

Oregon's Forest Management Plan Guidelines

July 2013



The Oregon Forest Management Plan Guidelines reflect the work of the Uniform Resource Planning and Endorsement System project, which is a collaboration of the above organizations. Funding was provided by the U.S. Department of Agriculture, Forest Service, Pacific Northwest Region through a 2010 Western States State and Private Forestry Competitive Grant.

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Introduction

Why a Forest Management Plan? -- Oregon forest landowners are currently faced with the need to have a written forest management plan for an increasing number reasons, including tax and business needs, cost-share programs, land use actions, markets for ecosystem services, and forest certification. While these are all important reasons to have a management plan, the most important reason to develop a management plan is so you – the landowner – can learn about your forest and develop or refine a course of action, given how it looks today and how you want it to look in the future. A plan is also a good way to let your heirs or others who follow you know your vision for the future of your forest and the steps you have taken to achieve that vision.

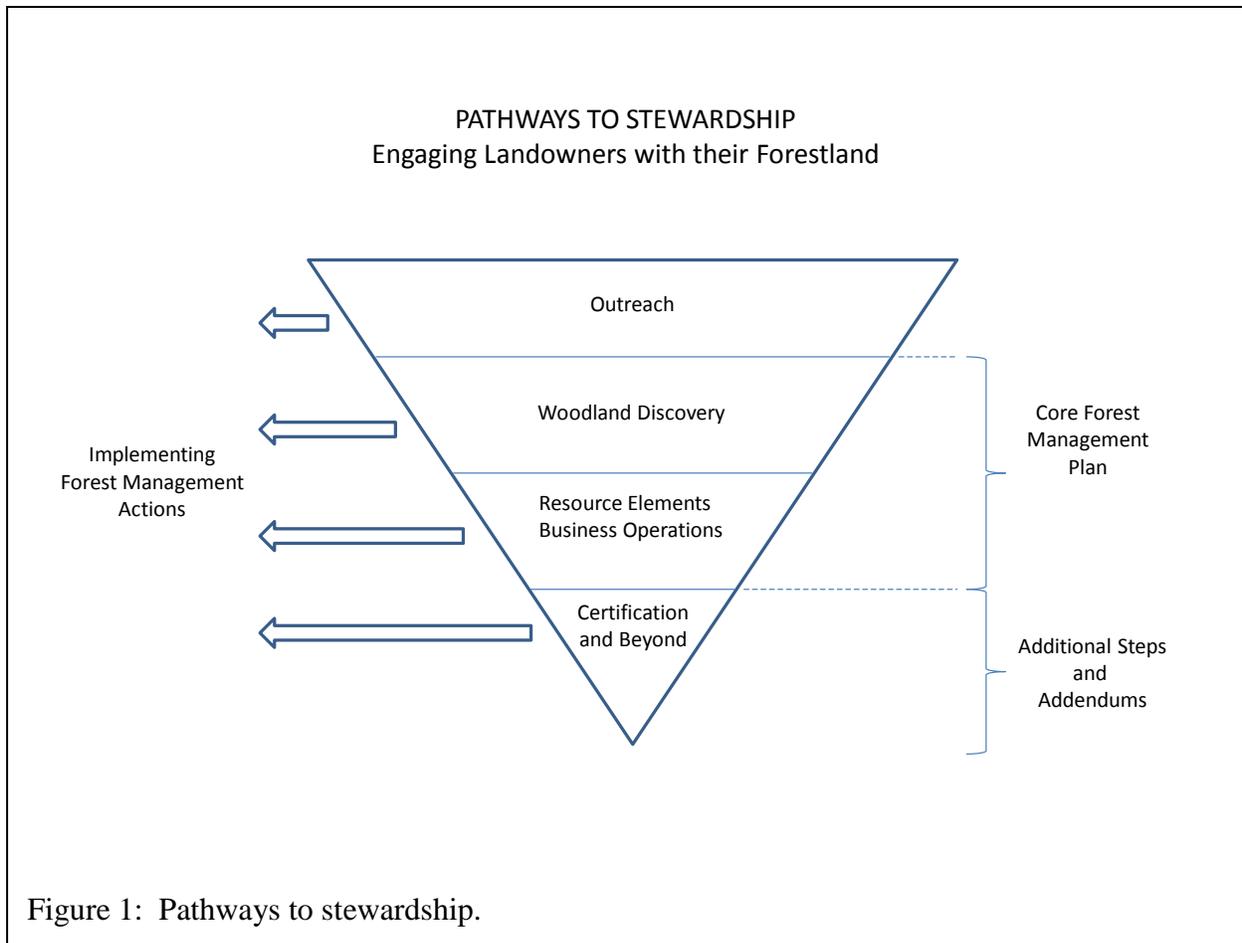
While you may not realize it at first, taking the step to learn about your forest and deciding what you want to do with it through a management plan is taking a step toward ensuring that your forest will be managed sustainably, such that it's many resources are available for many generations to come.

Who should write the Management Plan? -- A management plan can be developed by one or several people. There is no single answer to who best should take the lead in developing a plan, but there are a few matters to consider. Since much is learned about the forest through the management planning process, there is value in having whoever is involved in the day-to-day management of your forest also serving as the plan developer. This could be you - the landowner - or a professional forester, biologist or other professional natural resource specialist. It could also be a mentor - a friend, relative, or neighbor with the skill and energy to engage you in the planning process and link you with the necessary sources of natural resources expertise. Sometimes you can be the lead author; or you may wish to be the reviewer. Regardless of who writes the plan, it must be your plan in the end.

Why a Uniform Forest Management Planning System for Oregon? – These guidelines were developed through Oregon's Uniform Resource Planning and Endorsement System Project (Uniform Plan) funded by the U.S. Department of Agriculture, Forest Service, Pacific Northwest Region through a 2010 Western States State and Private Forest Competitive Grant. The Uniform Plan project is intended to make management planning simpler and easier for landowners. The reality is that most forest landowners develop a written plan because some agency or program requires one. With a multitude of agencies requiring plans, a multitude of plan templates and criteria arose over the years. Conversely, these Oregon Forest Management Plan Guidelines allow you to develop a single plan that is endorsed by many different agencies and programs, thus saving paperwork, time and money. Many [cooperators](#), including government agencies, landowners, foresters, and non-government organizations worked together to create the Oregon's Forest Management Planning System.

Oregon's Forest Management Planning System recognizes that forest management planning is a journey – Pathways to Stewardship -- involving several distinct steps (Figure 1). A landowner's initial interest in their property maybe wanting to take on a specific project or action that is pressing – such as reducing hazardous wildfire fuels or combating an invasive weed. Landowner assistance organizations and agencies usually first cross paths through outreach efforts defined around mutual interests or resource concerns. Landowners who are just beginning the management planning process begin a more formal journey by taking the [Woodland Discovery](#) step. [Woodland Discovery](#) consists of gathering basic property information and solidifying management goals. The remaining steps to completing your forest management plan organize

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the planning elements into specific management planning modules: soil and water, forest vegetation, fish and wildlife, access and protection, scenery and enjoyment and tax and business. Every step completed along the way results in the identification of specific actions that you can take to improve conditions of your forestland or otherwise meet your goals in owning forestland. Completion of your forest management plan opens up formal types of engagement such as forest certification and the enrollment of lands into specialized conservation programs that define a long-term commitment to sustainable forestry.

A Word about Reviewing and Updating Your Management Plan -- Going through the process of management planning is more important than the actual management plan itself. In a nutshell, articulating goals and objectives, discovering what you have in your forest, what you want to have, and identifying actions to take to get you there is the benefit of management planning. When you think about it, there is no end in this type of thinking. As you implement actions, you might think of new ideas. Storms, insects and diseases and droughts may unexpectedly change your forest conditions. Forest product markets are constantly changing. Your personal or family situation may change which may cause you to reassess your goals. In this sense, forest management planning is a continuous process and the plan document is a living document – more suited for being housed in a 3-ring binder than bound up and put on a shelf for posterity. Don't be afraid to write notes in the margins of your plan and paper clip photos of actions being implemented.

