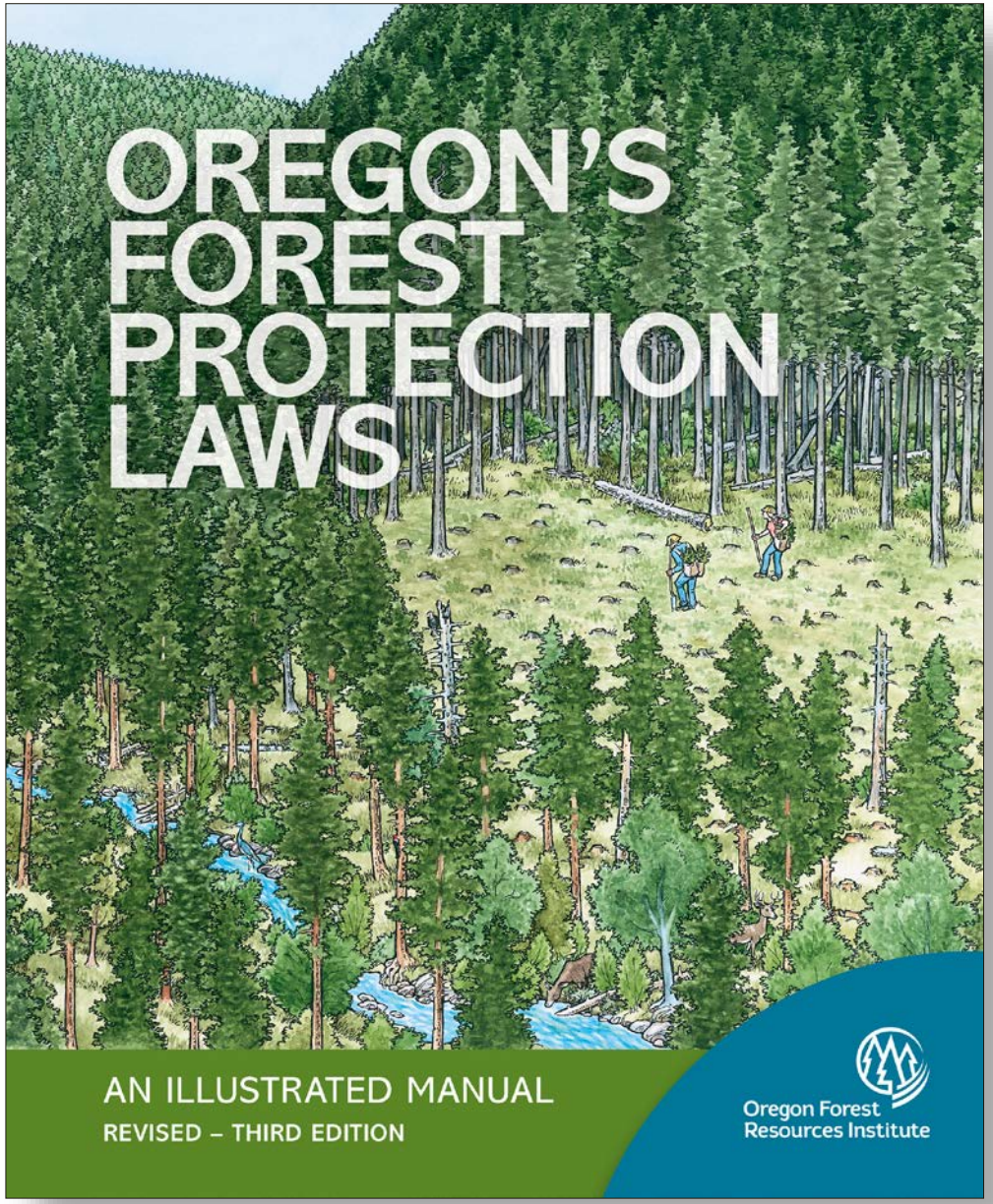
# OFPL: Illustrated Manual – 3rd Edition

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# WHO IS OFRI

The Oregon Forest Resources Institute was created by the State Legislature in 1991 to improve public understanding of Oregon's forest resources and to encourage environmentally sound forest management

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# Chapters in OFPL: Illustrated Manual – Revised 3rd Edition

- C. 1 - Introduction*
- C. 2 - Planning a timber harvest **
- C. 3 - Doing a timber harvest *
- C. 4 - Reforestation after harvest
- C. 5 - Fire and chemicals **
- C. 6 - Roads and stream crossings
- C. 7 - Other considerations
- C. 8 - Appendix **

