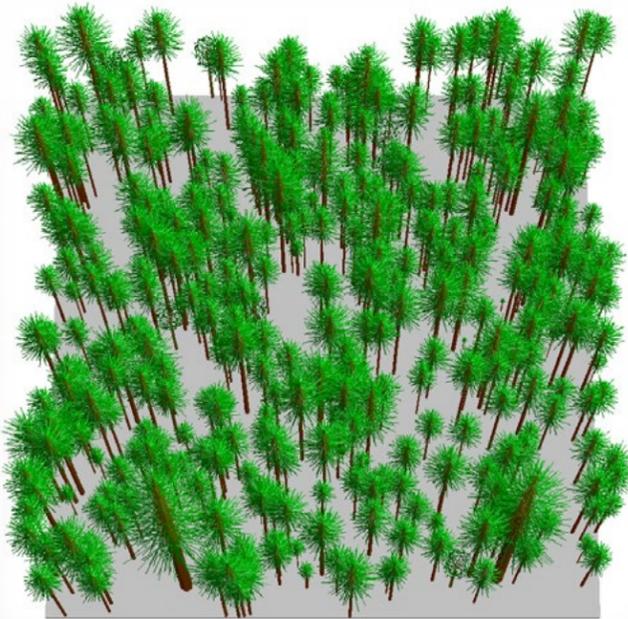
Variable Density Thinning (EA, p. 18)

Variable density thinning treatments are applied to create complex forest structure. This type of thinning may include treatments that create space (gaps) around large legacy trees of less prominent species such as pine, oak and cedar. It may also maintain denser areas that may remain untreated, known as “skips.” Variable density thinning objectives include:

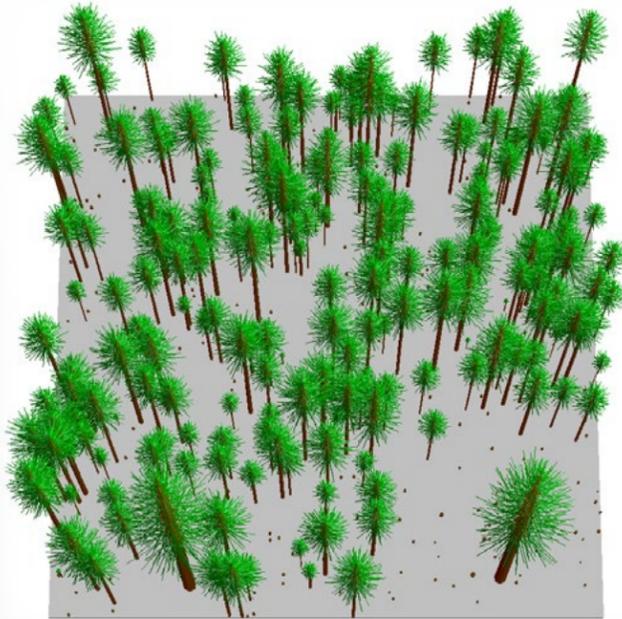
- Removing excess trees that create “ladder fuels,” which improves a forest stand’s ability to withstand wildfire.
- Increasing amount of spotted owl habitat over the long term.
- Favoring the retention of more fire tolerant and drought tolerant trees.

Example of Variable Density Treatment

Before Treatment



After Treatment



Above: The stand at left is experiencing competition for resources (such as light, nutrients, water, space). If no thinning were to occur, these stands would remain in stand exclusion (loss of a developed understory and midstory, spindly trees exhibiting growth suppression and susceptible to disease, mortality, and windthrow). Applying variable density thinning to the stand, at left, opens up the canopy, lets in available sunlight, and decreases competition for resources that lead to mortality.

Restoration Thinning (EA, p. 18)

Restoration thinning is a treatment proposed in areas where fire suppression has created unfavorable stand conditions. The objective is to change conditions to favor the retention of fire tolerant species such as ponderosa pine, sugar pine, incense cedar, large oaks and large Douglas-fir. Restoration thinning objectives include:

- Reducing stand density to promote individual tree vigor and help reduce competition induced mortality from Douglas-fir encroachment.
- Restoring stands losing their natural component of pine, incense cedar and oak to Douglas-fir encroachment.
- Utilization of gaps to enhance or promote individual tree development and skips for retaining unique stand characteristics.
- Reducing mortality and susceptibility of trees to insect and disease attack and spread.



