DIVISION 620
CHEMICALS AND OTHER PETROLEUM PRODUCTS

PURPOSE
OAR 629-620-0000

(1) OAR 629-620-0000 through 629-620-0800 shall be known as the chemical and other petroleum product rules. In addition to the application of chemicals, operators should be aware that certain requirements of these rules also apply to the use of other petroleum products, such as fuel and lubricants, on any forest operation.

(2) Operators are encouraged to voluntarily use integrated pest and vegetation management processes. The use of pesticides is one of a variety of integrated pest management strategies that forest landowners may implement to minimize the impact of forest pests in an environmentally and economically sound manner to meet site specific objectives. When properly used, pesticides and other chemicals can be effective tools in the growing and harvesting of forest tree species.

(3) The purpose of the forest practice chemical and other petroleum product rules is to establish requirements that will ensure:
- ***(a) 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***
- ***(b) The vegetative components of riparian management areas and sensitive resource sites receive protection on herbicide operations consistent with the purposes of the reforestation rules, the requirements of the sensitive resource site rules, and the vegetation retention goals of the water protection rules.***

(4) All distances listed in the chemical and other petroleum product rules shall be measured horizontally.

(5) Operations involving the use of chemicals and other petroleum products on forestland are also subject to the pesticide control laws administered by the Department of Agriculture, hazardous waste laws administered by the Department of Environmental Quality, hazard communication rules administered by the Occupational Safety and Health Division, the water use laws administered by the Water Resources Department. Maximum contaminant levels in drinking water for certain pesticides are established by the Health Division.

APPLICATION:

This rule is not used for enforcement action. It provides the framework for the rest of the chemical and other petroleum product rules.

ADMINISTRATION:

The term "chemicals" is defined in 629-600-0100. That definition includes the terms "pesticides" and "fertilizers." These terms are not defined in the forest practice rules. Instead, the definition of "chemicals" refers to the Oregon Department of Agriculture's statutory definition of "pesticides" in ORS 634.006(8) and of "fertilizers" in ORS 633.311. Since ODF and ODA coordinate closely on forest pesticide and fertilizer issues, both agencies should use the same definition. The forest practices rules defer to ODA definitions since they apply to all land uses in the state. The lengthy text of ORS 634.006(8) is not provided here, but it can be found in the Oregon Forest Laws and Administrative Rules book or at the Oregon State Legislature's webpage at http://www.leg.state.or.us/bills_laws/. Knowledge of this ODA definition is useful for understanding the forest practice rule guidance.

ORS 633.311 states,

> *"'Fertilizer' means any substance, or any combination or mixture of substances, designed for use principally as a source of plant food, in inducing increased crop yields or plant growth, or producing any physical or chemical change in the soil and shall contain five percent or more of available nitrogen, phosphorus pentoxide (phosphoric acid) or potassium oxide (potash), singly, collectively or in combination, except hays, straws, peat, and leaf mold, and unfortified animal manures."*

The definition of chemicals does not include materials that are used for dust abatement on forest roads. Magnesium chloride or other materials may be used for this purpose. Use of dust abatement products is covered in the road maintenance rules under OAR 629-625-0600(5).

Section (1) highlights that the use of "other" petroleum products, meaning petroleum products not used in chemical applications (such as fuel, lubricants, and hydraulic fluid), is also subject to the forest practice rules. Two rules, OAR 629-620-0100 and 629-620-0300, address practices that must be followed when other petroleum products are used on forest operations.

Section (2) references "integrated pest management" (IPM), which is defined in ORS 527.310(5). IPM is a decision-making process that examines all alternatives for pest control (including vegetation management) and uses a method that is environmentally and economically sound and meets site-specific management objectives. ORS 527.315 lays out a 12-step IPM process that must be followed by the department to control pests on state forestlands. The department is also required to encourage the use of the process when providing technical advice to private and local government landowners. **Stewardship Foresters must not require landowners to use only one method of pest control.** Instead, describe the end result needed and, if necessary, provide landowners or operators with a list of possible methods which can achieve that goal. Refer them to other technical experts who can more fully explain the advantages and disadvantages of these different methods. A 1993 OSU publication on alternatives to the use of herbicides for vegetation management is a useful reference.

Section (3) states the purpose of the chemical and other petroleum product rules. When reviewing written plans and plans for alternate practices, the Stewardship Forester should consider this purpose statement. The term "injurious" in (3)(a) is a subjective term. It is important to note that the purpose of the rules is not to maintain chemical-free zones outside of operation area boundaries. During rule development, it was acknowledged that small amounts of applied chemicals may potentially enter non-target areas during forest operations, even if best management practices are followed. However, there is adequate research and monitoring of human health, fisheries, and aquatic invertebrates to indicate that, if the rules are complied with, any effects on protected resources will be very minor, very localized, and very short in duration.

Subsection (3)(b) highlights that, in addition to compliance with the chemical and other petroleum product rules, herbicide operations must also result in retention of all vegetation required by the water protection rules, reforestation rules, and the sensitive resource site rules. This subsection supplies a principle that applies to many of the questions about chemical application. **There are three sources of regulations on chemical application. The three sources are additive, and the most restrictive limitations among those three must be applied wherever protected resources are present.** The three sources of regulations are: 1) the EPA-approved product label, 2) the forest practice rules on chemicals and other petroleum products, and 3) any other forest practice rules requiring vegetation retention for various purposes.