* Some changes
** Lots of changes

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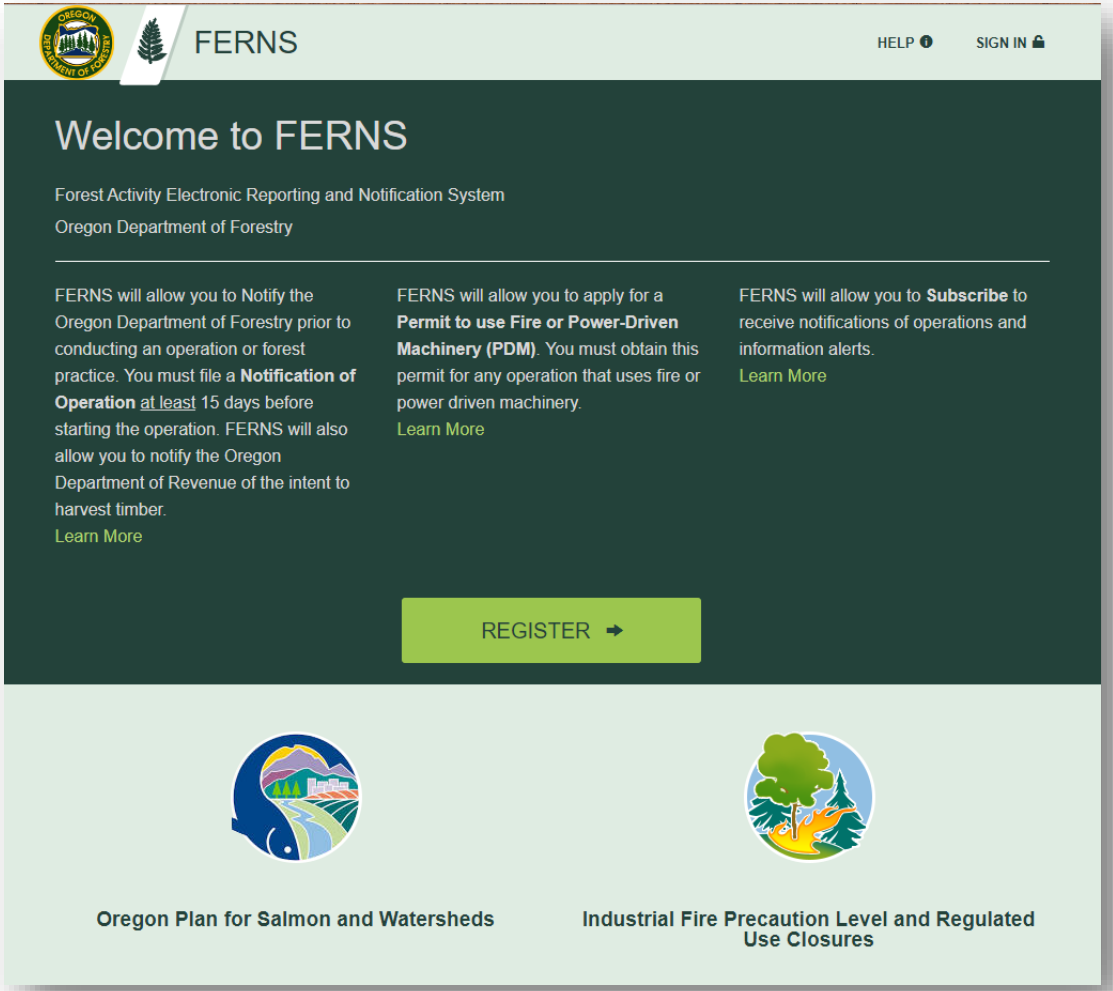
# E-Notification, Ferns & Written Plans – Introduction - Page 6

E-Notification

- File a Notification of Operations as required
- Update on written plan requirements

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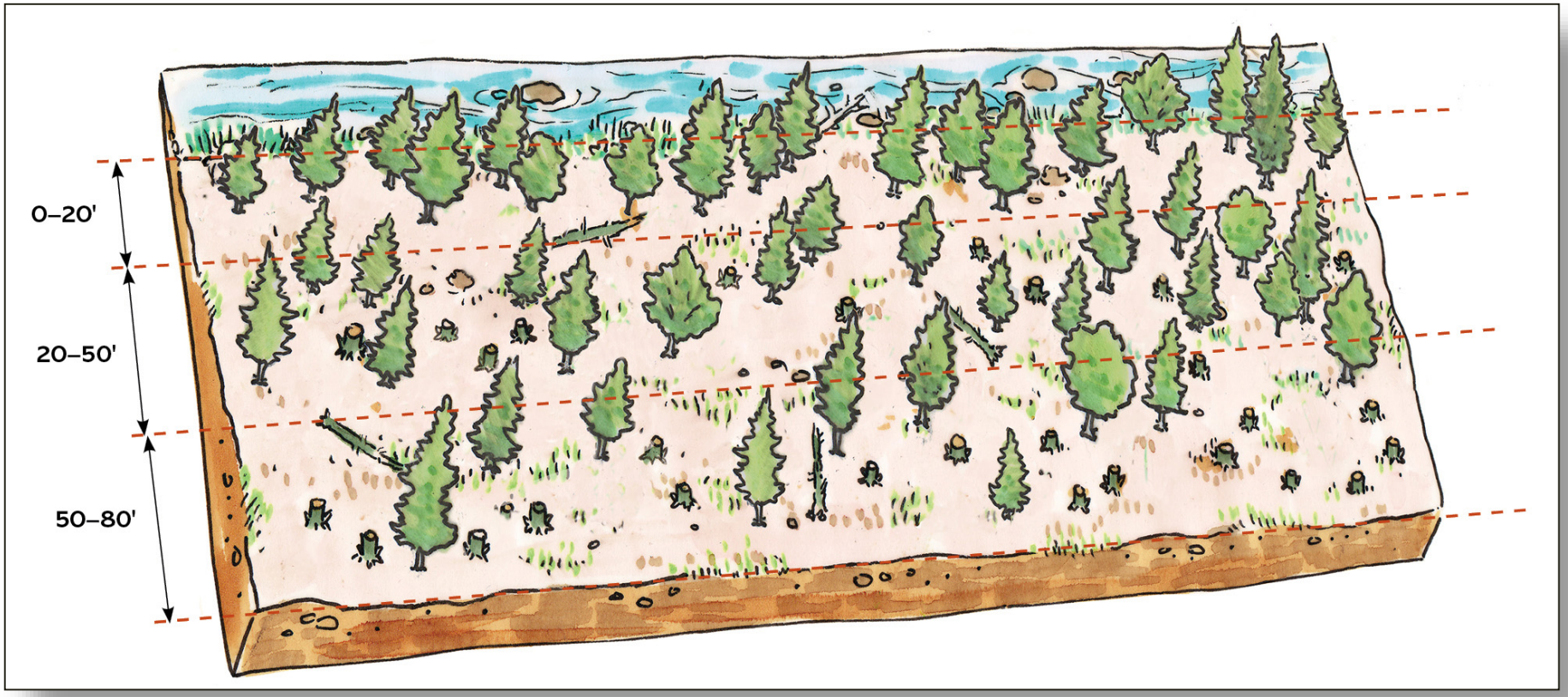
# RMAs by stream type – p. 20

| Table 2-3 Riparian Management Area Widths (for each side of a stream) | | | | | |
|---|---|---|---|---|---|
| Stream Size | Type F | SSBT | Relief SSBT | Type D | Type N |
| Large | 100 feet | – | – | 70 feet | 70 feet |
| Medium | 70 feet | 80 feet | 70 feet | 50 feet | 50 feet |
| Small | 50 feet | 60 feet | 50 feet | 20 feet | Specific protection measures (see Table 2-16) |
| Note: SSBT requirements only apply to Type 2 and 3 harvests. | | | | | |

