



# Do-It-Yourself Ways to Steward a Healthy, Beautiful Forest



Northwest  
Natural Resource  
Group





**You can do many simple things yourself to make your forest attract more wildlife, provide recreation, and contribute to its own upkeep.**

Our forests provide for us in many ways. Their beauty inspires us. They clean the air, filter and store water, protect soil, and shelter diverse plants and wildlife. They sustain livelihoods and yield firewood, building materials, and edible and medicinal plants. With all that forests do for us, a little care in return will help our forests continue to sustain our well-being.



This guide is intended for forest owners who are just getting started in stewarding their land. NNRG put this information together based on years of experience working with families, small businesses, and conservation groups across western Oregon and Washington. In conducting site visits, we've found that lands share common needs and owners share common questions.

While getting to know your forest, you can do a lot to improve its health and enhance its beauty.

This guide focuses on common ways Northwest forest owners can steward their land to meet a range of goals. These practices include:

- Observing and monitoring the forest
- Making your forest more wildlife-friendly
- Controlling invasive plants
- Keeping soil fertile and productive
- Creating structural and biological diversity

This is not an exhaustive manual with detailed instructions on how to complete these DIY practices. Instead, it describes the most important actions to help you start your journey of forest stewardship. At the end of this booklet, you'll find a list of resources that can help you learn how to carry out each of these practices.



Cover photo: Loren Kerns, Flickr Creative Commons  
Bottom photo: Matt Freeman-Gleason



# Observing and Monitoring the Forest

## Get to know your land

Take the time to become familiar with your forest. It's beneficial to understand which species, structures, and patterns make up your forest and how these components change with time. Taking note of these observations and being aware of changes can hone your intuition and provide insight into the workings and needs of your land.

You can take various approaches to forest monitoring. Some methods are fast and easy such as looking out the window as you drive by, while others take time and work, such as completing a forest inventory to understand stocking and growth rates.

A good way to start getting a feel for your forest is walking the woods and jotting down observations about what you see and hear. What you monitor should reflect your goals for the forest.



Measuring tree circumference to calculate diameter. Photo: NNRG

Taking the time to record these observations in a notebook or other tracking system such as a word document or spreadsheet can be immensely helpful in understanding your forest and helping to prioritize management activities. Memories of yesterday's western tanager sighting or the January 2012 ice storm can become fuzzy over time. Include photos in your monitoring records!

Important characteristics to observe include:

- **Tree species and abundance** – What trees grow in the forest? Which ones are most common? Which ones are least common? Are they in different locations?
- **Tree sizes** – Which trees are the biggest in diameter? Which trees have the largest live crowns (green tops)? Which trees are the tallest? Which trees are the smallest?
- **Age** – How old is the oldest tree in the forest? What species is it?
- **Seedlings and saplings** – Does the forest have young trees? What species? Where are they?
- **Shrubs, flowers, fungi, mosses, lichens** – What species live in the understory? Which ones are abundant? Which are rare?
- **Dead and down wood** – Does the forest have snags and/or logs on the ground? How big are they? How many? Do they have obvious signs of wildlife use?
- **Wildlife** – Species observed? Time of year? Tracks? Scat? Nests?
- **Streams and wetlands** – When do they hold the least water? When do they hold the most? How shaded are they? What types of vegetation dominate their margins?
- **Trail and road conditions** – Are there trails and/or roads? Do they need clearing? Is the drainage keeping sediment away from streams and other bodies of water? Are there signs of erosion?

*Every day the forests have something new to teach us – if we are paying attention.*

# Making Your Forest More Wildlife-Friendly

## Make your forest a better home

More than 400 species of wildlife live in the forests of western Oregon and Washington. Not all these critters need the same type of forest. Some prefer young stands with abundant grasses and flowering plants for food, while others require large trees with old-growth structures to make suitable nests. All wildlife, however, need four basic habitat elements: food, water, cover, and space.