Fire exclusion has resulted in stands such as this: trees are crowded and competition has resulted in excessive stand densities, increasing the likelihood for large wildfires and a loss of ecological landscape features such as legacy trees from competition.

Riparian Thinning Treatments and Ecological Protection Zones

Treatments are proposed in Riparian Reserves as part of the Upper Cow LSR Project (EA, pp. 21-24). Surveys have shown that proposed treatments would help accelerate the development of LSR conditions. Treatment would only be proposed in riparian areas that do not currently meet LSR objectives.

Riparian thinning is expected to benefit perennial and intermittent streams, fish habitat, and habitat for other aquatic species by promoting species diversity and resilience to disturbance in the riparian forest stands.

Treatments within Riparian Reserves would employ an Ecological Protection Zone (EPZ, no treatment buffer) to ensure protection of water quality during treatments. EPZ buffers would range from 35 feet on both sides of the stream to 200 or 400 feet on both sides of the stream in the full Riparian Reserve. This would depend on several factors, including whether the water body is a perennial fish bearing stream, perennial non-fish bearing stream, intermittent stream, or a wetland. Further details on EPZ buffers can be found in the EA (pp. 22-24).



Riparian Reserves would be treated in a manner that protects their important values.

R05W

R04W

R03W

Upper Cow EA Alternative 2

11/12/2015

T31S

T32S

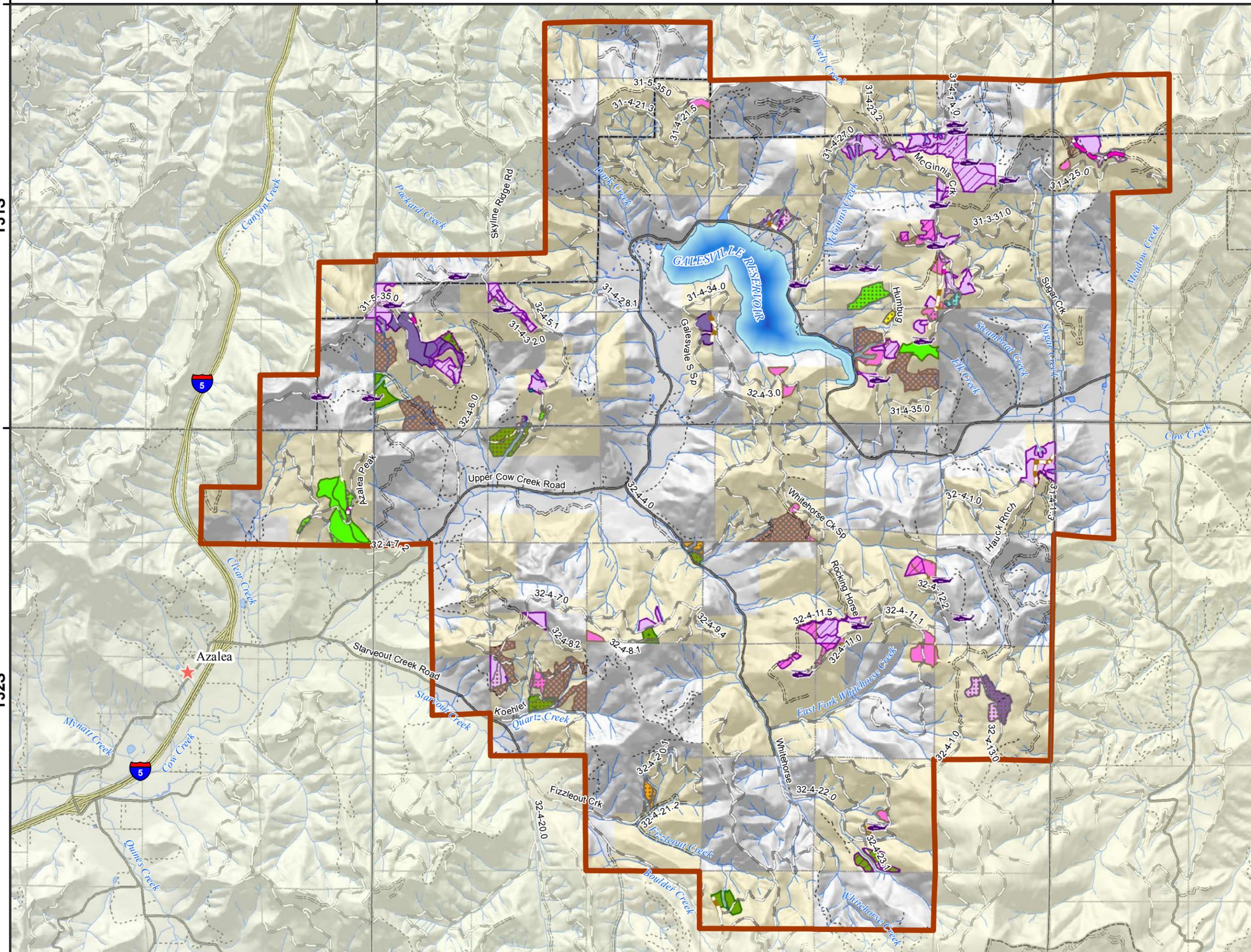
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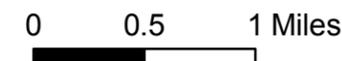
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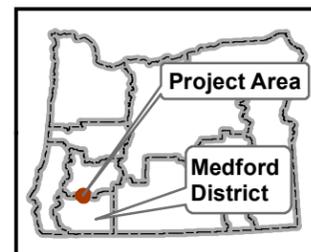
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- Planning Area
- Resource Area Boundary
- Bureau of Land Management
- Variable Density Thinning / Understory Reduction
- Variable Density Thinning
- Restoration Thinning / Understory Reduction
- Understory Reduction
- Restoration Thinning
- Density Management
- Legacy Tree Culturing / Understory Reduction
- Legacy Tree Culturing
- Density Management / Understory Reduction
- Cable Yarding
- Ground Based Yarding
- Helicopter Yarding
- Helicopter Landing
- Swing Roads
- Temporary Routes
- Interstate Highway
- Paved Road
- Rocked Road
- Natural Surface Road
- Not Known



