

FOREST PRACTICE NOTES

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PRIVATE FORESTS DIVISION
OREGON DEPARTMENT OF FORESTRY
2600 STATE STREET
SALEM, OR 97310

This *Forest Practice Note* explains the Oregon Department of Forestry's (ODF) regulations for using chemicals, such as pesticides, and petroleum products on forestland. The ODF administers these regulations under the authority of the Oregon Forest Practices Act.

In using chemicals and petroleum products, forest landowners and operators need to know about other agencies' rules, in addition to the forest practice rules. Forest operations using chemicals and petroleum products on forestland may also be subject to:

- The pesticide control laws administered by the Oregon Department of Agriculture
- The hazardous waste laws administered by the Oregon Department of Environmental Quality
- The hazard communication rules and worker protection standards administered by the Oregon Occupational Safety and Health Division
- The water use laws administered by the Oregon Water Resources Department

For example, using water from streams, lakes, or other surface water bodies to mix herbicides and other pesticides requires prior notice to the Oregon Water Resources Department and the Oregon Department of Fish and Wildlife. Notifying ODF of the planned operation does not satisfy this requirement. The forest operator must send copies of the original notification to the other agencies' local offices at least 15 days before beginning the operation.



CHEMICALS AND OTHER PETROLEUM PRODUCTS

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What types of "chemicals" and "other petroleum products" are subject to the forest practice rules?

In the rules, the term "chemicals" refers to all classes of pesticides and more, including:

- Herbicides
- Insecticides
- Rodenticides
- Fungicides
- Petroleum products used as carriers for pesticides
- Additives called adjuvants used in pesticide solutions, such as surfactants, drift control additives, anti-foam agents, wetting agents, and spreading agents
- Big game repellents
- Fertilizers

"Other petroleum products" that may be present on any forest operation and subject to the forest practice rules include engine fuels, hydraulic fluid, lubricating oils, and greases.

The forest practice rules distinguish between "chemicals" and "other petroleum products." Only certain rules apply to the "other petroleum products."



What is the purpose of the forest practice rules regulating the use of chemicals and other petroleum products?

The Board of Forestry encourages voluntary use of integrated pest management. This is a process that reduces the effects of forest pests (including vegetation competing with young trees) in an environmentally and economically sound manner to meet the landowner's site-specific objectives. Using pesticides is one of a variety of integrated pest management strategies forest landowners may use. When properly used, pesticides and other chemicals can be effective tools for prevention or mitigation of tree damage or mortality from competing vegetation, insects, and diseases.

What is required in a Written Plan?

A written plan must be submitted for any chemical operation located within 100 feet of a fish-bearing or domestic-use stream, or within 300 feet of a specified resource site¹. Written plans must be clear, concise, and capable of standing alone as complete documents. They should be shared with everyone directly involved with the chemical operation.

Three basic elements are essential to such plans:

1. A description of the planned operation
2. A description of the protected resources
3. A description of how the resources will be protected during the operation

The operation's specific conditions and complexity determine the information needed to fulfill these elements of the written plan.

Some information items are needed in every written plan, while some are not. The following list is a good reference. For more information, contact your local ODF stewardship forester at <https://tinyurl.com/odf-find-a-forester>

Items for all chemical application written plans:

- Names of the operator and landowner
- Legal description or clear association with a particular notification and unit number
- A map showing the operation area, the protected resources, section lines, and access roads
- The common name(s) and, if known, the product brand name(s) of the chemical(s) to be used
- The type of application method (helicopter, other aerial, ground – pressurized, ground – spot application, e.g. hack and squirt)
- The type of vegetation to be controlled
- A description of the protected resource (e.g. stream type and size, nesting site)
- The measures that will be taken to protect the resource site during the operation, including how noise disturbance will be addressed during the critical use period for protected bird species

¹Specified resource sites include sensitive bird nesting, roosting, and watering sites; resource sites used by threatened and endangered fish and wildlife species; and significant wetlands.