No matter what type of forest you have, you can take several important steps to ensure your woods provide a good home for wildlife:

1. Protect existing **water bodies**, including streams, ponds, and wetlands, and retain their forested buffers.
2. Protect **big legacy trees** with high structural complexity, and minimize the use of heavy equipment in their immediate proximity.
3. Conserve and create the **dead wood** wildlife need, including snags, down logs, and habitat piles.
4. Maintain or create a forest with **varying densities** of trees and tree heights. Some species prefer spots of dense forest, while others thrive in spare spacing. Some animals live on the ground, some in the mid-canopy, some at the top.
5. Maintain or create a forest with different sized openings in the canopy: patches of more or less sunlight foster **understory biodiversity**.
6. Conserve or plant the range of tree species that are native to a site, including both **conifers and hardwoods**.
7. Conserve or plant native shrubs, wildflowers, and grasses that produce flowers, berries, nuts, and seeds to provide **forage** for wildlife and pollinators.
8. Conserve or create small **rock piles** near water features to enhance amphibian and reptile habitat.
9. Install **nesting and roosting boxes** for cavity-dependent birds and bats. These are especially important in forests that are still developing the large, complex structures that birds prefer for nesting.



Woodpeckers are enjoying this snag in Olympia, WA and creating cavity habitat for other wildlife. Photo: NNRG



A forest owner in Union, WA cleans out a nest box to prepare it for the birds' next season. Photo: NNRG



Pollinators enjoying native plants in the Siskiyou Mountains, OR. Photo: US Fish & Wildlife Service



# The Importance of Dead Wood

## *One-third of forest wildlife depend on it*

The most important decision you can make to promote wildlife habit in your forest is to retain dead wood. Pacific Northwest forests naturally include some trees that succumb to diseases, pests, storm events, or old age. A certain amount of disease, decay, and tree death is normal in a healthy forest. Damaged, dead, deformed, and dying trees are hotspots of biodiversity and biological legacies. Second- and third-growth forests regularly lack sufficient snags and down logs, because these materials were often removed during previous intensive forest management; or the few remaining are in advanced stages of decay. Snags, large down logs, and big mature trees (that will eventually become big snags or big down logs) provide food and shelter to more than 40 percent of forest wildlife species.



A wildlife snag in Sheridan, OR. Photo: Jeanie Taylor

Wildlife biologists consider high-quality snags to be standing dead conifers with diameters that are 12 inches or larger – cavity-nesting birds like owls need diameters of at least 25 inches. Large hardwoods such as bigleaf maples and Oregon white oaks also provide long-lasting snags. It doesn't matter what type of snag – the bigger the better! Even a tall stump can be a short snag. Trees such as western redcedar or Douglas-fir that can continue to live with dead tops or dead limbs are especially enduring. These living snags can remain standing for decades and if they fall, become large down wood.

Through retention and natural recruitment, manage your forest to include:

- At least 4 down logs per acre that are 20 feet long and 20 inches in diameter or greater
- At least 4 snags per acre that are 20 feet tall and 12 inches in diameter or greater

### **Creating Habitat: Wildlife habitat piles**

Be they constructed piles of logs, brush, or rocks, these “critter condos” are used by ground-nesting birds, reptiles, amphibians, foxes, squirrels, rabbits, and other small mammals. Most habitat piles are built with logs, tree limbs, and branches. They provide some of the functions of down logs. Landowners often create them after small thinning projects or while picking up debris from storm events.

Wildlife can use habitat piles of any size, but they are especially drawn to those that are 10 to 12 feet across at the base and 6 feet tall. To make one, place large poles (at least 4 inches in diameter) on the ground in 4 to 6 perpendicular (crisscross) layers. Add finer material on top. Avoid using green conifer boughs in the piles from January to August to avoid attracting undesirable beetles to your forest. Aim for at least 3 to 4 piles per acre in areas without dead wood.