# Type SSBT Prescription 2 – Partial Harvest RMA – p. 27

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# Type SSBT – Partial Harvest RMA – p. 28

| Table 2-8. Type SSBT Prescription 2 – Partial Harvest RMA: Streamside Tree Retention for Harvest Type 2 or Type 3 Units (OAR 629-642-0105) | | | | |
|---|---|---|---|---|
| **Geographic Regions: Coast Range, South Coast, Interior, Western Cascades** | | | | |
| | Basal area target: Square feet of basal area per each 500-foot-long stream segment, each side of the stream (any combination of conifers and hardwoods 6 inches or greater DBH) | | Live conifer trees (8 inches or greater DBH) per each 500-foot-long stream segment, each side of the stream | |
| | Medium Type SSBT RMA = 80 feet | Small Type SSBT RMA = 60 feet | Medium Type SSBT RMA = 80 feet | Small Type SSBT RMA = 60 feet |
| No Harvest Zone | 0 to 20 feet = Retain all trees. Trees in this area do not count toward meeting the basal area or live conifer tree requirements in this table. | | | |
| Inner Zone | 20 to 50 feet: minimum 18 sq. ft. | 20 to 40 feet: minimum 10 sq. ft. | 20 to 50 feet: minimum 7 trees | 20 to 40 feet: minimum 4 trees |
| Outer Zone | 50 to 80 feet: minimum 18 sq. ft. | 40 to 60 feet: minimum 10 sq. ft. | 50 to 80 feet: minimum 7 trees | 40 to 60 feet: minimum 4 trees |
| | RMA Total (20 to 80 feet) = 69 sq. ft. | RMA Total (20 to 60 feet) = 37 sq. ft. | RMA Total (20 to 80 feet) = 15 trees | RMA Total (20 to 60 feet) = 8 trees |

Notes:
1. Distances are measured from the high-water level of the Type SSBT stream.
2. Up to 10% of the basal area requirement may be composed of sound conifer snags 6 inches or greater DBH and at least 30 feet tall.
3. Must meet requirements of each zone and RMA total.

# Type SSBT Relief Prescription – p. 29

| Table 2-9. Type SSBT Relief Prescription 2 – Partial Harvest RMA: Streamside Tree Retention for Harvest Type 2 or Type 3 Units (OAR 629-642-0110) | | | | |
|---|---|---|---|---|
| **Geographic Regions: Coast Range, South Coast, Interior, Western Cascades** | | | | |
| | BASAL AREA TARGET: Square feet of basal area per each 500-foot-long stream segment, each side of the stream (any combination of conifers and hardwoods 6 inches or greater DBH) | | LIVE CONIFER TREES (8 inches or greater DBH) per each 500-foot-long stream segment, each side of the stream | |
| | Medium Type SSBT RMA = 70 feet | Small Type SSBT RMA = 50 feet | Medium Type SSBT RMA = 70 feet | Small Type SSBT RMA = 50 feet |
| No Harvest Zone | 0 to 20 feet = Retain all trees. Trees in this area do not count toward meeting the basal area or live conifer tree requirements in this table. | | | |
| Inner Zone | 20 to 45 feet: minimum 15 sq. ft. | 20 to 35 feet: minimum 7 sq. ft. | 20 to 45 feet: minimum 6 trees | 20 to 35 feet: minimum 3 trees |
| Outer Zone | 45 to 70 feet: minimum 15 sq. ft. | 35 to 50 feet: minimum 7 sq. ft. | 45 to 70 feet: minimum 6 trees | 35 to 50 feet: minimum 3 trees |
| | RMA Total (20 to 70 feet) = 58 sq. ft. | RMA Total (20 to 50 feet) = 28 sq. ft. | RMA Total (20 to 70 feet) = 13 trees | RMA Total (20 to 50 feet) = 6 trees |

Notes:
1. Distances are measured from the high water level of the Type SSBT stream.
2. Up to 10% of the basal area requirement may be comprised of sound conifer snags 6 inches or greater DBH and at least 30 feet tall.
3. Must meet requirements of each zone and RMA total.

# Down log – minimum lengths and diameters – p. 39

| Table 2-19 Down Log Minimum Lengths and Diameters | | | |
|---|---|---|---|
| These sizes = 1 down log (10 cubic feet) | | These sizes = 2 down logs (20 cubic feet) | |
| Length (feet) | Diameter (inches, small end) | Length (feet) | Diameter (inches, small end) |
| 6 | 18 | 6 | 25 |
| 8 | 15 | 8 | 21 |
| 10 | 14 | 10 | 19 |
| 12 | 12 | 12 | 17 |
| 14 | 11 | 14 | 16 |
| 20 | 9 | 20 | 13 |
| 28 | 8 | 28 | 11 |
| | | 36 | 9 |
| | | 44 | 8 |

