

**South Coast Landowner Resource Guide  
Coos and Curry County  
2007**



**Coos Soil and Water Conservation District and  
Curry County Soil and Water Conservation District**

# Why a Landowner Resource Guide?

Dear Forest and Agricultural Landowner,

The coastal region of Southwestern Oregon is renowned for productive, diverse and beautiful forests and agricultural lands. Individual landowners contribute to this legacy through good stewardship and maintaining healthy watersheds. Healthy forests and agricultural lands resist insects, disease, drought, and fire better than overcrowded and stressed forest stands or inadequately managed agricultural lands. Together the efforts of many private landowners can influence the health and water quality of their entire watershed. The *South Coast Landowner Resource Guide* provides basic forest and agricultural management information with easy references for landowners to encourage good stewardship.

It is the intent of the Landowner Resource Guide Committee to address some of the challenges landowners face in managing their lands by compiling and exploring resources, and providing examples of best management practices in a user friendly format.

The *South Coast Landowner Resource Guide* is being published and distributed in Coos and Curry counties as a collaborative effort of the Coos and Curry County Soil and Water Conservation Districts (SWCDs), the Oregon Department of Forestry, and contributing partners to make better information easily accessible to landowners. Production of this guide is made possible through funding from US Forest Service Cooperative Forestry Program. The guide will be mailed to landowners who own more than 5 acres and is available free at the Oregon Department of Forestry, Coos and Curry SWCD offices, as well as OSU Extension Service office and participating agencies.

We have attempted to provide the most accurate information possible. Please help us by reporting inaccuracies so that we may correct them in future issues of this guide. If you have any questions or suggestions concerning this resource guide please contact: Coos SWCD, 541-396-6879, or Curry SWCD, (541) 247-2755.

Sincerely,

South Coast Landowner Resource Guide Committee



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# The Importance of Water Quality and the Role of Water Quality Protection Rules and Plans

Guarding the quality of Oregon's limited water supplies is vitally important to support the health of individuals, communities, fish, wildlife and nearly every industry in the state. One of the contributors to poor water quality is *non-point source pollution* - pollution from the general landscape which cannot be traced to a single point. To help address this, two important laws were enacted to help minimize agricultural/rural and forestland contributions to non-point source pollution.

## Some Examples of Non-Point Source Pollution

- Erosion and runoff from roadsides and construction sites
- Sediment from eroding agricultural and forestry lands
- Contaminated runoff from agricultural, forestry, and development operations

## Water Quality- Agriculture and Rural Areas

In 1993 the Oregon State Legislature approved the Oregon Water Quality Management Act (Senate Bill 1010) requiring the Oregon Department of Agriculture (ODA) to help reduce water pollution from agricultural and rural lands and to improve overall conditions in the watersheds.

Agricultural and rural representatives worked with the ODA to create custom-designed area-wide management plans (AgWQMAPs) to fit the needs of local agricultural and rural communities. Local operators were asked to identify problems such as soil erosion, nutrient loss from fields, degraded streamside areas, etc. The plans allow landowners the flexibility to develop their own approaches to local problems and describe ways landowners can protect streams while maintaining viable businesses and quality lifestyles. Through direction of the AgWQMAPs, Oregon Soil and Water Conservation Districts (SWCDs) offer assistance to landowners implementing voluntary conservation activities.

In addition to the voluntary strategies outlined in the plans, each area has a set of rules. Copies of the rule are available at ODA website

<http://egov.oregon.gov/oda/> or you can get a copy from your SWCD. These rules require certain conditions to be met on agricultural and rural lands. The regulations state that no person shall "cause pollution of any waters of the state". If problems exist, ODA works with landowners to find acceptable solutions. If someone refuses to correct a problem, ODA is mandated to enforce the rules.

## Examples of How Forests Help Keep Water Clean and Abundant

- Promote absorption of rain which refills underground aquifers and reduces flooding caused by storm runoff
- Keep water temperatures cool
- Provide wood to the stream channel. This helps slow the water down so sediments can drop out and also provides critical habitat for fish

## Water Quality- Forests and Small Woodlands

How forests and small woodlands are managed has major affects on water quality. Keeping water temperatures cool, reducing excess nutrient and sediment runoff, and increasing water infiltration are just a few of the many ways good management can influence stream health. To assure these benefits, the Oregon Department of Forestry

(ODF) administers the Oregon Forest Practices Act, which guides all forest activities in the state. A "notification of operations" from the ODF is legally required for all owners initiating a forest operation. Before any forestry-related work begins, contact ODF to find out if you need to file a notification.

### **Are you polluting?**

Most of the time the answer is no. But, ask yourself, are there conditions on my property that could be improved? Do my streambanks need more vegetation? Is too much sediment or manure running off my property? Are my access roads improperly built and allowing runoff into streams?

If the answer is yes or you are not sure, you can get help. Your local SWCD and NRCS staff can develop many options for you. OSU Extension and several other agencies can provide you with project and management ideas. ODA has regional water quality specialists available to answer questions. ODF offers technical advice through their Private Forests Program, which oversees and administers most cost-share subsidies for completing various non-commercial forest and resource management activities. Refer to the *Agency Resources for Information and Technical Assistance* list at the back of this guide for sources in our area.

Remember, responsibility for clean water and good stewardship starts with you.



**Elk River, Curry County**

#### **Technical Assistance Agencies listed in this article:**

- Soil & Water Conservation Districts (SWCDs)
- Natural Resources Conservation Service (NRCS)
- Oregon State University (OSU) Extension Services
- Oregon Department of Agriculture (ODA) – Regional Water Quality Specialist
- Oregon Department of Forestry (ODF) –Private Forests Program

# Who needs to file a Notification of Operation with the Oregon Department of Forestry?

The responsibility for filing a notification of operations lies with the landowner and is required for forest health improvement and commercial harvest activities.

Activities relating to the establishment, management, or harvest of forest tree species require a submission of Notification. Examples of these activities include pre-commercial thinning, slash disposal, chemical application, harvesting timber, site preparation for reforestation, and road building. A Notification is also required when cutting and selling timber from farmland or rural residential land, and when changing forestland to non-forest use.

For more information on whether you are required to submit a notification or to pick up a Notification form, visit the Oregon Department of Forestry in your county. After completing the form, submit the Notification of Operation and a map of the location of the planned activity to the local Oregon Department of Forestry office. The Coos District ODF office is located at 63612 Fifth Road, Coos Bay, Oregon 97420, (541)267-4136.

ODF must have the Notification at least 15 days prior to beginning the activities. Written plans are required in addition to the Notification of Operation when work is within 100 feet of a fish bearing or domestic use stream, within 100 feet of a large lake or within 300 feet of a significant wetland, or other protected resources. The operator/landowner is responsible for complying with the Oregon Forest Practices Act when operating on forestlands.

A burn permit is required to burn slash and other material resulting from forestland activities such

as thinning and commercial harvesting. A burn permit, valid only during permitted dates, can be obtained at the local Coos Forest Protective Association.

## Link to electronic versions of Notification of Operation/Application for Permit

[http://egov.oregon.gov/ODF/PRIVATE\\_FOREST\\_S/operations.shtml#Notification\\_of\\_Operations](http://egov.oregon.gov/ODF/PRIVATE_FOREST_S/operations.shtml#Notification_of_Operations)

- ◆ Instructions to completing the form
- ◆ Notification (2 pages) legal size
- ◆ Notification (4 pages) letter size
- ◆ Unit Addendum (2 pages)

NOTIFICATION OF OPERATION/APPLICATION FOR PERMIT	
OREGON DEPARTMENT OF FORESTRY OREGON DEPARTMENT OF REVENUE	
<p>Filing this notification does not grant permission to remove forest products! First obtain permission from the landowner and timber owner.</p> <p>For activities or operations within an urban growth boundary, the applicant is advised to contact the appropriate local government regarding land use regulations which may apply to the future use or development of this site.</p> <p>On-site inspections may be conducted by Oregon Department of Forestry (ODF) employees to ensure compliance with all the laws and rules governing fire protection and forest practices on private land.</p> <p>File a new Notification of Operation/Application for Permit form at an ODF office if any of the following conditions apply:</p> <ul style="list-style-type: none"> <li>• Your operation area is new.</li> <li>• You are adding a new activity to the operation.</li> <li>• You are changing or increasing the area involved in an existing operation.</li> <li>• It is after February 28, and you are continuing an operation that has been idle since the end of the previous calendar year and you have not informed ODF you intend to continue the operation before now.</li> </ul> <p>ODF must also be informed in writing of any other changes in the information on an existing notification, but completion of a new form may not be required.</p> <p>Provide PHOTOCOPIES of the completed original notification form and map to the local offices of the Water Resources Department and the Oregon Department of Fish and Wildlife ONLY if you plan to use on-site water to mix pesticides or to control slash burns.</p> <p>Multiple harvest units may be listed on one notification. BUT, if HARVEST units are separated by a mile or more (in a straight line) or are in different counties, file separate notifications for each unit. An operation can be any combination of forest activities. See OAR 629-605-0140 for a complete list. OAR 629-600-0100 defines "operation," "commercial," and "unit."</p> <p>The instructions are printed in italics. Please print or type the information on the form. <b>Do not fill in shaded boxes.</b> File notice with the State Forester at least 15 days prior to the date you would like to start operating. A notification is not considered accepted until it is properly filled out, has a map attached, and is received by the appropriate ODF office. Mail, fax, or deliver the form to one of the Oregon Department of Forestry offices that accepts notifications.</p>	
COUNTY (Enter only one):	NOTIFICATION NUMBER (Office Use)
<p>NOTICE &amp; PERMIT TYPE</p> <p><input type="checkbox"/> 2A Notice to the State Forester that an operation will be conducted on lands described here (ORS 527.570). 15 day waiting period required, unless waived.</p> <p>Check boxes that apply</p> <p><input type="checkbox"/> 2B Application for permit to operate power driven machinery (ORS 477.625). Expires at end of calendar year.</p> <p><input type="checkbox"/> 2C Notice to the State Forester and the Dept. of Revenue of the intent to harvest timber (ORS 327.500).</p>	<p>DATE RECEIVED: _____</p> <p>TIME RECEIVED: _____ INITIALS: _____</p> <p>DISTRICT: _____</p> <p>OFFICE: _____</p> <p>DATE OF CORRECTION: _____</p> <p>CORRECTION: _____</p>
<p>Enter name &amp; phone number of person to be contacted in case of fire emergency. This person should know what resources they have available for fire and have the authority to control those resources in case of fire.</p> <p>REPRESENTATIVE: _____ PHONE NUMBER: _____</p> <p>AREA CODE: _____</p> <p>Check the appropriate box as to who is completing this form.</p> <p><input type="checkbox"/> Operator <input type="checkbox"/> Landowner <input type="checkbox"/> Timber Owner</p> <p>TIMBER SALE NAME AND/OR NUMBER (if applicable): _____</p>	
<p>Enter the Operator information</p> <p>OPERATOR Name: _____</p> <p>Business Name: _____</p> <p>(Person and/or company conducting the operation)</p> <p>Mailing Address: _____</p> <p>City, State &amp; Zip Code: _____</p> <p>Area Code: _____ Phone No.: _____</p> <p>Operator Codes: UDF1: _____ UDF2: _____ UDF3: _____ UDF4: _____ UDF5: _____</p> <p>ATTENTION: If you are conducting timber harvesting or road construction within 100 feet of overhead or underground utility lines, call the Oregon Utility Notification Center at 1-800-332-2344. Request that the owner of the line be notified, and record the number issued to you by the Oregon Utility Notification Center here: _____</p> <p>FORM 629-3-1-0202 12x Order (Rev. 11/00) (Continued on Next Page)</p>	

# Landownership 101

You might be thinking “Why would I want to manage my property at all?” This may especially be the case if you bought it for privacy, to enjoy a rural lifestyle or enjoy a “natural” forest setting. However, investing some time, energy, and/or money into your property can:

- Help keep your forest healthy and vigorous
- Maintain/enhance/protect water quality
- Improve the appearance of your property
- Maintain and improve wildlife habitat
- Improve agricultural productivity
- Generate income from sales of forest products, crops, or livestock products
- Improve property values
- Prevent noxious weeds from spreading from or to your property

Many new owners are interested in taking care of their land but don’t know where to start. Here is a suggestion of important tasks to consider. This can help you get to know your property better and help you make well informed decisions regarding the long term stewardship of your land. To get started:

## • **Locate your property boundaries and corners.**

Get a survey done if needed.

## • **Walk your property.**

Learn how to identify the main local trees and shrubs, if you don’t know them already. Identify water sources. Streams can be perennial (flows all year), intermittent (flows part of the year), and ephemeral (flows only after storm events). Contact ODFW (see Agency page) to find out if streams are fish-bearing. Learn the common noxious weeds in the area. Get an aerial photo. Check your soil survey. Learn about past management activity.

## • **Evaluate your access.**

Winter/summer roads, skid trails, and footpaths. Can you get where you want to go? You can’t manage or take care of your property if you can’t get there.

## • **Check on tax status.**

Being taxed as agricultural or forestland may be advantageous with regard to property tax.

## • **Consider your goals and objectives for the property.**

Some goals may be stewardship-oriented and some may be production-oriented. See pages 7 through 17 for more information about setting management goals and objectives.

### **Examples of stewardship-oriented goals:**

- Maintaining or improving water quality
- Keeping agricultural and forest lands healthy and vigorous
- Maintaining and/or managing livestock access to streams and planting riparian vegetation
- Protecting against trespass
- Improving habitat for fish and wildlife
- Maintaining and/or improving road access

### **Examples of production-oriented goals:**

- Improving the growth rate of trees
- Producing agricultural products
- Producing posts, poles, and other small material
- Diversifying products for personal consumption (firewood, food)

## • **Create a stewardship or conservation plan based on your goals and objectives.**

Write your own, work with a private consultant or partner with a public agency (refer to the “Management Planning” section on page 5 and the *Landowner Assistance Chart* on page 43)

## • **Get some good advice.**

Private consultants, agencies and the internet are good sources of information. References can also be found throughout this guide.

## • **Take action.**

Armed with the proper information, begin to implement your stewardship or conservation plan.

*“If you don’t know where you are going, you probably won’t get there.”* William H. Emmingham, Oregon State University

## Management Planning

When seeking advice from natural resource managers, landowners are often advised to develop a “management plan” for their property. A well-written management plan is one of the most useful tools available to ranchers, farmers or woodland owners. Unfortunately, it is also one of the easiest tools to ignore. Many different types of plans exist depending on your goals and objectives.