Piles can go in areas with different sun exposure or vegetation types. In areas with little rain and hot summers, wildlife will benefit from habitat piles in shade. In cooler areas, a habitat pile on the edge of a clearing or anywhere with partial sun is beneficial. Avoid installing habitat piles along roads, near bases of trees, in areas that collect cool air or receive excess water, or where the pile will be a fire hazard.

### **Creating Habitat: Constructed logs**

If your forest is short of large downed wood, you can “construct” some. Lay small-diameter poles parallel to each other in a crib to form a “log”, the longer and wider the better! Place constructed logs according to the pile location guideline above.



A habitat pile in Olympia, WA. Photo: NNRG



A constructed down log in a crib in Coos Bay, OR. Photo: Yankee Creek Forestry

# Controlling Invasive Plants

## *Managing noxious weeds and invasive species*

It is quite possible that some of the flowers and plants in your forest are non-native. Some non-native plants are invasive - they spread rapidly and are difficult to control. These invasive weeds threaten ecosystem health and forest productivity. They can outcompete native species for resources like light, water, and space, resulting in the displacement of native plant species and a lack of food and cover for wildlife. Other invasive species are noxious weeds which may be toxic to humans, wildlife, or domestic animals. Properly controlling invasive plants protects native plants, supports wildlife habitat, and prolongs the longevity of your forest.

Many non-native plants have spread to western Oregon and Washington. They have been introduced by humans and livestock and dispersed by birds and other wildlife. Because of the widespread abundance of invasive species, the monitoring and removal of invasive plants is likely to be an ongoing stewardship

activity. Over time, you can make significant progress and get some good exercise as you remove invasive plants. Forests full of ivy, tansy, Scotch broom, or Himalayan blackberry can be transformed! The bramble patch that once took days of work to clear can be kept free of weeds with a few minutes of hand-pulling.

Prevent the introduction of new invasive species to your forest by cleaning equipment between sites, minimizing disturbed soils, seeding with native seed mixes, and retaining established vegetation. Control methods for invasive species vary by species and location; many weeds can be managed by manual activities such as hand-pulling, cutting, mechanical weed whacking, or digging, while some require herbicide application. Contact the noxious weed control board in your county to learn about invasives in your region and find out about ideal control options. Start identifying common forest weeds!

## Common Invasives in Northwest Forests



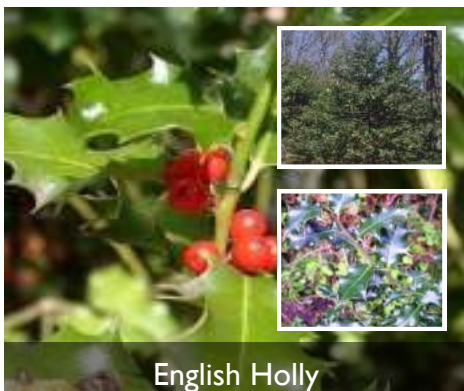
Blackberry (Cutleaf)



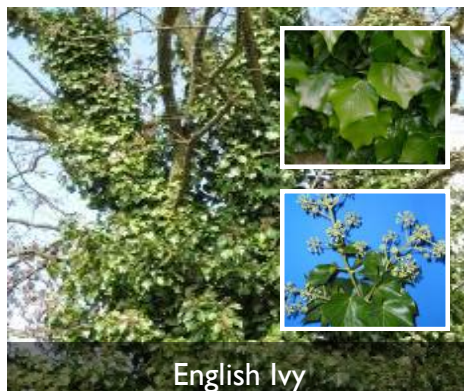
Blackberry (Himalayan)



Butterfly Bush



English Holly



English Ivy



False Brome



# Common Invasives in Northwest Forests



Garlic Mustard



Gorse



Herb Robert



Knapweeds



Knotweeds



Policeman's Helmet



Purple Loosestrife



Scotch Broom



Shiny Geranium



Tansy Ragwort



Teasel



Thistle (Nonnative Species)