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



R05W

R04W

R03W

Upper Cow EA Alternative 3

11/12/2015

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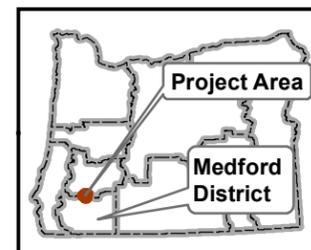
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-  Planning Area
-  Resource Area Boundary
-  Bureau of Land Management
-  Variable Density Thinning / Understory Reduction
-  Variable Density Thinning
-  Restoration Thinning / Understory Reduction
-  Understory Reduction
-  Restoration Thinning
-  Density Management
-  Ground Based Yarding
-  Cable Yarding
-  Helicopter Yarding
-  Helicopter Landing
-  Swing Roads
-  Temporary Routes
-  Interstate Highway
-  Paved Road
-  Rocked Road
-  Natural Surface Road
-  Not Known

0 0.5 1 Miles



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Resources that Influenced the Project Design

The Interdisciplinary team (IDT) of resource specialists that developed the project received comments from the public; local, federal and state agencies; federally recognized tribes; and other organizations that were interested in the project.

The IDT considered in detail the following issues and incorporated them into the design of the action alternatives, Project Design Features (pp. 31-41), and analysis of the environmental effects found in Chapter 3 of the EA.

Wildlife (pp. 61-91)

Resource specialists have considered the effects of project activities on northern spotted owl, their habitat, and their prey species, as well as effects to red tree voles, fishers, and other species of concern.