Section (4) clarifies that the distances listed in the chemical and other petroleum product rules must be measured horizontally rather than along the slope.

Section (5) lists other state agencies that have roles in regulating certain aspects of forest chemical operations. This list is provided for information only. Landowners and operators who have questions about the requirements of other state agencies should be encouraged to contact those agencies directly. Coordination between ODF and the Department of Agriculture in regulating pesticide use on forestland is formalized in a Memorandum of Agreement. OAR 629-620-0400(1) and the related guidance specifically address compliance with chemical product labels and ODA involvement in label interpretation and enforcement.

REFERENCES:

- OAR 629-600-0100 Definitions - *"Chemicals"*
- OAR 629-620-0100 Preventing, controlling, and reporting leaks and spills of chemicals and other petroleum products
- OAR 629-620-0300 Locations of mixing, transfer, and staging areas for chemicals and other petroleum products
- OAR 629-620-0400(1) Protection of the waters of the state and other resources when applying chemicals
- ORS 527.310 and 315 Integrated pest management statutes
- ORS 633.311 Definition of "fertilizers"; ORS 634.006(8) Definition of "pesticides"
- Harrington, T.B. and L.A. Parendes, editors. 1993. Forest Vegetation Management without Herbicides. Forest Research Laboratory, Oregon State University. Corvallis, Oregon.
- 1995. Memorandum of Agreement between the Oregon Department of Agriculture and the Oregon Board of Forestry. Oregon Department of Forestry. Salem.

PREVENTING, CONTROLLING, AND REPORTING LEAKS AND SPILLS OF CHEMICALS AND OTHER PETROLEUM PRODUCTS
OAR 629-620-0100

(1) The operator shall maintain equipment used for transportation, on-site storage, or application of chemicals in a leak proof condition. If there is evidence of chemical leakage, the operator shall suspend the further use of such equipment until the deficiency has been corrected.

APPLICATION:

This rule section is used for enforcement action. It applies to chemicals only and does not apply to other petroleum products.

COMPLIANCE:

The operator complies with section (1) of this rule if equipment used for transporting, storing or applying chemicals is maintained in a leak proof condition.

Unsatisfactory Condition: An unsatisfactory condition exists when equipment used for transportation, on-site storage or application of chemicals shows evidence of leakage.

Damage: Damage occurs when the unsatisfactory condition results in chemicals entering waters of the state.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued if corrective action can be taken before leaked chemical products enter the waters of the state. If the leaked materials enter waters of the state, a violation has occurred, and a written statement is not appropriate.

ADMINISTRATION:

The intent of this rule section is to prevent leaks that could result in chemicals entering the waters of the state.

Section (1) can be used in verbal or written recommendations or in written statements advising operators of actions needed to prevent damage from leaking equipment used in chemical applications.

Written statements and repair orders must prohibit the use and movement of leaking equipment, but cannot require the repair of the leaky equipment. Equipment repair is the operator's choice. At a minimum, written statements and repair orders should direct the operator to immediately contain and clean-up the leakage from the equipment. Written statements should direct the operator to take timely action to prevent further leaking and to contain, neutralize, and/or remove any spilled chemical before it enters any waters of the state.

The Department of Environmental Quality (DEQ) has principal and final authority for clean-up of chemical spills in Oregon. However, when there are chemical spills on forestland, ODF personnel are responsible for administering the FPA and taking certain actions related to control and cleanup. Repair orders and written statements should direct control and cleanup of spills, consistent with Directive 6-3-0-002 "Hazardous Materials Incident Reporting and Control." All ODF personnel who may encounter chemical spills must be familiar with this directive. Specifically, the directive states:

> *"Trained department employees may only take direct action to control* ***incidental releases or spills****. Such action shall only occur if the spilled substance is identified and it is determined that it can be safely absorbed, neutralized, or otherwise controlled in a safe manner with available personnel and equipment."* (Directive 6-3-0-002, Policy 2, page 3.)

When chemical spills are not simply "incidental releases," ODF personnel must not participate directly in control or containment action. Personnel must cooperate fully with agencies responsible for coordinating and directing remedial actions in an emergency response. ODF personnel are not authorized or trained to initiate control action in "emergency response" hazardous materials situations. Improper actions may endanger personnel on the site or result in increased damage to resources or public health.

REFERENCES:

- Oregon Department of Forestry Directive 6-3-0-002 - *"Hazardous Materials Incident Reporting and Control"*

PREVENTING, CONTROLLING, AND REPORTING LEAKS AND SPILLS OF CHEMICALS AND OTHER PETROLEUM PRODUCTS
OAR 629-620-0100

(2) Operators shall take adequate precautions to prevent leaks or spills of other petroleum products, such as fuel, motor oil, and hydraulic fluid, from entering the waters of the state.

APPLICATION:

This rule section is used for enforcement action. It applies to other petroleum products only and does not apply to chemicals.

