

FOREST Condition Assessment

Worksheet



With proper management, you can maintain healthy forest land. All forests can be managed for a single use, such as timber production, or for multiple uses, such as wildlife habitat, recreation, livestock grazing and/or timber production. To help you manage your forest land, you need to decide which of these uses are important to you. You likely have a primary use planned that will guide your overall management and decision-making processes. If secondary and tertiary uses are also important to you, allow these to guide your decisions as well. This worksheet will help you ensure that the vegetation and ecosystems on your forest land function properly for the land uses you have identified.

In a healthy forest, the larger overstory trees, smaller understory trees, and ground vegetation are all in good condition. The distribution of vegetation and the number of trees per acre will differ depending upon where your property is located within the state. Soil type, precipitation, temperature, tree species, and your land use objectives are also factors that affect the density and distribution of vegetation on your forest land.

Instructions: Conduct a basic assessment of your forest land by answering the following questions. Suggestions to help you address specific management issues are listed directly under each section. If you identify management needs and issues that may require professional assistance, refer to the last page of this **Forest Condition Assessment** for a list of resources.

Site	Date
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1. Identify the tree species on your forest land.

Select all that are present:

- | | |
|--|---|
| <input type="checkbox"/> Douglas fir | <input type="checkbox"/> Western larch |
| <input type="checkbox"/> Ponderosa pine | <input type="checkbox"/> Bigleaf maple |
| <input type="checkbox"/> Grand fir | <input type="checkbox"/> Red alder |
| <input type="checkbox"/> White fir | <input type="checkbox"/> Sitka spruce |
| <input type="checkbox"/> Western hemlock | <input type="checkbox"/> Oregon white oak |

Others:

↳ There are many references to help you identify the tree species present in Oregon. A good place to start is the *Common Trees of the Pacific Northwest* page on the Oregon State University Web site at:

<http://oregonstate.edu/trees/>

↳ Your local natural resources contact may suggest additional sources of information. List these other useful tree identification and forestry Web sites below for future reference:

2. What type of trees will your soil support?

If you do not know, refer back to the ***Inventory Your Natural Resources Worksheet***, which refers you to the *Web Soil Survey*. If you have not already completed this section, it will be helpful to visit the *Web Soil Survey* to find detailed soil information. Print out the reports available on this site or take notes on the following:

Descriptions of the soils present on your property

↳ After you delineate your property in *Web Soil Survey*, click on the “Soil Map” tab. On the left hand side of the screen, you will see a list of the soils present on your land. Click on a soil name to view the description, which will provide information on the soil’s properties and qualities, major land uses, as well as use and management suggestions for timber, crops, livestock, wildlife and other uses.

Site index values for the tree species on each soil

↳ Next, click on the “Soil Data Explorer” tab. On the left hand side of the screen, you will see a list of the soil reports available to you. Under “Vegetative Productivity,” select “Forest Productivity,” then click “View Soil Report.” Scroll down to the bottom right hand side of the screen to view the site index values for relevant tree species. The site index value gives you the average height trees will attain at a given age (either 50 or 100 years) on a specific soil. Generally, a higher site index value means the soil can support more trees per acre. The value allows you to compare the growth potential for trees on different soils. The site index will also help you evaluate your current stand.

Trees to manage for

↳ On the same table with the site index values, you will also find a column titled “Trees to Manage.” The species listed here are preferred for planting, seeding or natural regeneration on the respective soils.

Other data that you feel is important

3. Evaluate the health of your trees.

Eliminating conditions that make trees unhealthy is important. Record any indications of possible problems by answering the questions below. For any YES answer, provide descriptions in the space provided.

No **Yes** **Do you see evidence of disease?** Are there dead or dying branches in the canopy of a tree and/or discolored leaves or needles?

No **Yes** **Do you see evidence of insect attack?** This may include signs of whitish/pinkish colored pitch tubes on the bark, brown sawdust at the base of the tree, dead sections of a tree canopy, and/or large amounts of green needles on the ground.

No **Yes** **In the tree canopy, are there thick masses of very dense foliage (witches brooms)?**

No **Yes** **Are there many dead standing trees or many dead trees lying on the ground?**

No **Yes** **Do a majority of the trees have forked tops, dead tops with new leaders (dominant upright stems) growing, or dead tops with no new leader?**

↳ If any of the above raises a concern for you, contact a local forester with the Oregon Department of Forestry, NRCS, OSU Extension Service, or a private consulting forester.

4. Do you know the density of the forest stand (the number of trees per acre)?

No Yes

Do you know the average diameter of the trees in the forest stand?

No Yes

↳ If you answered NO to one or both of the above questions, then you may want to inventory your forest stand. There are several ways to conduct an inventory, but the simplest is to establish a “fixed size plot” as described below.

Forest Stand Inventory	
<p>1. Establish a fixed size plot. A fixed plot can be of any size, but should be large enough to be representative of the entire stand. Plots can be square, rectangular, or round. Round plots are the easiest to lay out. To do this, establish a center point and measure the radius out to the plot edge. Depending upon the plot size (e.g., 1/100 acre, 1/50 acre, 1/10 acre, etc.) the radius measurement will differ. A tenth-acre (1/10 acre) plot makes converting measurements to a full acre easy, just multiply by 10. The radius of a 1/10 acre plot is 37.2 feet.</p>	<p>Plot size:</p>
<p>2. After plot establishment, count the number of trees within in the plotted area.</p>	<p>Number of trees:</p>
<p>3. Compute the number of trees per acre. Count only the trees that are greater than 4 feet in height. (If you set a 1/10 acre fixed plot, then multiply the total number of trees by 10.)</p>	<p>Trees per acre:</p>
<p>4. Record the average tree diameter. Measure the diameter of only the trees that are taller than 4.5 feet <u>and</u> have a diameter of 3 inches or more. Measure the diameter of these trees at 4.5 feet above the ground.</p>	<p>Average tree diameter: (sum of all diameters measured ÷ number of trees measured)</p>
<p>5. Are there tree seedlings (trees less than 4 feet in height) on the ground? Note any new growth.</p>	<p><input type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>↳ The data you have collected in the Forest Stand Inventory above will help a professional forester answer your questions about forest management strategies.</p>	

5. Is wildfire a concern on your forest land?

- No** **Yes**

↳ If you answered YES, consider possible measures to reduce the concern, including:

- Reduce brush quantity on the property.**
- Thin overstocked stands.**
- Prune lower branches on the trees.**
- Reduce tree material on the forest floor.**
- Establish permanent firebreaks.**

↳ One or more of the above items may be needed. A professional forester can help you determine the actions that are most appropriate for your land.

6. Will you have livestock graze in the forest?

- No** **Yes**

↳ If you answered YES, you should also inventory the understory vegetation to determine the types and amounts of plants present. Contact a rangeland management specialist for assistance.

The Next Steps for Better Forest Management:

Review your answers to the questions above and identify where you can make improvements to the health of your forest land. If you would like additional information or assistance to help you further evaluate, inventory or plan management strategies for your forest land, consider working with one of the entities listed below:

- Oregon Department of Forestry (ODF)
- Natural Resources Conservation Service (NRCS)
- Oregon State University Extension Service
- Professional consulting forester