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It is a good idea to review your plan periodically – especially at the beginning of each year to review and begin activity planning for the actions you have scheduled to take place. Another time to visit and review your plan is when an action is completed. This is the time to complete your record keeping, make notes on modifications to the action and make a statement as to your satisfaction with the results with respect to your objectives and goals. At least once a year, do a thorough read of your plan. Were there unforeseen events that need to be incorporated in your management unit descriptions or that have affected your goals and objectives? Are there new market opportunities on the horizon? Are there planned actions that do not seem as promising compared to a year ago that perhaps could be dropped? Finally, while many forest management plans have a 10 year planning horizon; it is a good idea to redo the formal planning process every five years – beginning with a re-assessment of your goals and objectives and management unit boundaries and ending with a new schedule of planned actions for the next 5 years.

Using these Guidelines -- The purpose of these guidelines is to provide direction on the required information for completing the various planning elements that make up an Oregon Forest Management Plan. Think of the guidelines as answering the question – “What needs to be in your forest management plan?” Perhaps the hardest thing about management planning is getting started. So, the guidelines are accompanied by a fill-able and expandable planning template designed to get you started; but not designed to get you finished. Think of the template as an extension of the guidelines because with the template you can better visualize what is being asked for in each element. Never be limited by the space available in the template; or by its organization. Following or using the template is not a requirement. In the end, work with your plan writer to organize your plan in a way that works best for you, the landowner.

The guidelines are organized to first describe the type of content and level of information that is needed for your plan. *Additional optional information that you may wish to consider is indicated in this color and font.* In many cases, tips on how to organize your plan or where to go for further information are called out. Appendix B lists references and other sources of information that may prove useful in developing your plan. Background and educational information for each planning element is available on [Oregon's Forest Management Planning Website](#) (see [Plan Writing Tools and Guidance](#)).

About the Oregon Forest Management Planning Checklist – The checklist on the following page lists the 21 required planning elements – beginning with the plan's cover page and ending with the plan's signature page – that need to be addressed in order to have a complete forest management plan. Some elements, such as property description, forest vegetation and fish and wildlife, have specific sub-elements that need to be addressed. The colors organize the planning elements by the Pathways to Stewardship milestones marking the forest management planning journey: Woodland Discovery, Soil and Water, Forest Vegetation, Fish and Wildlife, Access and Protection, Scenery and Enjoyment, Tax and Business and Action Plan.

Success is measured with each step you along the journey; beginning with Woodland Discovery to the completion of the basic resource modules (Soil and Water, Forest Vegetation) to the completion of one or more individual modules depending on your goals and interest. It is okay to pause and rest along the way; though you should enter each pause along the journey with a completed Action Plan for the management actions you are ready to take to improve the on-the-ground condition of your forest or that otherwise meet your goals in owning forestland.

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Checklist

<input type="checkbox"/>	Cover Page		Date Completed:	
<input type="checkbox"/>	Table of Contents		Date Completed:	
WOODLAND DISCOVERY				
<input type="checkbox"/>	Landowner, Property and Plan Information	P R O P E R T Y I N F O R M A T I O N	Date Completed:	
<input type="checkbox"/>	Property Description		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Background and History		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> General Description		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Terrain and Topography		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Current Uses		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Landscape Context		Date Completed:	
<input type="checkbox"/>	Goals and Actions		Date Completed:	
<input type="checkbox"/>	MAPS AND PHOTOS		Date Completed:	
<input type="checkbox"/>	WHERE TO GET HELP		Date Completed:	
SOIL AND WATER				
<input type="checkbox"/>	Soils		Date Completed:	
<input type="checkbox"/>	Water Resources		Date Completed:	
FOREST VEGETATION				
<input type="checkbox"/>	Forest Vegetation		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> High Conservation Value Forests		Date Completed:	
<input type="checkbox"/>	Integrated Pest Management		Date Completed:	
<input type="checkbox"/>	FISH AND WILDLIFE			
<input type="checkbox"/>	<input type="checkbox"/> Desired Fish and Wildlife Species and Habitats		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Threatened and Endangered Species		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Rare, Sensitive and Other Unique Resource Sites		Date Completed:	
<input type="checkbox"/>	<input type="checkbox"/> Wildlife Related Damage and Problem Species		Date Completed:	
ACCESS AND PROTECTION				
<input type="checkbox"/>	Roads		Date Completed:	
<input type="checkbox"/>	Access and Security		Date Completed:	
<input type="checkbox"/>	Wildfire Protection		Date Completed:	
SCENERY AND ENJOYMENT				
<input type="checkbox"/>	Aesthetics and Recreation		Date Completed:	
<input type="checkbox"/>	Cultural Resources		Date Completed:	
TAX AND BUSINESS				
<input type="checkbox"/>	Tax and Business Management		Date Completed:	
ACTION PLAN				
<input type="checkbox"/>	Schedule of Planned Actions		Date Completed:	
<input type="checkbox"/>	Regulatory Compliance		Date Completed:	
<input type="checkbox"/>	Signature Page		Date Completed:	

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Guidelines

COVER

Develop a cover for your forest management plan, and include the following:

Title – Give your plan a title. Perhaps your forest has a name. In that case, a simple title for your plan is “[Name of Your Forest] Forest Management Plan”.

Photo: Provide a representative photo or collage of photos for your forest. You can be as creative as you want. One way to get younger children engaged is to have them draw a picture of what the forest means to them and use that on your cover. Older children can be assigned the responsibility of taking the cover photo.

Landowner Name: Put your name on the cover to indicate that this is your plan.

Period Covered by the Plan: This is the time period that you feel the plan will be in effect. Usually, this is no less than five years and no more than ten years.

TABLE OF CONTENTS

A Table of Contents or equivalent checklist needs to be in your plan to indicate which planning elements are covered. The following plan elements are required for a complete Oregon Forest Management Plan:

- Landowner, Property and Plan Information
- Property Description
 - Background and History
 - General Description
 - Terrain and Topography
 - Current Uses
 - Landscape Context
- Goals and Actions
- Maps and Photos
- Where to Get Help
- Soils
- Water Resources
- Forest Vegetation
 - High Conservation Value Forests
- Integrated Pest Management
- Fish and Wildlife
 - Desired Fish and Wildlife Species and Habitats
 - Threatened and Endangered Species
 - Rare, Sensitive and Other Unique Resource Sites
 - Wildlife Related Damage and Problem Species
- Roads
- Access and Security
- Wildfire Protection
- Aesthetics and Recreation
- Cultural Resources
- Tax and Business Management

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- Schedule of Planned Actions
- Regulatory Compliance
- Signature Page

You can organize and label the sections of your plan using the above list of plan elements or you can use different names and your own organization. [Tip: You may want to use a **checklist** like the one on page 4 to keep track of how the development of your plan is progressing.]

LANDOWNER, PROPERTY AND PLAN INFORMATION

Landowner Information

List contact information for you, the landowner (or for your property manager): legal name of the business or entity owning the property, and name, address, phone and e-mail information for the primary contact person.

Property Information

Provide the following for the property to be covered by the plan. [Tip: Looking for an easy way to find some of the information being asked for such as latitude and longitude, 6th field watershed name and forest fire protection district? Go to Oregon [LocatOR](#). For a web-video demonstration of Oregon [LocatOR](#), go [here](#). NOTE: [LocatOR](#) requires users to download the freeware application [Silverlight](#).]

