

‘Second Show’ Proposed Timber Sale Scoping Field Trip



Upper Willamette Resource Area
August 22, 2012

Purpose and Need:

- In Matrix: to produce a sustainable supply of timber, to increase merchantable volume over time, and to promote the development of desired understory vegetation
- For regeneration harvests: to treat root rot in the stand to produce a sustainable supply of timber, to manage the spread of the pathogen into adjacent stands, and increase the economic productivity of the stand.
- For thinning: to thin overstocked stands where density reduction is needed to maintain good diameter growth.

Land Use Plan Direction for regeneration harvest:

- Priority will be given to least productive stands; those that have low stocking, damage, disease, generally low growth rates or a predominance of non-commercial species resulting from past management.
- Harvest plans will help prevent vegetation management problems before they occur
- Harvest plans will provide for the maintenance of long-term site productivity and forest health

Key Point

- BLM would be designing Second Show project to be consistent with our Land use Plan

Background

- BLM has a mandate to manage the O & C lands for timber production as well as to provide for a wide range of other resources.
- BLM follows the O & C Act and all other federal laws (e.g. Endangered Species Act, Clean Water Act) that direct how the lands are to be managed.
- If the Secure Rural Schools is not renewed again, the counties will be relying on revenues from these timber sales.
- BLM actions are guided by a land use plan; Eugene district is guided by the 1995 Eugene District Resource Management Plan (RMP).
- Plan specifics:
 - Eugene District manages about 315,000 total acres
 - 43%- Late Successional Reserves
 - 28%- Riparian Reserves
 - 25%- Matrix (available for timber management)
 - 2/3- General forest management area- 6-8 trees/ acre retention after harvest
 - 1/3- Connectivity- 16-18 trees/acre retention after harvest
- In order to keep timber flowing from public lands, BLM has emphasized non-controversial commercial thinning from managed stands for the past 10 years
 - Our plan calls for a mix of regeneration harvest and thinning.
 - Since we've been doing more thinning than anticipated, we'd like to get back to a timber harvest program more consistent with what our plan calls for
 - Regeneration harvest is an appropriate harvest type in the Matrix area under our plan
- Our 2014 sale plan calls for a mix of commercial thinning and the regeneration harvest that we will look at today.
- As we explore the Franklin and Johnson concepts and apply them to an alternative in this project, a challenge will be to implement the project consistent with our RMP.

Planning Process

- Using our plan, BLM has developed a proposal to meet the annual timber harvest commitment for 2014.
- Regeneration harvest as proposed is outside of any critical habitat, and any owl provincial home range, and is in a previously managed stand.
- A map of this proposal has been sent out and is available on the web.
- We are in the "scoping" phase
 - Public can comment on our plans, providing input and new information
 - Comments can be submitted to BLM today on cards provided
 - Comments can be e-mailed to BLM (BLM_OR_EU_mail@blm.gov)
 - Comments can be sent through the standard mail (3106 Pierce Parkway, Suite E, Springfield, OR, 97477)
- Scoping will remain open until September 1, 2012.
- BLM interdisciplinary team
 - Available for questions on trip
 - Have been assessing the forest conditions in the areas identified
 - Will begin meeting in late September as a group to develop alternatives for the project
 - At least 2-3 alternatives are envisioned: no action; RMP alternative; variable retention harvest alternative (if significantly different than 2)
- Environmental assessment will be written next year. Estimated to be out for public review in late spring of 2013.

Stop 1



Notes:

- NFP overview
 - Major Land Use Allocations on the Eugene District include: Late-Successional Reserves (136,500 acres est.), Matrix (87,000 acres est.), and Riparian Reserves (172,900 acres est.)
- Showalter Regen Timber sale was sold in 1996. It sold for the appraised price of \$402.00 for a sale total of \$2,011,608.00. Showalter was planted in 2000 with 63,072 seedlings.



Diverse Early Successional Ecosystems and Variable Retention Regeneration Harvest



Representative diverse early successional ecosystem fifteen years after a timber harvest on BLM lands on the Roseburg District. The area is currently dominated by several shrub species with Douglas-fir saplings beginning to emerge above the shrub cover. Retention on this unit was in the form of dispersed dominant conifers; in the Franklin-Johnson strategy retention would be primarily in forest patches ("aggregates") with dispersed snags and down logs elsewhere in the unit.