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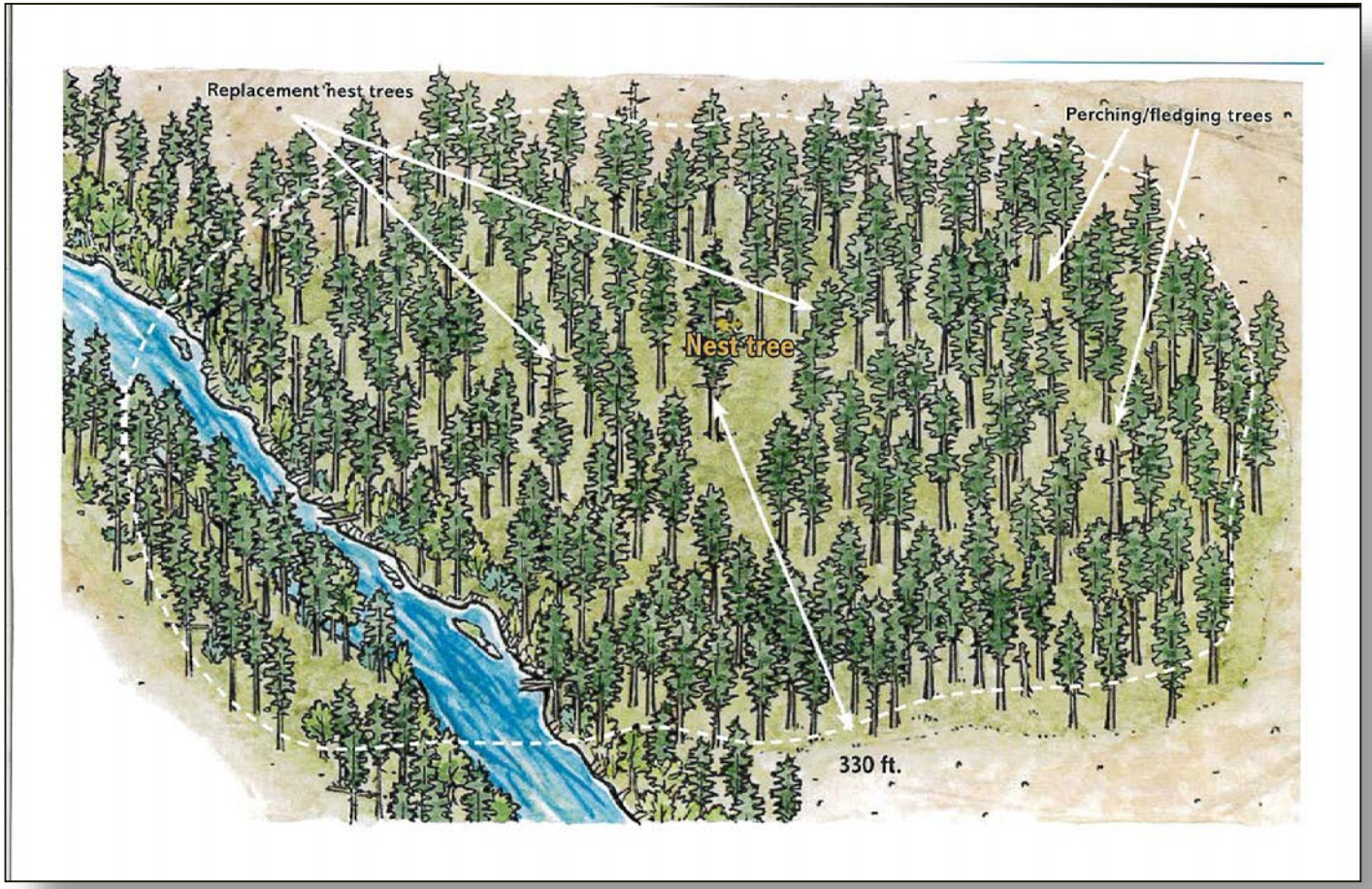
# Bald eagle – protected under Federal Eagle Protection Act – p. 44-45

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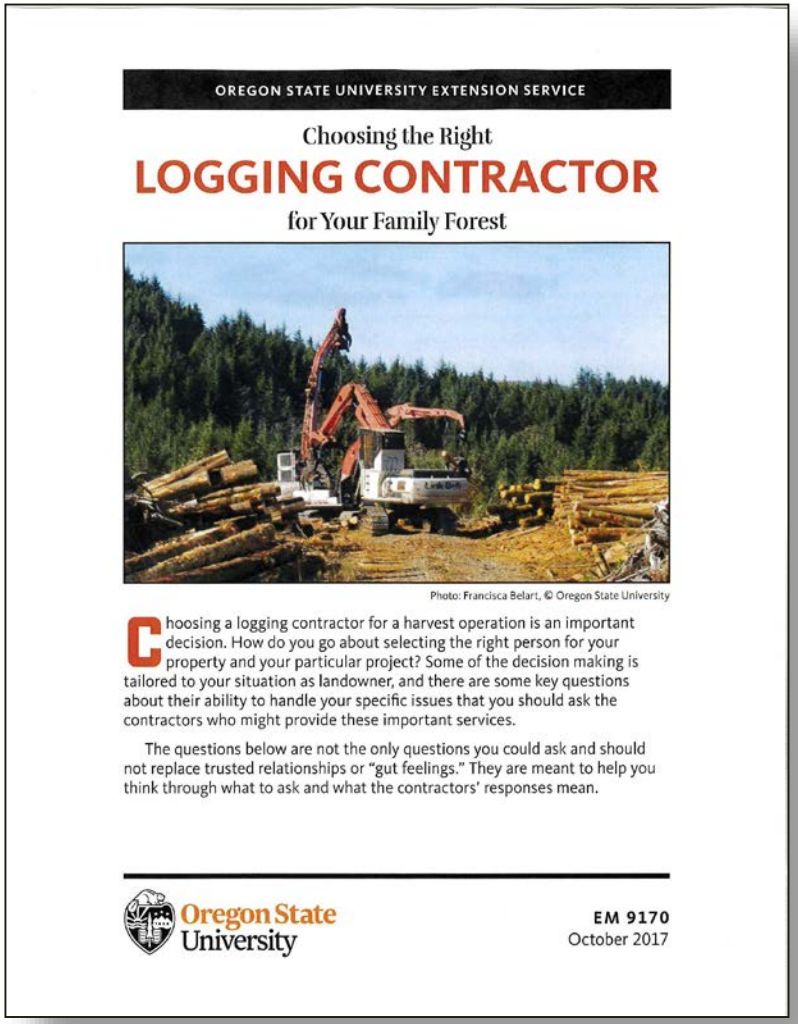
# Doing a Timber Harvest – Choosing the right logger



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Choosing the Right

## LOGGING CONTRACTOR

for Your Family Forest

Photo: Francisca Belart, © Oregon State University

Choosing a logging contractor for a harvest operation is an important decision. How do you go about selecting the right person for your property and your particular project? Some of the decision making is tailored to your situation as landowner, and there are some key questions about their ability to handle your specific issues that you should ask the contractors who might provide these important services.