- Property Name, *Address*, County in which property is located.
- Elevation
- Total Property Acres and Acres of Forestland
- Legal Description (Township, Range, Section) for each, if known
- Structural Fire Protection District [TIP: To identify your Structural Fire Protection District, consult your county property tax statement or contact your county tax assessor.]
- Forest Fire Protection District
- *Six Field Watershed -- The name of the sixth field watershed the property is located within. List all 6th field watershed names if the property lies in more than one watershed. If known, provide the corresponding 12 digit Hydrologic Unit Code. Some agencies and organizations are using the 6th field watershed as a means to prioritize eligibility for financial assistance. [Tip: The term 6th field watershed refers to level of watershed classification. Sixth field watersheds are uniquely identified by their 12 digit [Hydrologic Unit Code \(HUC\)](#) – so the terms 6th field watershed and 12 digit HUC are used interchangeably. Hydrologic Unit Codes and watershed “fields” provide a hierarchy in terms of watershed size – the more digits in the code or the higher the field number; the smaller the sub-basin being identified.]*
- *Forest Seed Zone, for species to be managed for [Tip: – See: [Seed Zone Maps](#).]*
- *Latitude and Longitude to the center of the property or key feature (such as a home or nearest recorded survey monument). This information is used by emergency responders.*
- *Is the property certified under a forest or agriculture certification program (Yes/No)*
 - *If yes, provide the certification program name and certification number*

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- For each tax lot making up the parcel, provide:
 - Tax lot number.
 - Tax lot zoning (this is different from property tax classification)
 - Property tax classification **[Tip: Visit [How Forestland is Taxed](#)]**

Property tax classification and zoning are two different things that often get confused. Zoning comes from county land use planning through the county’s Comprehensive Land Use Plan. Zoning does not define a property’s property tax classification. A property (or portion thereof) zoned one way may have portions of that zoning that each fall under a different property tax classification. Examples of property tax classifications are: 1) Small Tract Forestland Option, 2) Forestland Program, 3) Riparian Land Assessment, 4) Farm Woodlot Program, 5) Conservation and Management Program and 6) Wildlife Habitat Conservation and Management Program. Each piece of property must meet specific criteria in order to maintain its eligibility for a particular property tax program.

Plan Information

Indicate the time frame to be covered by your management plan (typically 10 years). If you received assistance from a natural resource professional such as a forester or wildlife biologist or some other plan writer, provide that person’s contact information. Indicate the date when you considered the plan “done”. Usually, this is the date you sign off on the plan.

PROPERTY DESCRIPTION

Background and History

Answer the question: “This is what I know about the history of my property.” Include such items as past owners, timber harvests, tree planting projects, conservation activities, road building, farming practices, and major disturbances such as wildfires, storms or insect attacks. Indicate when you acquired the property and what has happened to it since then.

General Description

Describe your forest as you would to a neighbor or friend. Is it dominated by evergreen or deciduous trees? Is it young or old? Are the trees uniform in size and age, or are there trees of all different sizes mixed together? Describe the pattern of forest and openings across your landscape. What does the forest floor look like? Does it have just moss, or herbs, grass and shrubs? Are there any water sources on your property?

Terrain and Topography

Describe the property’s terrain in terms of slope, aspect and elevation. Describe landforms that the property is part of (e.g., coastal headlands, valley floor, foothills, or mountains).

Current Uses

Describe how you are currently using your property. Do you live on the property? If not, how often do you visit or work on it?

Landscape Context

Describe how your property fits within a broader landscape assessment or initiative. For example, is your property within a [Conservation Opportunity Area](#)? Are there any other regional initiatives that recognize the importance of where you property is located – whether it be for watershed health, invasive species control, reducing wildfire risks or insect and disease control. Express any concerns you have about the level of hazardous wildfire fuels on neighboring lands.

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GOALS AND ACTIONS

Goals are based on your reasons and interests in owning forestland. Here are some examples:

- Improve forest health
- Protect against wildfires
- Provide and improve wildlife habitat
- Develop ponds or other water sources
- Learn about or study nature
- Establish new tree plantings
- Enhance tree growth and quality in your forest
- Hunting or fishing
- Generate income from harvesting timber
- Generate income from non-timber products
- Generate income from recreational access and use
- Restore native habitats
- Reintroduce or emulate the ecological role of wildfire in the forest
- Control invasive species
- Maintain and develop trails for hiking and skiing
- Develop and maintain trails for off-road recreational vehicle use
- Improve fish habitat including stream-side forests
- Retain my land as a forest
- Opportunities to integrate agriculture and range use with forest management
- Provide benefits of trees to the environment
- Maintain a secluded place to live
- Pass property on to heirs
- Others...

List all that apply. **[Tip: If you are ready, order in terms of their importance.]**

For each of your goals, list specific actions to the degree possible that would help you attain the goal. Consider the following:

- General description of the action including your reasons for taking it
- Priority for taking the management action
- Include how you are monitoring resource conditions and how well your actions worked

Think of this as a preliminary list of what you would like to do with your property. Your actions will be further developed as you completed the forest management planning journey. For example, if you decide to divide your property into Management Units (see Appendix A); you will develop specific objectives for managing the stand as a means to attain your goals. Specific Management Actions (e.g., silvicultural treatments including commercial timber harvests; see Appendix B) that support your management unit objectives will then be identified. You can then cross reference your management actions with requirements of the [Oregon Forest Practices Act](#). See Regulatory Compliance and Schedule of Planned Actions for more information.

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MAPS AND PHOTOS

Provide an aerial photo showing your property boundaries. Clearly distinguish the forest area of your property from non-forested areas. Areas that currently lack forest cover but you would like to see planted as forest should be included in your forest area. Also, create an aerial map of your property. Identify important property features such as roads, lakes and streams and property identifying features. Include county roads and/or highways that provide access to your property.

Overlay your aerial map on a topographic map or other terrain base that shows elevation contours to create a terrain map for your property. Create separate photos and maps for each parcel making up your property. [Tip: These photos and maps can be generated by a professional forester or other natural resource professional you have hired to help you with your plan; or by using internet mapping software such as [Oregon Explorer](#).]

If available, you may also want to include a basic plat map of your property showing boundaries and major property features. You could also include a "Directions to Your Property" map that shows the location of your property from a well-known location or town.

WHERE TO GET HELP

The natural resources professionals and other contacts that can help you manage your forest according to your plan are listed in this section. There are many sources of help available to assist landowners with getting started with managing their property.

- [Professional Forestry or Other Natural Resource Consultants](#)
- [Oregon Small Woodlands Association](#) and [Oregon Tree Farm System](#)
- Other Non-Governmental Landowner Assistance Organizations such as the [Northwest Natural Resource Group](#)
- [Oregon Department of Forestry](#) and [Oregon State University Extension Service](#) (in partnership with the [U. S. Department of Agriculture, Forest Service, State and Private Forestry](#))
- [Soil and Water Conservation Districts](#) (in partnership with the [U. S. Department of Agriculture, Natural Resource Conservation District](#))
- State ([Oregon Department of Fish and Wildlife](#)) and federal ([U. S. Fish and Wildlife Service](#)) Fish and Wildlife Agencies
- Professional tax advisors, business management consultants and accountants
- Loggers and other contractors

Some organizations may or may not charge a fee depending on the type of assistance provided and whether membership is required to gain access to assistance. You will need to do some searching or get help from a plan writer, other service providers, and local agency contacts to find the most appropriate places to get help. If you find a good contact or source of assistance – document it in this section of your plan for future reference. [Tip: For a great resource regarding where to get help – go to [KnowYourForests.org](#).]

SOILS

You will need a soils map for you property and a description of each soil type. The description of each soil type should include parent material and geologic origin. As applicable for the soil type, also include suitability and hazard information as part of your description such as: erosion hazard, harvest equipment operability, suitability for mechanical site prep/treatment, potential for damage by fire/seedling mortality, suitability for hand or mechanical planting, suitability for log

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landings, suitability for roads and rutting hazards. Also, provide vegetative productivity ratings for soils suitable for woodland management; either in terms of cubic feet of volume growth per acre per year, site index, site class or some combination. [Tip: The Natural Resource Conservation Service's [Web Soil Survey](#) is a tool for developing a soils map for your property. The Land Management and Vegetative Productivity reports that can be generated with Web Soil Survey contain the information you need for your plan.]

Finally, list and describe any unique geologic sites on your property such as talus slopes, cliffs, rock pits and outcrops.