Interior view of the early successional community shown above. Shrub species include snowbrush, manzanita, bitter cherry, trailing blackberry, and elderberry as well as a variety of herbaceous plants. Douglas-fir saplings are beginning to emerge from the shrub communities with one visible behind BLM forester Abe Wheeler (black t-shirt).



Example of variable retention harvesting as practiced on the trust lands managed by the Washington State Department of Natural Resources under terms of a Habitat Conservation Plan with US Fish and Wildlife Service. Retention is primarily in the form of forest patches ("aggregates"), some of which are associated with riparian habitat. Some dispersed retention is also included to provide for distributed sources of snags and down logs. Retention covers approximately 20% of this harvest unit.

Retention Forestry to Maintain Multifunctional Forests: A World Perspective

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The majority of the world's forests are used for multiple purposes, which often include the potentially conflicting goals of timber production and biodiversity conservation. A scientifically validated management approach that can reduce such conflicts is retention forestry, an approach modeled on natural processes, which emerged in the last 25 years as an alternative to clearcutting. A portion of the original stand is left unlogged to maintain the continuity of structural and compositional diversity. We detail retention forestry's ecological role, review its current practices, and summarize the large research base on the subject. Retention forestry is applicable to all forest biomes, complements conservation in reserves, and represents bottom-up conservation through forest manager involvement. A research challenge is to identify thresholds for retention amounts to achieve desired outcomes. We define key issues for future development and link retention forestry with land-zoning allocation at various scales, expanding its uses to forest restoration and the management of uneven-age forests.

Keywords: biodiversity, ecology, conservation, forestry

Forests cover approximately 30% of the world's land surface; harbor most of the global terrestrial biodiversity; and provide critical ecosystem services, such as climate regulation and protection of soil and water resources (FAO 2010). The different and often contradictory societal expectations for forests have led to many conflicts over their use (Freer-Smith and Carnus 2008). In many parts of the world, this has resulted in allocating forest areas either to conservation or to fiber production in intensively managed plantations. However, forest reserves and plantations currently constitute only about 11% and less than 4% of the world's forest area, respectively (Del Lungo et al. 2006, FAO 2010). Although the proportions of both plantations and reserves are likely to increase (Bauhus et al. 2010), most of the global forest estate will continue to play a multifunctional role, in which attempts are made to balance human commodity needs with the production of other goods and services (Thompson et al. 2011), including the habitat needs of forest-dependent organisms (Lindenmayer and Franklin 2002). More than 2 billion hectares of the world's forests (around 55% of all forest area) are managed as production

forests or used to extract multiple values (FAO 2010). Most private and public forest owners will need to manage forests to supply ecosystem services simultaneously with the production of revenue from forest products to help pay for that management.

One of the most controversial issues in the management of multifunctional forests around the world has been the simplification of forest structure and composition as a part of intensive wood production (Puettmann et al. 2009). The type and intensity of disturbances that occur under industrial forestry can deviate dramatically from those of natural disturbance processes (Lindenmayer and Franklin 2002). In fact, the traditional industrial approach to forest management is very much akin to a conventional agricultural model, in which simplification is the goal (Smith et al. 1997). The resulting lack of complexity in managed stands and across forest landscapes feeds back through ecosystem processes and carries high risks of reducing several key environmental services (e.g., Thompson et al. 2011).

A new forest-management model—retention forestry—was introduced in northwestern North America about

POLICY PERSPECTIVES

A major shift to the retention approach for forestry can help resolve some global forest sustainability issues

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Keywords

Ecologically sustainable forest management; altered logging practices; forest biodiversity conservation; forest ecosystem processes; altered forest policy; ecological forestry.