COMPLIANCE:

Operators comply with this rule when operations are conducted in a manner that prevents other petroleum products, such as fuel, motor oil, and hydraulic fluid, from entering the waters of the state.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator has not taken reasonable precautions to prevent leaks or spills of other petroleum products and a leak or spill leads to or is likely to lead to entry of the products into waters of the state.

Damage: Damage exists when an unsatisfactory condition results in other petroleum products entering waters of the state.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued if corrective action can be taken before other petroleum products enter the waters of the state. If the leaked materials enter waters of the state, a violation has occurred, and a written statement is not appropriate.

ADMINISTRATION:

Section (2) requires operators to take reasonable precautions to control the normal risks of petroleum product leaks or spills directly or indirectly reaching the waters of the state. The simple event of having an accidental leak or spill is not a violation in itself. Operators should be held responsible only for precautions to prevent normally expected risks of petroleum products entering waters. Judgment will be needed to determine what is normal in the operating situation. For example, chocking fuel truck wheels on a steep parking place would be normal, as is brake and transmission maintenance on fuel trucks. Taking the fuel truck home every night lest it be vandalized would be abnormal in most cases.

Section (2) can be used in verbal or written recommendations or written statements advising operators of risky placement or handling of other petroleum products.

Sources of "other petroleum products" are generally so much a part of everyday operations that operators may overlook the potential hazards. Common sources include vehicle fuel tanks, aircraft fuel tanks, fuel supply trucks, waste oil storage containers, supplies of servicing lubricants, diesel for pesticide mixtures, and the like.

Note that this rule section holds the operator responsible for prevention actions, while cleanup and reporting are separate requirements under sections (3) and (4).

ODF will judge the adequacy of prevention actions and leave oversight of leak and spill cleanup and reporting actions to the Department of Environmental Quality (DEQ). The related rule, OAR 629-630-0400(3), requires removal from forest land of all petroleum waste materials resulting from a forest operation. This is the rule that should be used to enforce cleanup of oil, filters, and oil or grease containers carelessly left on operation sites.

REFERENCES:

- OAR 629-605-0130 Compliance with the rules and regulations of the Department of Environmental Quality
- OAR 629-630-0400(3) Treatment of waste materials
- DEQ Webpage with regional contact information at http://www.oregon.gov/DEQ/LQ/index.shtml. See also the DEQ overview fact sheet at http://www.oregon.gov/DEQ/DEQSnapshot.pdf
- Letter from DEQ Spill Prevention & Management Program, August 9, 1994
- Oregon Department of Forestry Directive 6-3-0-002 - *"Hazardous Materials Incident Reporting and Control"*

PREVENTING, CONTROLLING, AND REPORTING LEAKS AND SPILLS OF CHEMICALS AND OTHER PETROLEUM PRODUCTS
OAR 629-620-0100

(3) Operators shall take immediate and appropriate action to stop and contain leaks or spills of chemicals and other petroleum products.

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

An operator complies with this rule if immediate control or neutralizing action is taken when chemicals or other petroleum products are spilled.

Unsatisfactory Condition: An unsatisfactory condition exists when a leak or spill of chemicals or other petroleum products occurs on an operation and the operator does not take immediate and appropriate action to stop and contain the leak or spill.

Damage: Damage occurs when an unsatisfactory condition results in chemicals or other petroleum products entering waters of the state.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued if corrective action can be taken before leaked chemical or other petroleum products enter the waters of the state. If the leaked materials enter waters of the state, a violation has occurred, and a written statement is not appropriate.

ADMINISTRATION:

Stopping and Containing Spills
This rule section requires operators to stop and/or contain any spills that might occur so that the spilled chemicals or other petroleum products do not reach waters of the state. This section does not require operators to clean up spilled material; that is required under state regulations administered by the Oregon Department of Environmental Quality (DEQ) (see the discussion under the Spill Cleanup heading below).

"Immediate" action is when the operator starts to contain or neutralize a spill when first becoming aware of it. "Appropriate" action is achieved by using accepted methods for containment and control of leaks and spills.

ODF will take initial responsibility for directing control action where a spill leak of oil or hazardous materials takes place as a result of noncompliance with forest practice rules. However, close coordination with other agencies, emergency responders, landowners, operators, and others is needed. Notably, ODF's authority over leaks or spills related to forest operations overlaps with DEQ's general authority over all leaks and spills of oil or hazardous materials. In some instances,

e.g., reportable, larger, or more complex or dangerous spills, DEQ may assert its overall authority and take a leading role in directing control efforts. See ODF Directive 6-3-0-002, Hazardous Materials Incident Reporting and Control for more information on how to balance ODF and DEQ spill response authorities. Even if ODF does take the lead in directing control actions, DEQ is a valuable resource in helping to determine "appropriate" control actions.

The Department of Forestry and DEQ worked together to summarize DEQ's rule requirements and these points should be shared with other agencies and interested parties as needed in the event of a leak or spill. ODF personnel should consider taking the following actions as deemed suitable to the situation:

1. Give priority to ensuring that responsible parties communicate to DEQ those leaks and spills that are of reportable quantities. Implement Forest Practices Directive 6-3-0-002, "Hazardous Materials Incident Reporting and Control," in response to spills.