# Keeping Soil Fertile and Productive

## *Foster nutrient-rich soils*

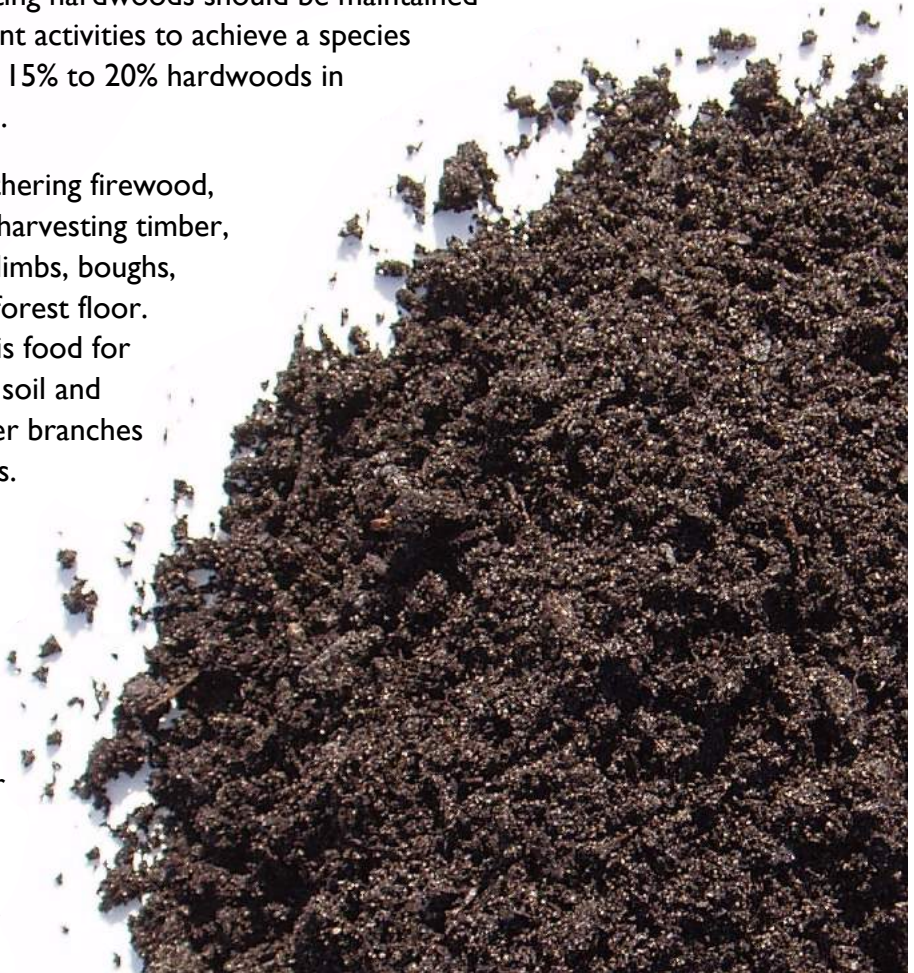
Forests and soils are intrinsically linked. A healthy forest is sustained by the natural productivity of the soil – defined as the capacity of soil, in its normal environment, to support plant growth.

Maintaining soil productivity means keeping soil in a condition that favors regeneration, survival, and long-term growth of desired vegetation. Indicators of soil productivity include the volume of organic matter and the water-holding capacity of the soil. Soil disturbances like compaction, puddling, rutting, and scarification are difficult to reverse and can have significant impacts on tree roots and below-ground

ecosystems. Compaction – which results when heavy equipment crushes the spaces between soil particles – is a common and detrimental soil disturbance that can result from imprudent timber harvest, road-building, and other intensive forest management activities.