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Abstract

Approximately 85% of the global forest estate is neither formally protected nor in areas dedicated to intensive wood production (e.g., plantations). Given the spatial extent of unprotected forests, finding management approaches that will sustain their multiple environmental, economic, and cultural values and prevent their conversion to other uses is imperative. The major global challenge of native forest management is further demonstrated by ongoing steep declines in forest biodiversity and carbon stocks. Here, we suggest that an essential part of such management—supplementing the protection of large reserves and sensitive areas within forest landscapes (e.g., aquatic features)—is the adoption of the retention approach in forests where logging occurs. This ecological approach to harvesting provides for permanent retention of important selected structures (e.g., trees and decayed logs) to provide for continuity of ecosystem structure, function, and species composition in the postharvest forest. The retention approach supports the integration of environmental, economic, and cultural values and is broadly applicable to tropical, temperate, and boreal forests, adaptable to different management objectives, and appropriate in different societal settings. The widespread adoption of the retention approach would be one of the most significant changes in management practice since the onset of modern high-yield forestry.

Introduction

Sustainable practices and policies based on the best science are recognized as critical to the future of humankind

(Bettencourt & Kaur 2011), but there is a large gap between the rhetoric and the reality of sustainability (Fischer *et al.* 2007). This is particularly apparent in the world's native and seminatural forest ecosystems that

Stop 2



Notes:

- Laminated Root Rot, *Phellinus Weirii*, is a fungus that causes severe root and butt decay, growth loss and mortality
- Aggregate selection is based on ecological functions, biodiversity hotspots, logging system placement, and other unique features. Aggregates can be of any size and shape, with a target retention, including riparian intrusions, of approximately 30%



Where to start:

- This is a quick, visual estimate. It should take only a minute or two to rate a plot.
- Focus on the ORIGINAL overstory.
- Look on the ground for evidence of trees missing from the canopy.
- Look for evidence of infected, live trees.
- To train your eye, look at the range of impacts from the disease, from as little as you can find, to the most severe.



Of primary interest is the overstory cohort that would have originated after the last stand-replacement disturbance such as a fire or timber harvest (in the red box). **What portion of the site is still fully stocked with these original trees?**

Dead and downed trees and infected stumps are important in determining the root disease severity.

The presence of live, young trees in the understory contributes far less to the severity rating.

Why do it?

Root disease severity rating is a tool to estimate the relative cumulative effects of root disease in forest stands. It is the factor that most reliably predicts stand mortality rates in the next 20 to 30 years.

Root disease mortality varies greatly year to year but sites with a history of active root disease are most likely to experience a similar or somewhat higher level of activity over subsequent years, as long as there are live, susceptible trees present.



For more information:

Forest Health Protection
USDA Forest Service
3815 Schreiber Way
Coeur d'Alene ID 83814-8363
1-208-765 7342



USDA STATE AND PRIVATE FORESTRY
FOREST HEALTH PROTECTION

Root Disease Severity Rating

On ground plots



Just How Bad Is It? — A Guide for rating
Root Disease Severity in forest stands

Live canopy of the overstory

Canopy loss from root disease is progressive

Canopy declines rapidly between classes 4 and 6.



No canopy loss

Up to 20% loss

30-50% loss

At least 75% loss

No canopy remains



Severity Classes



Appearance of the forest floor varies greatly depending on site productivity, how fast the mortality has occurred, and whether trees, shrubs or forbs fill in after the overstory trees are killed.

0	1	2	3	4	5	6	7	8	9
No evidence of root disease visible within 50 feet of plot.	Root disease present within 50 feet of plot but no evidence of disease on plot.	Minor evidence of root disease such as a suppressed tree killed, or minor part of overstory showing symptoms. Little reduction in canopy or volume.	Usually one co-dominant tree dead on otherwise fully stocked site. In absence of mortality, numerous trees showing symptoms of root disease.	20-30% reduction. Dead, and downed trees removed as well as live trees with advanced symptoms of disease contribute to impact.	At least half of ground area of plot showing evidence of root disease-killed trees.	50-75 percent reduction in canopy with most of ground area considered infested as evidenced by symptomatic trees.	There are very few of the original overstory trees remaining although the infested ground area often has densely stocked regeneration of the susceptible species.	The entire plot falls within a definite root disease patch with only one susceptible overstory tree present.	The entire plot falls within a definite root disease patch with no overstory trees of the susceptible species present.

