

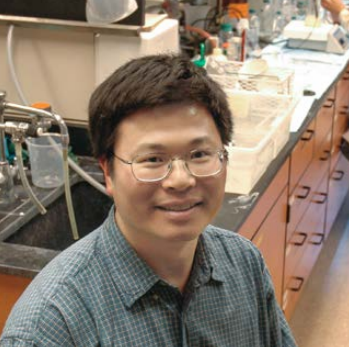


Welcome to Oregon's
forest sector





We are
Forest
Proud



Oregon's greatest resource

Fostering connections to our forests

While you might not work in the woods every day, I'll bet you know a thing or two about the importance of the forests that cover nearly half our beautiful state:

- Thousands of different owners and public agencies steward their lands to produce everything from clean water and wildlife habitat to sustainable wood products, from recreation opportunities to scenic views;
- Wood is the world's most sustainable and renewable building product, requiring less energy and water to produce than any other construction material;
- Millions of tree seedlings are planted each year in Oregon's forests – our laws require it;
- The environmental, economic and quality-of-life contributions Oregon's forests provide define who we are as Oregonians.

All of us connected to Oregon's forests through our work and our passion have an opportunity to tell others what we know, to help establish deeper connections of understanding and appreciation for our forests.

This handbook and the other Forest Proud educational materials provide insights and promote awareness for people of all ages who are interested in learning more and talking about what forests mean to Oregon. I encourage you to share your pride and your forest insights with others at work and in your community.

Nurturing a connection with Oregon's forests can start with you.



Doug Decker
Oregon State Forester,
2011-2016



We care

Oregon contains nearly 30 million acres of forestland. That's almost half the state.

We depend on our vast forests in many ways. They supply the timber we use to make lumber, paper and heat. Forests filter our drinking water. Countless plants and animals call forests home. They're great places to hike, fish, hunt or camp.



Photo: Jim Rivers

Oregon's forests have many different owners. This includes the federal and state government, timber companies and families. These landowners care for our forests. Their work helps preserve all the ways forests make our lives better.



Forest stewards

Caring for forests

Balancing different objectives

Different landowners have different goals for their forests. Some focus on wildlife habitat. Others grow timber to make wood products.

Usually they balance more than one priority for their forest. This includes maintaining a healthy forest while also producing timber, conserving fish and wildlife habitat, and protecting water quality.

Oregon's forests thrive thanks to the commitment of a diverse group of landowners.

Keeping forests as forests

A common goal among Oregon's forest landowners is maintaining a forest's many benefits to society, including filtering our air and water.

Selling timber helps private landowners afford to keep forests as forests. They're much less likely to sell the land to be turned into housing or other uses.

Oregon also has strong land use laws that limit converting forests into farms or subdivisions.





We replant

Oregon law requires forest landowners to plant trees after harvesting timber. This means we'll always have flourishing forests.

For forest products companies, it's not just about following the law. Replanting ensures a continued supply of logs for making wood products as well as habitat for a variety of animals, and creates a beautiful mosaic landscape.

Every year, 40 million young trees are planted in Oregon's forests. And far more trees are planted than are harvested.





Grow. Plant. Nurture.

Nurturing success

Grow

Oregon nurseries grow millions of native tree seedlings, and care for these young trees until they're ready for planting in the forest.

Plant

Crews of workers plant trees in Oregon's forests while the seedlings are dormant in fall, winter and early spring. This takes advantage of cool, wet weather that promotes good root development.

Nurture

Foresters care for seedlings after planting. They make sure the trees are healthy and aren't overtaken by weeds, grass and brush. From there, the seedlings can grow into a future forest.

From left: Tree seedlings are grown in nurseries before planting in the forest. Crews of forest workers plant each seedling by hand. Seedlings are cared for after they're planted.



40
million
trees
are planted
in Oregon
every year.



We are sustainable

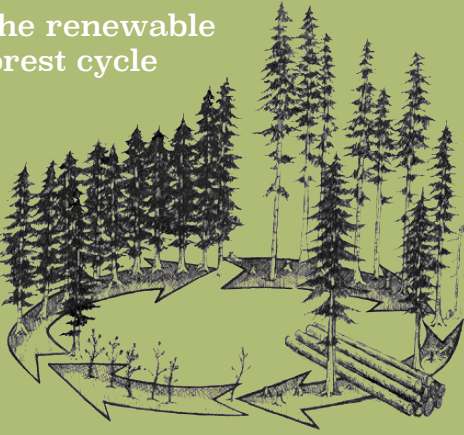
In Oregon, we make sustainable wood products. That's because we use trees — a renewable resource that can be harvested, planted and grown over and over.