WATER RESOURCES

- List the streams and rivers that border or run through your property and provide their classification in terms of size (Large, Medium or Small) and use (fish, non-fish, or domestic water) under the [Oregon Forest Practices Act](#) – Division 635. [Tip: Not sure of the stream or wetland classification? Contact your local office of the Oregon Department of Forestry (see: [Find a Forester](#)).]
- Identify on an aerial photo or map, or otherwise list, other important water features such as lakes, ponds, springs and wetlands. For wetlands, indicate their classification under the [Oregon Forest Practices Act](#) – Divisions 645 and 655. Include ponds and pump chances used in fire protection.
- Identify domestic sources of water on the property and any water rights from streams. If applicable, note registered domestic downstream water use as describe in the [Oregon Forest Practices Act](#). Identify any easements for water rights.

FOREST VEGETATION

For each management unit (or for your forest as whole if you have only one management unit), describe the forest vegetation using the information below. (See Appendix A for more information about Management Unit Planning.) A thorough forest inventory or timber cruise is NOT required. You do not have to disclose inventory information in your plan. If you have more than one management unit, it is a good idea to list your management actions planned for that unit as part of your management unit description as well as listing them again in your [Schedule of Planned Actions](#). See Appendix B – Forest Management Actions for a description of actions to consider.

Forest or Stand ID - If you have multiple management units (aka stands), come up with a system for labeling them. It can be as simple as I, II, III...or perhaps a code based on the objective for the management unit (e.g. T=timber, W=wildlife, etc.) or some other system.

Area – The size of the forest area or management unit in acres.

Slope, Aspect and Elevation – Use your topographical map to determine slope and aspect for the management unit. Elevation is optional but can also be included.

Site Quality – One source is the Site Index value listed for the soils underlying the management unit (see table next page).

Cover Type -- Indicate conifer, mixed conifer, mixed conifer/hardwood, hardwood or mixed hardwood as the primary cover type.

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Site Indexes (feet) Grouped by Site Quality Class for Oregon						
Species	Base Age	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V
		<i>High</i>		<i>Medium</i>	<i>Low</i>	
Douglas-fir	50	160 – 136	134 – 116	114 – 96	94 – 76	74 - 50
western hemlock	50		130 – 120	110 – 100	90 – 80	< 70
Douglas-fir	100	210 - 190	180 - 160	150 - 130	120 - 100	90 - 70
western Hemlock	100	210 - 190	180 - 160	150 - 130	120 - 100	90 - 70
red alder	100	210 - 190	180 - 160	150 - 130	120 - 100	90 - 70
ponderosa pine	100	160	140	120	100	80
lodgepole pine	100			120	100	80

Source: Oregon Department of Forestry from information provided by Atterbury Consultants, Beaverton, Oregon.

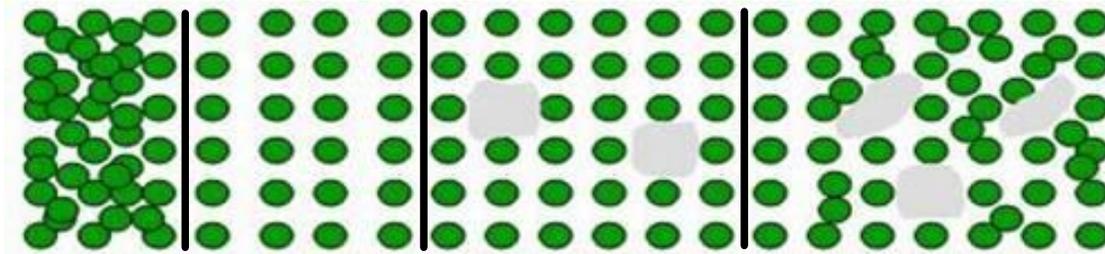
Horizontal Structure (Spacing)

Wild Stand

Evenly Spaced

Evenly Spaced with Openings

Variable Density (Unevenly with Openings)



Vertical Structure (# of Layers)

Single Canopy

Two Storied Stand

Multiple Layered Stand

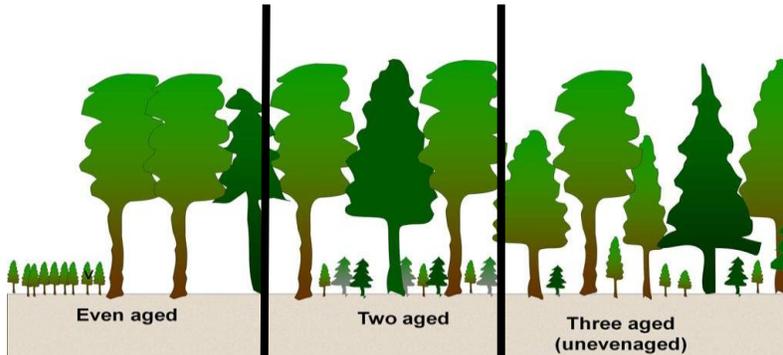


Illustration: Different ways to describe forest structure. Adapted from “Managing Your Woodlands – A Template for Your Plans for the Future” February 2011 (American Tree Farm System; U.S. Department of Agriculture Natural Resource Conservation Service; U.S. Department of Agriculture, Forest Service, Forest Stewardship Program”.

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Number of Layers -- See Illustration (page 11) – Vertical Structure for describing the layering of your forest – “One”, “Two”, “Three” or “Multiple” layers.

General Description – Provide a brief narrative description of your forest

Photo – Include a representative photo or photos of the management unit; especially of unique characteristics or features that define it.

Primary Layer -- Provide the following for the overstory or main layer for the stand:

- *Age – if known.*
- Growth Stage -- Seedlings (< than 4.5 feet in height), Sapling (1-5” diameter breast height (dbh)), Small Trees (6-11” dbh), Large Trees (12-29” dbh) and Very Large Trees (30” or more in dbh).
- Spacing -- See Illustration (page 11) – Horizontal Structure for describing spacing.
- Canopy – Provide a general description of the forest canopy. “Open” if the stand is young or the tree canopies do not overlap; “Closed” if the tree canopies touch each other or otherwise overlap and the ground is shaded; “Variable” if the canopy is open in some areas and closed in others.
- Stocking – A general description of tree stocking relative to what is desired (e.g., under-stocked, moderately-stocked, fully-stocked or overstocked). *Estimated trees per acre can also be used.*
- *Diameter Class/Height Class -- Estimate the general diameter (at breast height) of the overstory trees to the nearest 5 inches and the general tree height to the nearest 10 to 25 feet.*
- Species -- Indicate the tree species and the percent of the stand or layer the species occupies. Add species as appropriate for mixed species stands or layers. Species percent can be based on tree stocking, basal area or just a visual estimate.

Secondary and Third Layers -- For each additional layer, provide:

- *Age – Indicate the age of the layer in years if known.*
- *Growth Stage: Seedlings (<4.5 feet in height), Sapling (1-5” diameter breast height (dbh)), Small Trees (6-11” dbh), Large Trees (12-29” dbh) and Very Large Trees (30” or more in dbh).*
- *Prevalence – Provide a description of the layer distribution in the stand. Is it “Uniform” and occurs throughout; or “Variable” occurring in some portions of the stand; or does the second or third layer “Fill Pockets” or “Fills Openings” in the overstory.*
- *Stocking – rough estimate of the number of trees per acre.*
- *Species: Indicate the tree species and the percent of the stand or layer the species occupies. Add species as appropriate for mixed species stands or layers. Species percent can be based on tree stocking, basal area or just a visual estimate.*

Understory Vegetation – Described the forest understory in terms of woody species, herbs, grasses and other forbs and structure (single or multiple layers) and density (sparse, medium, heavy, impenetrable) and whether it is desirable or competing.

Snags and Down Wood – Indicate if there are snags (standing dead trees) and down wood (logs, woody debris) in the stand in terms of average size, condition (e.g., hard or rotten; legacy from previous harvest) and prevalence (uniform or variable).