2. Advise parties (particularly forest operators) responsible for non-reportable leaks and spills of their obligation to comply with DEQ rules. Enforcement of reporting and cleanup rules remains DEQ's responsibility. The linkage is in rule OAR 629-605-0130. Refer inquiring responsible parties to DEQ for methods acceptable to meet DEQ cleanup performance standards.

3. Advise responsible parties of their liability and enforce control action on petroleum leaks and spills likely to enter surface waters. Encourage cleanup of threats to groundwater such as wells.

4. Unless forest operations are involved, refer complaints to DEQ's field office. A link to a webpage with DEQ office locations and phone numbers is supplied among the references.

Safety

In accordance with the Hazardous Materials Incident Reporting and Control Directive, department employees will act only at the first responder awareness level, meaning they will take direct control actions only for minor spills of known materials that are safe to be near under the given circumstances. See the directive for more information regarding the first responder awareness level.

Spill Cleanup

DEQ oil and hazardous waste spill rules hold the responsible party (which may be other than the operator) strictly liable for cleanup and any appropriate reporting to DEQ. ODF personnel should be aware of these DEQ rules and inform operators that they have some responsibilities to DEQ. In summary, this is the way DEQ applies their rules:

1. DEQ rules hold persons responsible for causing or allowing petroleum leaks or spills strictly liable for cleanup. The responsible party may not be the operator. Whoever caused or allowed the leak or spill is the party responsible to DEQ. Such leaks or spills

can range from small chronic vehicular leakage, to spillage during machinery use or maintenance, to spills from tank trucks or wrecked vehicle/aircraft fuel tanks.

2. DEQ has authority to require cleanup whether or not they are present to direct the cleanup of any spill, however small or large. Some have argued that cleanup be enforced on every petroleum leak on the ground no matter how small. Having limited resources, DEQ prioritizes its efforts by directing attention primarily to spills exceeding reportable quantities. Any quantity of petroleum product spilled into or threatening to enter waters of the state is reportable. For petroleum spilled on the ground, the reportable quantity is 42 gallons within 24 hours. For most forestry pesticides, the reportable quantity for pesticides is 200 pounds (25 gallons for liquids), either in concentrated product from a container or from a tank mix (see OAR 340-142-0050). Pesticides listed in the federal regulation 40 CFR Part 302 may have different reportable quantities. If there is any question, the responsible party should consider the spill reportable, and DEQ can help sort out the actual requirements. Responsible parties are liable for cleanup of lesser spills in accordance with DEQ rule performance standards, but cleanup for such incidents is unlikely to be reviewed by DEQ unless there is a specific request and DEQ has the time.

3. DEQ rule performance standards for cleanup are to achieve the "lowest practicable level" of remaining petroleum, using the "best available methods." Consideration is to be given to such factors as depth to groundwater, soil characteristics, rainfall, proximity to surface water and people, etc. For non-reportable leaks or spills, the responsible party is left to judge whether their cleanup is adequate, subject to DEQ review if DEQ should become involved (see 2. above).

4. The fate of petroleum leaks or spills is a consideration for the responsible party and DEQ in determining "best available" cleanup efforts. The possible fates of petroleum are the following:
   a. Movement into surface waters or groundwater directly or with rainfall (an outcome to be rigorously avoided);
   b. Evaporation to become a hydrocarbon air contaminant (since petroleum requires high temperatures and maximum exposure to the air, this is unlikely to happen to petroleum soaked into the ground); or
   c. Consumption by microbial action in the soil (the best outcome for petroleum remaining in the soil).

5. Used petroleum leaked or spilled on a site can never be considered a road surfacing treatment as a means of evading cleanup responsibility. Surfacing roads with used petroleum is not permitted under 1993 state and federal law because of the contaminants created during petroleum's use.

REFERENCES:

- OAR 629-605-0130 Compliance with the rules and regulations of the Department of Environmental Quality
- OAR 629-630-0400 (3) Treatment of waste materials

- OAR 340-142-0050 Reportable Quantities
- 40 CFR Part 302, table 302.4 List of Hazardous Substances and Reportable Quantities
- DEQ Webpage with regional contact information at http://www.oregon.gov/DEQ/LQ/index.shtml. See also the DEQ overview fact sheet at http://www.oregon.gov/DEQ/DEQSnapshot.pdf
- 2006. Oregon Department of Environmental Quality. What to Expect When You've Had a Spill. Oregon Department of Environmental Quality. Portland, Oregon. Available at http://www.deq.state.or.us/lq/pubs/factsheets/cu/WhatToExpectSpill.pdf
- Letter from DEQ Spill Prevention & Management Program, August 9, 1994
- Oregon Department of Forestry Directive 6-3-0-002 - *"Hazardous Materials Incident Reporting and Control"*

PREVENTING, CONTROLLING, AND REPORTING LEAKS AND SPILLS OF CHEMICALS AND OTHER PETROLEUM PRODUCTS
OAR 629-620-0100

(4) The operator shall immediately report to the State Forester any chemical spills and other petroleum product spills resulting from the operation that enter, or may enter, the waters of the state. Such notification will not exempt the operator from any requirements of other local, state, and federal agencies to report chemical or other petroleum product spills.