Maintaining forest soil productivity is less costly than trying to fix damaged soils after the fact. Understanding the characteristics and limitations of the soil on your land can save you time, money, and frustration. These three practices can help you conserve soil quality in your forest:

- 1. Retain Hardwoods:** Hardwood trees such as red alder, bigleaf maple, Oregon ash, bitter cherry, cascara, and black cottonwood contribute a significant amount of annual leaf litter and woody debris to the forest floor. This biotic material is consumed by invertebrates and other decomposers and incorporated back into the soil. Existing hardwoods should be maintained and favored during forest management activities to achieve a species composition that eventually includes 15% to 20% hardwoods in historically conifer-dominated stands.
- 2. Retain Organic Debris:** While gathering firewood, conducting young stand thinning, or harvesting timber, redistribute byproducts like smaller limbs, boughs, and pieces of wood throughout the forest floor. This finer material, also called slash, is food for decomposer organisms in the forest soil and supports soil development. The larger branches can be made into wildlife habitat piles.
- 3. Use the Dry Season:** Soil doesn't compact as readily when it's dry, so try to schedule activities that use heavy equipment during periods with low soil moisture like summer and early fall. Build trails and maintain forest roads during summer to minimize erosion during rain events. Keep heavy equipment on designated trails as much as possible.





# Creating Structural and Biological Diversity

## *Remove suppressed trees from densely stocked young stands*

One of the most important forest practices often overlooked by new forest owners is thinning out non-commercial trees in overstocked stands. In many Pacific Northwest forests, previous management has removed structural complexity like big trees, large snags, down logs, and multi-layered canopies. *Young stand thinning* is a tool to help accelerate the forest's return to improved ecological resilience.

Young stand thinning is a management technique commonly applied to densely planted stands, where typically only one type of tree species (usually Douglas-fir) was planted after a timber harvest. This type of thinning involves the removal of small, non-merchantable trees to give the retained trees the light and space they need to grow. Young stand thinning is often recommended for stands that exceed 350 trees per acre and are 10 to 20 years old. These stands tend to be transitioning into a stem exclusion phase, characterized by a dense canopy with limited light and sufficient shade to kill lower

branches and stifle understory vegetation.

With minimal light reaching the forest floor, this highly simplified forest structure attracts less wildlife and allows few understory plant species to persevere. These stands have less biodiversity than any other kind of forest in the Pacific Northwest.

During the stem exclusion phase, live tree crowns gradually begin receding, and once they diminish below 35 percent, the growth of the tree favors height production as trees compete for sunlight. Left too long in this phase, the trees in these dense stands can develop an excessive height-to-diameter ratio, becoming so skinny for their height that they are highly susceptible to damage during wind and ice storms. Competition within overstocked stands can also increase the potential for drought die-off, fire risk, vulnerability to pests and disease, and overall reduced growth and timber quality. Therefore, if a young stand is too dense, young stand thinning can set the stage for optimal growth.



A family forest that after young stand thinning to enhance forest aesthetics and improve tree growth and health in Portland, OR. Photo: Michael Ahr



# More on Young Stand Thinning

## *Remove the right trees to achieve ideal spacing*

### Which trees should be removed?

The objective of young stand thinning is not to maintain an even spacing among all trees, but rather to favor dominant trees, both hardwood and conifer, that have the largest crowns and good log quality. This technique is referred to as “best tree selection.” The first thinning of a stand typically occurs “from below,” removing the smaller diameter, suppressed, and poorest quality trees. Once the suppressed and poor quality trees have been removed, the stand can be further thinned to reach an average optimal spacing of about 12 to 15 feet between trees.