The purpose of the forest practice chemical and other petroleum product rules is to establish requirements that will ensure:

1. Chemicals and other petroleum products used on forestland do not occur in the soil, air, or waters of the state in quantities that would be injurious to water quality or to the overall maintenance of terrestrial wildlife or aquatic life; and
2. Vegetation near the waters of the state and other sensitive resource sites receives protection on herbicide operations consistent with the requirements of other forest practice rules dealing with the protection of these important forest resources.

What additional information is required on a notification of operation when a forest operation involves a chemical application?

A notification must be submitted to ODF at least 15 days before conducting a chemical application or other operation on forestland. The waiting period is 30 days when there are registrants – citizens interested in helicopter applications of pesticides near their house or water intake – within one mile of the helicopter application.

When chemicals will be used, notifications must include:

- a) Common name of the chemical(s) to be used
- b) Product brand name, if known at the time of notification
- c) Application method
- d) Fertilizer application rate per acre to be used



What actions must be taken to prevent, control, and report leaks and spills of chemicals and other petroleum products?

Operators must maintain chemical handling equipment in a leakproof condition. Operators include landowners, loggers, and pesticide applicators. The equipment includes whatever is used for transportation, on-site storage, or application of chemicals. If there is evidence of chemical leakage, the equipment must not be used again until it is repaired.

Operators must also take adequate precautions to prevent leaks or spills of chemicals and other petroleum products from entering streams, ponds, lakes, wetlands, and other waters.

When a spill or leak does occur, operators must immediately stop the leak and contain the spread of the spill. If the spill enters, or may enter streams, lakes, wetlands, or other waters of the state, operators must also immediately report it to the nearest ODF office. Reporting to ODF does not exempt the operator from any additional requirements of other local, state, and federal agencies to report chemical or other petroleum product spills.

Persons responsible for spills of reportable quantities of chemicals or petroleum products must contact the Oregon Emergency Response System (OERS) at 1-800-452-0311 (503-378-6377 if near Salem). OERS serves as a central contact to notify state agencies of spills.

What special precautions must be taken to protect water quality when mixing chemicals on forestland?

Whenever water is taken from any stream or water impoundment for use in mixing chemicals, the operator must prevent chemicals from entering the water by taking at least the following precautions:

- Providing an air gap or reservoir between the water source and the mixing tank; and
- Using pumps, suction hoses, feed hoses, and check valves that are used only for water, and never for chemical mix.

What actions must be taken to protect water quality when locating mixing, transfer, and staging areas for chemicals and other petroleum products?

When forest operations involve:

- Mixing chemicals;
- Transferring chemicals or other petroleum products between equipment or containers;
- Cleaning tanks or equipment used during chemical applications; or
- Landing and staging aircraft

Operators must conduct these activities only in locations where any chemical or petroleum spill will not run off into streams, lakes, wetlands, or other water bodies.

The minimum precaution is to avoid locating chemical mixing and staging areas within 100 feet of fish-bearing and domestic-use streams.

Table 1. Buffer requirements for pesticide applications to forestland under the forest practice rules.

Buffer Requirements for Pesticide Applications to Forestland	Herbicides, Rodenticides, and Biological Insecticides (and all other chemicals except fungicides, non-biological insecticides, and fertilizers)			Fungicides and Non-Biological Insecticides		
	Helicopter Applications	Other Aerial Applications¹	Ground Applications	Helicopter Applications	Other Aerial Applications¹	Ground Applications
Waters of the State	<i>All distances are horizontal distances from the high water level</i>			<i>All distances are horizontal distances from the high water level</i>		
Type D Streams	75 feet or RMA width ²	60 feet	10 feet	300 feet	300 feet	10 feet
Type F and Type SSBT Streams	75 feet or RMA width ²	60 feet	10 feet	300 feet	300 feet	10 feet
Type N Streams w/ flowing surface water at time of application	50 feet	0	0	60 feet	60 feet	0
Type N Streams w/ ponded surface water (not flowing) at time of application	50 feet	0	0	50 feet	0 feet	0
Significant Wetlands ³	60 feet	60 feet	10 feet	300 feet	300 feet	10 feet
Stream-Associated Wetlands	Buffer according to the stream type			Buffer according to the stream type		
Large Lakes (>8 acres)	60 feet	60 feet	10 feet	300 feet	300 feet	10 feet
Other Lakes with fish use	60 feet	60 feet	10 feet	300 feet	300 feet	10 feet
Areas of standing open water >1/4 acre at time of application	60 feet	60 feet	10 feet	300 feet	300 feet	10 feet
Infrastructure and Structures	<i>All distances are horizontal distances</i>			<i>All distances are horizontal distances</i>		
Water Intakes ⁴	300 feet ⁵	0	0	300 feet ⁵	0	0
Schools (starting at boundary of school campus tax lot)	300 feet ⁶	60 feet ⁷	0	300 feet ⁶	0	0
Inhabited Dwellings (starting at edge of dwelling structure)	300 feet ⁶	60 feet ⁷	0	300 feet ⁶	0	0