Northern Spotted Owl



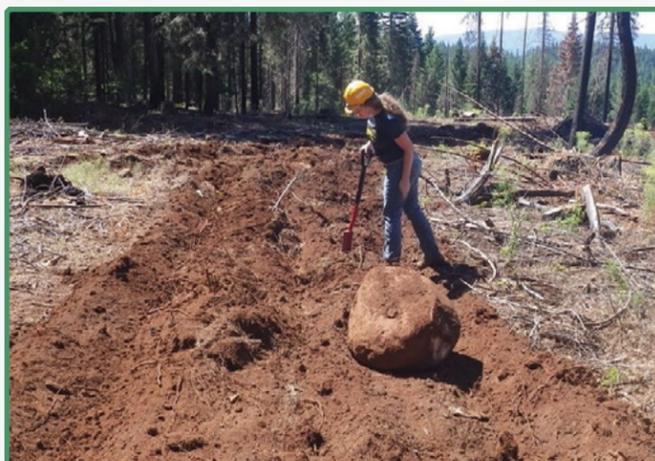
Red Tree Vole (RTV) surveyor, verifying nest occupancy.

Soils (pp. 91-108)

Effects to soil and site recovery, nutrient cycling, and accelerated erosion have been analyzed. Resource specialists have incorporated measures to reduce potential impacts to fragile soils.

Invasive Species/Noxious Weeds (pp. 138-141)

Botanists have evaluated proposed project activities for the potential spread of invasive/noxious weeds. Measures have been incorporated into the project design to reduce the likelihood of spreading non-native plant species.



BLM Soil Scientist assessing soil compaction.



Contract Administrator verifying equipment is washed to prevent noxious weed spread prior to entry on public land.

Hydrology / Aquatics (pp. 108-129)

A project goal is to protect water quality and quantity, fish, and aquatic habitat. Resource specialists have analyzed project effects on the physical integrity of the aquatic system, as well as sediment and instream flow. Measures have been incorporated into the project design to protect sensitive species such as Coho Salmon.



BLM employee surveying a stream.



Effects to fish, such as Coho Salmon have been analyzed as part of the Upper Cow LSR Project.

Fuels / Fire (pp. 58-61)

The proposed treatments are intended to create fire resilient stands by reducing surface fuels, ladder fuels, and crown density through prescribed fire. Thinning followed by treatment of surface fuels can reduce potential fire danger and increase resiliency to natural fire.

Stand Condition / Health (pp. 48-58)

Resource specialists analyzed project effects to stand health and long-term fire resiliency. Proposed treatments, legacy tree culturing, and re-planting of appropriate diverse species are designed to benefit long-term plant and wildlife habitat.



Silviculturist verifying stand age.



Thinning may allow for both natural and prescribed fire to burn with low intensity.

Archeological Resources (pp. 129-130)

The Planning Area has been surveyed by BLM Archeologists to determine potential impacts to cultural resources. Measures have been incorporated to protect cultural and paleontological resources if discovered during project design and implementation.



Flint found and protected at a BLM archaeology site.

Operations Needed to Accomplish goals

Yarding methods may vary depending on a number of factors, including environmental concerns, available roads, ease of access, and cost. Below are the three types of yarding operations being considered in the Upper Cow LSR Project.

Cable Yarding

Cable yarding is the process of removing logs from a harvest unit to a landing by use of wire cables, a carriage, a tower, and a yarder.

- The carriage is the device from which logs are suspended and which rides back and forth between the yarder and tower, also called the “skyline carriage.”
- The tower is the anchor point placed on the far end of the yarding corridor, from which the carriage moves back and forth.
- On Medford District BLM lands, at least one end of the log must be suspended during yarding. This helps limit impacts to soils and other plants.

Ground-Based Yarding

Ground based yarding is the removal of logs from a harvest unit using wire cables and a tractor or dozer-like machine.

- On Medford District BLM lands, the tractor must be equipped with an integral arch so that one end of the log is suspended above the ground while being pulled to a landing. This protects soils and the remaining trees within the unit.

Helicopter Yarding

Helicopter yarding is the removal of logs from a harvest unit using wire cables and a helicopter to fully suspend the logs from the ground and transport them to a landing.

- Usually conducted when access to a unit is limited by one of a number of factors, including terrain difficulty, lack of available roads, and environmental concerns such as presence of sensitive plants and animals.
- This is often the most expensive and hazardous yarding method available.