Oregon wood comes from forests where landowners are required to replant trees after harvesting timber. They must also protect fish and wildlife habitat, as well as drinking water.

That's thanks to the Oregon Forest Practices Act. The state law contains nearly 300 rules that require forest landowners to use sustainable practices.

By maintaining Oregon's forests, we'll continue to enjoy high-quality water, as well as wood houses, apartments and office buildings, into the future — plus hiking, hunting and fishing in the woods for generations.

The renewable forest cycle



Trees are grown, harvested and replanted in a continual cycle.

Sustainably managed forests provide:

- Drinking water
- Wildlife habitat
- Recreation
- Wood products

Creating sustainable forests

Oregon forest landowners and managers are careful to protect our forest resources. They make sure to not harm drinking water. They replant trees after harvesting timber. They also leave down logs for wildlife habitat, and buffers of trees to shade and cool streams for fish.

Foresters make plans for years into the future to sustain our forests. It's worth it to help preserve a precious resource for generations to come.



We are high-tech

Technology has improved each step of making Oregon forest products.

Nurseries are growing healthier seedlings. Computer mapping aids foresters in caring for forests. Modern logging is both high-tech and low-impact on the environment. Mills use computer scans to maximize the value of each log.

All these advances help make our forests and the products that come from them more sustainable.



Advances in science and technology have changed how we plant, grow and harvest trees.

Modern forest practices

Advanced nursery techniques

Through skilled nursery management, the use of modern equipment and proper seedling storage, today's seedlings are more likely to survive after planting. Contemporary seed propagation and selection also result in trees that are less susceptible to disease.

Digital forestry

Foresters use drones, aircraft and lidar to map their trees from the sky. Digital mapping tools such as geographic information systems (GIS) have improved forestry.

Light-touch logging

Instead of dragging logs across the ground or through streams, loggers now use cables to carry suspended logs uphill to a road or ridge. They also use modern equipment that doesn't disturb the soil as much.

Clockwise from left, below: Digital mapping tools are common in modern forestry. Advanced logging machines can scan and cut logs in the forest so they're ready to mill. Computerized mill equipment scans logs for defects.



A high-tech industry

We are innovative

Thanks to innovation, we can now build skyscrapers out of wood.

A number of Oregon companies make engineered “mass timber” products that are strong enough to build larger and taller buildings with wood. Mass timber structures are beautiful. They’re also just as safe as traditional buildings in a fire or earthquake.

Oregon is leading the way with innovative uses of wood. More and more offices, condominiums and other mid-size to tall buildings are being built with wood, which helps support our local mills.

What is mass timber?

Mass timber products are made by gluing together lumber or veneer to make wooden beams, floors or walls. One example is cross-laminated timber, or CLT. It is made by layering pieces of lumber in alternating directions. The pieces are bonded together to create massive panels. Each panel is several layers thick and strong enough for building a skyscraper.





Oregon-grown architecture



Forest to frame

Sustainable forests

Oregon-made wood products come from sustainable forests. Trees are replanted after harvest, and the environment is protected.

More offices and commercial buildings are being constructed with wood products grown and made in Oregon.

New wood markets

Oregon mills have long relied on home-construction demand. But now more apartments, offices and other large buildings are also being built with wood.

Beautiful buildings

Wood buildings are attractive. More architects are choosing this material for their projects. They like its warm, cozy feel. Plus, wood comes from a renewable resource, so it's sustainable, too.



A man with a beard, wearing a brown jacket, a brown cap, and blue jeans, stands next to a large, weathered tree stump. He is smiling and has his hand on the stump. The background shows a forest with green trees and a cloudy sky.

We follow regulations

In 1971, Oregon became the first state to pass a forest practices law, to help protect our drinking water as well as fish and wildlife habitat.

Forest landowners carefully follow the Oregon Forest Practices Act. Those who don't face consequences. Regular monitoring by the Oregon Department of Forestry shows more than 97 percent of landowners comply with the law.

The law's forest practices rules are continually updated to keep pace with advances in forest science.



