



## Forest Thinning: Not a One-Time Deal

Once sunlight and moisture are able to reach the forest floor, an abundance of new growth is triggered. Grasses, shrubs, berries and insects that are the cornerstones of a food chain attract birds, deer and bear. The thinned forest mimics the process of creating an old-growth forest where trees of all ages exist.

*As trees continue to grow -- thinning continues to be necessary.*

Every year, a healthy tree will produce a 1/10 inch growth ring - all the way around, all the way up. Picture that amount of growth on all trees in a healthy, uncrowded stand. In recent years less than 5% of new growth annually has been removed by thinning or harvesting from the National Forests of Oregon and Washington.

*What becomes of trees that are removed? Are they put to good use? You bet!*

- Lumber to build new houses
- Telephone poles and posts for fences
- Pellets to heat schools and houses
- Paper for your daily newspaper
- Shavings for animal bedding
- Piled and left on-site for wildlife
- and hundreds more!



*Left: Healthy, thinned, ponderosa pine stand. Above: This thinned stand suffered little in a recent prescribed fire. With little fuel, the low-intensity surface fire remained cool and was beneficial to this stand.*

## Many Big Fires Burn where People Live, Work and Play

Forests that are most vulnerable to catastrophic fire are concentrated at lower elevations where increasingly people are building homes. Deliberate forest thinning and removal of fuels greatly reduces the danger these fires pose to firefighters, private property and communities.

## You can be Involved to Help Lessen the Threat of Wildfire

- Contact your local Forest Service Ranger Station. Let the Ranger hear your concerns and your interest in getting involved.
- Share your ideas to find reasonable solutions and your willingness to assist in taking action to get on with the thinning and fuel reduction program.

- Arrange for an information presentation by a Forest Service resource professional. They are available and willing to speak to interested groups about forest health issues.
- Organize a group of volunteers who can help Forest Service employees pile or clear brush, pull invasive weeds, or assist with other tasks.



*A devastating crown fire swept through the untreated area, upper left. Treated Forest Service and Black Butte Ranch land gave the fire little fuel to continue.*

- Learn more about your forests and grasslands and the need to thin and care for them so they stay healthy and disease free.
- Where you live, create a fire-safe, defensible space around your home. See [www.firewise.org](http://www.firewise.org) for more information.

### Contact Us:

Forest Service field offices are listed under US Federal Government in your local phone book.

Visit the Forest Service Pacific Northwest Region website at [www.fs.fed.us/r6](http://www.fs.fed.us/r6).

Call the Forest Service Regional Office in Portland, Oregon at 503-808-2468.

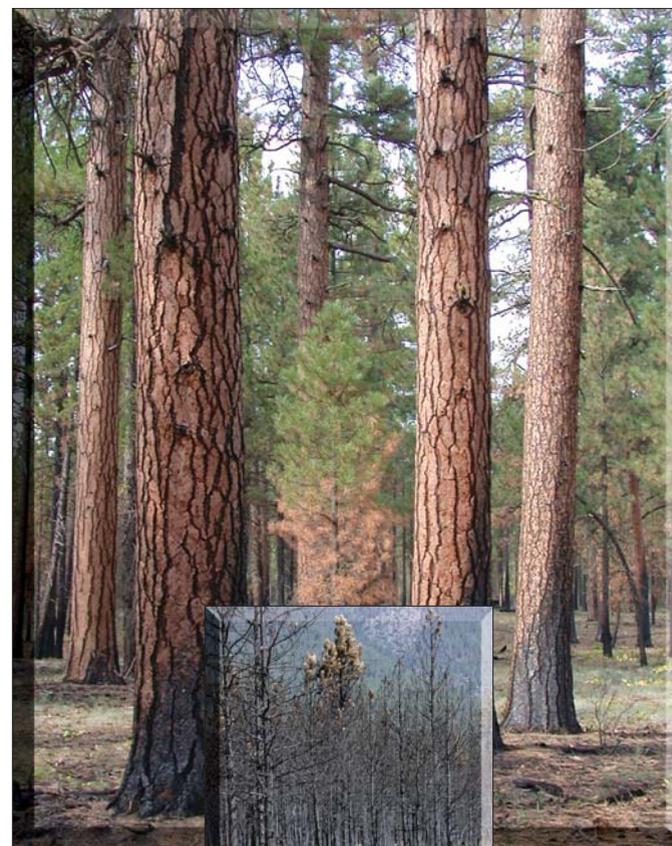
Stop by the Forest Service Regional Office at 333 SW 1st Avenue, Portland, OR 97204.