A cable yarding operation.



A ground-based yarding operation.



A helicopter yarding operation.

Road Work (EA, pp. 210-213)

The Upper Cow LSR Project Environmental Assessment analyzes roads within the Planning Area and proposes a variety of actions, including: road maintenance, temporary route construction, temporary route reconstruction, and temporary route renovation. When forest management activities generate revenue, road maintenance activities occur on a regular basis and are associated with project activities. These maintenance activities may improve the function of forest roads and decrease sedimentation from forest roads.

Temporary Route Construction*

- These routes are created in areas where no previous routes exist. They allow operators temporary access to harvest units.

Temporary Route Reconstruction*

- These routes already exist on the landscape.
- Reconstruction restores an existing road to its engineered condition.

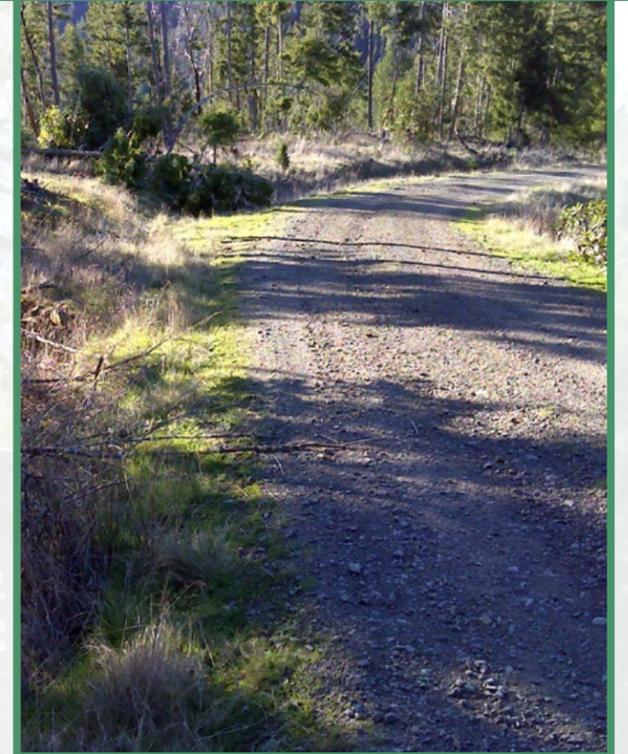
Temporary Route Renovation*

- Restores an existing unmaintained route to its original or modified design standard.

Road Maintenance

- Maintenance on existing roads would help maintain their original design standard.
- Maintenance reduces sedimentation from road runoff.

*All constructed, reconstructed, and renovated roads would be fully decommissioned after use.



Typical BLM road.



Decommissioned road after more than 15 years.



Road Maintenance.

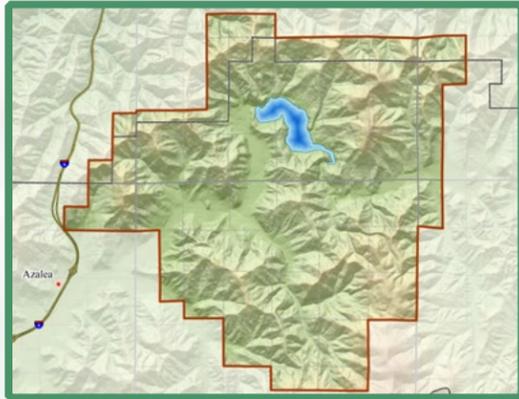


Recently decommissioned road.

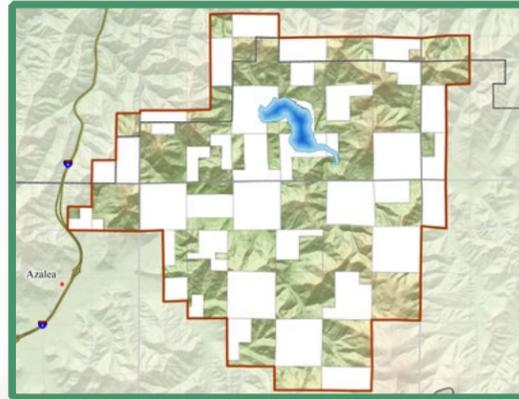
Upper Cow Project Unit Selection Process

An interdisciplinary team (IDT) of resource specialists is brought together during the planning stages of a project. There are many steps that the IDT must go through before the final proposed treatment units are selected. Below is a brief description of the unit screening and selection process.