Four things to remember about plans:

1. Plans are made to be used by the landowner;
2. There are many resources to help you learn about and develop a plan that will suit your needs;
3. You can do it if you have the desire or have it done;
4. Planning is just the beginning; implementing and maintaining the items on the plan is up to the landowner.

A management plan can help you look at your options, make decisions, and plan for tomorrow. The following table provides a brief outline of available plans.

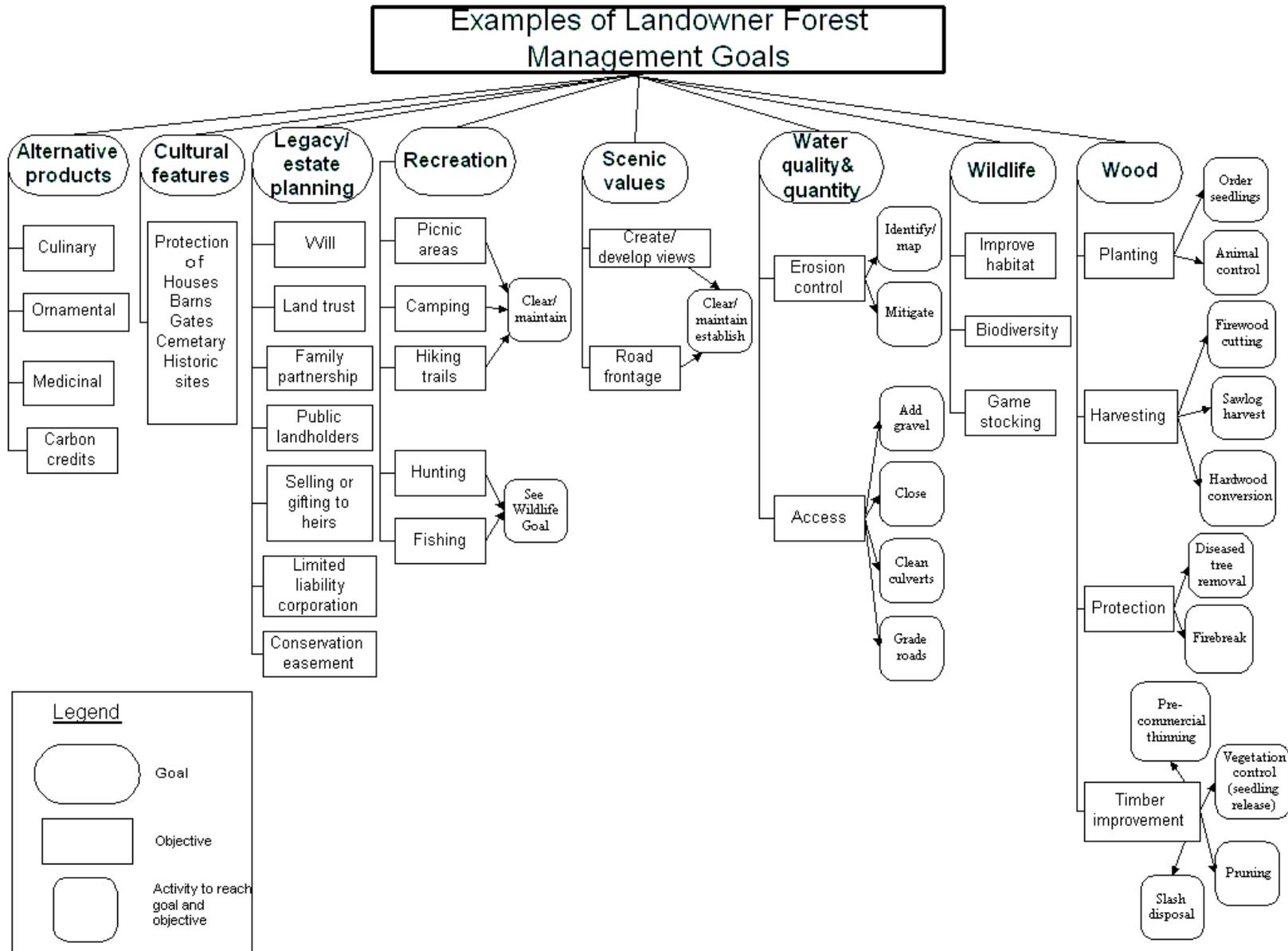
Type of plan	Purpose/Benefits	Reference	Scope	Technical help
<b>Forest stewardship plan</b>  -American Tree Farm  -Oregon Forest Stewardship Plan  -OSU Extension Service Master Woodland Manager Program  -OSU Extension Service Resource Management Plan	<input checked="" type="checkbox"/> Saves time and money and helps avoid costly mistakes that may not be correctable. <input checked="" type="checkbox"/> Basic orientation to forest stewardship. <input checked="" type="checkbox"/> Helps to consider what is on the property. <input checked="" type="checkbox"/> Provides information about forest management, strategies, opportunities, Forest Practices Act Requirements. <input checked="" type="checkbox"/> Handy way to organize your business records and record activities on your property. <input checked="" type="checkbox"/> Helps demonstrate to others your commitment and intent in continued woodlot management. <input checked="" type="checkbox"/> One way to satisfy management plan requirements of forest certification programs such as the Oregon Tree Farm System. <input checked="" type="checkbox"/> Advantage in qualifying for some incentive programs. <input checked="" type="checkbox"/> Information about technical and financial assistance available.	<b>OSU Extension Service publications</b>  <i>-Management Planning for Woodland Owners: Why and How</i> EC 1125  <i>-Management Planning for Woodland Owners: An Example</i> EC 1126  <b>USDA Forest Service</b>  <i>-Forest Landowners Guide to Internet Resources: States of the Northeast</i> <a href="http://na.fs.fed.us/pubs/misc/flg">http://na.fs.fed.us/pubs/misc/flg</a>	Entire forestland	-ODF  -OSU Extension Service  -OSU Extension Service Master Woodland Managers  -American Tree Farm System

Type of plan	Purpose/Benefits	Reference	Scope	Technical help
<b>Farm/Conservation plan</b>	<ul style="list-style-type: none"> <li>☑ Identifies immediate or potential problems that will result in resource degradation and diminished production.</li> <li>☑ Protects soil productivity and water quality.</li> <li>☑ Helps you comply with environmental regulations.</li> <li>☑ Qualifies you for various USDA conservation programs that can help you implement your conservation plan.</li> <li>☑ Adapts to your changing farm or ranch operational goals.</li> <li>☑ Establishes a reasonable schedule for applying conservation practices to fit your timetable and resources.</li> </ul>	<p><b>Natural Resources Conservation Service</b></p> <p><i>-Conservation Planning Investing in Our Future</i></p> <p><b>OSU Extension Service publications</b></p> <p><i>-Farm and Ranch Survival Kit</i>  <a href="http://extension.oregonstate.edu/wasco/smallfarms/RiskManagement.php">http://extension.oregonstate.edu/wasco/smallfarms/RiskManagement.php</a></p>	Agriculture land and forestland-total or partial plan.	NRCS/FSA  SWCD
<b>Wildlife habitat plan</b>	<ul style="list-style-type: none"> <li>☑ Enhance specific wildlife habitat (i.e. big game, waterfowl)</li> </ul>	<p><b>Oregon Department of Fish and Wildlife</b></p> <p><i>-The Oregon Conservation Strategy</i></p>	Specific unit	ODFW USFWS NRCS SWCD

Ref. Management Plans: Tools for Success! Chal Landgren and John Panches Northwest Woodlands-Winter 2007 Volume 23 No.1

# Effective Management Practices

Figure 1: Landowner Forest Management Goals Chart



## How to use SILVICULTURE practices to reach your goals

☞ **More references available through variety of agencies. See contact list for local offices and websites.**

Practice	Explanation	Goal/Use	Technical Reference	Notes
<b>Tree and shrub planting</b>		<b>Wildlife</b> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Create riparian buffer</li> <li>• Enhance wildlife habitat</li> </ul> <b>Wood</b> <ul style="list-style-type: none"> <li>• Control wildlife damage</li> </ul> <b>Water quality</b> <ul style="list-style-type: none"> <li>• Reduce soil erosion</li> <li>• Conserve water</li> </ul> <b>Protection</b> <ul style="list-style-type: none"> <li>• Cultural features</li> </ul> <b>Scenic values</b> <ul style="list-style-type: none"> <li>• Create borders and privacy screens</li> </ul> <b>Alternative products</b> <ul style="list-style-type: none"> <li>• Diversify farm income (berry, nuts, fruits)</li> </ul>	<b>OSU Extension Service publications</b> <ul style="list-style-type: none"> <li>• <i>Successful Reforestation: An Overview</i> EC 1498</li> <li>• <i>Selecting and Buying Quality Seedlings</i> EC 1196</li> <li>• <i>Seedling Care and Handling</i> EC 1095</li> <li>• <i>Guide to Reforestation in Western Oregon</i> <ul style="list-style-type: none"> <li>• <i>Managing Red Alder</i> EC 1197</li> <li>• <i>A Guide to Multifunctional Hedgerows in Western Oregon</i> EM 8721</li> </ul> </li> </ul> <b>USDA National Agroforestry Center(USFS, NRCS)</b> <ul style="list-style-type: none"> <li>• <i>Silvopasture in the Pacific Northwest</i> USDA AF note-26</li> </ul>	A few things to consider when planting: <ul style="list-style-type: none"> <li>✓ Site preparation</li> <li>✓ Control of competing vegetation</li> <li>✓ Stock type (bare root, container, etc?)</li> <li>✓ Density (how many trees per acre?)</li> <li>✓ Tree species (what to grow?)</li> <li>✓ Animal damage control</li> </ul>
<b>Vegetation management (release)</b>	Reduce competing vegetation after planting in order to increase tree survival by allowing better availability of water and nutrients to trees.  Control of unwanted vegetation such as noxious weed.	<b>Wood</b>  <b>Wildlife</b> <ul style="list-style-type: none"> <li>• Biodiversity</li> </ul>	<b>OSU Extension Service publications</b> <ul style="list-style-type: none"> <li>• <i>Introduction to Conifer Release</i> EC 1388</li> </ul>	Keep vegetative competition at a minimum during tree establishment (first 3-5 years).

<b>Practice</b>	<b>Explanation</b>	<b>Goal/Use</b>	<b>Technical Reference</b>	<b>Notes</b>
<b>Fertilization</b>	Trees require many nutrients for sustained growth and reproduction. When certain nutrients are lacking in the soil, fertilization may be able to correct the deficiency.	<b>Wood</b> <ul style="list-style-type: none"> <li>Increase growth rate; tree health and volume of living crown on the tree</li> </ul> <b>Wildlife</b> <ul style="list-style-type: none"> <li>Improve habitat by increasing forage value</li> </ul>	<b>OSU Extension Service publications</b> <ul style="list-style-type: none"> <li><i>Successful Reforestation an Overview</i> EC 1498</li> <li><i>Tree Growth, Forest Management, and Their Implications for Wood Quality</i> PNW 576</li> </ul>	Before beginning a fertilization program, the amount of available nutrients must be determined. A soil sample is recommended. To increase program accuracy, foliar analysis points out nutritional deficiencies caused by soil acidity (pH).
<b>Silvopasture</b>	<p>Production of trees, tree products, forage, and livestock.</p> <p>Timber and pasture are managed as a single integrated system.</p>	<b>Range</b> <ul style="list-style-type: none"> <li>Forage for grazing</li> </ul> <b>Wood</b>	<b>USDA National Agroforestry Center(USFS, NRCS)</b> <ul style="list-style-type: none"> <li><i>Silvopasture in the Pacific Northwest</i> USDA AF note-26</li> <li><i>Silvopasture: An Agroforestry Practice</i> USDA AF Note-8</li> </ul> <b>OSU Extension</b> <ul style="list-style-type: none"> <li><i>Is Agroforestry Appropriate for your Small Farm?</i> Oregon Small Farm News</li> <li><i>Silvopasture in the Pacific Northwest</i> USDA AF note-26</li> <li><i>Silvopasture: An Agroforestry Practice</i> USDA AF Note-8</li> </ul>	More information pertaining to the Pacific Northwest is being developed.

Practice	Explanation	Goal/Use	Technical Reference	Notes
<b>Pre-commercial thinning</b>	<p>Opens up young stands so individual trees grow faster.</p> <p>Controls stand density by removing trees that will die or crowd crop trees before commercial harvesting begins.</p> <p>Leaves more growing space for each tree and usually stimulates forage production for a few years.</p>	<p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Improve habitat</li> <li>• Biodiversity</li> </ul> <p><b>Wood</b></p> <ul style="list-style-type: none"> <li>• Protection(reduce fuel load)</li> <li>• Health</li> <li>• Timber improvement</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• <i>Using Pre- Commercial Thinning to Enhance Woodland Production Woodland Production EC 1189</i></li> </ul> <p><b>NRCS Standard Practice code 666</b></p> <ul style="list-style-type: none"> <li>• Forest stand improvement</li> </ul>	<p>Expect little or no value to be removed.</p>
<b>Selective/commercial thinning</b>	<p>Removes selected trees from a stand to allow others to continue growing.</p> <p>Reduces competition among trees and delays crown recession or natural pruning.</p>	<p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• -Improve habitat</li> </ul> <p><b>Wood</b></p> <ul style="list-style-type: none"> <li>• Timber improvement</li> <li>• Protection</li> <li>• -Health(enhance resistance to insect attack and disease)</li> </ul> <p><b>Recreation</b></p> <ul style="list-style-type: none"> <li>• Create camp site</li> <li>• Create picnic area</li> </ul> <p><b>Alternative products</b></p> <ul style="list-style-type: none"> <li>• Mushroom production</li> <li>• Greenery production</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• <i>Tree Growth, Forest Management, and their Implications Their Implications for Wood Quality PNW 576</i></li> <li>• <i>Thinning Systems for Western Oregon Douglas-fir Stands EC 1132</i></li> <li>• <i>Managing Western Hemlock Forests in the Oregon Coast Range EC 1490</i></li> <li>• <i>Managing Hardwood Stands for Timber Production EC 1183</i></li> <li>• <i>Thinning: An Important Timber Management Tool PNW 184</i></li> </ul>	<p>Expect material to be removed to have some commercial value.</p>