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Range – If rangeland is present, indicate if it is part of the understory of a stand of trees or if it is an inclusion (one or more “meadows”) in an area otherwise dominated by trees. Describe the vegetation (if not included in Understory Vegetation above) and indicate its density and whether it is desirable or competing. Include rangeland in the discussions below (Stand History, Monitoring, Forest Health, and Desired Future Condition) if forest grazing is one of your goals in owning forestland.

Stand History – Indicate the types of harvest or management actions that have taken place in the stand. For harvests, describe what was removed. Also, include historical events (by year if known) for the stand such as date of origin, if planted or natural and when the stand was impacted and incurred losses from wildfire, insects and diseases.

Monitoring – Indicate how you are currently monitoring forest resource conditions, the detection of insects, diseases and other pests, the implementation of management actions and the response of forest resource conditions to the implementation of actions.

Forest Health – Indicate what conditions may be affecting the stand and whether the condition is prevalent or isolated. If none, simply state the stand is healthy. See *Appendix C – Insects, Disease and Other Damage Agents* for a list of damage agents.

- Insect and Disease Infestations
- Invasive Plant Species
- Wildlife Damage
- Storm Damage (from wind, ice or snow)
- Wildfire Fuels (size(s) and whether they form “ladder fuels”)
- Other (add as many as appropriate)

Landslide Risk – Indicate whether the management unit is subject to Division 623 – Shallow, Rapidly Moving Landslide and Public Safety provisions of the [Oregon Forest Practices Act](#).

Management Objectives -- Using the following list as a guide to choose from, list your objectives for your forest by category and give a brief description:

- Timber Management*
 - *Establishment*
 - *Timber Stand Improvement*
 - *Commercial Harvest*
 - *Managing Forest Structure*
 - *Uneven-Aged Management*
- Fish and Wildlife*
 - *Desired Species and/or Habitat*
 - *Threatened and Endangered Species*
 - *Special Sites; Rare or Sensitive Species*
- Forest Biomass*
- Aesthetics/Recreation*
- Monitoring of Resource Conditions*
- Ecosystem Services (e.g. habitat, carbon sequestration, water quality)*
- Wildfire Fuels Management*
- Forest Health*
 - *Insects and Diseases Control*
 - *Invasive Plant Control*

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- *Wildlife Damage Control*
- *Wildfire Rehabilitation*
- *Storm Damage Salvage*
- Forest Grazing*
- Agroforestry (e.g., windbreaks, silvopasture, ally cropping and forest farming)*
- Other _____ (add as many as appropriate)*

Desired Future Condition -- Describe how you would like to see the stand look in 5 years and for the long-term.

High Conservation Value Forests

Indicate whether you want to manage your forest, or specific portions of it as a High Conservation Value Forest.

INTEGRATED PEST MANAGEMENT

A statement that warrants that you will apply Integrated Pest Management when addressing animal control, vegetation control, insect and disease outbreaks, invasive species and other pests affecting your forest's ability to achieve your forest management goals and objectives.

FISH AND WILDLIFE

Describe any monitoring of fish and wildlife populations and habitat conditions that you are currently undertaking.

Desired Fish and Wildlife Species and Habitats

- Describe the different wildlife species and habitats that are present on the property and desired in the future.
- Describe species and habitats that are not currently present, but that you would like to see in the future. [Tip: Check out the [Oregon Conservation Strategy](#) – Oregon's statewide blueprint for conserving fish and wildlife. For landowners who want to improve conditions for at-risk fish and wildlife, it provides a menu of conservation actions. Check to see if your property is located within one of [Oregon's Conservation Opportunity Areas](#) and see if there are opportunities for you to implement voluntary conservation actions on your property.]

Threatened and Endangered Species

- Identify federally or state listed threatened and endangered species that may occur on or near your property. [Tip: A comprehensive list of threatened and endangered species in Oregon can be found on the Oregon Department of Fish and Wildlife website at: [Federal and State Listed Threatened and Endangered Species in Oregon](#). Your legal obligations for a species vary depending on whether it is federally or state listed, so it is good to know if a particular species is only listed at the state level.]
- List sources (resource professionals, data bases, etc) used to learn more about state and federally listed threatened and endangered species.

Rare, Sensitive and Other Unique Resource Sites

- Identify other sensitive and rare species, unique habitats, and other unique resource sites. [Tip: The [Oregon Forest Practices Act](#) has specific provisions for protecting some resource sites when conducting a forest operation See *Regulatory Compliance* for more information.]

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- List sources (resource professionals, data bases, etc) used to learn more about rare species, unique habitats, and other unique resource sites and the dates these sources were accessed. [Tip: Check out the [Oregon Forest BioDiversity Explorer](#) as an authoritative database to consult about threatened, endangered, sensitive, rare and other important forest species that could be located on or near your property.]

Wildlife Related Damage and Problem Species

- Identify pest species causing problems that you need to manage or control.

ROADS

- Your plan needs to contain a description of the roads and their characteristics that lie within your forest based upon an onsite review of the roads. This information can be in the form of a map with a legend, a list, or a narrative.
- Roads should be identified as to their purpose (i.e. primary access, secondary - all weather, secondary - seasonal), their surface (paved, gravel or dirt), their length, their drainage type (i.e. outsloped, water bars, ditches and cross-drains), number and type of stream crossings (i.e. fjord, bridge, culvert, temporary crossing) and indicate whether they are gated or not.
- Main roads, especially those providing access to your property and/or that are important for firefighting, should be identified and labeled on your aerial photo or topographic map. [Tip: For larger properties, mapping your roads and streams on separate maps that cover portions of your property allows you to provide more information about each road with respect to length, surface type, location of gates and stream crossings. Separate copies of these maps should be readily accessible for firefighting purposes]
- Problem areas – poor drainage, rutting, clogged ditches and culverts, culvert failures, and road failures – need to be called out and flagged for taking action. [Tip: Replacing a culvert? Go to U.S. Geological Survey's [Oregon Streamstats Website](#) for the size necessary to handle the peak flow for the stream crossing where the culvert is to be replaced.]

The plan's review of roads and their condition can be guided by the following checklist:

- 1) Are there any roads on the forest tract? Yes/No
 - a) If yes, does water drain properly from the roads? Yes/No
 - i) If no, indicate location(s) of issues in your road descriptions (or on a road map).
Make recommendation(s) for repair in the description or on the map.
- 2) Are there cross drains or stream crossings (culverts/bridges) present? Yes/No
 - a) If yes, are these structures functioning properly? Yes/No
 - i) If no, indicate location(s) of issues in your road descriptions (or on a road map).
Make recommendation(s) for repair in the description or on the map.

ACCESS AND SECURITY

- Identify the legal access you have to your property from the nearest county road or highway and indicate whether this access is owned outright or through an easement. If the access is not owned outright, confirm that your access easements gives you access to the property for forest management purposes such as harvest.

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- Identify any road easements surrounding ownerships may have across your property. If you have powerline or pipeline easements crossing your property, discuss and map these as well.
- Identify the steps you have taken to ensure the boundaries of your property are clearly marked and allowable access/use (or no trespass) properly signed. [Tip: If you are an absentee landowner, indicate how often you (or a representative) will get out and inspect the property for unauthorized use.]