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

An operator complies with this rule when chemical spills and other petroleum product spills resulting from the operation that enter, or may enter, the waters of the state are immediately reported to the State Forester.

Unsatisfactory Condition: An unsatisfactory condition exists when chemical spills and other petroleum product spills resulting from the operation that enter, or may enter, the waters of the state are not immediately reported to the State Forester.

Damage: Resource damage is not a prerequisite for taking enforcement action. There is a violation if an operator fails to report spills of chemicals or other petroleum products to the State Forester at the first reasonable opportunity after the spill.

Written Statement of Unsatisfactory Condition: Under specific conditions listed in OAR 629-670-0125, a written statement of unsatisfactory condition may be issued instead of a citation for certain administrative violations. Use a written statement only if the spilled materials have not yet entered waters of the state, and if there is still an opportunity for the operator to report full information on the spill at the first reasonable opportunity after the spill.

ADMINISTRATION:

Operators are required to inform the department of any spill or leak of a chemical or other petroleum product that enters, or threatens to enter, the waters of the state.

The “first reasonable opportunity" to report the accident will vary for each accident. A report should be immediate if the operator has an industry radio or an in-range mobile telephone. If not, then an allowance must be made for travel to a means of communication. The report may be delayed if the operator and their personnel are required to take emergency containment or lifesaving measures.

When notified of a chemical accident, the Stewardship Foresters or the person receiving the notice should refer to the "Hazardous Materials Incident Reporting and Control Directive." Notify Private Forests Division staff as soon as possible. Notify the Oregon Emergency Response System (OERS) if Salem staff cannot be immediately contacted.

Reporting spills to the Department of Forestry does not exempt operators from the reporting requirements of other state or federal agencies. Operators should be made aware that they also have an obligation under DEQ rules to report spills or releases of "reportable quantities" of oil or hazardous materials, as required by OAR 340-142-0001 through 340-142-0130.

Operators should be encouraged to contact the OERS directly when spills occur. Reporting to OERS will satisfy the requirements of this rule section because OERS will notify the Department of Forestry and other state agencies that may need to be informed and involved in a coordinated response strategy. Spill reporting to DEQ is best done through OERS, as that process is most likely to quickly reach the DEQ duty officer. The OERS phone numbers are 1-800-452-0311 or (503)378-6377 (local call in the Salem area).

REFERENCES:

- Oregon Department of Forestry Directive 6-3-0-002 - *"Hazardous Materials Incident Reporting and Control"*
- OAR 340-142-0001 through 340-142-0130- Oil and Hazardous Material Emergency Response Requirements

PROTECTION OF WATER QUALITY DURING MIXING OF CHEMICALS
OAR 629-620-0200

(1) Whenever water is taken from any stream or water impoundment for use in the mixing of chemicals, the operator shall prevent chemicals from entering the waters of the state by taking at least the following precautions:
(a) Providing an air gap or reservoir between the water source and the mixing tank; and
(b) Using pumps, suction hoses, feed hoses, and check valves that are used only for water.

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

Operators comply with this rule when the specified precautions are taken to prevent chemicals from entering waters of the state whenever water is taken from any stream or water impoundment for use in the mixing of chemicals.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator takes water from a stream or water impoundment for the use in the mixing of chemicals and does not apply the practices specified in this section.

Damage: Damage occurs when the unsatisfactory condition results in chemicals entering waters of the state.

Written Statement of Unsatisfactory Condition: A written statement should be issued when the operator can take timely and appropriate action to gain compliance with this section rule before chemical entry into water occurs.

PROTECTION OF WATER QUALITY DURING MIXING OF CHEMICALS
OAR 629-620-0200

(2) (For information only) When water is to be withdrawn from the waters of the state for use in mixing pesticides or for slash burning, ORS 537.141 requires operators to notify the Water Resources Department and the Department of Fish and Wildlife. Notification to the State Forester does not satisfy this requirement.

APPLICATION:

ODF will not use this rule section for enforcement action.

ADMINISTRATION:

Section (2) alerts operators to a requirement of the Water Resources Department (WRD) that both that agency and ODFW must be informed when water will be withdrawn from the waters of the state for use in mixing pesticides or for slash burning. ODF is not involved in this process. However, to satisfy this requirement, operators can send the local offices of these two agencies copies of the ODF notification, with an explanatory note about their planned actions attached. The operator must identify the type of water use and the source on the ODF notification form as described in the instructions. Addresses of local WRD and ODFW offices should be provided to operators upon request. If after fifteen days, WRD or ODFW have not informed the operator of water use restrictions, the operator may use the water and be in full compliance with water law. Waivers of the waiting period by ODF do not apply to WRD's requirements. For these two specific water uses there is no annual fee, nor is there an annual limit on the time period of the use.