Stop 3



Notes:

- The Second Show Project area consists of a 70-80 year old stand that was harvested in the mid 30's. The stand area was site prepped with a broadcast burn and naturally seeded. It was Thinned in 1991-1993, and fertilized following the commercial thin.
- Species that are less susceptible to Laminated Root Rot include pines, cedars and hardwoods.
- A Northwest Forest Plan Regen sale in this area could produce approximately 35,000-45,000 MBF per acre for a potential revenue generation of 2.5-3.5 million dollars.

Terms Defined:

Aggregates – A non-entered, intact forest patch that is retained following harvest (range from 1/10 acre to 5 acres in size).

Best Management Practices (BMP) – Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Board Foot – A unit of solid wood, one-foot square and one inch thick.

Bureau of Land Management (BLM) – Agency within the Department of the Interior charged with management of the public lands.

Coarse Woody Debris (CWD) – Pieces of trees that have been detached from their original source of growth. This includes uprooted trees and any severed stems or branches attached to them.

Diameter at Breast Height (DBH) – The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

Endangered Species Act (ESA) – Act created in 1973 that identified a National List (administered by the USFWS) of any plant, animal, or fish that is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) – A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment.

Early Seral Stage – The period from disturbance to crown closure of conifer stands. Brush, grass or herbs are usually plentiful at this stage.

Even age stands – forest stands that originated from the same major stand replacement event. These events can be events of nature, such as fire or events of man such as timber harvesting.

Green Tree Retention – A stand management practice in which live trees, as well as snags and large down wood, are left as biological legacies within harvest units to provide habitat components over the next management cycle.

Interdisciplinary Team (IDT) – A team of resource specialists organized by agencies to prepare environmental documents.

Legacy Tree – A tree from a previous harvest.

Northwest Forest Plan (NFP) – The plan for management of Forest Service and Bureau of Land Management-administered lands within the range of the northern spotted owl.

O&C Lands (O&C) – Public lands granted to the Oregon and California Railroad Company, and subsequently revested to the United States, that are managed by the Bureau of Land Management under the authority of the O&C Lands Act.

Old Growth—This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately 200 years until the when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbances, the forest structure will be more even-aged at late mature or early old growth stages.

Resource Management Plan (RMP) – A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

Seed Tree Cutting Method (Legacy Trees)—an even-aged reproductive cutting method in which all mature timber from an area is harvested in one entry except for a small number of trees left as a seed source for the harvested area.

Land Use Allocations (LUA) – the identification in a resource management plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions.

- A. **Late Successional Reserves (LSRs)**
- B. **Matrix Lands** – A land use allocation in the Eugene District RMP of lands outside of Reserves and Special Management Areas managed for a variety of objectives including timber harvest.
 - a. **Connectivity/Diversity Blocks** – A sub-division of the Matrix land use allocation in the Eugene District RMP managed for a variety of objectives including timber harvest. The Eugene District RMP directs that 12-18 green conifer trees be retained in regeneration harvests in Connectivity/Diversity blocks.
 - b. **General Forest Management Area (GFMA)** – A sub-division of the Matrix land use allocation in the Eugene District RMP managed for a variety of objectives including timber harvest. The Eugene District RMP directs that 6-8 green conifer trees be retained in regeneration harvests in the General Forest Management Area.
- C. **Riparian Reserve (RR)** – A land use allocation in the Eugene District RMP where riparian-dependent resources receive primary emphasis and where special standards and guidelines apply.
- D. **Adaptive Management Areas (AMAs)**—Landscape units designated for development and testing of technical and social approaches to achieve desired ecological, economic, and other objectives.
- E. **District Designated Reserves**—Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the PSQ.

Harvest types:

- A. **Commercial Thinning (CT)** – The removal of merchantable trees from an even-aged stand to encourage growth of the remaining trees.
- B. **Pre Commercial Thinning (PCT)**- The removal of non-harvestable trees to encourage growth of residual trees.
- C. **Regeneration Harvest** – Timber harvest with the objective of opening a forest stand enough to regenerate desired tree species.
- D. **Thinning from Below** –
- E. **Variable Retention Harvest**— refers to the distribution of trees that remain in a stand (are retained) after timber harvests or major stand replacement natural fires.