WILDFIRE PROTECTION

- Know who to call in a wildfire emergency.
- Develop (and practice) an evacuation plan to be used in the case of a wildfire. Include family, neighbors or friends that need to be contacted. Plan for as many evacuation routes as available depending on the location and direction of the fire. If possible, all routes should allow for ingress and egress at the same time; otherwise know which ones do not. Evacuation planning should be done even if you do not live on the property. The evacuation plan should be readily accessible and kept separate from your forest management plan.
- If not addressed in the *Roads, Access and Security* section of your plan, provide an overview of which roads and water sources (including access to them) can be used for fighting wildfire. [Tip: Whoever is responsible for providing wildfire protection can come out and assess your property with respect to the desired infrastructure for fighting wildfire on your property (e.g., roads, turn around areas, defensible space around your home and other buildings, access ways, fuel breaks and water sources).]
- Describe where hazardous fuel conditions occur on your property and on neighboring properties. [Tip: If you are using *Management Unit Planning*, you can address hazardous fuels in the general description of each management unit as applicable, and summarize in this section. Concerns about hazardous fuels on neighboring properties can be expressed in the Landscape Context portion of your *Property Description*.]
- On one of your maps, identify structures, fire breaks, water sources, power lines, cell towers, roads and turn around areas on your property and have an extra copy of this map readily available for firefighters. Similarly, on a separate version of this map, identify sensitive cultural or other sites that you want firefighters to be aware of but you do not necessarily want mapped as part of your management plan.
- Warrant that you will follow all applicable laws and rules prior to conducting a prescribed burning operation on your property. [Tip: See [Oregon Forestland Burning Guide](#) and the [Oregon Department of Forestry Smoke Management Website](#) for more information.]

AESTHETICS AND RECREATION

- Is managing for visual aesthetics and recreation one of your goals for the property? If so, this section of your plan should provide the details of what you mean or envision. Be specific about the types of recreation you want to manage for. *List trails, picnic and camping spots that occur on your property. Indicate allowable uses on the trails (motorized, non-motorized, horses, biking, etc).*
- If managing for aesthetics and/or recreation is not one of your goals, then simply state so and move on.

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- Is the property to be used solely by self and family, or is it a goal to provide public access? If public access is to be allowed, discuss where, for what purpose and whether access will be seasonal or year round. Include whether you would like to provide for outdoor and woodland owner education.

CULTURAL RESOURCES

- A description of the historic sites, artifacts or other remnants that are important to you and your family. Indicate the degree of antiquity, whether they are above ground or subsurface in their location. Include sites or areas of your property that are important to your family or of local community significance. [Tip: For more information about private landowner obligations with respect to cultural resources, see [Protecting and Preserving Oregon's Archeological and Cultural Resources.](#)]
 - Above ground examples include old or heritage road beds or railroad grades, spring board stumps, blazed or otherwise modified trees, remnants of telegraph lines, and old foundations and other structure footprints.
 - Subsurface examples include old dumps, remnant debris from old timber harvests such as rusted iron, and unusual presence and arrangement of rocks that survive an old activity such as a hearth or below ground oven.
- Include descriptions of any known cultural resource sites that occur on or near your property such as old cemeteries, buildings and American Indian burial grounds. Graves or elements of human remains are a rare but possible resource that might be encountered. [Tip: The suspected presence of Native cultural materials might require a visit with the Oregon State Historic Preservation Office in Salem for advisement. Recorded cultural sites that are registered require a higher level of sensitivity in management.]
- Identify management practices for protecting cultural resources such as those designed to avoid or minimize impacts. Record and document sites if avoidance is not possible and significant impact is likely. [Tip: Photographs and specific description and location information of cultural resources within a management unit are important elements for their survival. Those responsible for conducting forest management actions must accurately understand the presence and extent of the site so as to best avoid or minimize impacts to it.]
- Include statements describing who or what sources of information you consulted about the presence, absence or possibility of historic or cultural resource sites including the date or dates the information was obtained. [Tip: Useful information sources are county records at either the courthouse (county surveyor) or the local county museum. Another productive tool is consulting with local genealogical societies to determine locations of old Donation Land Claim titles. Very early government surveys frequently show improvements and can be accessed at U.S. Department of the Interior Bureau of Land Management offices.]

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TAX AND BUSINESS MANAGEMENT

- Describe how you will treat your forest land for income tax purposes: for personal use, as an investment, or as a business. Verify you know your basis in both your land and timber accounts. [Tip: Visit the [National Timber Tax Website](#) for more information.]
- Summarize how you are going to approach record keeping and timber harvest reporting (volume and value).
- If applicable, describe what steps you have taken for estate planning and transfer of your property to your heirs. [Tip: See Oregon State University's [Ties to the Land Program](#) for succession planning guidance.]
- List best business practices required for landowner recognition and/or certification programs.

SCHEDULE OF PLANNED ACTIONS

- List your planned management actions for the next 5 years. Include the following:
 - The type of management action (see *Forest Management Actions* for a list of categories)
 - General description of the action including your reasons for taking it
 - Priority for taking the management action
 - If applicable, indicate the management unit(s) where the action will take place
 - Acres to be treated by the action
 - Cost Share (Indicate 'yes' if the plan is to seek cost share assistance; 'no' otherwise)
 - Incentive Program Code, if applicable (see *Forest Management Actions* for codes)
 - Include a place to record actual starting and completion dates
 - Include a place to record cash flow (cost and revenues)
 - Check if permits from and notification to the Oregon Department of Forestry apply
 - Reference relevant [Oregon Forest Practices Act](#) and other regulations that apply
- Describe any suggested monitoring of: resource conditions, practice implementation and/or resource condition response to practice implementation. Indicated the type of monitoring activity, its frequency and by whom (e.g., landowner, cooperating organization or natural resource professional).
- Summarize your "To Do" list for specific tasks to be taken over the next 5 years addressing needs under other management planning elements such as Roads, Access and Security, Fish and Wildlife, Wildfire Protection, Aesthetics and Recreation, Cultural Resources, Marketing Ecosystem Services, Regulatory Compliance, and Tax and Business Management. Include any needed or desired landowner education and training needs.
- *Besides listing actions to be completed over the next 5 years, make a list of those actions and tasks that you are considering over the long-term.*

REGULATORY COMPLIANCE

- A statement warranting that you (the landowner) will comply with all applicable local, state and federal laws regulating private forest land. List the laws that specifically apply to your land. See [Summary of Key State and Federal Laws Regulating Private Forestland in Oregon](#) for a description of the laws that may apply.
- *If applicable, list legal encumbrances such as conservation easements, assignment of mineral rights, road and utility easements and other long-term binding contractual obligations that affect your property.*

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SIGNATURE PAGE

A signature page that contains the landowner's (or representative's) signature, the plan preparer's signature (if there is one) and applicable agency or certification program approvals. Signing the plan also affirms the following:

- This forest management plan describes the existing vegetation, soils, and wildlife/fisheries habitat and addresses the opportunities for the management and protection of all natural resources according to landowner objectives with no long-term adverse impacts.
- The forest management planning elements that have been checked are addressed.
- Planned actions are voluntary and subject to change. This plan does not limit or reduce any existing rights of the landowner.
- Carrying out the recommended actions contained in this plan will likely enhance long-term carbon storage through sustainable management of the land for forestry uses, even if short-term carbon storage capacity may be diminished by some actions.

APPENDIX A

MANAGEMENT UNIT PLANNING

Identifying Management Units

Larger properties and smaller properties that are complex in the different types of forests they contain will need to be delineated into management units – specific areas of your property where specific actions (or no action) are going to take place.

Identifying management units begins with looking at aerial photos of your property. First, draw lines around the non-forest use areas of your property – home, garden, other structures, corrals, agricultural fields etc. What remains then is your forest. [Tip - The area of forest on your air photo should represent the same area of forestland acres reported under property information].

Looking at your forest – delineate areas that have similar conditions with respect to tree size, species mix, structure and age. Foresters call this stand typing – drawing lines on an aerial photo around forest in similar condition. Stands could by themselves define a management unit or be further divided into separate management units if one part of the stand is to be managed differently than another part of the stand. Slope, aspect and underlying soil type are other reasons why one area of your forest may be managed differently from another. Similarly, the identification of unique areas such as geologic, historic or family sites; or important ecological habitats, can also define management units. Give each management unit a unique label or name to be used as a reference. [Tip: Create an aerial photo “map” that shows and labels the management units that make up your property.]

Identifying management units is an iterative process – meaning that you start with one set of units; then work through developing your management plan, and modify as you go along. Some of the management units you first identified may be lumped together; others may be split apart.