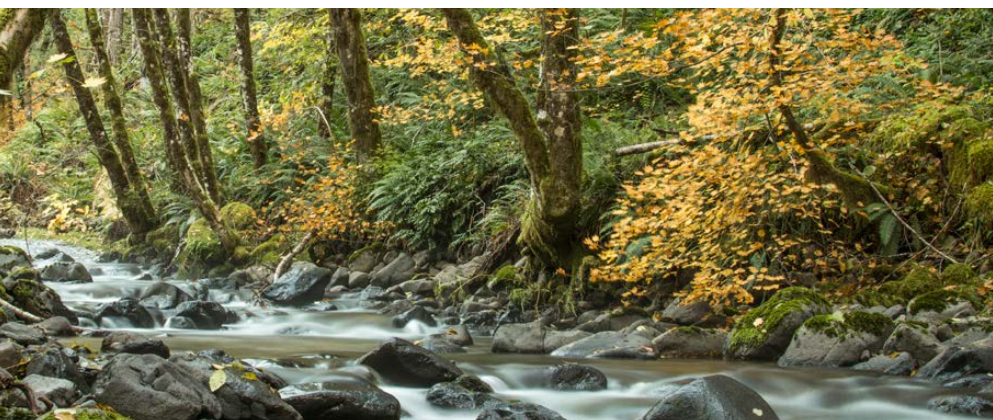


Protecting forests, water and habitat

Here are some of the key rules in the Oregon Forest Practices Act:

- **Replanting:** Landowners must plant seedlings within two years of a timber harvest.
- **Protecting water:** Landowners can't harvest timber, build roads or use chemicals near streams.
- **Protecting wildlife:** When harvesting timber, landowners must leave some live trees, standing dead trees (snags) and logs for wildlife.
- **Clearcutting limits:** Landowners can't clearcut more than 120 acres within a single ownership.
- **Restricting chemicals:** Landowners must follow strict limits on herbicide use.

Oregon law requires private forest landowners to replant trees after timber harvest. They must also protect streams and wildlife habitat.



We conserve habitat



Forests are home to many different kinds of wildlife. That's why protecting animals and fish is important when working in Oregon's forests.

State law requires Oregon forest landowners to conserve wildlife habitat.

Landowners often go beyond these requirements. They hire wildlife biologists to make sure timber harvests don't harm fish, birds and other animals. In addition, many have volunteered to improve streams for fish.



Wildlife biologists
help landowners
conserve forest habitat.

Protecting forest habitat

Creating clearings

Forest clearings left by fires or windstorms are important habitat for songbirds, deer and other animals. Landowners leave some trees and logs behind when harvesting timber. This mimics natural clearings and provides similar habitat.



Protecting fish

Landowners leave buffers of trees on each side of streams when harvesting timber. The trees provide shade to keep the water cool for fish. As the trees age, they'll eventually fall into the stream. This creates pools and shelter for fish. Plants left along streams also attract bugs that fish eat.

Voluntary projects

Many Oregon forest landowners have improved fish habitat with voluntary projects. This includes fixing or removing old culverts that block fish from traveling upstream.

Oregon's private forestland provides habitat for deer, elk, fish, butterflies, birds and other animals.



Creating habitat



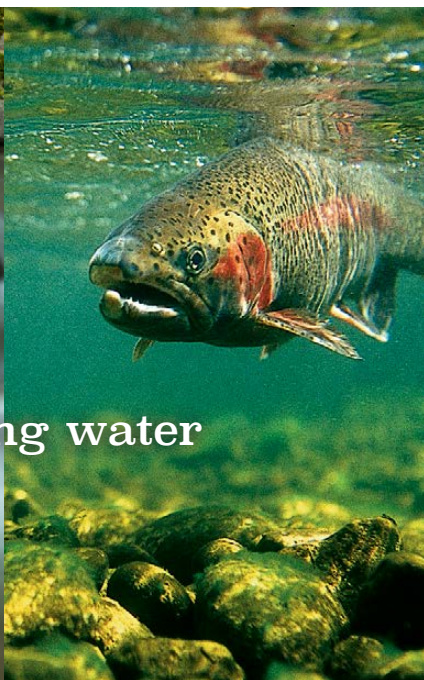
We protect water

Safe drinking water is a basic necessity. Forest landowners are careful to protect it for all of us.

Most of Oregon's drinking water comes from forests, including forests that produce wood. Landowners take precautions to safeguard water sources, such as preventing chemicals and muddy runoff from getting into streams.

As a result, Oregon's water quality is among the highest in the nation.





Safeguarding water

From forest to faucet

Oregon's highest-quality drinking water comes from forests. That's because soils in these wooded areas act as a natural water filter.

Here's how it works: Forest soils absorb rainwater. Contaminants in the water bind with soil particles and decompose. Eventually, the filtered water flows into nearby streams, groundwater and drinking-water sources.

Oregon law restricts timber harvesting, road building and the use of chemicals near streams. This protects fish and the source of much of the state's drinking water.

Protecting water

An important part of working in Oregon's forests is protecting water. Forest managers carefully plan timber harvests to avoid muddying streams. Loggers use modern equipment that's less impactful on soil and water. It's also illegal to apply chemicals over streams.