<b>Practice</b>	<b>Explanation</b>	<b>Goal/Use</b>	<b>Technical Reference</b>	<b>Notes</b>
<b>Pruning</b>	Removes lower branches of young trees.	<p><b>Wood</b></p> <ul style="list-style-type: none"> <li>• Protection(increase fire resistance by reducing “fuel ladders”)</li> <li>• Timber improvement (enhance clear wood production and tree value)</li> </ul> <p><b>Scenic values</b></p> <ul style="list-style-type: none"> <li>• Road frontage</li> </ul> <p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Can reduce damage by some wildlife</li> <li>• Improve habitat (enhance grass and forage production)</li> </ul> <p><b>Alternative products</b></p> <ul style="list-style-type: none"> <li>• Bough production</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• <i>Pruning to Enhance Tree and Stand Value</i> EC 1457</li> </ul>	<p>When to prune:</p> <p>Conifers: late summer and early fall, trees will produce only small amounts of pitch and will be less likely to attract insects that can invade wounds.</p> <p>Deciduous trees: late winter or early spring before the leaves appear.</p>
<b>Regeneration harvest (clearcut)</b>	Removes all trees in a single harvest in order to regenerate the forest naturally or artificially (plantation).	<p><b>Wood</b></p> <ul style="list-style-type: none"> <li>• Timber improvement</li> </ul> <p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Improve habitat (create early seral stage habitat type-feeding opportunities)</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• <i>Clearcutting in the Douglas- fir Region of the Pacific Northwest</i> PNW 149</li> </ul>	

Practice	Explanation	Goal/Use	Technical Reference	Notes
<b>Hardwood conversion</b>	Replacement of hardwood stands with conifer because of their greater potential economic return per acre under today's market conditions.	<b>Wood</b>	<b>OSU Extension Service publications</b> <ul style="list-style-type: none"> <li>• <i>Timber Harvesting</i> EC858</li> <li>• <i>Converting Western Oregon Red Alder Stands to Productive Conifer Forest</i> EC1186</li> <li>• <i>Managing Hardwood Stands for Timber Production</i> EC1183</li> <li>• <i>Marketing Alder &amp; Other Hardwoods</i> EC1377</li> </ul>	



Pre-commercial thinning and mechanical release

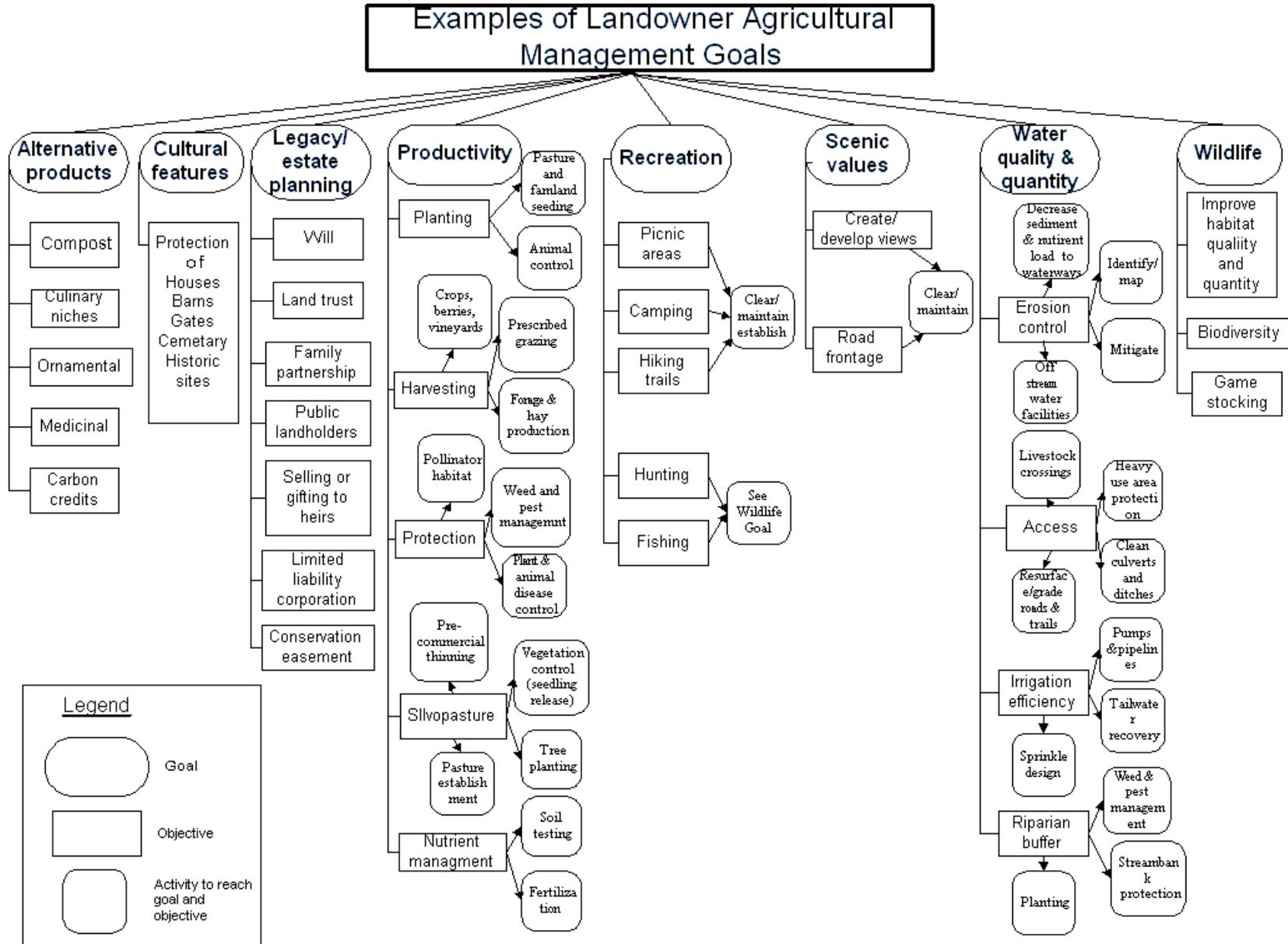


Commercial thinning operation



Planting browsed protected trees after site preparation

Figure 2: Landowner Agricultural Management Goals Chart



## How to Use AGRICULTURAL practices to reach your goals

👉 **More references available through variety of agencies. See contact list for local offices and websites.**

Activity	Explanation	Goal/Use	Technical Reference	Notes
<b>Weed &amp; Pest Management</b>	<p>Controls noxious and undesired weed species by biological, mechanical, or chemical methods.</p> <p>Proper pesticide management minimizes potential hazards.</p>	<p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• -Improve habitat quantity &amp; quality</li> </ul> <p><b>Productivity</b></p> <ul style="list-style-type: none"> <li>• Protection (Improve health &amp; vigor of desired species and enhance resistance to insect attack and disease)</li> </ul> <p><b>Water Quality</b></p> <ul style="list-style-type: none"> <li>• Improves proper functioning condition of riparian buffers</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• <i>PNW Weed Management Handbook</i></li> <li>• <i>Weeds of the West Handbook</i></li> </ul> <p><b>Oregon NRCS publications</b></p> <ul style="list-style-type: none"> <li>• <i>Tips for Small Acreages in Oregon Fact Sheets (online or in office)</i></li> </ul> <p><a href="http://www.or.nrcs.usda.gov/news/factsheets.html">http://www.or.nrcs.usda.gov/news/factsheets.html</a></p> <p><b>Miscellaneous</b></p> <ul style="list-style-type: none"> <li>• <i>Range &amp; Pasture Steward Magazine</i></li> </ul> <p><a href="http://www.dowagro.com/range/resource/rpsteward.htm">http://www.dowagro.com/range/resource/rpsteward.htm</a></p> <p><a href="http://www.dowagro.com/range/">http://www.dowagro.com/range/</a></p> <ul style="list-style-type: none"> <li>• <i>County Weed Advisory Board</i></li> <li>• Pesticide Specialists &amp; Dealers (contact information online or at SWCD offices)</li> </ul>	
<b>Pre-scribed Grazing</b>  (Sample: Rotation methods, Fencing, Increased Watering facilities)	<p>Grazing techniques and related practices that when used together improve the desired forage production to meet landowner objectives.</p>	<p><b>Productivity</b></p> <ul style="list-style-type: none"> <li>• Harvesting (Forage and hay production)</li> <li>• Protection (Improve health &amp; vigor of desired forage species)</li> <li>• Animal Health (Improve health &amp; pounds of production/ acre)</li> </ul> <p><b>Water Quality</b></p> <ul style="list-style-type: none"> <li>• Riparian buffer</li> <li>• Erosion control (Decrease sediment and nutrient loads to waterways)</li> </ul> <p><b>Wildlife</b></p> <ul style="list-style-type: none"> <li>• Improve habitat quantity and quality</li> </ul>	<p><b>OSU Extension Service publications</b></p> <ul style="list-style-type: none"> <li>• Small Farms Newsletter</li> </ul> <p><a href="http://smallfarms.oregonstate.edu/newsletter/index">http://smallfarms.oregonstate.edu/newsletter/index</a>.</p> <p><b>NRCS Standard Practices</b></p> <ul style="list-style-type: none"> <li>• NRCS Prescribed Grazing Practice</li> </ul> <p><b>Oregon NRCS publications</b></p> <ul style="list-style-type: none"> <li>• <i>Tips for Small Acreages in Oregon Fact Sheets (online or in office)</i></li> </ul> <p><a href="http://www.or.nrcs.usda.gov/news/factsheets.html">http://www.or.nrcs.usda.gov/news/factsheets.html</a></p>	

Activity	Explanation	Goal/Use	Technical Reference	Notes
			<b>Miscellaneous</b> •American Cowman <a href="http://www.americancowman.com">http://www.americancowman.com</a> •Forage & Nutrition Groups (Contact SWCD for membership information) •The Grassfarmer-GLCI News (Grazing Lands Conservation)Magazine	
<b>Riparian Buffers</b>	Enhancement or creation of improved buffers along waterways through tree/shrub/vegetation plantings, use exclusion (part-time or total), weed and brush management.	<b>Water quality</b> <ul style="list-style-type: none"> <li>• Erosion control(Decrease sediment and nutrient loads to waterways)</li> </ul> <b>Scenic Values</b> <ul style="list-style-type: none"> <li>• Road frontage</li> <li>• Create/develop views</li> </ul> <b>Recreation</b> <ul style="list-style-type: none"> <li>• Picnic areas, camping, hiking trails, fishing access</li> </ul> <b>Wildlife</b> <ul style="list-style-type: none"> <li>• Improve habitat quantity and quality</li> </ul>	<b>OSU Extension Service publications</b> •Watershed Stewardship EM8714  <b>NRCS Standard Practice</b> •NRCS riparian forest buffers practice  <b>Oregon NRCS publications</b> •Managing Streamside Areas with Buffers (Fact Sheet #5- <a href="http://www.or.nrcs.usda.gov/news/factsheets.html">http://www.or.nrcs.usda.gov/news/factsheets.html</a> )  Seen planting practice on page ____	
<b>Pasture &amp; Hayland Planting</b>	Improve forage production through renovation or introduction of improved cultivars	<b>Productivity</b> <ul style="list-style-type: none"> <li>• Protection (Improve health and vigor of desired forage species and decrease wind )</li> </ul> <b>Water quality</b> <ul style="list-style-type: none"> <li>• Erosion control</li> <li>• Irrigation efficiency (Conserve water)</li> </ul> <b>Wildlife</b> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Improve habitat quantity and quality</li> </ul>	<b>Oregon NRCS publications</b> •Tips for Small Acreages in Oregon Fact Sheets (online or in office) <a href="http://www.or.nrcs.usda.gov/news/factsheets.html">http://www.or.nrcs.usda.gov/news/factsheets.html</a>  <b>OSU Extension Service publications</b> •Pasture and Hayland Renovation for Western Washington and Oregon. EB 1870 •Pastures – Western Oregon and Western Washington. Fertilizer Guide FG 63.	

Activity	Explanation	Goal/Use	Technical Reference	Notes
			<p>•<i>Early Spring Forage Production for Western Oregon Pastures</i>. EM 8852-E.</p> <p><b>Miscellaneous</b></p> <p>•<i>Seed Varieties and Suppliers</i> (SWCD office)</p>	
<p><b>Soil Testing and Fertilization</b></p>	<p>Managing the amount, sources, placement, form and timing of application of nutrients and soil amendments to minimize agricultural non-point source pollution of surface and ground water resources</p>	<p><b>Productivity</b></p> <ul style="list-style-type: none"> <li>• Protection (Improve health &amp; vigor of desired forage species)</li> <li>• Nutrient management (Budget and supply nutrients for plant production, which maintains or improves physical, chemical and biological condition of soil)</li> </ul> <p><b>Water quality and quantity</b></p> <ul style="list-style-type: none"> <li>• Erosion control (Decrease sediment and nutrient loads to waterways)</li> </ul>	<p><b>OSU Extension Service publications</b></p> <p>•<i>Nutrient Management</i> <a href="http://smallfarms.oregonstate.edu/soils/nutrient.php">http://smallfarms.oregonstate.edu/soils/nutrient.php</a></p> <p><b>Fertility Management</b></p> <p><a href="http://smallfarms.oregonstate.edu/pasture/fertility.php">http://smallfarms.oregonstate.edu/pasture/fertility.php</a></p> <ul style="list-style-type: none"> <li>• Western Oregon &amp; Washington Fertilizer Guide</li> <li>• Soil Testing Home Page--Forage Information System</li> <li>• Timing of Nitrogen Fertilizer for Oregon Pastures</li> <li>• Pastures: Western Washington and Western Oregon Fertilizer Guide</li> <li>• Soil Test Interpretation Guide</li> <li>• Assessing the Pasture Soil Resource (ATTRA)</li> </ul> <p>Nutrient Cycling in Pastures (ATTRA)</p> <p><b>NRCS Standard Practice</b></p> <p>•<i>NRCS Comprehensive Nutrient Management Practices</i></p> <p><b>Miscellaneous</b></p> <p>•<i>Small Farm Fact Sheets</i></p> <p><a href="http://www.lpes.org/SmallFarms.html">http://www.lpes.org/SmallFarms.html</a></p>	

Activity	Explanation	Goal/Use	Technical Reference	Notes
<b>Silvopas- ture</b>		See Silvopasture practice on page ____		
<b>Sprinkler design; Tail water recovery; Pumps and pipelines</b>	Determine and control volume, frequency, and application rate of irrigation; minimize agricultural non-point source pollution of surface and ground water resources.	<b>Productivity</b> <ul style="list-style-type: none"> <li>• Protection (Improve health and vigor of desired forage species)</li> </ul> <b>Water Quality</b> <ul style="list-style-type: none"> <li>• Irrigation efficiency</li> </ul>	<b>OSU Extension Service publications</b> <ul style="list-style-type: none"> <li>• <a href="http://smallfarms.oregonstate.edu/newsletter/index">http://smallfarms.oregonstate.edu/newsletter/index</a>.</li> </ul> <b>Oregon NRCS publications</b> <ul style="list-style-type: none"> <li>• Tips for Small Acreages in Oregon Fact Sheet #14 Planning and Managing Irrigation (online or in office) <a href="http://www.or.nrcs.usda.gov/news/factsheets.html">http://www.or.nrcs.usda.gov/news/factsheets.html</a></li> </ul> <b>Miscellaneous</b> <ul style="list-style-type: none"> <li>• <i>K-Line Irrigation-New Tool for Producers</i> <a href="http://k-linena.com/">http://k-linena.com/</a></li> </ul>	