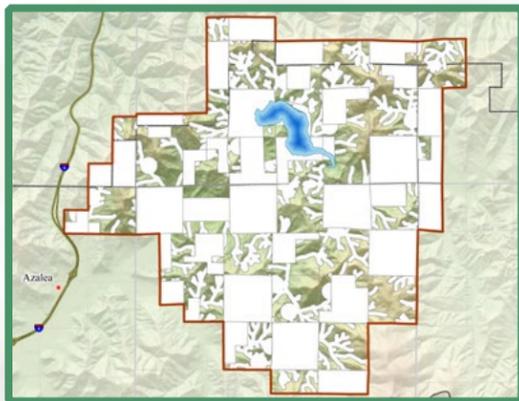
Step 1 - Delineate Planning Area



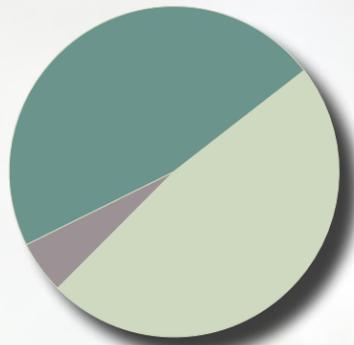
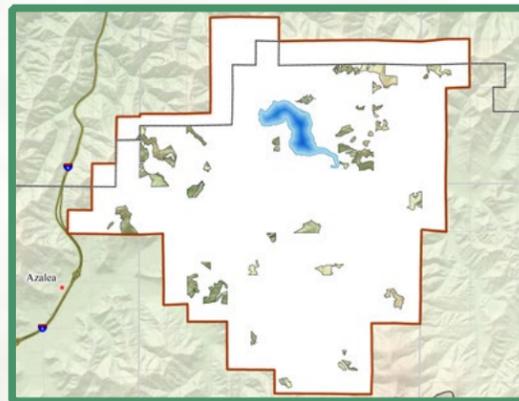
Step 2 - Identify BLM-Managed lands



Step 3 - Broad Scale Screening Process:
Remove sensitive areas, Northern Spotted Owl nest patches, sensitive soils, flora and fauna protection areas from the project.



Step 4 - Fine Scale Screening Process:
Remove Northern Spotted Owl habitat areas (Recovery Action 32 patches*), Northern Spotted Owl site prioritization (Recovery Action 10*), red tree vole protection buffers, environmental protection zones (EPZ), and areas that were uneconomical or inaccessible.



- Non-BLM land within the Planning Area: 48%
- BLM Managed lands screened out: 46.8%
- BLM Managed lands under consideration for treatment within the Planning Area: 5.2%

*The Revised Recovery Plan for the Northern Spotted Owl includes 33 Recovery Actions which are near-term recommendations to guide the activities needed to accomplish the recovery objectives and achieve the recovery criteria listed in Plan.

Public Involvement (EA, pp. 8-10)

To the right is a diagram which briefly explains the National Environmental Policy Act (NEPA) and the Environmental Assessment process.

The brown boxes to the right show the steps in the EA process where the BLM solicits public participation. The Upper Cow Project is currently in the stage described in the final brown box, the "EA Public Comment Period and Field Trip."

EA 30-day Public Comment Period

Public participation for the Upper Cow LSR Project EA will begin on February 9, 2016, when the BLM publishes a legal notice in the *Grants Pass Daily Courier* and the *Roseburg News Review*. The EA will be made available on that day for a 30-day public comment period, ending on March 10.

Comments received during the comment period will be incorporated into the decision making process for the project. Comments may be submitted in hardcopy or electronically to the address listed below.