If you have more than one management unit on your property, then the Forest Vegetation and Managing for Wood Section of your plan should address each management unit individually.

APPENDIX B

FOREST MANAGEMENT ACTIONS

There are several broad categories of management actions designed to establish, treat or manage forest vegetation.

For a list of actions with activity codes used by the Oregon Department of Forestry and the Natural Resources Conservation Service, [[click here/scroll to bottom of document](#)]

- Forest Establishment -- Preparing a site by clearing slash, debris and brush; planting trees (or planning for natural regeneration); protecting seedlings; and controlling competing grass and brush so the new forest has room to grow are the steps to establishing a forest. Forest establishment needs to be planned for if an existing forest is going to be harvested, as replanting after timber harvest is your legal obligation under the [Oregon Forest Practices Act](#).
- Timber Stand Improvement -- Forests that are past the forest establishment stage may still need to be managed to meet landowner goals. Are there too many trees that may need to be pre-commercially thinned to maintain growth and vigor or to allow for the establishment of a native plant understory? Are there invasive plant species that need to be controlled? Are there pockets of brush that could be cleared and replanted? What about hazardous wildfire fuel treatments? Answers to these types of questions will identify timber management opportunities in young forests.
- Forest Health Treatments – One or more treatments can be employed to enhance the resiliency of a forest to a serious insect or disease outbreak or wildfire. Typically, a healthy forest will have a low level of insects, disease or other damage that does not interfere with your ability to meet your objectives. In contrast, an unhealthy forest will have insects, diseases, or other damaging agents that interfere with your ability to meet your objectives. Forest health treatments are those that are explicitly designed to prevent outbreaks by lowering the risk of your forest to damaging agents.
- Commercial Timber Harvest -- The commercial harvest of timber is an opportunity to generate income and get a return on your forest investment. While there are developing market opportunities in special forest products, recreation leases, carbon offsets, wetland banking and other ecosystem services; the bread and butter of the profitability of owning forestland still comes from its timber value. Even if timber harvest is not an objective, knowing the value of your forest is still important to track. People's financial circumstances change and nature can have the tendency to prompt you to salvage harvest after windstorms, wildfire and insect and disease infestation. Further, timber stand improvements, controlling invasive species, managing for fish and wildlife all entail out-of-pocket expenses; so some harvest consistent with these other uses generates the needed capital to cover these costs.

Commercial timber harvest comes in two forms – the partial removal (or selection) of trees that leaves a residual forest in place following the harvest (e.g., commercial thinning, sanitation/salvage, selection harvest, variable retention harvest) and a final or regeneration harvest (aka clearcut) that requires the planned establishment of a new forest after the harvest is completed. Clearcutting can also meet some wildlife management objectives for those species dependent on openings and herbaceous forage that newly regenerated forests can provide. Which type of harvest is appropriate depends on the physical condition and location of your forest, your goals and objectives and the market

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in terms of logging costs (and the availability of a logger) and timber prices. Identifying planned harvest opportunities may be more of an exercise to determine what set of circumstances need to be met (e.g., stand conditions and market opportunity) in order for the harvest to meet your objectives rather than setting an exact year for the harvest.

- ☑ Managing Forest Structure -- It is not uncommon for timber production and revenue to be a secondary objective for a particular forest; where aesthetics, wildlife, or ecology is the primary objective. That does not mean that the forest will not need to be harvested or other planned actions identified. Commercial thinning specifications can be set as means to achieve a particular “look” to a forest – both visually as well as in terms of wildlife habitat. Commercial thinning can be used to favor a particular tree species in the forest; to improve forest health; or to create openings for the establishment of native forage and brush for wildlife. Actions can also be conducted at the individual tree scale. As a forest gets older, the amount of dead wood in the forest is important to wildlife – both standing (snags) and down (down logs); and when proximate to a stream important to fish and other aquatic life. Do you want your forest to have more snags and down wood? Topping a tree, girdling a tree (killing it without cutting it down) or dropping a large tree and leaving it are management actions that can be conducted (perhaps coincident with a commercial thinning operation) to increase this type of structure in your forest.
- ☑ Uneven-aged Management -- Some types of forests – namely those containing tree species that can establish themselves and grow in partial shade – can be managed on a uneven-aged rotation; meaning that trees are commercially removed periodically and new trees established to take their place – without clearcutting. This can be employed on an individual tree basis (individual tree selection) or on a patch-cut basis (removing small groups of trees; also called group selection). The result is the continual presence of mature trees and with the aggressive control of invasive plants, a native understory very suitable for some wildlife. Uneven-aged management systems need to be carefully monitored. The system can fail if natural regeneration or tree plantings fail. As is always the case when thinning, wind events can cause serious damage in the form of wind throw and broken tops. Invasive plants can become very aggressive; curtailing the development of desired native plant understory important to wildlife and stand diversity.

Other management actions relate to fish and wildlife habitat improvements, recreation and cultural resources; wildfire prevention and fuels management; and actions to improve roads and infrastructure. A complete table of management actions as classified by the Oregon Department of Forestry and Natural Resources Conservation Service is below.

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Title	Description	ODF Activity Code ⁽¹⁾	NRCS Practice Code ⁽²⁾
<i>Forest Establishment – Site Preparation</i>			
<i>Broadcast Burning</i>	Broadcast burning used for site preparation for direct seeding or planting of trees.	C04A	
<i>Mechanical, Chemical, Hand</i>	Mechanical, chemical, and hand site preparation including piling and burning, and aerial, tractor, and hand application of chemicals needed for direct seeding or planting of trees.	C04B	490
<i>Slash Reduction</i>	Slash reduction on projects with a primary purpose of timber production. Include slash piling and crushing. Includes slash reduction here for wildlife habitat projects.	C28	384
<i>Forest Establishment – Planting</i>			
<i>Voluntary Reforestation</i>	Seeding, planting, replanting, or interplanting of lands suitable for supporting forests but currently not in a forestry use.	C05, CP3	612
<i>Interplanting</i>	Planting to improve the stocking of an existing stand.	C05	612
<i>Reforestation</i>	Seeding, planting, replanting or interplanting of lands to meet stocking levels required by the Oregon Forest Practices Act.	C06	612
<i>Forest Establishment – Seedling Protection and Vegetation Control</i>			
<i>Moisture Conservation</i>	Moisture conservation measures to protect recently planted trees. Include hand and aerial application of herbicides, mulching, weed barriers, etc.	C19	612
<i>Chemical/Mechanical</i>	Stand release by mechanical or chemical methods including both aerial and ground applications.	C09A	666
<i>Animal Protection measures</i>	Protection of seedlings from animal damage. Includes budcapping, tubing, and big game repellents, etc.	C21	612
<i>Timber Stand Improvement</i>			
<i>Fertilization</i>	Fertilization of forest stands.	C07	
<i>Pre-Commercial Thinning</i>	Removal of non-merchantable trees to redistribute growth and improve vigor of the residual stand.	C08	666
<i>Pruning</i>	Pruning where the primary purpose is improving timber quality. Also includes pruning done in conjunction with wildlife habitat improvements where the trees are still available for future timber harvesting and the pruning meets specifications for log height and wood quality.	C20	660
<i>Vegetation Enhancement</i>	Enhancing forest vegetation in an established stand through mechanical and chemical control methods.	CP11	