The questions below are not the only questions you could ask and should not replace trusted relationships or "gut feelings." They are meant to help you think through what to ask and what the contractors' responses mean.

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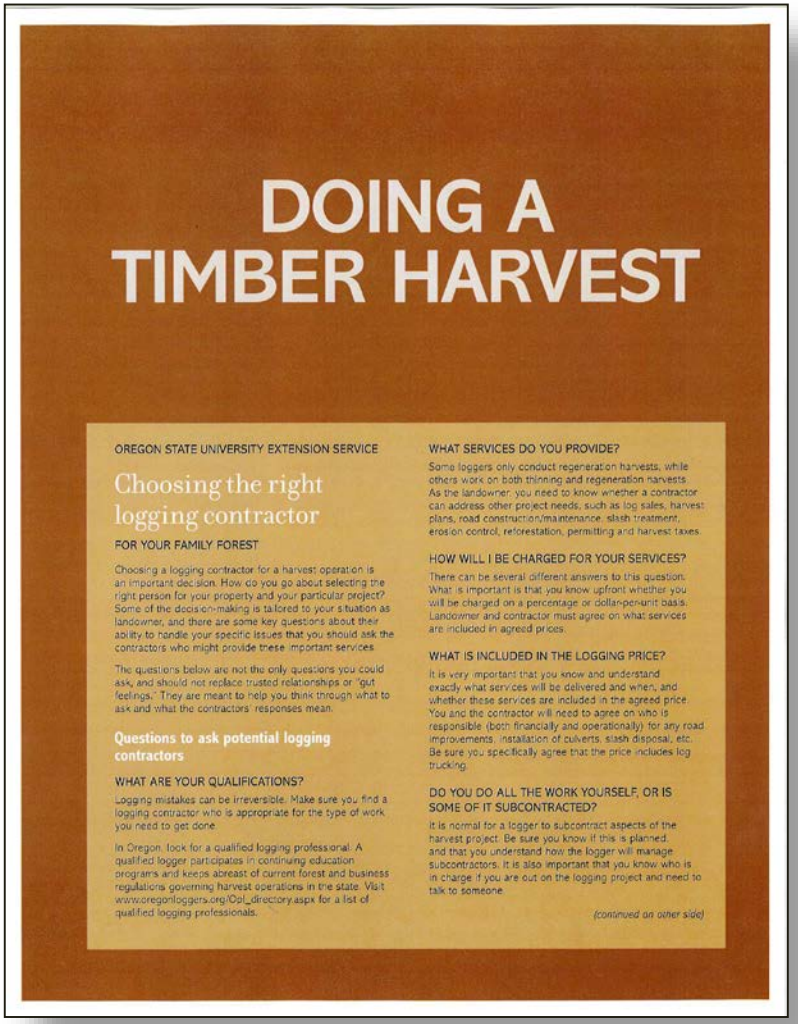
October 2017



## DOING A TIMBER HARVEST

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Choosing the right logging contractor

FOR YOUR FAMILY FOREST

Choosing a logging contractor for a harvest operation is an important decision. How do you go about selecting the right person for your property and your particular project? Some of the decision-making is tailored to your situation as landowner, and there are some key questions about their ability to handle your specific issues that you should ask the contractors who might provide these important services.

The questions below are not the only questions you could ask, and should not replace trusted relationships or "gut feelings." They are meant to help you think through what to ask and what the contractors' responses mean.

**Questions to ask potential logging contractors**

WHAT ARE YOUR QUALIFICATIONS?

Logging mistakes can be irreversible. Make sure you find a logging contractor who is appropriate for the type of work you need to get done.

In Oregon, look for a qualified logging professional. A qualified logger participates in continuing education programs and keeps abreast of current forest and business regulations governing harvest operations in the state. Visit www.oregonloggers.org/OpI_directory.aspx for a list of qualified logging professionals.

WHAT SERVICES DO YOU PROVIDE?

Some loggers only conduct regeneration harvests, while others work on both thinning and regeneration harvests. As the landowner, you need to know whether a contractor can address other project needs, such as log sales, harvest plans, road construction/maintenance, slash treatment, erosion control, reforestation, permitting and harvest taxes.

HOW WILL I BE CHARGED FOR YOUR SERVICES?

There can be several different answers to this question. What is important is that you know upfront whether you will be charged on a percentage or dollar-per-unit basis. Landowner and contractor must agree on what services are included in agreed prices.

WHAT IS INCLUDED IN THE LOGGING PRICE?

It is very important that you know and understand exactly what services will be delivered and when, and whether these services are included in the agreed price. You and the contractor will need to agree on who is responsible (both financially and operationally) for any road improvements, installation of culverts, slash disposal, etc. Be sure you specifically agree that the price includes log trucking.

DO YOU DO ALL THE WORK YOURSELF, OR IS SOME OF IT SUBCONTRACTED?

It is normal for a logger to subcontract aspects of the harvest project. Be sure you know if this is planned and that you understand how the logger will manage subcontractors. It is also important that you know who is in charge if you are out on the logging project and need to talk to someone.