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# Fire & Fuels

*Without fuels, what's a fire to do?*



United States Department of Agriculture



Forest Service

Pacific Northwest Region



## Fire - a Living Legend

Throughout history, fire occurred naturally in our forests and grasslands and were a vital part of the ecosystem.

In the 19th century, livestock grazing depleted grasses that had previously carried low-intensity surface fires.

Without these “cool” fires, there was enough moisture for small trees to survive when normally they would have burned. This type of fuel buildup increased further when early 20th century forest managers extinguished fire as quickly as possible.

Today many surviving trees, along with dead wood and brush, provide fuel for larger, more destructive fires.



Seward and Todd. From private collection of Senator Gordon McKay.



A. Frequent, low-severity fires helped create old-growth ponderosa pine forests, such as this one near Bend, Oregon in the early 20th century.  
B. A crowded old-growth stand today.



## Too Many Trees for the Forest's Own Good.

Stands of live trees crowded together in the forests east of the Cascades and in southwest Oregon create highly combustible conditions.

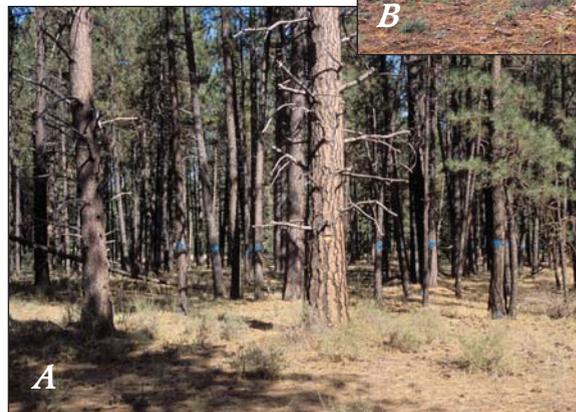
Historically, pine forests supported a few dozen trees per acre but now, hundreds and sometimes thousands of trees compete for moisture and nutrients.

Overcrowding stresses and weakens trees and leaves the forest susceptible to insect epidemics.

Overcrowding can also turn a beneficial, low-intensity surface fire into a catastrophic, high-intensity stand replacing crown fire where extreme temperatures not only kill trees but destroy habitat, degrade watersheds, and sterilize soils.

Extreme fire can also change the ecosystem from forest to brush-field, an ideal setting for invasive weeds to thrive.

Intense fires are often difficult or impossible to stop; they will burn until weather or terrain slow their advance - or they run out of fuel.



Photos A, B, and C were taken from the same photo point.  
A. All trees marked with blue will be removed.  
B. After thinning.  
C. After thinning and prescribed fire.



## Forest Thinning, Fuel Removal, Selective Harvesting

Three factors determine the extent and intensity of forest fires.

- abundance of fuel
- weather
- terrain

We can influence only one of these factors in a meaningful way: we can reduce available fuels. With less fuel, the severity of wildfires is significantly less.

One way to thin out trees is with prescribed fire, a low-intensity flame applied by trained experts. Under the right conditions, a prescribed fire will thin out some trees and clear the ground of dead wood and brush.

Another way is to remove trees by occasional selective harvesting or tree thinning. Large and small trees can be removed so that a diverse forest with trees of all sizes remains. Selective harvesting is a forest manager's way of helping nature do its job.



The pictures below were taken from the same photo point at a wet site where fire typically occurs every 50-100 years. A. A very crowded and insect infested stand; B. The stand after thinning; C. After prescribed fire; D. After the B&B fire.