K-line  
irrigation  
system



Tailwater recovery system  
under construction



Rotational grazing

## Road Management

Investment now = savings later

### Benefits of Proper Road Maintenance

#### Landowner:

- Prevents need for continuous repairs or major reconstruction projects
- Prevents road closures
- Reduces hauling costs for commercial activities
- Decreases wear and tear on vehicles

#### Streams:

- Reduces delivery of sediments that cause turbidity (suspension of fine sediments in the water column)
- Prevents road-related landslides which can change channel morphology (structure)

#### Fish Health:

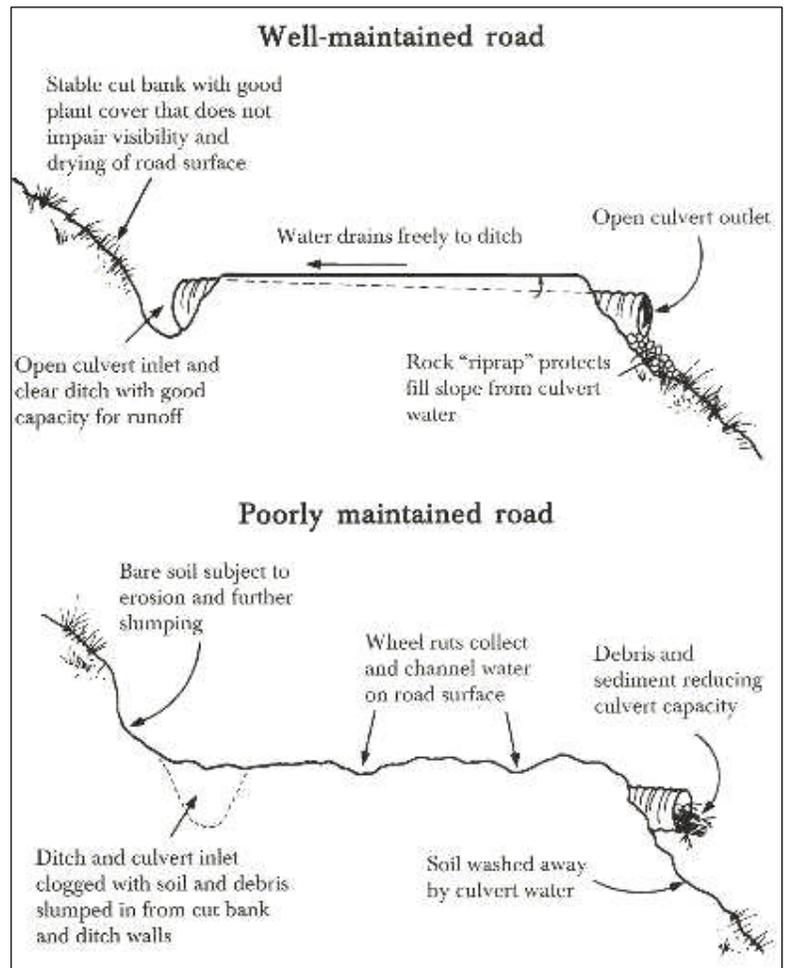
- Reduces turbidity which causes gill abrasion, clogs resting pools and smothers fish eggs

Good road design and maintenance is quite possibly one of the smartest investments of time and money a landowner can make. Proper maintenance usually pays for itself over time through decreasing the need for additional surface rock, minimizing the potential for road fill failures or stream crossing washouts, and reducing wear and tear on vehicles. Reliable, efficient and safe access to your property also saves time and headaches – especially if you are conducting commercial activities on your land. Also, since roads are one of the greatest potential sources of sediment to stream channels - as well as one of the chief barriers to fish passage - quality road design and maintenance can help keep water clean and promote healthy fish populations.

### Maintaining your existing road

Good road maintenance essentially boils down to managing the road's interaction with water – water draining from the road surface and water where the road intersects streams or groundwater seeps. For existing roads, it's best to start with an assessment of the road's condition to gain an understanding of how it is currently handling this interaction. Conducting an analysis will help to identify potential problems and can even give you a sense of how well your road system might perform during a large (i.e., 25- or 50-year) storm event. Helpful tools for conducting a road inventory include the *Forest Road Hazard Inventory Protocol* available from the Oregon Department of Forestry (ODF) and OSU Extension's *Checklist for Storm-proofing Rural Roads*. For specific questions, or for help with roads in sensitive areas, contact the Department of Forestry or your local watershed council/ association.

With road inventory in hand, you are ready to develop an efficient maintenance program. The following pages highlight some examples of best management practices to include in your program. There are also two excellent guides for understanding all aspects of good road



Examples of some important differences between well-maintained and poorly maintained woodland roads. OSU Extension Service- *The Woodland Workbook- Planning Woodland Roads*

management and developing a comprehensive maintenance program: the *Forest Road Management Guidebook* published by ODF, and *Oregon's Forest Protection Laws*, published by the Oregon Forest Resources Institute (OFRI). OSU Extension also has several helpful publications in addition to their road checklists.

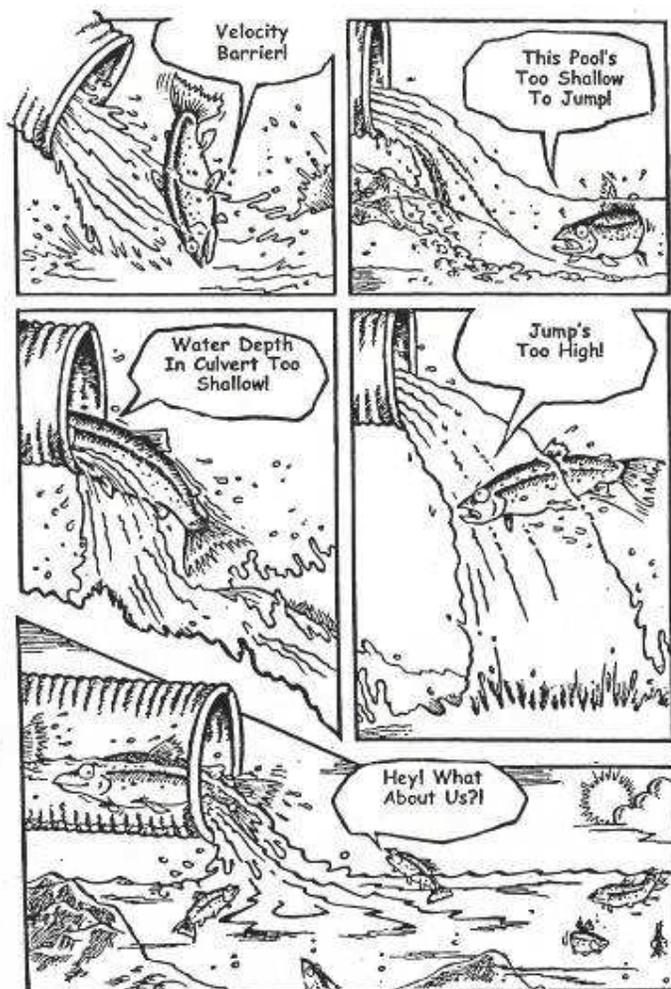
### **Constructing a new road**

As one landowner put it, “it costs just as much in the long run to put in a bad road as it does to put in a good road.” Putting in a new road that will provide years of reliable service and protect water quality requires careful planning and good design. The savvy landowner will do his homework to get the best in design assistance and to find a good contractor. Again, the *Oregon's Forest Protection Laws* guidebook is a great place to start. It will acquaint you with some of the principles and rules governing new road construction - knowledge which will come in handy when reviewing designs and choosing a contractor. *Note: For additional information on choosing a contractor, see the Choosing a Contractor section.*

### **Roads and fish**

Many existing roads were built in the days before there was much knowledge about fish habitat - especially the ability of fish to move through culverts. The squeezing of streams into inadequately-sized and/or poorly placed culverts has had a dramatic affect on fish populations - namely the cutting off of access to many miles of spawning and rearing habitat. Landowners pay a high price, too, when roads wash out or collapse because undersized culverts are unable to handle high flows.

Things are looking up, though, as more and more landowners partner successfully with various agencies to install stream crossing structures that protect the integrity of their road and increase access to high quality fish habitat. All stream crossing projects must now be reviewed and approved by the Oregon Department of Fish and Wildlife (ODFW) - ensuring that designs are appropriate for fish-bearing streams.



Culverts under roads can block fish passage through a number of factors, including excessive water velocity, insufficient depth, excessively high jumps, or a combination of these factors. *Reprinted by permission of Oregon Forest Resource Institute*



Before installation of fish friendly culvert



After newly installed culvert

For more information about agencies that provide assistance with culvert design, please refer to the *Resource Planning: Farm/Forest* column in the *Landowner Assistance* table on page 43. Both the *Forest Road Management Guidebook* and the *Oregon's Forest Protection Laws* manual also provide excellent information about stream crossing designs.

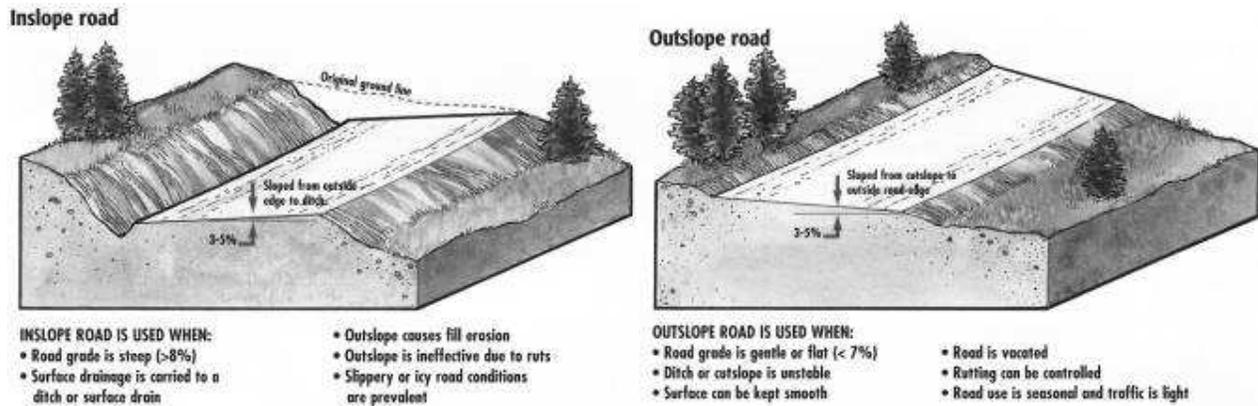
#### **Contact Agencies**

- Oregon Department of Forestry (ODF)
- Oregon Forest Resource Institute (OFRI)
- Oregon Department of Fish & Wildlife (ODFW)
- OSU Extension Services
- Watershed Councils/Associations

*Note: additional sources of technical assistance can be found in the Resource Planning: Farm/Forest and Funding and Cost-share sections of the Landowner Assistance table on page 43.*

## Nine Ways to Protect Your Road Investment and Keep Streams Clean

- ◆ **1. Maintain the road shape** (insloped or outsloped) so water is shed efficiently from the road surface. This prevents premature replacement of surfacing and reduces grading costs.



*Reprinted by permission of the Oregon Forest Resource Institute*

- ◆ **2. Install enough ditch relief culverts\*** between stream courses to prevent an over-concentration of water in the ditch line. Water concentrated in the ditch for too long can increase erosion in the ditch and the receiving stream channel.

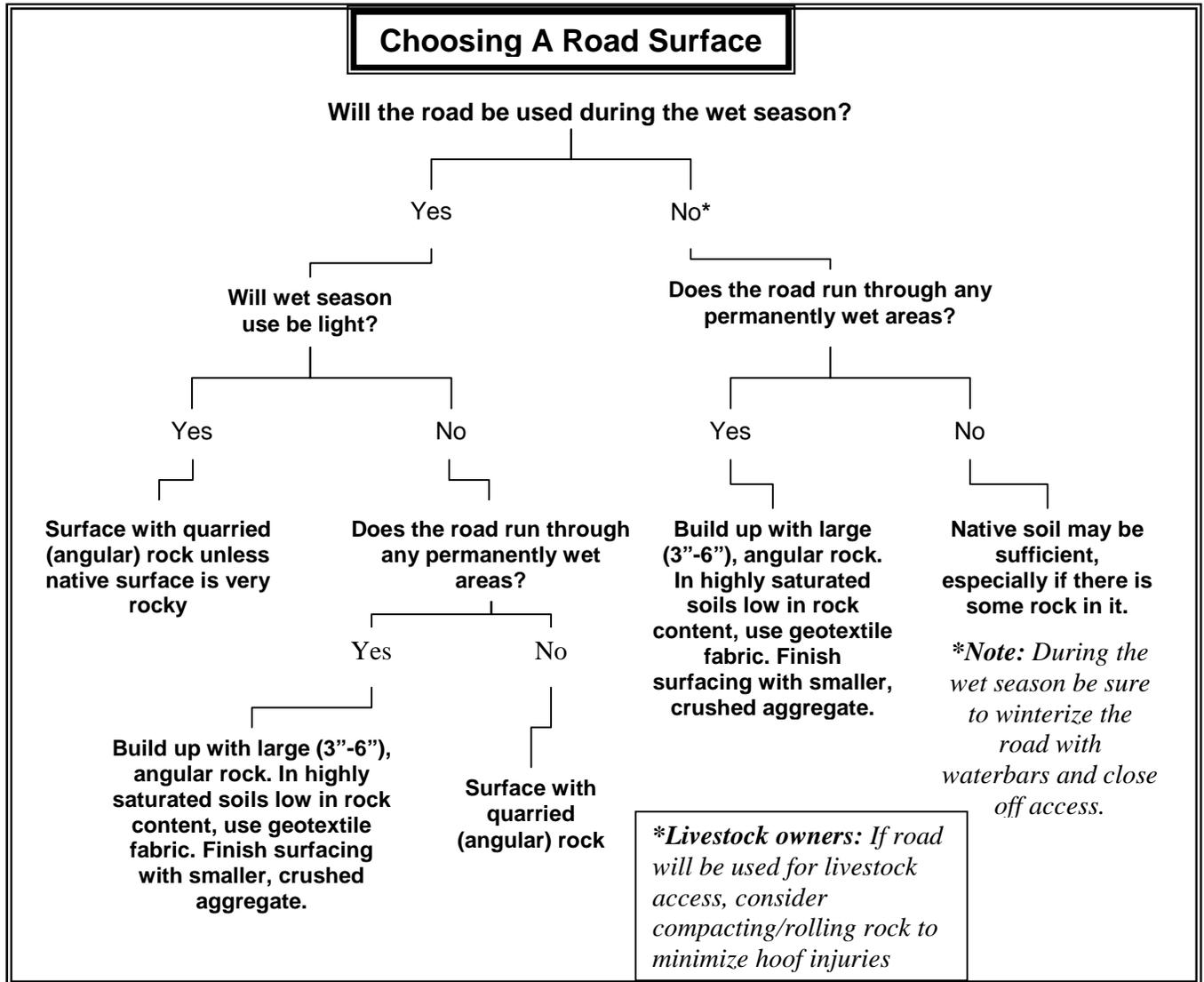
*\*culverts under the road that move water from the ditch on the uphill side onto a stable area on the downhill side. These also prevent water from crossing the road surface and softening the roadbed*

- ◆ **3. Maintain functional ditch lines**, but do not clean too often. Cleaning exposes the soil, which leads to turbid water. When ditches are cleaned, place a **silt barrier device** (i.e., straw or hay bale) in the ditch line before it enters either a live stream or spring.