Table 2. Buffer requirements for fertilizer applications on forestland under the forest practice rules.

Buffer Requirements for <u>Fertilizer</u> Applications to Forestland	Fertilizers	
	Aerial Applications	Ground Applications
Waters of the State	<i>All distances are horizontal distances from high water level</i>	
Type D Streams	100 feet	100 feet
Type F and Type SSBT Streams, <i>Domestic-Use Portions</i>	100 feet	100 feet
Type F and Type SSBT Streams, <i>Non-Domestic-Use Portions</i>	No direct application	No direct application
Type N Streams, <i>Large and Medium Size</i>	No direct application	No direct application
Type N Streams, <i>Small Size</i>	0	0
Significant Wetlands ³	No direct application	No direct application
Stream-Associated Wetlands	Buffer according to the stream with which the wetland is associated.	
Large Lakes (>8 acres with or without fish)	No direct application	No direct application
Other Lakes with fish use	No direct application	No direct application
Areas of standing open water >1/4 acre at time of application	No direct application	No direct application
Infrastructure and Structures	<i>All distances are horizontal distances</i>	
Water Intakes	0	0
Schools (starting at boundary of school campus tax lot)	0	0
Inhabited Dwellings (starting at edge of dwelling structure)	0	0

Notes for Tables 1 and 2:

- **Comply with pesticide labels which may require wider buffers than shown in Table 1 and 2.**
- Where two or more protected resources coincide, apply the most protective buffer.
- Direct application of pesticides and fertilizers is not allowed within the minimum buffers in the tables.

¹ "Other aerial applications" includes applications by unmanned aircraft systems (drones) and fixed-wing aircraft.

² Apply the wider of the two buffer widths, either 75 feet or the RMA width in effect on July 7, 2020, which excludes Type SSBT streams in the Siskiyou Georegion. ORS 527.768 to 527.798.

³ Significant wetlands include: wetlands >8 acres, estuaries, bogs, and important springs in eastern Oregon.

⁴ Protected water intakes means "water uses qualifying for a spray buffer" (defined in SB 1602 and ORS 527.786(4)), and identified from: Oregon Water Resources Dept. and E-Notification registrations, effective December 15, 2021.

⁵ Buffer is required when helicopter pesticide application unit and water intake are in the same "sixth-level hydrologic unit," SB 1602, effective January 1, 2021.

⁶ The landowner or school board requesting the pesticide application may choose to forego all but the inner 60 feet of this buffer, SB 1602, effective January 1, 2021.