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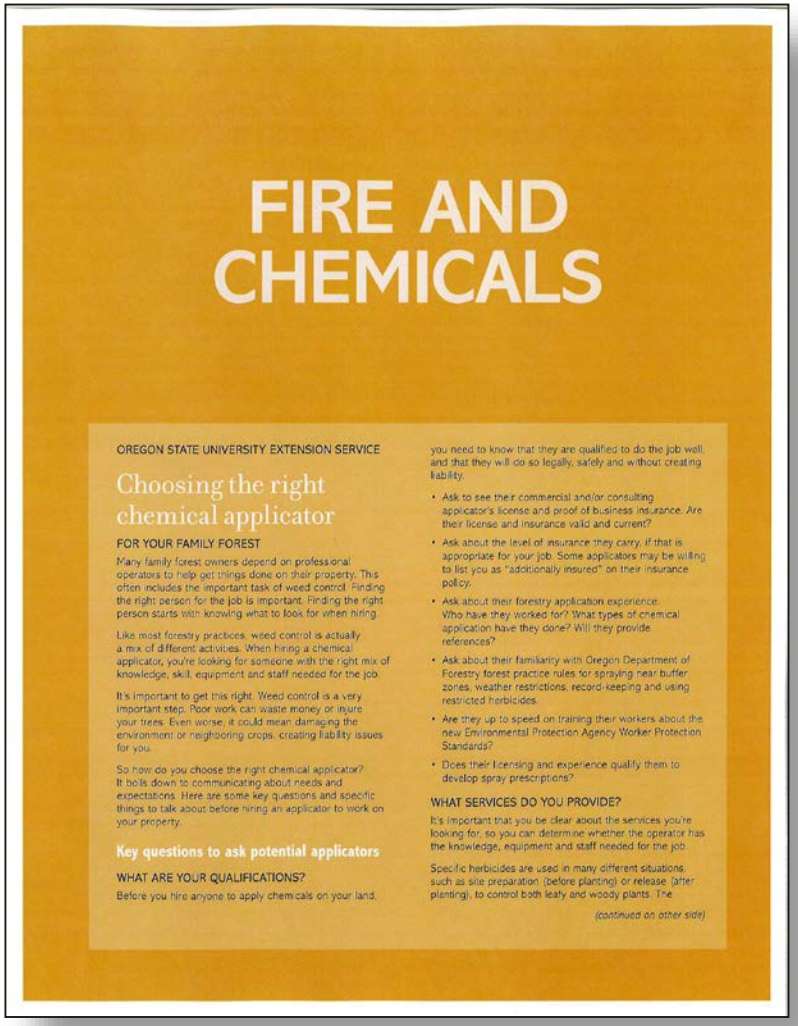
# Fire and Chemicals – Choosing the right chemical applicator



FIRE AND CHEMICALS

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## Choosing the right chemical applicator

### FOR YOUR FAMILY FOREST

Many family forest owners depend on professional operators to help get things done on their property. This often includes the important task of weed control. Finding the right person for the job is important. Finding the right person starts with knowing what to look for when hiring.

Like most forestry practices, weed control is actually a mix of different activities. When hiring a chemical applicator, you're looking for someone with the right mix of knowledge, skill, equipment and staff needed for the job.

It's important to get this right. Weed control is a very important step. Poor work can waste money or injure your trees. Even worse, it could mean damaging the environment or neighboring crops, creating liability issues for you.

So how do you choose the right chemical applicator? It boils down to communicating about needs and expectations. Here are some key questions and specific things to talk about before hiring an applicator to work on your property.

### Key questions to ask potential applicators

#### WHAT ARE YOUR QUALIFICATIONS?

Before you hire anyone to apply chemicals on your land, you need to know that they are qualified to do the job well, and that they will do so legally, safely and without creating liability.

- Ask to see their commercial and/or consulting applicator's license and proof of business insurance. Are their license and insurance valid and current?
- Ask about the level of insurance they carry, if that is appropriate for your job. Some applicators may be willing to list you as "additionally insured" on their insurance policy.
- Ask about their forestry application experience. Who have they worked for? What types of chemical application have they done? Will they provide references?
- Ask about their familiarity with Oregon Department of Forestry forest practice rules for spraying near buffer zones, weather restrictions, record-keeping and using restricted herbicides.
- Are they up to speed on training their workers about the new Environmental Protection Agency Worker Protection Standards?
- Does their licensing and experience qualify them to develop spray prescriptions?

#### WHAT SERVICES DO YOU PROVIDE?

It's important that you be clear about the services you're looking for, so you can determine whether the operator has the knowledge, equipment and staff needed for the job.

Specific herbicides are used in many different situations, such as site preparation (before planting) or release (after planting), to control both leafy and woody plants. The

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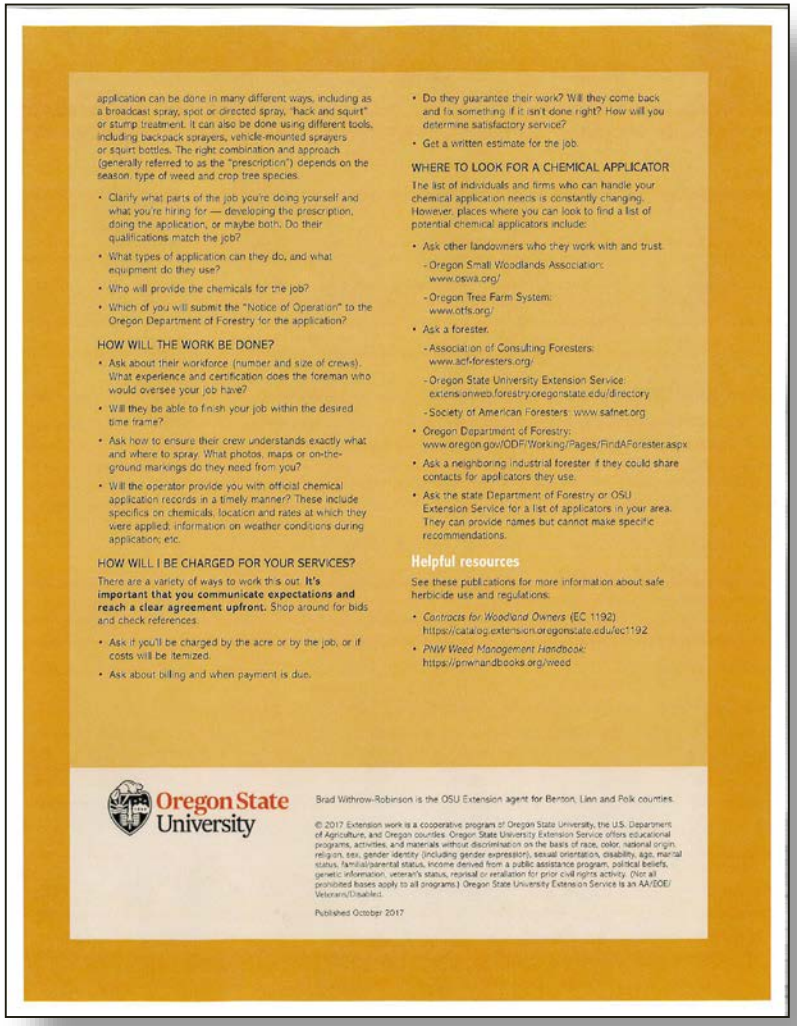