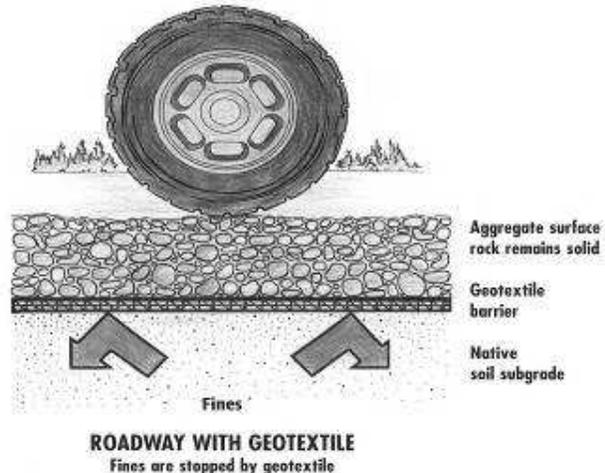
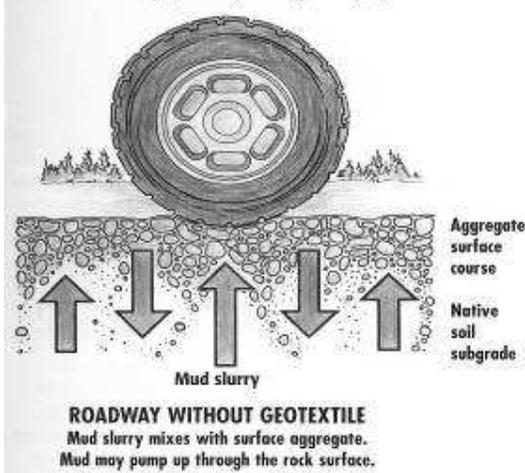


**Improperly drained road causing rutting and sediment delivery to stream**

◆ 4. Maintain adequate surface rock for wet season use.



Geotextiles can keep weak or wet subgrade soils from moving into the road base rocklayer, reducing its weight-carrying effectiveness.



Reprinted by permission of Oregon Forest Resource Institute

◆ **5. Winterize non-rocked roads with water bars and other temporary drainage devices.** Properly constructed water bars should be at a 30 degree or greater angle to the road, and constructed across the entire cross section of the roadway and shoulder to assure proper drainage. Spacing will depend on the native soil, the road's steepness (slope), and how much rain the area receives.

◆ **6. Know where streams and springs are located, and monitor the road to ensure the road runoff is not adding turbid water or large volumes of sediment to the stream/spring**

◆ **7. Where groundwater and streams intersect the roadway, install culverts or other drainage structures instead of diverting water down the ditch.** This prevents eroding of the ditchline and the potential for saturation of the fill which leads to landslides and/or loss of culverts. For fish-bearing streams, be sure to install culverts that allow fish passage.

**Road vocabulary**

**Water bar:** structure installed in the road surface to divert road surface water off of the road. Water bars are constructed from subgrade soil or other materials, such as rubber strips and timber.

**Subgrade:** The layers of roadbed on which the base of the surface course are placed. On an unsurfaced road, the finished subgrade is the wearing surface (top layer of road's surface).

◆ **8. Check culverts throughout the winter to ensure they are functioning.**

◆ **9. Avoid disposing ditch spoils, slide debris, or other soil/rock material over the edge of the road if the slope below is over 50%.** This decreases the risk of slope failure.

## Large Wood Structures

### Yesterday's Trash is Today's Treasure



Before large wood placement

logs, branches, and roots influence stream health in several ways. For example, a rich variety of bugs known as *macro-invertebrates* feed on the leaves, twigs, and other organic matter trapped by the wood. These macro-invertebrates are a vital food source for emerging juvenile salmon. The wood also helps slow the water down – improving water quality by allowing suspended sediments to settle out, and providing welcome resting areas for migrating fish. It traps and sorts the gravels used by fish for spawning, and also helps create deep pools which provide the cold water areas and protection from predators so essential to the survival of young salmon during the hot months of summer and early fall.

Many long-time landowners on the south coast still remember the days when agencies actively promoted the removal of wood from stream channels. At the time it was believed that the large “jams” created by logs and the debris that would collect around them were an obstacle to fish attempting to move upstream to spawn. As time went by, however, it became increasingly clear that removing wood was actually causing more harm than good to fish populations and the overall health of the stream. Why? It turns out those messy-looking piles of



After large wood placement



Large wood placement in low land stream

Armed with this new understanding, agencies and landowners are partnering together on large wood placement projects to help “jump start” degraded stream channels until wood can be delivered to the stream naturally from the adjacent riparian and upslope areas. Cut logs or whole trees with roots and branches are placed directly into the stream and/or floodplain to mimic what would happen naturally. Sometimes trees of adequate size available outside of the riparian buffer are simply pulled over straight into the stream channel, but if there are no trees available on site, logs are brought in from offsite. Trees with root wads are especially valuable as they supply excellent cover habitat for fish and cause the stream to scour out deep pools as the water flows

around the root wad. Root wads also add considerable weight compared to a cut log, which decreases the chance of the log moving.



Although they are an excellent way to speed up the recovery process for damaged streams, large wood placement projects are challenging and not without risk. Streams and rivers are dynamic systems, and any activity that affects how water moves in the channel will trigger changes both upstream and downstream of that activity. Many different factors must be taken into account when designing and implementing a large wood placement project, so technical assistance is a must. Landowners should have a clear understanding of their goals and objectives, too, and make sure the agency or contractor they are working with is willing to take those into account when designing the project. A

good place to start is with your local watershed council/association, or with the Oregon Department of Fish & Wildlife (ODFW). Please see the agency list on page 45 for contact information.

*Note: Obtaining the necessary permits for instream projects is a complicated process that can take months to complete, depending on the complexity and location of the project. Working through this process with the help of a technical assistance provider is highly recommended.*

Maleki, S.M., B.L.K. Rigger. 1999. Watershed Restoration Inventory. Monitoring Program Report No. 1999-2 to the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon.

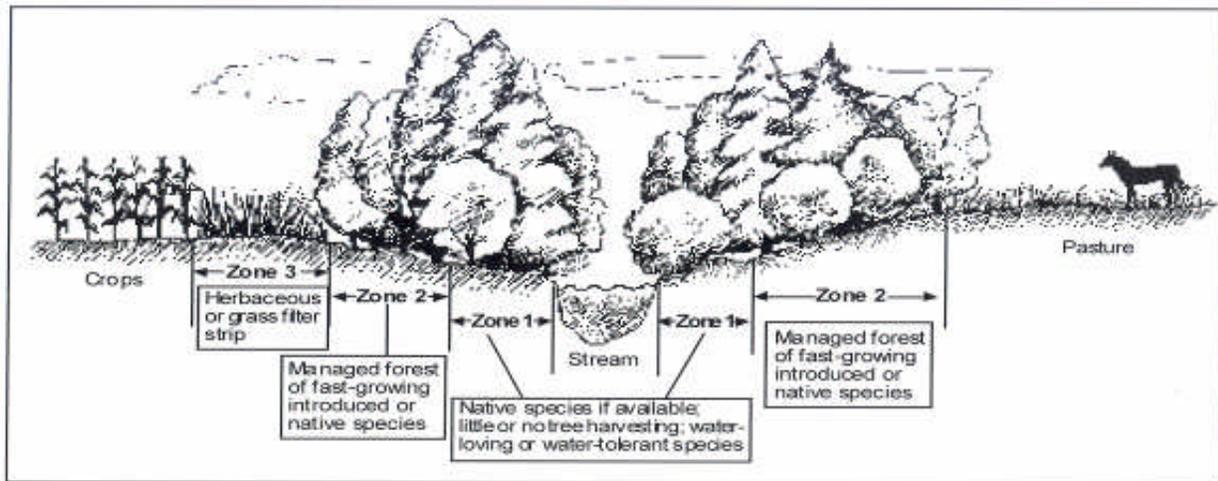
Oregon Department of Forestry and Oregon Department of Fish and Wildlife. 1995. A Guide to Placing Large Wood in Streams.

#### **Contact Agencies**

- ❖ Oregon Department of Fish & Wildlife (ODFW)
- ❖ Watershed Councils/Associations

## Riparian Area Management

“Riparian” is the term used for the vegetated areas along the edges of naturally occurring water bodies (streams, lakes, ponds, springs, rivers and wetlands). They vary in width and are often identified by a change in vegetation type. Riparian areas serve as a kind of mediator between the water body and adjacent land. At the water’s edge, the trees, shrubs and grasses protect the land from eroding by providing “drag” to reduce the speed of the water, redirecting water flows, and perhaps most importantly, holding the bank soils through a tightly woven root system. The riparian area captures surface runoff - trapping sediment and manure, filtering out pesticide runoff, and trapping and retaining excess nutrients such as nitrogen and phosphorous. Riparian vegetation also increases water infiltration into the surrounding soils, which recharges the water table and sets up a “savings account” of water for release during the dry season.



Riparian areas provide important habitat for many types of wildlife – humans included! The canopy provides shelter and shade, creating migration corridors and relief from the heat for land species, nesting sites for birds, and cool water temperatures for fish. Leaves and needles fall to the ground and are incorporated into the soil or are consumed by a variety of bugs which, in turn, become food for fish, birds, and other wildlife. Trees that eventually fall into the stream create resting pools and cover for fish (see the *Large Wood Structures* section to learn more about the role of trees in the stream channel).

Historical land use patterns have resulted in negative impacts to many riparian areas throughout both counties, but that trend is changing as landowners discover the many benefits of healthy riparian systems and explore ways to incorporate them into their management goals. Drive around both counties and you will see signs of riparian management projects: the new fence along a creek, crooked rows of blue tubes with tiny trees poking out of them, livestock drinking from a new off-stream watering system, fuzzy ranks of trees where once only tangles of blackberries grew...all evidence of the growing effort to restore these areas now recognized as one of the key contributors to healthy watersheds.

## Restoring your riparian areas

For landowners looking to restore their riparian areas, it pays to do some careful planning before jumping into a project. A successful riparian restoration project isn't simply a matter of fencing out livestock and planting a few trees. There are many other details to consider including the qualities of the site, the appropriate types of plants for the site, a good source for those plants, establishing a planting timeline, preparing the site for planting, developing a maintenance program, etc. Agencies such as soil and water conservation districts or local watershed councils/associations are excellent resources for assistance with this process. These organizations can provide help in many ways - from project design to seeking out partial project funding through grants or other programs to providing good, old-fashioned labor for planting trees and building fence. Landowners can also consult the *Coastal Oregon Riparian Silviculture Guide* published by the Coos Watershed Association. This detailed guide provides technical guidance for all aspects of planning, maintaining, and monitoring your project.

## Maintaining your restored or intact riparian areas



**Site preparation, December 2001**

In areas where commercial activity is a management goal, both intact and restored riparian areas come under the rules of the Oregon Forest Practices Act. The *Oregon's Forest Protection Laws* guide put out by the Oregon Forest Research Institute (OFRI) is an excellent resource for understanding these rules. Each county has zoning ordinances (Coos: Article 4.5, Section 4.5.180; Curry: Article III, Section 3.280) as well as county Agricultural Water Quality Management Plan and Rules (AgWQMAP & Rules) governing activities in riparian areas.

Routine maintenance will include such activities as oversight of livestock access through fence maintenance or carefully controlled grazing programs, periodic thinning to encourage growth, interplanting with other native species to increase habitat complexity and the variety of wildlife using your riparian area. Looking for and treating weed infestations will also be part of maintaining your investment. The silviculture practices table on pages 8 through 12 contain technical references for several management activities that work for riparian maintenance and enhancement, too (i.e., pruning, planting, pre-commercial thinning, etc.).



**Intensive vegetation management leads to successful establishment of trees, January, 2007**



**Proper functioning riparian buffers**

**Contact Agencies**

- Coos Soil & Water Conservation District (SWCD)
- Curry County Soil & Water Conservation District (SWCD)
- Watershed Councils/Associations
- Farm Service Agency (FSA)
- Oregon Department of Agriculture (ODA)
- OSU Extension

**Helpful Publications**

- *Oregon's Forest Protection Laws* (email <info@ofri.com> or contact Ellen Clarke at (971) 673-2949)
- *Coastal Oregon Riparian Silviculture Guide* (Available through the Coos Watershed Association and online at [www.cooswatershed.org/publications.html](http://www.cooswatershed.org/publications.html))
- *Watershed Stewardship: A Learning Guide*, Section III, Chapter 1: "Riparian Area Functions and Management" by John Runyon, David Hibbs, and Tara Nierenberg (OSU Extension)
- *A Soil Bioengineering Guide for Streambank and Lakeshore Stabilization*, chapter. 2: "The Riparian Ecosystem," C. Ellen Eubanks, Dexter Meadows, and Jill S. Cremer for US Dept of Ag Forest Service Technology and Development Program

## Help! My Land is Washing Away!

Dealing with stream bank erosion is a highly complicated issue for both landowners and technical assistance providers. Rivers and streams are dynamic systems constantly adjusting to changes in flow and the amount of debris or sediment they are carrying. Erosion is a natural part of a stream's efforts to slow itself down in order to accomplish its work of transporting sediment and debris throughout the watershed. Erosion also occurs in response to any changes in the stream's shape. This makes it very difficult to determine what is causing "problem" erosion. Installing structures that attempt to permanently prevent a stream from adjusting its shape is problematic, too. Experience has shown the stream will simply start adjusting upstream and/ or downstream of the project.