Tree selection criteria include:

- Trees with less than 30 percent live crown
- Trees with a defect (broken or forked top, partially debarked, etc.— keep some for habitat)
- Trees that are smaller, weaker, or less vigorous (likely with diameters less than 8 inches)



Evaluating a dark, dense forest for thinning near Bremerton, WA.  
Photo: NNRG

### What spacing is optimal?

Stands exceeding 350 trees per acre with spacing of 12 feet or less between trees should be thinned to approximately 250 to 300 trees per acre, which means you will have 12 to 15 feet of space between trees. Thinning in this manner typically results in a variable-density spacing among retained trees that averages about 12 to 15 feet apart. However, if dominant trees are growing close together and are still maintaining optimal timber quality, they should be left at their natural spacing. If shade-tolerant tree seedlings are naturally regenerating in the understory (e.g. western hemlock, western redcedar, grand fir, bigleaf maple, etc.), they should also be thinned to approximately 12 to 15 feet between seedlings if the site will support their continued growth.

**It is crucial that you retain your forest’s best trees, rather than adhere to a rigid spacing requirement.** If high-quality retained trees occur in close proximity to each other, they may be left as a clump to help stabilize against wind disturbances and protect below-ground connectivity of tree roots.



Using slash to build habitat piles after thinning a young stand to increase tree diversity, OR. Photo: Michael Ahr

**Protecting the best trees is the most important priority. Retain trees of diverse species that have the largest live crown, tallest height, straightest stem, and show no signs of defect (e.g. broken tops, scars, leaning, etc.). A few trees with broken tops, forked tops, scars, or other features can be retained to enhance wildlife habitat.**



# More on Young Stand Thinning

## *The finer points of thinning*



### **What's the best thinning method?**

Trees should be cut within six inches of the ground using either a chainsaw or hand saw. Be careful to bring down cut trees so they do not damage the trunk or limbs of retained trees.

### **When to thin?**

The ideal time to thin is late summer (September) through mid-winter (February). This helps avoid wind damage in recently thinned stands. Avoid young stand thinning from late March to late June because:

- This is many birds' primary nesting season.
- Sap flow is high in spring, and retained trees are more sensitive to bark damage.
- Slash material left on the ground during this season can increase the likelihood of a bark beetle infestation as the beetles are attracted to fresh debris.



### **What to do with slash?**

Depending on the volume of material on the ground after young stand thinning, slash can be:

- Left where it falls – often slash will decompose where it is.
- Lopped and scattered across the site - the resulting slash mat should not exceed 12 inches in depth.
- Arranged into habitat piles measuring about 6 feet high and 10 to 12 feet across, aiming for 3 to 4 piles per acre. Smaller piles can also benefit wildlife. See “Creating wildlife habitat,” on page 5.
- Stacked into constructed habitat logs by piling poles in parallel to create a “log” that is at least 20 inches in diameter and 20 feet long. See “Creating wildlife habitat,” on page 5.
- Cut into firewood and removed from the forest.
- Processed into biochar, a charcoal used as a soil amendment.

Wherever you place it, slash should not be piled against the bases of remaining trees in order to avoid damage to the trees.

Conducting young stand thinning on a family forest in Ashland, OR. Photo: NRCS Oregon

*“When the land does well for its owner, and the owner does well by his land; when both end up better by reason of their partnership, we have conservation.*

*When one or the other grows poorer, we do not.”*

*– Aldo Leopold, The Farmer as a Conservationist*



# Next Steps

## *Continue your stewardship journey*

The stewardship activities covered in this handout are common ways to improve the health of your forest and deepen your connection to the land. As you continue down the path of forest stewardship, you may want to consider other management activities to achieve your goals.

### **Increase biodiversity**

Plant a variety of native tree and plant species that are suited to your forest to provide habitat for pollinators and wildlife. The aesthetics of spring blossoms, fall leaf color, and delicious edible berries greatly increase human enjoyment as well!

### **Improve aquatic habitat**

Focus on strategies that maintain cold, clean water and habitat for water-dependent species. This means managing riparian areas to: provide shade cover with both conifers and hardwoods, keep banks vegetated to prevent erosion, create or preserve large down wood in the water, and improve or adjust barriers to fish passage such as perched culverts, filled culverts, or those that are too small for fish to navigate.