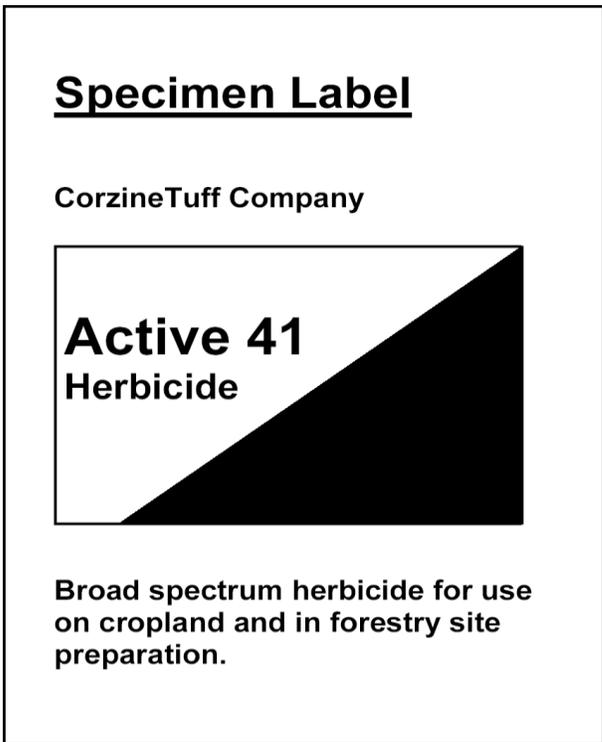
⁷ Other aerial herbicide applications only, not other pesticides, ORS 527.762, effective January 1, 2016.

When chemicals are applied on forestland, how must water quality, other resources, and people be protected?

Each forest pesticide has a federally approved label which describes how it must be applied. The label is a legal document; failing to follow the label requirements is a violation of both federal and state law. **In addition**, the forest practice rules require other protection actions to address the unique blend of resource values, rugged terrain, and operational constraints that exist on forestland. These actions are related to weather conditions, aerial applications parallel to streams, and buffering water bodies, water intakes, and structures (see **Tables 1 and 2** on pages 4 and 5).

Weather conditions such as temperature, relative humidity, wind speed, wind direction, atmospheric temperature inversions, and precipitation may strongly affect the deposition and drift of chemicals, especially during aerial and pressurized, ground-based chemical applications. Pesticide product labels may include specific requirements for weather conditions during applications. The forest practice rules do not contain weather limitations, but do require weather conditions during the application to be closely monitored and recorded, and evaluated to ensure chemicals do not drift outside the target area.

Aerial chemical applications must be made parallel to the edges of streams and other waters to reduce the potential for chemicals to enter the water.



What information must be recorded and maintained on forest chemical applications?

Table 3 lists the information operators must collect and retain for three years after a forest chemical application. This information must be made available to ODF upon request.

Table 3

	Aerial pesticide applications and pressurized, ground-based broadcast pesticide applications with potential for drift, such as right-of-way and backpack sprayer applications	Other ground-based pesticide applications (stem injection, "hack and squirt", granular, etc.)	Fertilizer
Legal description	✓	✓	✓
Acres treated	✓	✓	✓
Chemical brand name or EPA registration number & application rate	✓	✓	
Date and time of application	✓	✓	✓
Air temperature	✓		
Relative humidity	✓		
Wind speed and direction	✓		
Applicator's name	✓	✓	✓

Note: Air temperature, relative humidity, wind speed, and wind direction must be measured at least hourly for aerial applications and at least at the beginning and ending of each day's work for ground-based applications.

A standardized form is offered on page 8 of this note as one method of keeping the required records.

What special actions must be taken when applying chemicals near streams used by community water systems?

It is important that community water system managers are informed about planned chemical operations so they can coordinate their water quality monitoring activities with such operations. These requirements apply when chemicals will be aerially applied within 100 feet, or applied from the ground within 50 feet of domestic use portions of Type F,



Type SSBT, and Type D streams used by a community water system. The operator must notify the water system manager about the planned chemical operation at least 15 days before the operation begins. Notifying ODF does not satisfy this requirement. This requirement generally applies only to community watersheds 100 square miles (64,000 acres) in size or smaller. Your local ODF stewardship forester can help you identify water systems requiring notification.

If requested by the community water system manager, the operator must provide the following additional information before commencing the operation:

- The application technology that will be used
- Practices that will be followed to minimize drift toward the stream
- Any monitoring efforts that will be conducted by the landowner
- The planned time schedule for the application

Where can information on chemicals used on forestland be obtained?