Often the stream is left to make its adjustments without interference. There are times, however, when intervention is necessary. In order to design a "fix," a detailed investigation of the site needs to be performed and a comprehensive plan designed to treat the cause without creating impacts to neighboring properties.

Since streams are constantly responding to changes in the characteristics influencing their shape, it is important that the design take into account all the characteristics influencing that particular stream. These services should be performed by a hydrologist, engineer, geologist or other professional trained in stream processes and experienced with these types of projects. Providing the appropriate fix can save time and money, and is best for the long-term health of the stream.

### *Some characteristics that influence a stream's shape:*

- Steepness of the channel (gradient)
- Amount of water moving through the channel at any given time
- Materials in the streambed and banks (boulders, tree roots, sand, gravel, etc.)
- Amount of sediment (silt, clay, sand, gravel, cobble, and boulders) moving through the channel
- Width of the channel compared to depth (width-to-depth ratio)
- Amount and type of riparian vegetation (the plants growing next to the stream such as trees, shrubs, and grasses)

### **A Stream at Work**

In order to accomplish its work of transporting sediment throughout the watershed, a stream needs to manage its energy. Here are some ways land and water work together to make that happen:

*-Instream structures:* trees, root wads, boulders, branches, etc. all help the water use up (dissipate) energy as it flows over, through, around, and under them.

*-Meandering:* in lower gradients a stream wanders from side to side, dissipating energy by forcing the water around the bends and by friction against the bed and banks of the stream.

*-Floodplains:* these flatter areas allow the stream to spread out during higher flow events, slowing the water down and allowing sediment to drop out. They also act as a sponge, absorbing water then slowly releasing it as the flood recedes.

#### **To Learn More:**

Ellis-Sugai, Barbara and Derek C. Godwin. *Going With the Flow: Understanding Effects of Land Management on Rivers, Floods, and Floodplains*. Corvallis: Oregon State University, 2002

### So What Can I Do?

- Encourage growth of appropriate riparian vegetation. Vegetation along the streambank provides friction that helps the stream slow down, and the roots help hold bank soils. (*Note: discourage establishment of invasive species such as Himalayan blackberry and Japanese knotweed. These types of plants do not increase bank stability*). See the *Riparian Management* section for more information.
- Storm proof roads to minimize sediment delivery. More sediment than a stream is adapted to transport will cause increased erosion. See the *Road Management* section for more information.
- Utilize best management practices (i.e., pasture management) to minimize soil compaction. This reduces excess surface runoff and improves water infiltration.
- Promote activities that help reconnect channels with floodplains. This will help the stream use up energy and deposit excess sediment. It also helps to recharge aquifers and increase summer moisture and pasture productivity.
- Take the stream's history into account when planning land use projects. Historical aerial photographs of your property can help show how the stream moves around over time. Allowing for probable stream movement can improve the chances of success of your new project.
- Remember that your property is just one point in a dynamic system. Upstream and downstream landowners can also be affected by your actions.



**Eroding bank, fall 2003**



**Two years after planting willow stakes,  
December 2005**

## Weed Management

A weed is defined as a plant growing in a place in which it is not wanted. By that definition almost any plant could be classified as a weed if found growing in an unwanted place! Some plants are classified as weeds because they are poisonous to animals and humans and are undesirable because of their toxicity. However, most plants are classified as weeds because they are persistent and hard to keep out of a garden, lawn, or field.

Steve Dewey of Utah State University has described invasive noxious weeds as a raging biological wildfire—out of control and spreading rapidly. The devastation from these alien plants includes enormous economic losses to agriculture and irreparable ecological damage to wildlands. Millions of acres have been invaded or are at risk, including forests, farmland, wilderness areas, national parks, recreation sites, and wildlife management areas.

Noxious weeds can drastically affect wildland plant and animal communities, damage watersheds, increase soil erosion, and adversely impact recreation. Lands invaded by noxious weeds don't return naturally to their pre-invasion condition. Weeds continue to spread and the damage worsens if action isn't taken.

Effective weed management is accomplished by the balanced implementation of **Prevention, Detection, Suppression (Control)** and **Revegetation**, the same elements used in wildfire management.

### Prevention

Prevention is the most effective and least costly form of weed control. Weed prevention means placing a priority on protecting and preserving lands not presently infested. Education and regulation are key ingredients needed to raise public awareness and gain greater support for weed prevention. Land managers and the general public need to recognize the adverse effects of noxious weeds, and become involved in efforts to reduce spread. Along with landowners, informed hikers, campers, hunters, bikers, 4-wheelers, and other recreationists can do much to prevent the spread of weeds. (i.e. cleaning equipment before leaving an area, packing in weed-free feed, etc.) Every landowner should have a weed management plan and budget for continuing education and active prevention.

### Detection

Know your enemy! Weed detection requires field surveys or “scouting”, and the ability to recognize and report targeted noxious weeds. Landowners are encouraged to learn to identify plants common to the area. For example, effective control of a perennial thistle, such as Canada thistle, differs greatly from control of the similar-looking, but annual, Italian thistle. A few good sources for information on weeds and plant identification include OSU Extension, the local County Weed Advisory Board, Bureau of Land Management, U.S. Forest Service, your local Soil and Water Conservation Districts, and the internet.



Canada Thistle is declared a "noxious weed throughout the U.S. and has long been recognized as a major agricultural pest, costing tens of millions of dollars in direct crop losses annually and additional millions in costs for control.

Photo Credit & Org: John M. Randall, The Nature Conservancy, Davis, CA

## **Suppression (Control)**

The same four-step approach used to control wildfires can also be used to control noxious weeds

1. *Rapid Response:* Control of noxious weeds is often postponed until infestations have covered hundreds or thousands of acres and are beyond hope of eradication. Adopting a rapid response attitude about new noxious weed infestations is vital to success and greatly reduces the cost of control.
2. *Size-Up:* Developing a weed management plan is essential to maximize treatment efficiency and increase chances of success. Plans should include information such as size of infestation, direction and rate of spread, location and value of threatened resources, and potential control constraints (i.e., terrain, accessibility, safety, method restrictions, budget, etc.).
3. *Containment:* Efforts should always be focused on stopping the advancing perimeter before controlling the interior of an infestation. If full containment is not practical, the goal is to stop spread on one or two sides to protect the most valuable resources. **Resist directing most or all control efforts at the core of a large weed problem. Ignoring the need for perimeter containment and control of isolated spots allows the spread to continue as if nothing had been done.**
4. *Mop-Up:* Mop-up means total eradication – killing every weed and exhausting the soil of all weed seeds. Failure to fully mop up any weed infestation essentially guarantees its eventual re-establishment and spread. For some weed species mop-up may need to continue for decades, so the effort needed for eradication may be justified only for relatively small patches or along containment edges of larger infestations.

## **Revegetation**

The fourth fundamental of weed management should place an emphasis on revegetation following control. Having healthy, vigorous perennial plants that provide competition for the space, moisture, and nutrients is the best way to protect sites from reinvasion.

## Summary



**Poison Hemlock** All parts of the plant are poisonous, humans are usually poisoned when mistaking the plant for wild parsley. A lethal dose for a horse is 4 to 5 pounds of leaves, cattle may be poisoned with 1 to 2 pounds, and sheep with a half pound or less.  
Credit & Org: A Guide To Selected Weeds Of Oregon, Published by the Oregon Department of Agriculture, 1985

Listed resource agencies such as SWCDs, NRCS, and OSU Extension can help you develop a comprehensive weed management plan. An Integrated Pest Management (IPM) plan will utilize environmentally sensitive prevention, avoidance, monitoring and suppression strategies to manage not only weeds, but also insects, diseases, animals and other organisms that directly or indirectly cause damage or annoyance. IPM is a sustainable approach to pest control that combines the use of prevention, avoidance, monitoring and suppression strategies to maintain pest populations below economically damaging levels, minimize pest resistance, and minimize harmful effects of pest control on human health and environmental resources. IPM suppression systems may include biological controls, mechanical/cultural controls, and if selected, the judicious use of chemical controls. If

using chemical controls, remember “the label is the law” as far as what, when, where, and how to use the control, and also requires compliance with the ODA Pesticide Use Reporting System (PURS) guidelines.

### Contact Agencies:

- Coos Soil & Water Conservation District (SWCD) – weed identification; Integrated Pest Management (IPM) plans
- Curry Soil & Water Conservation District (SWCD) – weed identification
- Coos Weed Advisory Board – weed identification information
- Curry Weed Advisory Board – weed identification information; IPM plans
- Natural Resource Conservation Service (NRCS) – weed identification; IPM plans
- OSU Extension Services – weed identification; IPM plans
- Bureau of Land Management (BLM) – weed identification
- US Forest Service – weed identification

## Wildlife Habitat

*Over 40 percent of Oregon's wildlife habitat is found on non-federal lands.*

One of the benefits of living in the country is having an abundance of wildlife. This is certainly true of rural life in Coos and Curry counties. The diversity of Oregon's south coast landscapes supports a wide variety of plant and animal species, some of which are threatened or endangered. Natural resource conservation on these lands goes hand-in-hand with the enhancement of wildlife and native plant habitat throughout the state.

As a rural landowner, whether you live on a small parcel or a large ranch, you can apply a number of simple practices to enhance the natural habitat and diversity of wildlife on your property. A mix of native vegetation and a reliable water source are the basic elements needed for good wildlife habitat. The type of plants you use to provide food and cover will determine the type of wildlife species that are attracted to your property.

### **Practices that Improve Habitat**

- ◆ *Establishing stream buffers*
- ◆ *Restoring wetlands*
- ◆ *Controlling weeds*
- ◆ *Removing fish passage barriers*
- ◆ *Managing domestic animals such as livestock, dogs, cats, etc.*

### **Techniques for Attracting Wildlife**

- ◆ *Plant native plant species. Wildlife prefers them to non-native species.*
- ◆ *Plant a diversity of vegetative types and heights.*
- ◆ *Select plants that flower and bear fruit at different times of the year.*
- ◆ *Leave snags and some downed, woody material for perching, hiding and nesting.*
- ◆ *Plant small grains or large-seeded grasses for wildlife food.*
- ◆ *Develop wildlife and off-channel watering facilities.*
- ◆ *Install bat boxes and bird houses to encourage those species that often feed on insect pests.*



Planting native plants and installing bird boxes are some activities that can attract wildlife on your property.

**How Good is My Place for Wildlife Habitat?**

Local agencies can assist you with a detailed wildlife habitat evaluation of your property and help you plan and implement improvements for general wildlife or specific species. The following table outlines some basic wildlife habitat assessment items that can help you determine the existing and potential wildlife habitat of your property.

- |   |
|---|
| <p><b>Agencies for Technical Assistance</b></p> <ul style="list-style-type: none"> <li>• Oregon Department of Fish &amp; Wildlife (ODFW)</li> <li>• OSU Extension Service</li> <li>• Soil &amp; Water Conservation Districts (SWCDs)</li> <li>• Natural Resources Conservation Service</li> <li>• Local wildlife societies</li> </ul> |
|---|

Habitat element	Goals
Forest or Trees/shrub Areas	Diversity of tree and shrub heights, diameters and species. Is there a mix of ground cover, understory, and canopy species? The more diverse, the better wildlife habitat potential.
Snags	Optimum goal is 5 snags/acre
Openings	Openings (<500' across) - including infrequently used roads - that offer a mix of grass, forbs, and shrubs.
Human Disturbance	Habitats benefit with distance from human disturbance
Temporary & permanent wildlife water	Natural or developed water facilities less than ¼ mile in any direction is optimum.
Pastures & Cropland quantity, quality	Vigorous and diversified vegetated cover of grasses & forbs
Interspersion of Habitat elements	Optimum is a mix of habitat element types <200'



## Value and Protect Oak Savannas and Woodlands

**Oak woodland:** Stands of deciduous or mixed deciduous/conifer trees with a generally continuous or semi-open canopy.

**Oak savanna:** Oak savanna: Typically an upland prairie with scattered oak trees.

Once upon a time, oak woodlands and savannas served as prime hunting grounds and plant gathering areas for the Native American tribes. The tribes actively managed these sites by setting fire to the rolling prairies and savanna each fall to protect the areas from encroachment by the surrounding conifer forests. This practice declined with the arrival of the first settlers in Oregon. As a result, these richly varied, unique systems were either overtaken by the surrounding forests or, more commonly in the Valley, replaced by agricultural fields and suburban homes. Today, White oak savannas and woodlands are among the most endangered ecological communities in the Pacific Northwest.

*Other common trees that occur with oaks are Douglas fir, grand fir, Pacific madrone, big leaf maple and Oregon ash. Native shrubs include poison oak, oceanspray, hazel and serviceberry.*

Why work to preserve them? These areas provide many benefits to present day landowners. For starters they support communities of plants and animals unlike any others found in the conifer forests or agricultural areas surrounding them. At least a couple hundred species of native wildlife occupy these systems, and the native plants are very attractive to game species such as deer, elk and wild turkeys. Cooling effects from the spreading canopies and water evaporation from the leaves provide high quality protection for livestock during the hot summer months. And white oaks are well adapted to survive ground fires, making them less likely to burn than the encroaching conifers during a wildfire.

Oregon white oak is the most widely distributed oak in the Pacific Northwest and can be found on a wide range of soils and topographic conditions - from dry, rocky hillsides to floodplains. Oregon white oak is usually restricted to locations that are either too dry in summer or too wet in winter for most other trees. Currently, most of the appropriate sites for growing oaks are located on private lands. Landowners who own any number of Oregon white oak (also called Gary oak) are encouraged to conserve, and when appropriate, to actively manage Oregon white oaks that already exist on their property, and to consider planting additional oaks.

Although it can be very tempting to try and reforest these prairies with potentially higher economical value trees such as conifers, remember that white oaks tend to grow on harsh sites, making conifer reforestation efforts more difficult and costly. Many foresters and landowners have wasted considerable time and money attempting to reforest these lands with Douglas fir. Landowners are now encouraged to manage these important areas by thinning out encroaching and/or competing conifers from the stands.