REFERENCES:

- ORS 537.141 Uses of water not requiring water right application, permit or certificate

LOCATIONS OF MIXING, TRANSFER, AND STAGING AREAS FOR CHEMICALS AND OTHER PETROLEUM PRODUCTS
OAR 629-620-0300

(1) Operators shall conduct the following activities only in locations where spillage of chemicals or other petroleum products will not enter the waters of the state:
- ***(a) Mixing chemicals;***
- ***(b) Transferring chemicals or other petroleum products between equipment or containers including, but not limited to, fueling of aircraft or heavy equipment;***
- ***(c) Cleaning tanks or equipment used during chemical applications;***
- ***(d) Landing and staging aircraft.***

(2) Notwithstanding section (1), operators shall not locate chemical mixing and staging areas for aerial chemical applications within 100 feet of Type F or Type D streams.

APPLICATION:

This rule is used for enforcement action.

COMPLIANCE

Operators comply with section (1) of this rule by conducting the listed activities only in locations where spills of chemicals or other petroleum products will not reach waters of the state. Operators comply with section (2) by locating chemical mixing or staging areas at least 100 feet (horizontal distance) from Type F or Type D streams.

Unsatisfactory Condition: There is an unsatisfactory condition under section (1) if an operator conducts any of activities listed in the section in locations where spills or chemicals or other petroleum products are likely to reach waters of the state. There is an unsatisfactory condition under section (2) if an operator locates a mixing or staging area for aerial chemical applications within 100 feet of the high water level of a Type F or Type D stream.

Damage: Damage exists under section (1) or section (2) if the unsatisfactory condition leads to chemicals or other petroleum products entering waters of the state.

Written Statement of Unsatisfactory Condition: For both sections (1) and (2), a written statement should be issued if the operator can take timely and appropriate action to prevent damage. Timely and appropriate action is when the operator immediately stops use of the location and moves the operation to a more appropriate location. In addition, if a leak or spill has occurred but has not entered waters of the state refer to OAR 629-620-0100 guidance.

ADMINISTRATION:

Rule subsections (1)(b) and (d) apply to both chemicals and other petroleum products. Rule subsections (1)(a) and (c) and section (2) apply only to chemicals. Section (2) sets a minimum distance requirement from streams for mixing or staging areas for aerial chemical applications, regardless of the potential risk of spilled chemicals reaching the waters of the state. In some situations, the requirements of Section (1) may result in the need for even greater distances between mixing or staging areas and Type F and D streams.

Also refer to the guidance for OAR 629-620-0100. A spill situation may result in violations of portions of both rules. The Department of Environmental Quality will typically be involved as the lead agency in spill responses and will determine directly with the operator what is "appropriate" action in controlling and neutralizing a spill.

REFERENCES:

- OAR 629-620-0100 Preventing, controlling, and reporting leaks and spills of chemicals and other petroleum products
- OAR 629-630-0400(3) Treatment of waste materials
- Oregon Department of Forestry Directive 6-3-0-002 - *"Hazardous Materials Incident Reporting and Control"*

PROTECTION OF THE WATERS OF THE STATE AND OTHER RESOURCES WHEN APPLYING CHEMICALS
OAR 629-620-0400

(1) When applying chemicals aerially or from the ground, operators shall protect waters of the state and other forest resources by following the requirements of the chemical product label and by meeting the additional protection measures listed in this rule.

APPLICATION:

The primary purpose of this section is to introduce the remaining sections of this rule. This section may be used for enforcement action for failure to comply with chemical product label requirements. However, in most instances of potential label violations, the Oregon Department of Agriculture Pesticide Division will take the lead in investigation and enforcement action, with ODF in a supporting role.

COMPLIANCE:

To comply with this section, chemical applications must be made in a manner consistent with the practices required by the product label.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator fails to comply with all applicable requirements on a chemical product label.

Damage: Damage is not a prerequisite for a violation. In most instances, an unsatisfactory condition is a violation. However, close consultation with the Oregon Department of Agriculture, the lead agency in this instance, is needed before enforcement action is initiated.

Written Statement of Unsatisfactory Condition: A written statement may be issued for minor violations of chemical product label requirements if water quality and other forest resources have been harmed. Close consultation with the Oregon Department of Agriculture, the lead agency in this instance, is needed before enforcement action is initiated.

ADMINISTRATION:

This rule section introduces the seven following sections which require specific practices to protect the waters of the state and other resources during forest chemical applications. The section also requires operators to comply with the label requirements of any forest chemical products used on an operation.

The Oregon Department of Agriculture's Pesticide Division has the primary responsibility for enforcement of chemical label requirements. When Stewardship Foresters become aware that a chemical application may have been made in a manner inconsistent with the product label wording, this information must be shared with Pesticide Division investigators. Salem Private Forests Division staff can assist the Stewardship Foresters in relaying this information.

Following consultation with ODA, Stewardship Foresters may be required to issue a citation and prepare a case brief, but civil penalties for label violations will generally be issued through ODA's process, not through the Private Forests Division.

ODA considers chemical drift across a property line to be an application outside the target area and a practice inconsistent with the product label. ODA may also take enforcement action when it discovers applications of chemicals were made in a "faulty, careless, or negligent manner." Stewardship Foresters should be vigilant for such occurrences, promptly report them to ODA for investigation, and assist ODA in such investigations.