- Pesticides and potential human health effects of pesticide exposure:
National Pesticide Information Center (NPIC) at 1-800-858-7378, or <http://npic.orst.edu/>
- Pesticides used and regulated in forests:
<http://npic.orst.edu/health/forestry.html>
- Fact sheets about specific pesticides:
<http://npic.orst.edu/ingred/specchem.html>
- Herbicide effectiveness and other control methods on target weeds:
<https://pnwhandbooks.org/weed/forestry-hybrid-cottonwoods/forestry>

To discuss a pesticide exposure situation, contact:

The Oregon Pesticide Analytical and Response Center (PARC)

at (503) 986-6470

or

Oregon Poison Center

at 1-800-222-1222

How can citizens learn about forest chemical operations in their local area?

People living in and near managed forestland are encouraged to communicate directly with their neighboring forest landowners. Most industrial and non-industrial forest landowners are willing to explain the management plans for their property and listen to public comments and concerns.

Citizens may receive information about forest operations, including chemical applications, by subscribing to receive copies of notifications of operations submitted to ODF. **Subscriptions** apply to a geographic area of interest and one or more forest activities of interest. Subscriptions may be created in ODF's E-Notification system. To learn more, visit <https://tinyurl.com/odf-e-notifications>

Citizens may also register to receive communications about pesticide applications planned within one mile of their residence or water intake. Like subscriptions, **registrations** are created in ODF's E-Notification system.

A mandatory 15- to 30-day waiting period applies to all aerial chemical applications and some ground-based applications on forestland. This waiting period gives interested parties the opportunity to provide comments to ODF and the operator about the planned pesticide application.

Oregon Department of Forestry Field Offices

For more information about the Oregon Forest Practices Act or the Forest Practice Rules, please contact your local ODF stewardship forester at <https://tinyurl.com/odf-find-a-forester>



Daily Chemical Application Record Form

Revised October 2018

O D F	O A A	U S A	<p>This form outlines daily chemical application information an applicator must record to meet requirements of the Oregon Departments of Forestry (ODF)¹ and Agriculture (ODA)², and the U.S. Department of Agriculture (USDA)³. An applicator may use a different form if the required information is included. <i>The applicator must retain the ODA and ODF-required records for 3 years, and the USDA-required records for 2 years.</i></p>
			Landowner and Location
	✓		Name, address, and telephone of person or business who owns or controls the property:
✓	✓	✓	Legal Description of Application Area (Township/Range/Quarter-quarter section):
*			Notification #: _____ Unit #: _____
			Applicator
✓	✓	✓	Applicator(s) (Name(s) of Person(s) Applying Chemical, Including Supervisor if Trainee or Apprentice):
	✓	✓	Applicator License Numbers for persons applying chemical (Including Supervisor if Trainee or Apprentice):
✓			Applicator Contractor:
			Application Information
	✓		Supplier of Pesticide Product:
✓	✓	✓	Pesticide EPA Registration Number: _____ Manufacturer, Product Name, (Formulation*): _____
✓	✓	✓	EPA Registration Number and Product Brand Name:
✓	✓	✓	Number of Acres Treated:
✓	✓		Per Acre Application Rate:
		✓	Total Amount of Pesticide Product Applied:
✓			Carrier Used, including Rate/Acre:
	✓		Application Equipment Used (Aerial, Backpack, Etc.): If Aerial F.A.A. Aircraft Number:
	✓	✓	Crop (enter "forest" for forestry applications):
✓	✓	✓	Date of Application: Beginning Time: _____ Ending Time: _____
<p><i>ODF Only:</i> Weather Information (For Aerial Applications Measure and Record Information Hourly; For Ground-Based Pressurized Broadcast Application Measure and Record Information at the Beginning and End of Each Day's Application):</p>			
Time			
Air Temperature			
Relative Humidity			
Wind Speed			
Direction wind coming from (e.g., N or NNW)			
Applicator Signature: _____			

¹ Oregon Department of Forestry requirements (per OAR 629-620) for all chemical applicators.
² Oregon Department of Agriculture requirements (per OAR 634.146 for commercial and public pesticide applicators, commercial operators, pesticide consultants, and private applicators using restricted-use pesticides or power-driven equipment).
³ U.S. Department of Agriculture requirements for private pesticide applicators using restricted-use products.
* Optional information for ODF