Managing oak woodlands and savannas does require an extra level of time and financial commitment from the landowner. The unusual openness of oak savannas and woodlands developed in a regime of understory fires. Because current land uses make large scale burning impractical in most settings, any

*Black oak and Canyon oak also occur in southern Oregon – especially in the eastern parts of Curry County. Black and White oak are very similar; however, Black oak can be distinguished from White oak by its 3-toothed, bristle-tipped leaves.*



*Oregon White Oak-California Black Oak  
Courtesy of BLM*

plan to restore an oak savanna or woodland to the typical 4-10 trees per acre must include both long-term brush control to reduce competition, and frequent oak thinning to avoid overstocking and crowding. Such brush control and thinning, whether by chemical or mechanical means, can lead to high labor costs. With persistence, hard work and financial commitment, however, it is possible for a dedicated landowner to reproduce conditions favoring the spreading canopies of individual heritage-type oak trees and the stunning landscape they create.



Oak savannas like this one, support diverse plant and animal communities.

**For Technical Assistance:**

- ❖ Natural Resource Conservation Service (NRCS)
- ❖ Oregon Department of Fish and Wildlife (ODFW)
- ❖ Oregon Department of Forestry (ODF)

**To Learn More:**

- ❖ *A Landowner's Guide for Restoring and Managing Oregon White Oak Habitats*, BLM
- ❖ *A Practical Guide to Oak Release*, USDA, Pacific Northwest Research Station
- ❖ *Wildlife on White Oaks Woodlands*. Woodland Fish and Wildlife Project Publication

## **PEST ALERT! Sudden Oak Death**

Sudden oak death (SOD) is caused by a new *Phytophthora* fungus, a previously unknown and recently introduced non-native pathogen. It readily kills dominant tanoak, coast live oak and California black oak trees. Fortunately, Oregon white oak is not damaged by the pathogen. The disease spreads when clouds and rain move spores within forest canopies or when people or animals transport infected plants or plant parts or infected soil. More than 100 different species can host this pathogen - including Douglas-fir, coast redwood, and true firs - and many other forest species from California into British Columbia are susceptible to infection.

14 coastal counties in California have lost more than 1 million oak and tanoak trees, and Curry County, Oregon has lost several hundred tanoaks. State, national, and international quarantines have been imposed, establishing regulations on all host plant species grown in affected areas. A twenty-six square mile quarantine is in effect in the Brookings area. Efforts to eradicate the pathogen from Oregon forests are ongoing and likely will continue for several years.

## **How You Can Help Stop the Spread**

- ❖ Contact Oregon Department of Forestry to find out if you live, work, recreate or will be traveling in the quarantined part of Curry County.
- ❖ Do not collect and remove host plants or plant parts from quarantined areas. Do not collect or remove soil.
- ❖ Stay on established trails, and respect road closures.
- ❖ Before leaving an infested area, clean and disinfect used equipment. Wash soil off tires, wheels and the undercarriage of your vehicle. Clean soil off shoes, mountain bikes, horses' hooves, and pets' paws.

### **Contact Agencies**

- ◆ Oregon Department of Forestry forester or federal forester
- ◆ OSU Extension Curry County
- ◆ Oregon Department of Agriculture

### **Publications & Informational Websites**

- ◆ *Sudden Oak Death and Phytophthora ramorum* - Oregon State University Extension Service EM 8877
- ◆ [http://extension.oregonstate.edu/emergency/oak\\_death.php](http://extension.oregonstate.edu/emergency/oak_death.php)
- ◆ <http://nature.berkeley.edu/comtf/>
- ◆ [http://www.aphis.usda.gov/plant\\_health](http://www.aphis.usda.gov/plant_health)

## Choosing a Contractor or Consultant

If you're now inclined to do some work on your property, have a particular project in mind, or just want to learn more about how to go about it in the future, read on. You may find that you are able to tackle smaller projects yourself, but to complete bigger projects you may need the services of others. Some projects may also result in materials that you may be able to sell. Finding a good contractor and accessing good markets are important parts of being a successful land steward.

### Define your reasons and goals for treatment

Before you hire someone to work on your property, make sure you clarify what it is you want to accomplish and why. Do you want to give trees more room to grow or improve your pasture? Perhaps you'd like to reduce fire risk or create a more "park-like environment"? Leave a natural or family legacy? Do you need to address insect or disease to realize additional income from your land? If you need help understanding your options or clarifying your goals, a walk with a farm/conservation planner or a consulting forester is a good place to start. Professionals can help you evaluate land health and advise you on steps to take to meet your goals. You could elect to work with a consulting professional to develop an in-depth management plan for your property. In any case, ask potential consultants about their educational background, certifications they may hold and references they can provide.

### Selection Process

Once you know what you want to accomplish, the next step is choosing someone to do the work. Before you set someone loose on your property, it is important to find out if they have "the right stuff" for the job:

- **The right credentials**

Some types of work or businesses may require a license; check with the Oregon Bureau of Labor and Industries, [see Farm/Forest Labor at [www.boli.state.or.us](http://www.boli.state.or.us) or call the Bureau at 971-673-0761]. Verify that the contractor is insured and bonded to protect their workers, you and your property.

- **The right experience**

Make sure the contractor has experience doing the work you need to have done. For example, a tree planter may not be equipped to remove a hazardous tree next to your house. In order to see if a contractor can accomplish on-the-ground work consistent with your vision, ask for the names of former clients and to view completed projects. See if the contractor holds membership in a professional association or has affiliation with a professional group. This can help you determine if a contractor is right for the job you have in mind.

- **The right equipment**

Don't assume all contractors are equally prepared to handle the challenges particular to your property. Make sure the contractor has access to the appropriate equipment needed for your job, and that it is cleaned between jobs to avoid spreading noxious weed seeds and/or diseases such as Port Orford Cedar root rot.

- **The right management methods for the job site**

Talk with prospective contractors about how they plan to avoid damaging the land adjacent to your work site. If the job requires transiting through pastures or sensitive riparian areas, is their equipment likely to compact soils? Are they prepared to handle dust control, or to repair farm or woodland roads used for access? Is re-seeding pasture or other cover an appropriate part of job site clean-up?

## **Get it in writing!**

In most cases, it is best not to proceed without a signed contract in hand. OSU Extension Service provides samples of contracts for logging in the Woodland Workbook [see: <http://eesc.orst.edu/agcomwebfile/edmat/EC1192.pdf>].

## **Permits and Notification**

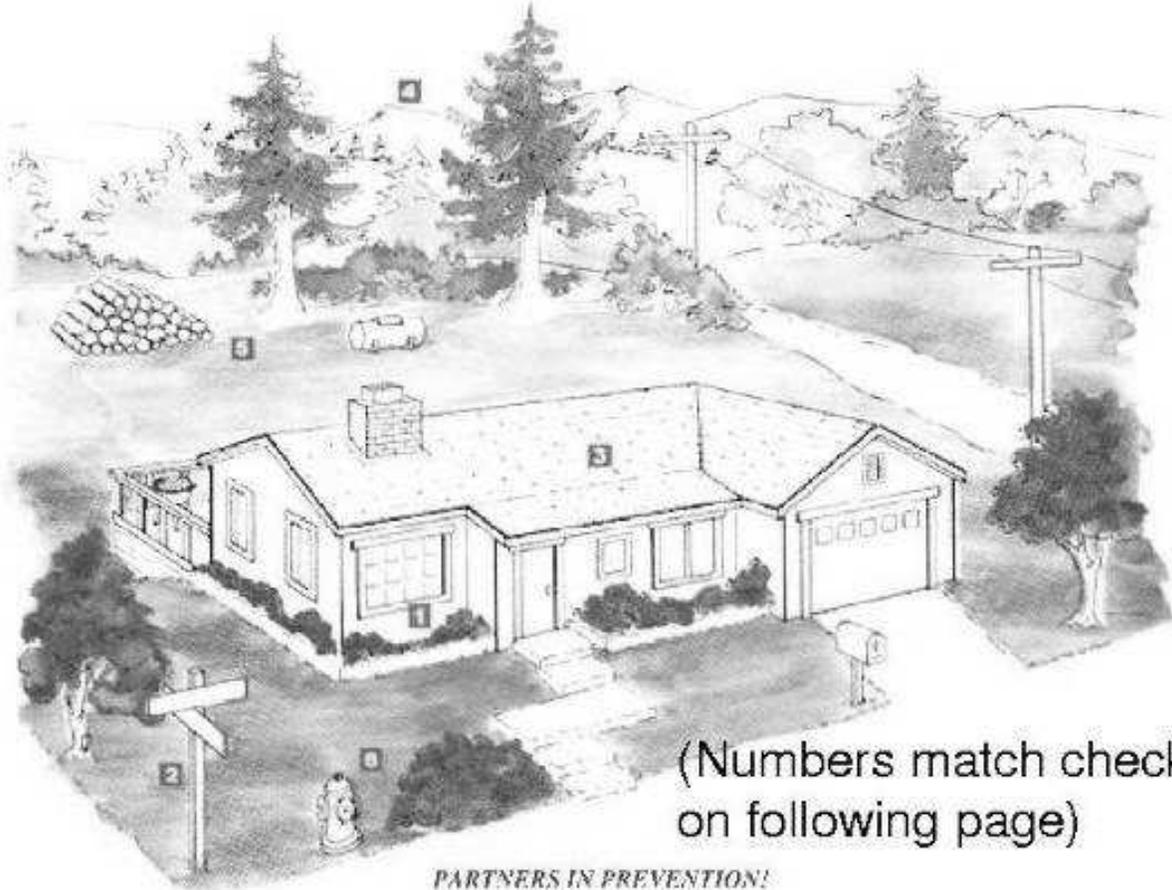
Certain types of projects require permits (i.e., forestry, work in wetlands and flood plains, construction). Be aware that it can take considerable time to work through the permit process, so plan ahead. Some permits require fees, as well, thus be sure to make room for this in your project budget.

### **To find a contractor or consultant, check the Resource Guide Directory or:**

- Check the yellow pages, classified ads, the internet and agricultural/forestry news letters and publications;
- Contact OSU Extension or the Oregon Small Woodlands Association;
- Visit the on-line Society of American Foresters Consultant Directory at [www.safnet.org/certifiedforester/directory.cfm](http://www.safnet.org/certifiedforester/directory.cfm);
- Ask other land owners and neighbors about their experiences;
- Visit the Oregon Woodlands Assistance Catalog and select "Find a service provider"  
[[www.oregonwoodlands.org](http://www.oregonwoodlands.org)]

# Homeowner's Checklist

Making the Area Outside your home Fire Safe



(Numbers match checklist on following page)

*PARTNERS IN PREVENTION!*



COOS FOREST PROTECTIVE ASSOCIATION 63612 FIFTH RD COOS BAY, OR 97420 (541) 267-3161 [www.odf.state.or.us/cfpa](http://www.odf.state.or.us/cfpa)

# Checklist (continued)

## 1 Design/Construction

- Consider installing residential sprinklers
- Build your home away from ridge tops, canyons and areas between high points on a ridge
- Build your home at least 30-100 feet from your property line
- Use fire resistant materials
- Enclose the undersides of eaves, balconies and above ground decks with fire resistant materials
- Try to limit the size and number of windows in your home that face large areas of vegetation
- Install only dual-paned or triple-paned windows
- Make sure that electric service lines, fuse boxes and circuit breaker panels are installed and maintained as prescribed by code
- Contact qualified individuals to perform electrical maintenance and repairs

## 2 Access

- Identify at least two exit routes from your neighborhood
- Construct roads that allow two-way traffic
- Design road width, grade and curves to allow access for large emergency vehicles
- Construct driveways to allow large emergency equipment to reach your house
- Design bridges to carry heavy emergency vehicles, including bulldozers carried on large trucks
- Post clear road signs to show traffic restrictions such as dead-end roads, and weight and height limitations
- Make sure dead-end roads and long driveways have turn-around areas wide enough for emergency vehicles
- Construct turnouts along one-way roads
- Clear flammable vegetation at least 10 feet from roads and five feet from driveways
- Cut back overhanging tree branches above roads
- Construct fire barriers such as greenbelts
- Make sure that your street is named or numbered, and a sign is visibly posted at each street intersection
- Make sure that your street name and house number are not duplicated elsewhere in the county
- Post your house address at the beginning of your driveway, or on your house if it is easily visible from the road

## 3 Roof

- Remove branches within 10 feet of your chimney and dead branches overhanging your roof
- Remove dead leaves and needles from your roof and gutters

- Install a fire resistant roof. Contact your local fire department for current roofing requirements
- Cover your chimney outlet and stovepipe with a nonflammable screen of 1/2 inch or smaller mesh

## 4 Landscape

- Create a "defensible space" by removing all flammable vegetation at least 30 feet from all structures
- Never prune near power lines. Call your local utility company first
- Landscape with fire resistant plants
  - On slopes or in high fire hazard areas remove flammable vegetation out to 100 feet or more
- Space native trees and shrubs at least 10 feet apart
- For trees taller than 18 feet, remove lower branches within six feet of the ground
- Maintain all plants by regularly watering, and by removing dead branches, leaves and needles
- Before planting trees close to any power line contact your local utility company to confirm the maximum tree height allowable for that location

## 5 Yard

- Stack woodpiles at least 30 feet from all structures and remove vegetation within 10 feet of woodpiles
- Locate LPG tanks (butane and propane) at least 30 feet from any structure and maintain 10 feet of clearance
- Remove all stacks of construction materials, pine needles, leaves and other debris from your yard
- Contact your local fire department to see if open burning is allowed in your area; if so, obtain a burning permit
  - Where burn barrels are allowed, clear flammable materials at least 10 feet around the barrel; cover the open top with a non-flammable screen with mesh no larger than 1/4 inch

## 6 Emergency Water Supply

- Maintain an emergency water supply that meets fire department standards through one of the following:
  - a community water/hydrant system
  - a cooperative emergency storage tank with neighbors
  - a minimum storage supply of 2,500 gallons on your property
- Clearly mark all emergency water sources
- Create easy firefighter access to your closest emergency water source
- If your water comes from a well, consider an emergency generator to operate the pump during a power failure

## Landowner Assistance

### Funding & Cost Share Assistance

- FSA
- NRCS
- ODF-Private Forests
- Watershed Councils/Associations
- Weed Boards
- SWCDs
- OWEB
- ODFW
- DEQ
- ODA

### Educational Outreach

- OSU Ext
- SWCDs
- Watershed Councils/Associations
- Weed Boards
- Tree Farm System
- OSWA

### Hazard Treatment & Response

- Water Quality**
- DEQ
- ACOE
- ODA
- Hazardous Spills**
- US Coast Guard
- ODA
- Insect & Disease**
- ODF
- ODA

### Land Use Planning/Taxes

- Coos County**
- Forest Land Dwelling
- Land Use Planning
- Special Assessments
- County Assessor
- Curry County**
- Forest Land Dwelling
- Land Use Planning
- Special Assessments
- County Assessor
- Timber Taxes**
- Dept of Revenue