Information on forest chemicals, including product labels, is maintained at the department website shown under REFERENCES. Stewardship Foresters should become familiar with the environmental and human health protection requirements on the current labels for the most commonly applied chemicals in their area. Some of these requirements have significant implications for forest operations. For example, some sulfometuron methyl products contain language similar to the following for helicopter applications: “maintain adequate buffer distance between any homestead, agricultural land, or other desirable plantings to avoid adverse impacts to desirable vegetation.” ODA interprets these terms as meaning any yard, pasture, garden, field, and perhaps even range land. Aerial applications of these products, especially near a property line, should be given special attention to ensure label compliance. In addition, some 2,4-D labels require specific no-application buffers for downwind residential areas. Many other forest pesticide labels suggest or require that precautions be taken to avoid drift onto sensitive sites such as residential areas or susceptible vegetation.

In another example, the labels for some glyphosate products allow direct application to water under certain conditions. Despite the label wording, such a practice is not allowed where it is otherwise prohibited by the forest practice rules. Applications must be conducted in compliance with the buffer requirements of the chemical rules and the vegetation retention requirements of the water protection rules.

REFERENCES:

- Oregon Department of Forestry website “Pesticide Use in Oregon’s Forests,” at http://egov.oregon.gov/ODF/privateforests/pesticides.shtml.
- Memorandum of Agreement between the Oregon Department of Agriculture and the Oregon Board of Forestry dated July 6, 1995

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(2) When applying herbicides near or within riparian management areas or waters of the state, operators shall maintain vegetation required to be protected by the water protection rules.

APPLICATION:

This section may be used for enforcement action. However, in most instances, if a chemical application negatively impacts vegetation required to be retained under the Water Protection Rules, take enforcement action under those rules.

COMPLIANCE:

An operator complies with this rule when, after application of herbicides, the retained vegetation in riparian management areas is at levels that meet or exceed the standards set in the water protection rules.

Unsatisfactory Condition: An unsatisfactory condition exists when a herbicide application affects vegetation required to be retained near or within riparian management areas or waters of the state to the extent that the intended functions of the vegetation are no longer provided.

Damage: An unsatisfactory condition under this section automatically leads to damage. However, enforcement action should be taken under the applicable water protection rule rather than this rule section.

ADMINISTRATION:

This requirement to avoid damaging vegetation otherwise required to be retained applies even if the herbicide is labeled for aquatic use (e.g., some glyphosate products). The requirement also applies to herbicide applications for road maintenance and roadside vegetation control. Vegetation within the stream buffer at road crossings is needed to protect water quality from sedimentation, warming, and chemical pollution.

The Water Protection Rules require maintenance of vegetation for Type F streams, Type D streams, large and medium Type N streams, small Type N streams that meet the criteria in OAR 629-640-0200(6), significant wetlands, large lakes, and lakes that have fish or that are at least ½ acre in size. The no-direct application buffers described in the remaining sections of this rule provide additional protection for vegetation near waters of the state. In most instances, if a herbicide application leads to the violation of the Water Protection Rules, violations of either section (3) or section (4) of this rule will have occurred as well.

The rule section text states, "When applying herbicides . . . within . . . waters of the state . . . ." This wording is intentional since operations may involve applications to wetlands that are not "significant" and do not contain water at the time of the application, but which are still technically "waters of the state."

REFERENCES:

- OAR 629-625-0600 Road maintenance
- OAR 629-640-0000 to 629-655-0000 Water Protection Rules: Vegetation retention along streams; Riparian management areas and protection measures for significant wetlands; Riparian management areas and protection measures for lakes

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(3) 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 during aerial and pressurized, ground-based chemical applications. Operators shall apply chemicals only under weather conditions which will protect non-target forest resources and comply with the product label and the other sections of this rule.

APPLICATION:

This section is used for enforcement action.

COMPLIANCE:

Operators comply with this section by applying chemical only when weather conditions are such that nontarget forest resources will be protected, and the application will comply with product labels and other sections of this rule.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator applies chemicals under weather conditions such that

- Non target resources such as water quality or vegetation required to be retained are not protected; or
- The application does not comply with the labels of any chemical products applied; or
- The application violates other sections of this rule.

Damage: An unsatisfactory condition under this section automatically leads to damage. However, in most instance , applications under improper weather conditions will result in noncompliance with label requirements under section (1), or result in noncompliance with the buffer requirements of sections (4), (5), (6), or (7) of this rule. In such cases, enforcement action should be taken under those rule sections rather than this section.

If all other sections of this rule are complied with, but it is determined that the application occurred under weather conditions that resulted in damage to protected resources, enforcement action should be taken under this rule section.

Taking enforcement action under this rule section, in the absence of violations of other sections of this rule, will require the department to adequately document that the combination of weather conditions, site characteristics, and application methods resulted in resource damage. If weather conditions were appropriate during the application and all other sections of this rule were complied with, but resource damage still resulted, then no violation of the rules exists. Instead, a reevaluation of the effectiveness of the rules is needed.

ADMINISTRATION:

Weather Conditions; Label Requirements and Resource Protection:
The labels for many herbicide products registered for forest use in Oregon contain some direction to avoid application during windless or inversion conditions, or during gusty conditions. Some labels may restrict application based on other specific weather conditions. Section (3) of this rule, along with other regulations, puts the full responsibility on the chemical applicator to apply chemicals only when weather conditions are such that the application will comply with pesticide product label requirements and that non-target forest resources will be protected.