### **Conduct a commercial thinning**

Young stand thinning can improve densely stocked stands only so far. Thinning with timber harvesting equipment is a way to enhance the complex spacing and structure of forests. First-entry thinning often occurs in stands that are 25 to 35 years old. A first-entry commercial thinning emphasizes improving

stand structure and the value of future timber. The material harvested has modest commercial value and – with favorable market timing – will cover the costs for the harvest work and infrastructure maintenance or improvements (roads, trails, culverts, boundary surveys, tree and shrub planting, snag creation, etc.), while providing some income to the landowner. Future harvests after thinning present greater opportunities for net income to the landowner, while creating more complex forest structure and sustaining local economies.

### **Connect to educators, professionals, and cost-share resources**

Across western Oregon and Washington, there is a vibrant network of natural resource professionals in university extension programs, state and local agencies, nonprofit organizations, landowner groups, and private professionals who can walk your land with you and help you think through your forest management options. It's a great idea to create a forest management plan to recognize your forest's needs, help prioritize your objectives, and determine strategies to make your forest vision a reality.





# Checklist

This is a summary of the “to do” items in this handout to help you track your stewardship priorities. Have fun out in your woods!

- ✓ Monitor your forest, and write down how it is changing. Track tree species, abundance, size, and age, as well as shrubs, flowers, fungi, mosses, lichens, dead standing wood, down wood, wildlife, streams, wetlands, trails, and roads.
- ✓ Improve wildlife habitat: protect water bodies, protect big legacy trees, conserve and create dead wood, maintain or create variable densities of trees, foster understory diversity, conserve or plant diverse hardwoods and conifers, conserve or plant forage shrubs, conserve or create rock piles near water, and install nesting boxes.
- ✓ Identify areas with less than 4 down logs and 4 snags per acre. Consider building wildlife habitat piles and constructed logs in these areas.
- ✓ Identify invasive species in your forest, choose control methods ideal for the species and the site, and implement control.
- ✓ Increase soil nutrients by retaining or planting hardwoods, retaining organic debris on the forest floor, and only using heavy equipment during the dry season.
- ✓ Identify stands that would benefit from young stand thinning. Select suppressed trees with small diameters, defects, or less than 30% live crown. Thin trees to a density of about 250-300 trees per acre (12-15 feet between trees). Avoid thinning from March to June.
- ✓ Consider the next steps in your stewardship journey!



Thinning out a dense alder stand in Oakville, WA to improve retained tree growth and create wildlife habitat structure. Photo: Matt Freeman-Gleason



# Resources

These resources will deepen your knowledge of the stewardship practices noted in this guide and will help prepare you to get out in the woods!

## MONITORING

- *Plants of the Pacific Northwest Coast* - by Jim Pojar and Andy MacKinnon
- *Native Trees of Western Washington* - by Kevin Zobrist
- *Trees to Know in Oregon* - by Ed Jensen
- *Shrubs to Know in Pacific Northwest Forests* - by Ed Jensen
- *Conducting a Forest Biodiversity Assessment: A Guide for Forest Owners and Land Stewards*  
<http://nnrg.org/resources/monitoring-and-inventory-tools/>
- *Basic Forest Inventory Techniques for Family Forest Owners*  
<http://cru.cahe.wsu.edu/CEPublications/PNW630/PNW630.pdf/>
- *Inventory and Mapping: A Beginner's Guide to Basic Inventory and Digital Mapping of Non-timber Forest Products on Small Private Forestlands*  
<http://ntfinfo.us/publications/index.html/>