application can be done in many different ways, including as a broadcast spray, spot or directed spray, "hack and squirt" or stump treatment. It can also be done using different tools, including backpack sprayers, vehicle-mounted sprayers or squirt bottles. The right combination and approach (generally referred to as the "prescription") depends on the season, type of weed and crop tree species.

- Clarify what parts of the job you're doing yourself and what you're hiring for — developing the prescription, doing the application, or maybe both. Do their qualifications match the job?
- What types of application can they do, and what equipment do they use?
- Who will provide the chemicals for the job?
- Which of you will submit the "Notice of Operation" to the Oregon Department of Forestry for the application?

#### HOW WILL THE WORK BE DONE?

- Ask about their workforce (number and size of crews). What experience and certification does the foreman who would oversee your job have?
- Will they be able to finish your job within the desired time frame?
- Ask how to ensure their crew understands exactly what and where to spray. What photos, maps or on-the-ground markings do they need from you?
- Will the operator provide you with official chemical application records in a timely manner? These include specifics on chemicals, location and rates at which they were applied; information on weather conditions during application; etc.

#### HOW WILL I BE CHARGED FOR YOUR SERVICES?

There are a variety of ways to work this out. **It's important that you communicate expectations and reach a clear agreement upfront.** Shop around for bids and check references.

- Ask if you'll be charged by the acre or by the job, or if costs will be itemized.
- Ask about billing and when payment is due.
- Do they guarantee their work? Will they come back and fix something if it isn't done right? How will you determine satisfactory service?
- Get a written estimate for the job.

#### WHERE TO LOOK FOR A CHEMICAL APPLICATOR

The list of individuals and firms who can handle your chemical application needs is constantly changing. However, places where you can look to find a list of potential chemical applicators include:

- Ask other landowners who they work with and trust.
  - Oregon Small Woodlands Association: www.oswa.org/
  - Oregon Tree Farm System: www.otfs.org/
- Ask a forester.
  - Association of Consulting Foresters: www.acf-foresters.org/
  - Oregon State University Extension Service: extensionweb.forestry.oregonstate.edu/directory
  - Society of American Foresters: www.safnet.org
- Oregon Department of Forestry: www.oregon.gov/ODF/Working/Pages/FindAForester.aspx
- Ask a neighboring industrial forester if they could share contacts for applicators they use.
- Ask the state Department of Forestry or OSU Extension Service for a list of applicators in your area. They can provide names but cannot make specific recommendations.

#### Helpful resources

See these publications for more information about safe herbicide use and regulations:

- *Contracts for Woodland Owners* (EC 1192) https://catalog.extension.oregonstate.edu/ec1192
- *PNW Weed Management Handbook:* https://pnwhandbooks.org/weed

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# Industrial Fire Precaution Levels – p.88

- **Level 1 - Fire Season**
  - formerly Closed Season
- **Level 2 - Limited Shutdown**
  - formerly Partial Hootowl
- **Level 3 - Restricted Shutdown**
  - formerly Partial Shutdown
- **Level 4 - Complete Shutdown**
  - formerly General Shutdown

# Summary of key fire season requirements – p.89

- Permit for power-driven machinery
- Fire watch after daily operations
- Water supply and pump on-site
- Firefighting hand tools on-site
- Fire extinguishers on motorized equipment
- Fire tools and extinguishers on trucks
- Engine exhaust spark arrestor
- Chainsaw requirements
- Cable logging precautions
- Flammable debris removal
- Falling hazard snags
- Waiver of alternate methods
- No smoking
- Immediate control of any unwanted fire

# Spray buffers – p. 104

**Table 5-1 Distances from Water Bodies, Inhabited Dwellings and Schools when Using Chemicals**

| Chemical Application Buffers Required for Waters of the State by the Chemical and Other Petroleum Products Rule | Herbicides, Rodenticides, insecticides and all other Chemicals except the next two columns | | Fungicides and non-biological Insecticides | | Fertilizers (See Table 5-1 Notes above) | |
|---|---|---|---|---|---|---|
| Application (see table notes) | Aerial | Ground | Aerial | Ground | Aerial | Ground |
| Aquatic areas of fish-bearing streams with no domestic use (most Type F and SSBT streams) | 60 feet | 10 feet | 300 feet | 10 feet | No direct application | No direct application |
| Aquatic areas of domestic-use streams with fish (all Type D and some Type F and SSBT streams) | 60 feet | 10 feet | 300 feet | 10 feet | 100 feet | 100 feet |
| Inhabited dwelling or school | 60 feet | No buffer specified | No buffer specified | No buffer specified | No buffer specified | No buffer specified |
| Aquatic areas of other streams (Type N streams) | No buffers specified, but protect vegetation noted in Table 2-16 | No buffers specified, but protect vegetation noted in Table 2-16 | 60 feet if flowing at time of application | No buffer specified | No direct application to large and medium streams | No direct application to large and medium streams |
| Significant wetlands | 60 feet | 10 feet | 300 feet | 10 feet | No direct application | No direct application |
| Aquatic areas of lakes larger than 8 acres | 60 feet | 10 feet | 300 feet | 10 feet | No direct application | No direct application |
| Aquatic areas of other lakes with fish | 60 feet | 10 feet | 300 feet | 10 feet | No direct application | No direct application |
| Other standing water larger than ¼ acre at time of application | 60 feet | 10 feet | 300 feet | 10 feet | No direct application | No direct application |
| All other waters | No buffer specified | No buffer specified | No buffer specified | No buffer specified | No buffer specified | No buffer specified |