### Permits Local/State/Federal

- Notification of Operation (Forest Activities)**
- ODF

- Stream Work Permits**
- Fill/Removal
- DSL
- ACOE
- Culverts-Forest Roads
- ODF
- ODFW

- Fire Season & Burning Permits**
- CFPA

- Smoke Management**
- CFPA

- CAFO/AFO**
- ODA

- Fish & Wildlife Issues**
- Threatened/Endangered
- ODFW
- USFWS
- NMFS

- Water Rights**
- Watermaster

- Construction**
- Coos County
- Curry County

### Farm/Conservation Plans

- SWCDs
- NRCS
- OSU Extension

### Forest Plans

- ODF
- NRCS
- Consulting Foresters
- Industrial Timber Assistance Programs

### Riparian Planting Plans

- SWCDs
- Watershed Councils/Associations
- FSA
- ODA
- OSU Extension

### Forest Planting Plans

- ODF
- OSWA

### Young Growth Mgmt

- (Pruning, fertilizing, thinning, etc.)
- NRCS
- ODF
- Consulting Foresters
- Industrial Timber Assistance Programs

### Timber Sale Layout

- Consulting Foresters
- Industrial Timber Assistance Programs

### Culvert Design

- Consulting Foresters
- Industrial Timber Assistance Programs
- ODF
- ODFW
- NRCS
- Watershed Councils/Associations

### Road Layout & Design

- Consulting Foresters
- Industrial Timber Assistance Programs
- ODF
- NRCS

### Weed Mgmt Plans

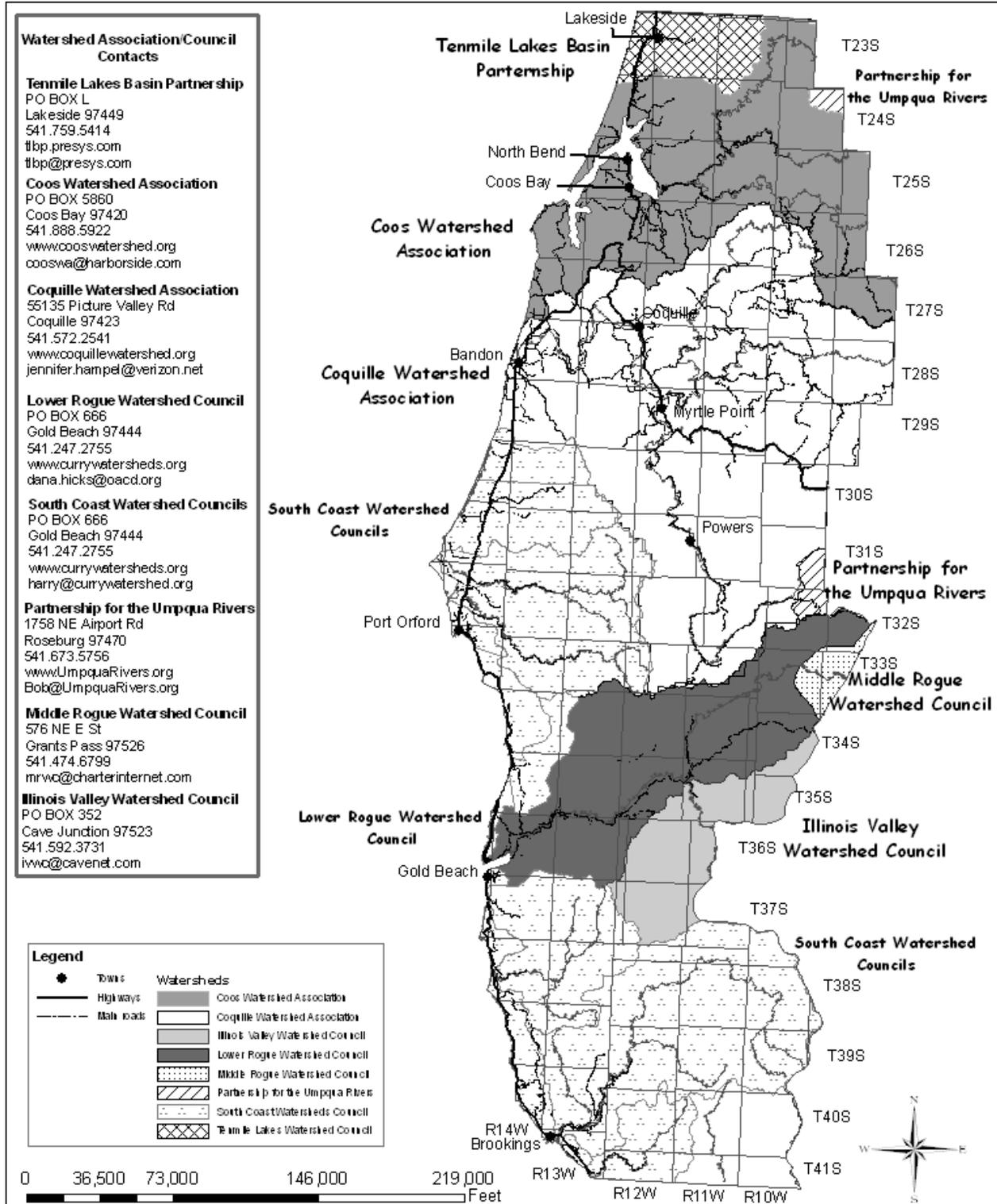
- Watershed Councils/Associations
- SWCDs
- Weed Boards
- NRCS
- OSU Extension

### Fish Habitat Designs

- ODFW
- Watershed Councils/Associations

### Resource Planning Farm/Forest

# Watershed Councils and Associations in Coos and Curry Counties



## Agency Resources for Information and Technical Assistance

### STATE AGENCIES

**Oregon Dept. of Agriculture (ODA)**  
635 Capitol Street NE  
Salem, OR 97301-2532  
(503) 986-4550  
[www.oregon.gov/ODA](http://www.oregon.gov/ODA)

**Oregon Dept of Fish & Wildlife (ODFW)**  
(Fish and Wildlife Biologist available)

**Coos District** (Reedsport-New River)  
63538 Boat Basin Drive; PO Box 5430  
Charleston, OR 97420  
(541) 888-5515

**Curry District** (South of New River)  
29907 Airport Way; PO Box 642  
Gold Beach, OR 97444  
(541) 247-7605  
[www.dfw.state.or.us](http://www.dfw.state.or.us)

**OSU Extension Oregon State University  
Forestry Extension**

**Coos County Extension Service  
(Forest educational materials available)**  
Ohlsen Baxter Building  
631 Alder Street  
Myrtle Point, OR 97458  
(541) 572-5263 or (800) 730-4978  
[extension.oregonstate.edu/coos](http://extension.oregonstate.edu/coos)

**Curry County Extension Service  
(Watershed Agent available)**  
29390 Ellensburg; PO Box 488  
Gold Beach, OR 97444  
(541) 247-6672 or (800) 356-3986  
[extension.oregonstate.edu/curry](http://extension.oregonstate.edu/curry)

**Douglas County Extension Service  
(Forestry Agent available)**  
1134 SE Douglas ; PO Box 1165  
Roseburg OR 97470  
(541) 672-4461  
[www.cof.orst.edu/cof/extended/extserv](http://www.cof.orst.edu/cof/extended/extserv)

**Dept. of Environmental Quality (DEQ)**  
381 N. Second St.  
Coos Bay, OR 97420  
(541) 269-2721 or  
(800) 452-4011  
[www.deq.state.or.us](http://www.deq.state.or.us)

**Oregon Dept of Forestry (ODF)  
Stewardship Forester Available**  
63612 Fifth Rd  
Coos Bay, OR 97420  
(541) 267-4136  
[www.odf.state.or.us](http://www.odf.state.or.us)

**Department of State Lands (DSL)**  
775 Summer Street, NE Suite 100  
Salem, OR 97301-1279  
(503) 378-3805  
[www.oregonstatelands.us](http://www.oregonstatelands.us)

### PROPERTY TAXES, TIMBER TAXES & ASSESSMENT

**Coos County Taxes & Assessor**  
250 N Baxter St  
Coquille, OR 97423  
541.396.3121 ext. 333 or 334  
541.396.3121 ext. 268 (Assessor)

**Curry County Assessor**  
29821 Ellensburg Ave  
PO Box 746  
541.247.3294 or  
800.242.7601

**Oregon Dept. of Revenue (DOR)  
Timber Tax Section**  
955 Center St.  
Salem, OR 97301-2555  
(503) 378-4988 or (800) 356-4222  
[www.oregon.gov/DOR/TIMBER/index.shtml](http://www.oregon.gov/DOR/TIMBER/index.shtml)

### LAND USE ISSUE AGENCIES

#### LAND USE PLANNING & ZONING

**Coos County Planning**  
290 N Central  
Mailing: 250 N Baxter  
Coquille, OR 97423  
(541) 396-3121 ext. 210  
(800) 735-2900

**Curry County Planning**  
94235 Moore Street  
Gold Beach, OR 97444  
(541) 247-3304

#### WATER RIGHTS

**Coos County Watermaster**  
290 N Central  
Mailing: 250 N Baxter  
Coquille, OR 97423  
(541) 396-3121 ext. 254

**OREGON PLAN FOR SALMON & WATERSHEDS – WATERSHED  
ASSOCIATIONS/COUNCILS**

**Tenmile Lakes Basin  
Partnership**  
(541) 759-2414  
l1tlbp.presys.com

**Coos Watershed Association**  
(541) 888-5922  
www.cooswatershed.org

**Coquille Watershed Association**  
(541) 572-2541  
www.coquillewatershed.org

**Lower Rogue Watershed  
Council**  
(541) 247-2755  
www.currywatersheds.org

**South Coast Watershed  
Council**  
(541) 247-2755  
www.currywatersheds.org

**SPECIAL DISTRICTS**

**Coos Soil & Water Conservation  
District (SWCD)**  
382 N Central Blvd  
Coquille, OR 97423  
(541)396-6879  
coosswcd.oacd.org

**Curry County Soil & Water  
Conservation District (SWCD)**  
94181 4th Street  
PO Box 666  
Gold Beach, OR 97444  
(541)247-2755  
<http://www.currywatersheds.org>

**WEED BOARDS**

**Coos County Weed  
Advisory Board**  
c/o Coos County Board of  
Commissioners  
250 N Baxter  
Coquille, OR 97423  
(541) 396-3121 x 248

**Curry County Weed  
Advisory Board**  
94181 4<sup>th</sup> Street  
PO Box 666  
Gold Beach, OR 97444  
(541) 247-2755  
www.currywatersheds.org

**ASSOCIATIONS**

**Oregon Small Woodlands  
Association (OSWA)**  
1775 32nd Place, NE, Suite C  
Salem, OR 97303  
(503) 588-1813  
**Local:** Roy Hendrick  
20820 Carpenterville Rd.  
Brookings, Or. 97415  
541.469.6254  
<http://www.oswa.org/>

**Coos Forest Protective Association  
(CFPA)**  
63612 5<sup>th</sup> Rd  
Coos Bay, OR 97420  
(541) 267-3161

**Bridge Office** (541) 572-2796  
**Brookings** (541) 469-2302  
**Four Mile Bandon** (541) 347-3400  
**Gold Beach** (541) 247-6241  
**Reedsport** (541) 271-2224  
<http://www.coosfpa.net/>

**FEDERAL AGENCIES: STREAM PERMITS &  
PROBLEMS**

**U.S. Army Corps of Engineers  
(ACOE)**  
2201 N Broadway, Ste C  
North Bend, OR 97459  
Enforcement & compliance: (541)  
756-2097  
Permit manager: (541) 756-5316

**U.S. Coast Guard  
(USCG)**  
2000 Connecticut Ave.  
North Bend, OR 97459  
(541) 756-9220

## FEDERAL AGENCIES: FARM & FOREST

**Bureau of Land Management  
(BLM)**

1300 Airport Lane  
North Bend, OR 97459  
(541) 756-0100  
<http://www.blm.gov/or/index.htm>

**Farm Service Agency  
(FSA)**

376 N Central Blvd.  
Coquille, OR 97423-1244  
(541) 396-4323

**National Marine Fisheries  
Service (NMFS)**

2900 NW Stewart Parkway  
Roseburg, OR 97470  
(541) 957-3383  
<http://www.nwr.noaa.gov/>

**Natural Resources Conservation  
Service (NRCS)**

**District Conservationist Available**  
382 N Central Blvd.  
Coquille, OR 97423-1244  
(541) 396-2841

**U.S. Department of Agriculture  
(USDA)**

**Wildlife Services**  
**Coos County Assistance Available**  
Roseburg, OR  
(541) 679-1231

**U.S. Fish and Wildlife Service  
(USFWS)**

2900 NW Stewart Parkway  
Roseburg, OR 97470  
(541) 957-3474  
<http://pacific.fws.gov/>

**U.S. Forest Service (USFS)**

**Chetco Ranger District**  
539 Chetco Ave  
Brookings, OR 97415  
(541) 412-6000

**Gold Beach Ranger District**

29279 Ellensburg  
Gold Beach, OR 97444  
(541) 247-3600

**Oregon Dunes NRA**

Siuslaw National Forest  
855 Hwy 101  
Reedsport, OR 97467  
(541) 271-3611

**Powers Ranger District**

42861 Highway 242  
Powers, OR 97466  
(541) 439-6200  
<http://www.fs.fed.us/>

## **PARTNERS AND CONTRIBUTORS**

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Coos Watershed Association  
Coquille Watershed Association  
Curry County Soil and Water Conservation District  
Lower Rogue Watershed Council  
Natural Resources Conservation Service  
Southwest Oregon Resource Conservation Development Council  
Oregon Department of Fish and Wildlife, Charleston and Gold Beach Field Offices  
Oregon Department of Forestry, Coos District  
Oregon Small Woodlands Association, Coos-Curry Chapter  
Oregon State University Extension Service, Coos County  
Oregon Trout  
South Coast Watershed Councils  
Stuntzner Engineering & Forestry LLC  
Tenmile Lakes Basin Partnership

# Landowner Checklist

- Define your goals and objectives
  - Evaluate your options
  - Select a contractor suited to your job
  - Determine if permits or restrictions apply
  - Take action, begin implementation
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## CONTACT LIST

**Coos SWCD**  
382 N Central Blvd  
Coquille, OR 97423  
**541.396.6879**

**Curry SWCD**  
94181 4<sup>th</sup> Street  
PO Box 666  
Gold Beach, OR 97444  
**541.247.2755**

**Oregon Department of  
Forestry**  
63612 Fifth Road  
Coos Bay, OR 97420  
**541.267.4136**

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**Curry County SWCD**  
**PO Box 666**  
**Gold Beach, OR 97444**