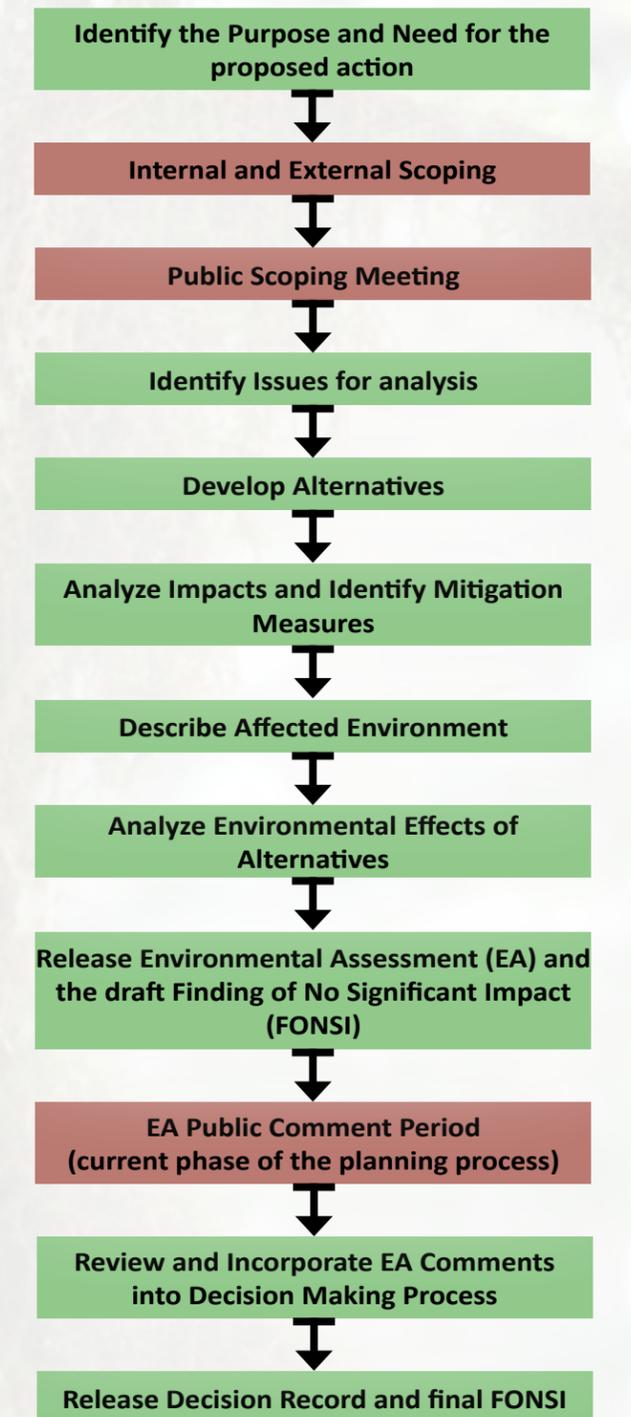
Following release of the EA, the BLM will then consider public comments and issue a Decision Record which will describe the selected alternatives to be implemented that were analyzed within the Upper Cow Late Successional Reserve Project Environmental Assessment. The Decision Record will be protestable.

For more information on the Upper Cow LSR Project, visit the BLM's national ePlanning website at <http://tinyurl.com/BLMePlanning-UpperCow> or call our Project Lead, Ferris Fisher at the number listed below.

Ferris Fisher, Planning and Environmental Coordinator
 Grants Pass Field Office
 2164 NE Spalding Avenue
 Grants Pass, Oregon 97526
 (541) 471-6639
ffisher@blm.gov

Understanding the National Environmental Policy Act (NEPA)