## WILDLIFE

- *Living with Wildlife in the Pacific Northwest* - by Russell Link
- *Landscaping for Wildlife in the Pacific Northwest* - by Russell Link
- *Diversifying Forest Structure to Promote Wildlife Biodiversity in Western Washington Forests*  
<http://cru.cahe.wsu.edu/CEPublications/EM044/EM044.pdf/>
- *Habitat Conservation for Landbirds in Coniferous Forests of Western Oregon and Washington*  
[http://www.orwapif.org/sites/default/files/Western\\_Conifer\\_Plan\\_new.pdf/](http://www.orwapif.org/sites/default/files/Western_Conifer_Plan_new.pdf/)
- *Woodland Fish and Wildlife*  
<http://woodlandfishandwildlife.com/>
- *Pollinator Conservation Resources*  
<https://xerces.org/pollinators-pacific-northwest-region/>

## INVASIVE SPECIES

- *Oregon Invasive Species Council*  
<https://www.oregoninvasivespeciescouncil.org/>
- *Washington Invasive Species Council*  
<http://www.invasivespecies.wa.gov/>
- *Invasive Species: What Gardeners Need to Know*  
<https://catalog.extension.oregonstate.edu/em9035/>
- *Invasive Weeds in Forestland: Brooms*  
<https://catalog.extension.oregonstate.edu/ec1598/>
- *Invasive Weeds in Forestland: English Ivy*  
<https://catalog.extension.oregonstate.edu/ec1595/>
- *Invasive Weeds in Forestland: Gorse*  
<https://catalog.extension.oregonstate.edu/ec1593/>
- *Invasive Weeds in Forestland: Himalayan & Evergreen Blackberry*  
<https://catalog.extension.oregonstate.edu/ec1594/>
- *Invasive Weeds in Forestland: Knapweeds*  
<https://catalog.extension.oregonstate.edu/ec1596/>
- *Invasive Weeds in Forestland: Knotweeds*  
<https://catalog.extension.oregonstate.edu/ec1597/>
- *Invasive Weeds in Forestland: Tansy Ragwort*  
<https://catalog.extension.oregonstate.edu/ec1599/>



# Resources

## SOIL

- Keeping your Forest Soils Healthy and Productive  
<http://cru.cahe.wsu.edu/CEPublications/eb2019/eb2019.pdf/>
- Managing Organic Debris for Forest Health  
<http://www.cals.uidaho.edu/edComm/pdf/PNW/PNW0609.pdf/>

## THINNING

- Assessing Tree Health  
<http://cru.cahe.wsu.edu/CEPublications/FS055E/FS055E.pdf/>
- Backyard Forestry in Western Washington  
<http://cru.cahe.wsu.edu/CEPublications/EM026E/EM026E.pdf/>
- Silviculture for Washington Family Forests  
<http://cru.cahe.wsu.edu/CEPublications/eb2000/eb2000.pdf/>
- Using Pre-commercial Thinning to Enhance Woodland Productivity  
<https://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/14000/ec1189.pdf/>
- Many Young Stands Too Crowded  
<http://blogs.oregonstate.edu/treetopics/2016/01/22/many-young-stands-crowded/>
- Spacing Young Conifer Stands  
<http://blogs.oregonstate.edu/treetopics/2016/01/29/spacing-young-conifer-stands-2/>
- Young Stand Thinning Strategies  
<http://blogs.oregonstate.edu/treetopics/2016/08/05/young-stand-thinning-strategies/>

## NEXT STEPS

- Funding for Forest Stewardship: Environmental Quality Incentives Program  
<http://www.nnrg.org/resources/eqip/>
- Forestry Education and Assistance for Washington Forest Landowners  
<http://cru.cahe.wsu.edu/CEPublications/FS043E/FS043E.pdf/>
- Know Your Forest – A comprehensive website of resources focused on Oregon forest management  
<http://www.knowyourforest.org/>
- Oregon Forest Industry Directory  
<http://www.orforestdirectory.com/>
- Washington Forestry Consulting Directory  
<http://forestry.wsu.edu/consultingdirectory/>

For a full complement of stewardship resources, visit our library at <http://www.nnrg.org/resources>





To strengthen the ecological and economic vitality of Northwest forests and communities by connecting landowners with the knowledge, skills, and markets they need to steward their forests.

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