Photo: Sam Beebe



We harvest responsibly

To make wood products, you need a sustainable timber supply. That means forest landowners and timber companies must harvest timber responsibly.

Each year, Oregon landowners typically harvest timber from just a small portion of their properties. They also plant more trees than they harvest.

These responsible practices have paid off. Forests in Oregon are plentiful. In fact, the state's total forestland has held steady at about 30 million acres for more than 60 years.





The responsible harvest cycle

Responsible timber harvesting

Timber harvest planning

Before a single tree is cut, there's extensive planning. Most landowners rely on detailed, long-term harvest plans. This includes planning to protect streams, as well as fish and wildlife habitat.

Timber harvest managers work with engineers to carefully build logging roads. If the terrain for a timber harvest is steep, they make sure to avoid landslide-prone areas.

From left: Timber harvests are years in the making, and each is carefully planned. Loggers use equipment and techniques that are low-impact on the environment. Under Oregon law, landowners must replant harvested areas within two years.

Low-impact logging

Today's logging equipment and techniques are much less impactful than in the past. Most modern logging machinery uses tracks instead of tires. These evenly distribute the machine's weight to reduce soil compaction. Roads, trucks and other equipment are also kept away from streams.





We use herbicides safely

Newly planted trees must outgrow the weeds and brush around them to survive their first few years. That's why some forest landowners use herbicides, as safely and sparingly as possible.

Herbicides keep weeds and brush in check. This gives seedlings a head start to grow into a new forest.

Herbicides are usually only needed in the first few years of tree growth. Throughout Oregon, forest herbicides account for just 4 percent of all chemicals used for timber and agriculture production.



Herbicide use is heavily regulated

Limiting chemical use

Foresters must follow many state and federal regulations when using herbicides. These rules help protect people, fish and drinking water.

Herbicides can't be used near streams that have fish or that supply municipal drinking water. Aerial herbicide application is illegal when the weather could cause drift.

Regulating herbicides

Herbicide use in Oregon is regulated by the following state and federal agencies:

- Environmental Protection Agency
- Occupational Safety and Health Administration
- Oregon Department of Agriculture
- Oregon Department of Environmental Quality
- Oregon Department of Forestry
- Oregon Water Resources Department

Herbicides are typically applied to a forest stand just two to four times over 40 or 50 years. As trees grow, the weeds die off naturally from lack of sunlight.



Photo: Bruce Alber



Photo: Kyle Reed

Oregon's forest workers are at the front line of preventing and fighting wildfires.

Because they work in the forest, they can be the first to respond when a fire starts. They also help prevent wildfires by taking special precautions during fire season.

Private forest landowners, loggers and timber company employees work with firefighters to prevent and fight fires. Together, they are helping keep Oregon green.



Photo: Kyle Reed



Photo: Andy Lyon



Photo: Kyle Reed

Fighting and preventing wildfires

Living with fire

Fire in Oregon's forests

Wildfire has always been part of the forest ecosystems in Oregon. Fires naturally thin out forests. They also clear away dead brush and foster regrowth of trees and plants.

But since people started putting out most wildfires 100 years ago, many forests have grown unnaturally dense. This is fueling bigger, more destructive fires.

From left: Forest landowners cooperate with firefighters on controlling wildfires. Thinning out smaller trees and clearing dry brush reduces the fuel for future fires. Prescribed burns can improve a forest's fire-resiliency.

Fighting fire with fire

To combat this problem, public and private forest managers plan forest restoration projects. These involve thinning trees, mowing dry brush and prescribing controlled, low-intensity burns. The aim is to improve forest health by mimicking the natural role of fire. Leaving less fuel on the ground and more space between trees also limits the spread of a future wildfire.



Photo: The Nature Conservancy

Controlled burns can help improve forest health.