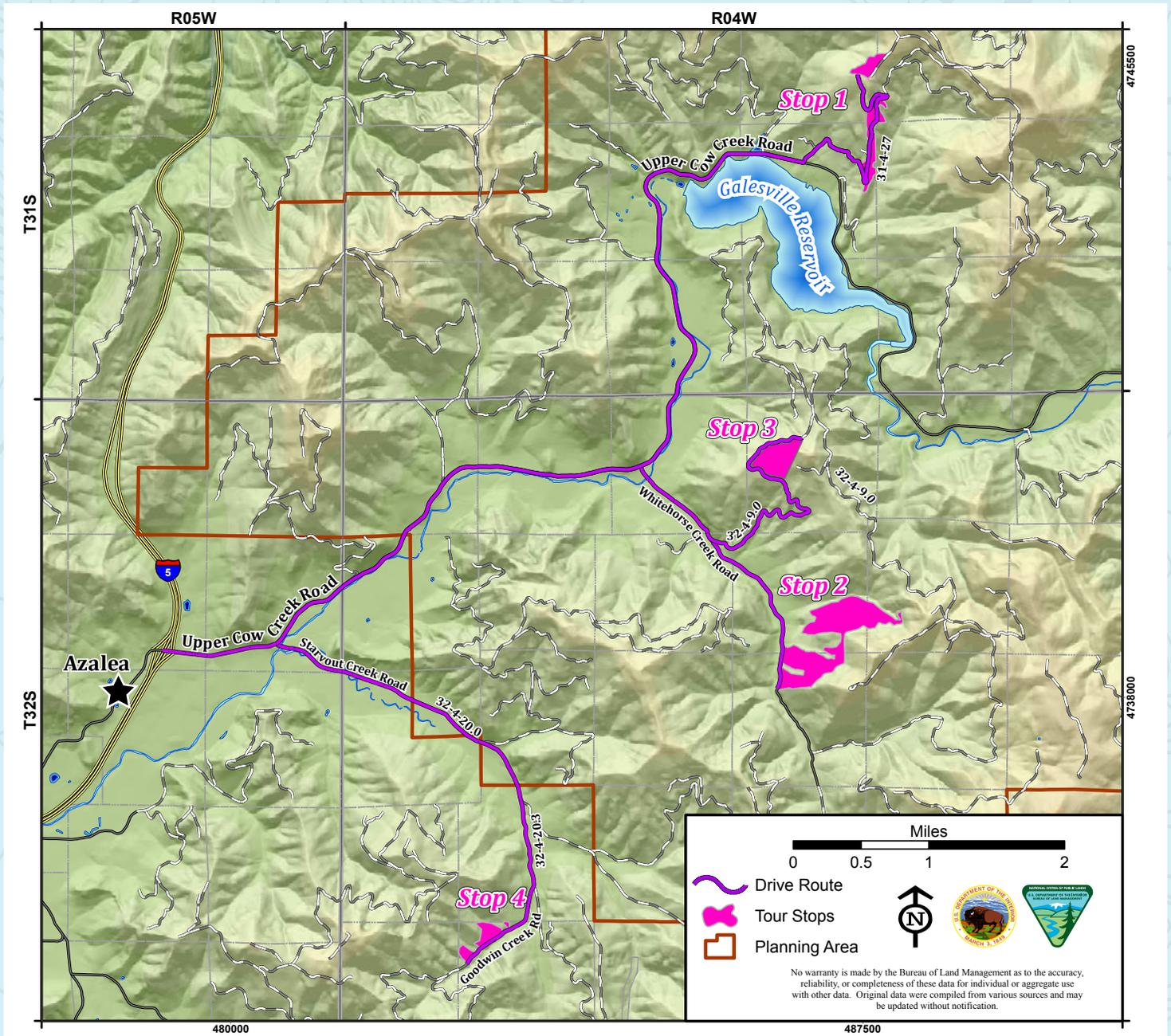
The Environmental Assessment Process



Key Points of Public Participation

Forest Management Tour in the Upper Cow Area

The Grants Pass Field Office invites you to personally view previous BLM forest management treatments, similar to the types of treatments proposed in this project. If you choose to make this trip, please plan accordingly: Check the weather forecast, bring appropriate clothing and equipment, and tell someone where you are going. This tour may take approximately 3 hours.



Stop #1: (McGindy Units 1 and 2)
2007 Commercial Thin; 40% canopy target on non-riparian areas, 50% canopy target on riparian areas

Stop #2: (Starving Cow Unit 10-1b)
2010 Lop and Scatter; 50% Canopy Target

Stop #3: (Starving Cow)
2010 Cable Yarding; 40% Canopy Target

Stop #4: 2006 Selective Slashing, Handpile and Cover, Handpile Burn

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2164 NE Spalding Ave • Grants Pass, OR 97526

541-471-6500