Note for Table 5-1: For aerial herbicide applications, measure the 60-foot unsprayed buffer next to inhabited dwellings from the dwelling and for schools, from the property boundary of school campuses.

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# Assistance for Family Forest Landowners – p. 140

- Forest stewardship plans
- Environmental quality incentives program (EQIP)
- Bark beetle mitigation funds
- Conservation reserve enhancement program (CREP)
- Forest health
- Reforestation following natural disasters
- Conservation easements
- Tax credits and incentives
- Urban and community forestry
- Other resources and information

# General prescriptions for stream RMAs – p. 160

- Medium SSBT - Presc. 1 - no harvest RMA
- Medium SSBT - Presc. 2 - partial harvest RMA
- Medium SSBT - Presc. 3 - north-sided buffer
- Medium SSBT - Relief Presc. 1 - no harvest RMA
- Medium SSBT - Relief Presc. 2 - partial harvest RMA
- Small SSBT - Presc. 1 - no harvest RMA
- Small SSBT - Presc. 2 - partial harvest RMA
- Small SSBT - Presc. 3 - north-sided buffer
- Small SSBT - Relief Presc. 1 - no harvest RMA
- Small SSBT - Relief Presc. 2 - partial harvest RMA

# General Prescription Requirements – Medium SSBT - No Harvest - p.173

| **Table A-22 Medium Type SSBT Prescription 1 – No Harvest RMA:** Streamside Tree Retention for Harvest Type 2 or Type 3 Units (OAR 629-642-0105) |
|---|
| **Wildlife Leave Trees: Up to 50% of the trees retained to meet the total basal area target and any wildlife leave trees in excess of the total basal area target: Square feet of basal area per each 500-foot stream segment, each side of the stream (any combination of conifers and hardwoods 6 inches or greater DBH)** |
| RMA Total basal area (20 to 80 feet) = 69 sq. ft. |
| Notes for Table A-22<br>1. Distances are measured from the high water level of the Type SSBT stream.<br>2. Up to 10% of the basal area requirement may be comprised of sound conifer snags 6 inches or greater DBH and at least 30 feet tall. |

- **All understory vegetation within 10 feet of high-water level**
- **All trees within 80 feet of high-water level**
- **All trees within the RMA that lean over stream channel**
- **All snags and downed wood in the stream channel and RMA**

# General Prescription Requirements – Medium SSBT - Partial Harvest - p.174

| **Table A-23 Medium Type SSBT Prescription 2 - Partial Harvest RMA:** Streamside Tree Retention for Harvest Type 2 or Type 3 Units (OAR 629-642-0105) | |
|---|---|
| **Basal area target: Square feet of basal area per each 500-foot stream segment, each side of the stream (any combination of conifers and hardwoods 6 inches or greater DBH)** | **Live conifer trees (8 inches or greater DBH) per each 500-foot stream segment, each side of the stream** |
| No Harvest Zone: 0 to 20 feet = Retain all trees. Trees in this area do not count toward meeting the basal area or live conifer tree requirements in this table. | |
| Inner Zone: 20 to 50 feet, minimum 18 sq. ft. | Inner Zone: 20 to 50 feet, minimum 7 trees |
| Outer Zone: 50 to 80 feet, minimum 18 sq. ft. | Outer Zone: 50 to 80 feet, minimum 7 trees |
| RMA Total (20 to 80 feet) = 69 sq. ft. | RMA Total (20 to 80 feet) = 15 trees |
| Notes for Table A-23<br>1. Distances are measured from the high water level of the Type SSBT stream.<br>2. Up to 10% of the basal area requirement may be comprised of sound conifer snags 6 inches or greater DBH and at least 30 feet tall.<br>3. Must meet requirements of each zone and RMA total. | |

# General Prescription Requirements – Medium SSBT - North-side buffer - p.175

| **Table A-24. Medium Type SSBT Prescription 3 – North-sided Buffer:** Streamside Tree Retention for Harvest Type 2 or Type 3 Units (OAR 629-642-0105) |
|---|
| **Geographic Region: Coast Range, South Coast, Interior, Western Cascades** |
| Wildlife Leave Trees: All conifers and hardwoods trees that meet wildlife leave tree requirements within 40 feet of the stream high water level. |
| Notes for Table A-24.<br>1. Distances are measured from the high water level of the Type SSBT stream. |

- **All understory vegetation within 10 feet of high-water level**
- **All trees within 40 feet of high-water level**
- **All trees within the RMA that lean over stream channel**
- **All snags and downed wood in the stream channel and RMA**

# Major Changes in Revised 3rd Edition

- C. 1 - E-Notification & FERNs
- C. 2 - Type SSBT prescriptions & relief
- C. 2 - Down logs - minimum lengths & diameters
- C. 2 - Bald eagle changes
- C. 3 - Choosing the right logging contractor
- C. 5 - Choosing the right chemical applicator
- C. 5 - Industrial fire precaution levels
- C. 8 - General prescription requirements for Type SSBT streams

# Third Edition Advisory Group

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# THANKS!


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**More info at www.oregonforests.org**