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<i>Fish and Wildlife Habitat Improvements</i>			
<i>Nesting Boxes, Snags</i>	Creating cavities, nesting boxes, roosts, platforms and snags.	C15A	645
<i>Wildlife Water Facilities; Spring Development</i>	Creating wildlife water facilities. Includes guzzlers, cisterns, wildlife ramps, and the development of forest springs.	C15B	645
<i>Create/Enhance Wildlife Habitat</i>	Activities with a primary purpose of enhancing wildlife habitat. Include creating forest openings with a primary purpose for wildlife use. Record activities such as site preparation, slashing, burn piles, noncommercial thinning, etc., used in the process of creating a forest opening and not under site preparation etc. This practice also includes planting trees, shrubs, grass, forbs, done separately or in combination with noncommercial thinning, slash reduction, under burning, or release.	C15C	645
<i>Fisheries Habitat Enhancement</i>	Fisheries habitat enhancement. Accomplishments include the placement of large wood, the creation or enhancement of pools, riffles, side channels and backwaters.	C25	380
<i>Riparian –Tree and Shrub Establishment</i>	Establishment of trees and shrubs to create a riparian buffer along streams flowing through agriculture and range lands.	CP22	
<i>Riparian Enhancement</i>	Protection and improvement of riparian areas. Includes site preparation, planting trees, shrubs, grass, and release.	C14B	391
<i>Wetland Restoration</i>	Restoration of wetlands. Includes release, site preparation, planting willow sprigs, seedlings and restoring original hydrology.	C27	659
<i>Threatened & Endangered Species</i>	Projects that include protection or enhancement of threatened & endangered species. This includes all wildlife and non-wildlife projects that involve threatened and endangered species protection and enhancement.	C29	
<i>Recreation and Cultural Resources</i>			
<i>Create Trails</i>	Development and construction of forest trails for recreational purposes.	C16A	655
<i>Create/Enhance Recreation Area</i>	Development or enhancement of recreation areas. Include planting, pruning, thinning, slash removal etc, with a primary purpose of recreation.	C16B	
<i>Cultural Resource Site Protection</i>	Protection or enhancement of cultural sites.	C16C	
<i>Wildfire Prevention and Fuels Management</i>			
<i>Fire Prevention</i>	Fire lanes or pond construction.		
<i>Prescribed Burning</i>	Prescribed burning in existing stands to control brush, reduce slash hazard, control insect or disease problems, etc.	C09B	338
<i>Fuels Reduction</i>	Includes one or more of the following: noncommercial thinning, chipping, pruning, slash disposal, “slashbusting”.	C10	666,660, 384
<i>Fire and Fuel Breaks</i>	A permanent or temporary strip of bare or minimally vegetated land that is managed and maintain to stop the spread of fire.		394, 383

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<i>Insect and Disease and Invasive Species Control</i>			
<i>Surveys for Insects or Disease</i>	Ground surveys, aerial surveys, traps and other baiting.	C18Z	
<i>Invasive Species Control</i>	Control of invasive plant species.	C14D	595
<i>Coordinated Suppression</i>	Coordinated Suppression for Insects or Disease across Ownership Boundary	C18Y	
<i>Integrated Pest Management</i>	Combines chemical, mechanical, biological or cultural means for controlling a pest such as unwanted wildlife, insects, diseases and invasive plants instead on relying one single means.		595
<i>Forest Health Treatments</i>			
<i>Species Conversion</i>	Conversion of a stand through thinning or planting to a more insect or disease resistant species based on the insect and disease agent present	C05, C08	612, 666
<i>Pre-Commercial & Commercial Thinning</i>	Removal of non-merchantable trees to reduce stress and improve vigor and resistance of the residual stand.	C08, C10C	666
<i>Commercial Timber Harvest</i>			
<i>Conifer Thinning from Above</i>	Commercial thinning of conifer stand where overstory and canopy trees are removed releasing a healthy, well-stocked residual stand.	C10C	
<i>Conifer Thinning from Below</i>	Commercial thinning of conifer stand where suppressed and intermediate trees are removed for the purpose of maintaining and redistributing growth remaining well distributed dominant and co-dominant trees.	C10C	
<i>Hardwood Thinning</i>	Commercial thinning of hardwood.	C10H	
<i>Mixed Stand Thinning</i>	Commercial thinning of selected species in mixed conifer hardwood stand.	C10C or C10H	
<i>Sanitation Thinning</i>	Removal of dead or dying trees from a stand.	C11C or C11H	
<i>Conifer Salvage Harvest</i>	Salvage harvesting of fire, wind, insect or disease-damaged conifer timber.	C11C	
<i>Hardwood Salvage Harvest</i>	Salvage harvesting of fire, wind, insect or disease-damaged hardwood timber.	C11H	
<i>Conifer Final Harvest</i>	Final harvesting of conifer.	C12C	
<i>Hardwood Final Harvest</i>	Final harvesting of hardwood.	C12H	

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<i>Managing Forest Structure</i>			
<i>Create standing dead and/or down wood.</i>	Girdling, blasting or dropping live trees to provide habitat features in the form of broken tops, snags and down wood.	C15A	
<i>Variable Retention Harvest</i>	The selection harvest of individual trees to maintain and enhance structurally complex forests.	C10C	
<i>Uneven-Aged Management</i>			
<i>Group Selection Harvest</i>	Complete removal of a group of trees in small patches for the purpose of allowing regeneration of new trees in those patches.	C12C	
<i>Selection Harvest</i>	The partial removal of trees in an uneven-aged stand based on the specified removal of a number of trees from each diameter (or age) class.	C12C	
<i>Other Management Actions</i>			
<i>Road Work</i>	Design, construction, maintenance, and improvements of forest roads.	C14A	560
<i>Road Removal</i>	The closure, decommissioning, or abandonment of roads, trails and/or landings and associated treatment to protect resources.		654
<i>Stream Bank Protection</i>	Protection of stream banks and shorelines. Includes bio-engineering approaches.	C14C	380
<i>Windbreaks</i>	Installation and renovation of windbreaks.	C22	380, 650
<i>Irrigation Systems</i>	Installation of irrigation systems in conjunction with windbreaks or forest establishment efforts.	C23	
<i>Fencing</i>	Installation of fencing to protect riparian forests or plantations from animal damage.	C24	382
<i>Critical Area Planting</i>	Planting critical areas with grass, shrubs, or trees to control erosion	C26	342
<i>Agroforestry Establishment</i>	Establishment of agroforestry projects for agriculture or range.	C30A	311, 381
<i>Agroforestry Improvement</i>	Improvement of agroforestry projects (includes grazing and noncommercial thinning).	C30B	379
(1) Oregon Department of Forestry (ODF) Stewardship Forester Activity and Accomplishment Reporting (SFAAR) Code.			
(2) U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) Practice Code			

**Oregon's Forest Management Plan Guidelines
July 2013**

**APPENDIX C
INSECTS, DISEASES AND OTHER DAMAGE AGENTS**

Category	Agent	ODF Activity Code⁽¹⁾	
<i>Bark Beetles</i>	Mountain Pine Beetle	C18L	
	Western Pine Beetle	C18M	
	<i>Ips sp.</i>	C18N	
	Fir Engraver	C18O	
	Douglas-fir Beetle	C18P	
	Other Bark Beetles	C18Q	
	Wood Borers (round, flat headed, Horntail Wasps)	C18R	
<i>Defoliators and Other Insect Pests</i>	Spruce Budworm	C18S	
	Douglas-fir Tussock Moth	C18T	
	Other Defoliators (Sawflies, needle miners, Pandora Moth)	C18U	
	Aphids/scales	C18V	
	Shoot/tip borers, weevils	C18W	
	Exotic Pests	C18X	
<i>Diseases</i>	Dwarf Mistletoe/true mistletoe	C18F	
	Cankers (Phomopsis, Cytospora)	C18G	
	Foliage (Swiss Needle Cast, Rhabdocline, Elytroderma)	C18H	
	Root Diseases (Laminated, Armillaria, Annosus, Black Stain)	C18I	
	Decay/rot (Indian Paint Fungus, Pini conks)	C18J	
	Rusts (White Pine Blister, Western Gall)	C18K	
<i>Other Damage Agents</i>	Drought/Water Stress (including excess moisture)	C18A	
	Extreme Temperatures (freezing, heat, sunscald)	C18B	
	Fire Injury	C18C	
	Mechanical Injury (logging, lightning, wind, soil compaction, animal damage)	C18D	
	Chemical Injury (herbicides, pollutants)	C18E	
(1) Oregon Department of Forestry (ODF) Stewardship Forester Activity and Accomplishment Reporting (SFAAR) Code.			