We make great products

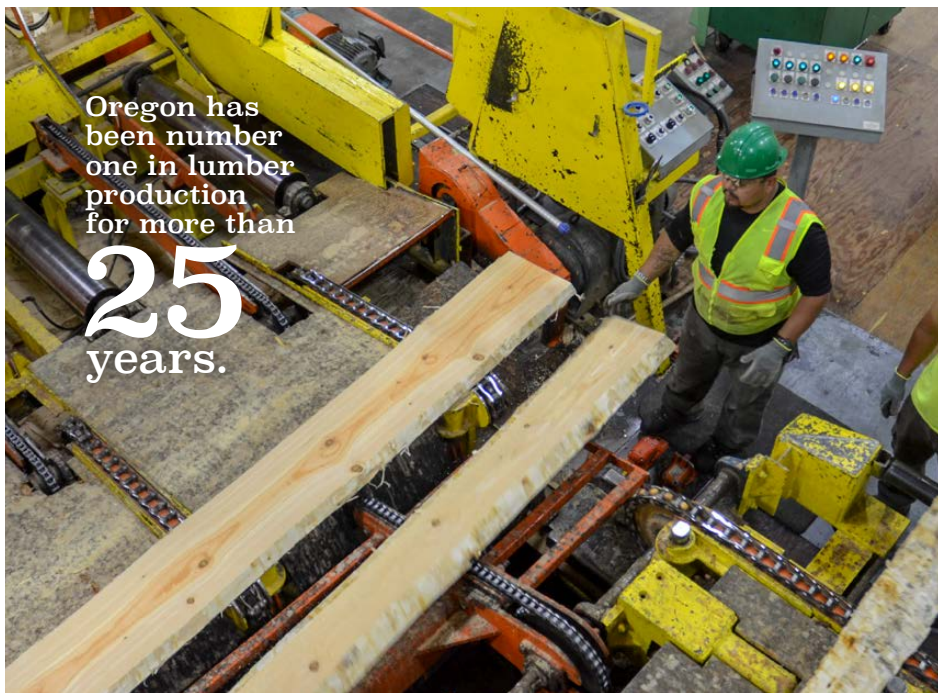
Wood from Oregon's forests is used to make the thousands of wood and paper products we use every day.

Locally made wood products are beautiful and durable, and require relatively little energy to produce. They're also reusable and recyclable.

Making wood products is part of Oregon's identity, heritage and culture. Our state has long been the top producer of softwood lumber and plywood in the United States.

What's so great about wood?

- Wood is beautiful, durable and strong.
- Wood comes from trees — a renewable resource.
- Wood is reusable and recyclable.
- Wood requires less energy and water to produce than other construction materials.
- Half the dry weight of wood is carbon, removed from the atmosphere as trees grow.
- Oregon wood can be sourced locally, saving on transportation emissions.
- Timber used to make Oregon wood products is harvested sustainably.



Oregon has
been number
one in lumber
production
for more than

25
years.

A unique building material

Made in Oregon

Oregon leads the nation in making wood building materials. About 75 percent of the wood products made here are sold in other states.

With advances in technology, Oregon-made wood is also now more common in bigger and taller buildings. These include offices, hotels and condominiums.

Oregon leads U.S. production of softwood lumber and plywood. It's also home to the first certified U.S. producer of structural cross-laminated timber, or CLT, used for tall buildings.



Oregon is number one

Be proud

Connect with Forest Proud

Join the Forest Proud community at [Facebook.com/ForestProudOregon](https://www.facebook.com/ForestProudOregon).



Oregon Forest Resources Institute

Forest Proud is brought to you by your employer in partnership with the Oregon Forest Resources Institute.

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Ways to get involved

Joining a trade association, getting more informed and volunteering are the among the ways you can help promote and educate about Oregon's forest sector, as well as connect with others who are passionate about our forests.

Here are some places to start:

Policy

Organizations that advocate on behalf of Oregon's forest sector, forest professionals and forest landowners at the local and national level:

American Forest Foundation forestfoundation.org

American Forest Resource Council amforest.org

Associated Oregon Loggers oregonloggers.org

Oregon Forest & Industries Council ofic.com

Oregon Small Woodlands Association oswa.org

Oregon Society of American Foresters oregon.forestry.org

Education

Sources for information about forestry, forest management, forest products and forest wildlife, among other forest-related topics:

Keep Oregon Green keeporegongreen.org

North American Forest Partnership forestproud.org

Oregon Department of Forestry oregon.gov/ODF

Oregon Department of Fish & Wildlife myodfw.com

Oregon Forest Resources Institute OregonForests.org

Oregon State University Forestry & Natural Resources Extension extensionweb.forestry.oregonstate.edu

World Forestry Center worldforestry.org

WoodWorks woodworks.org

Volunteer

Organizations that rely on volunteers to educate youth about forests, care for forested parks and restore forest wildlife habitat:

Friends of Tryon Creek tryonfriends.org

Forest Park Conservancy forestparkconservancy.org

Forests Today & Forever foreststodayandforever.org

Hopkins Demonstration Forest demonstrationforest.org

Klamath Outdoor Science School klamathoutdoorschool.org

SOLVE solveoregon.org

The Nature Conservancy nature.org

Tillamook Forest Center tillamookforestcenter.org

For a complete list of resources, or to learn more about the topics covered in this publication, go to OregonForests.org/ForestProud.