Applicators are responsible for taking all precautions that are necessary to comply with pesticide product labels and to avoid damaging drift onto forest resources or off-site sensitive areas such as residential areas or agricultural fields. Applicators must consider weather conditions in connection with the pesticide product(s) in use, tank mixes, application equipment, application techniques, local topography, and nearby sensitive resources. Because there are so many variables in these conditions, ODF should not recommend specific allowable temperature, relative humidity, or wind velocity figures for chemical applications. References are available to guide applicators, but even these tend to avoid specific numbers (see REFERENCES below).

Note that the Oregon Department of Agriculture will take the lead in investigation and enforcement action related to potential label violations, with ODF in a supporting role. See the guidance for OAR 629-620-0400(1) for more information.

Stewardship Foresters are asked to watch for, and report to Private Forests Division staff, any adverse effects detected outside of application areas where weather conditions may have been a factor. Applicators must measure and record weather data during the application, as required by OAR 629-620-0600.

Temperature and Relative Humidity:
Chemical application in high temperatures and low humidities can lead to off target movement of chemicals in two ways:

- Evaporation of applied droplets and subsequent air movement of dried chemical particles; and/or
- Volatilization of chemical active ingredients in aerial or deposited droplets and subsequent air movement of the active ingredient vapor. For herbicides, the potential for volatilization is primarily a concern for products in ester formulations.

Most labels for forestry pesticide products note that the potential for off-target movement increases when ambient temperatures are high and relative humidities are low. Typically, pesticide product labels do not give specific temperature or humidity figures. Some publications recommend avoiding pesticide applications when ambient temperatures exceed 70 or 75 degrees Fahrenheit.

Wind Speed and Direction:
Aerial applications and pressurized, broadcast, ground-based applications of chemicals should generally be applied when wind velocities are relatively low, but not under totally calm conditions. Pesticide product labels often suggest or require that applications take place only under specific wind velocities and conditions. Whenever possible, applications should be conducted when winds are blowing away from sensitive, non-target sites. When aerially applying insecticides with very small droplet sizes, drift off-target is more likely. In these situations, a low-velocity wind blowing away from sensitive non-target sites is preferable to totally calm conditions.

Chemical applications should not take place when air turbulence (thermal updrafts, etc.) is so great that it seriously affects the normal spray pattern. Evidence of turbulence includes the presence of convective clouds and "dust devils" in open areas. Applications should also not take place under inversion conditions. Signs of inversions are very calm wind conditions and a visible “lid” or ceiling on haze or smoke in the area. Under inversion conditions, fine spray droplets can hold together in a concentrated cloud, with the potential for damage from off-site deposition. Many pesticide product labels advise against application when inversion conditions are present.

Precipitation:
Chemical applications should not take place in foggy conditions; during or immediately prior to snow, hail, or rain storms; or when snow or ice covers target vegetation. "Storms" means high intensity precipitation events that have the potential to move the chemical off-target through run-off during the application. Applications under any situation where the soil is already saturated should also be considered inappropriate. Unless stated otherwise in the pesticide product label, low intensity rain events, such as drizzle, mist, or light showers, are not weather conditions which would prohibit chemical applications (although such conditions may reduce the effectiveness of the applied chemical).

REFERENCES:

- OAR 629-620-0600 Daily records of chemical applications
- Hellman, E. and J. Fults. 1999. Preventing Phenoxy Herbicide Damage to Grape Vineyards (EM 8737-E). Oregon State University Extension Service. Corvallis Oregon. http://extension.oregonstate.edu/catalog/html/em/em8737-e/
- Oregon Department of Agriculture. Undated. Take Care While Using Broadleaf Herbicides (2-page flyer). Oregon Department of Agriculture. Salem, Oregon. http://oregon.gov/ODA/PEST/docs/pdf/two4dbroc.pdf
- Oregon State University Extension Service. 2007. Pesticide Drift Management (EM 8934-E). Oregon State University Extension Service. Corvallis, Oregon. http://extension.oregonstate.edu/catalog/pdf/em/em8934-e.pdf
- Shenk, M. Editor. 2008. Oregon Pesticide Safety Education Manual: A Guide to the Safe Use and Handling of Pesticides. Oregon State University Extension Service. Corvallis, Oregon.
- Stock, T. 2008. Preventing Water Contamination and Pesticide Drift: A Checklist for Pesticide Applicators (EM 8964-E). Oregon State University Extension Service. Corvallis, Oregon. http://extension.oregonstate.edu/catalog/pdf/em/em8964-e.pdf

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(4) Except where the product label or sections (2), (6), or (7) apply more stringent requirements, when applying chemicals by aircraft, operators shall not directly apply chemicals within 60 feet of:
- ***(a) Significant wetlands,***
- ***(b) The aquatic areas of Type F and Type D streams,***
- ***(c) The aquatic areas of large lakes,***
- ***(d) The aquatic areas of other lakes with fish use, or***
- ***(e) Other areas of standing open water larger than one-quarter acre at the time of the application.***

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

Operators comply with this section when chemicals (other than fertilizers, fungicides, and nonbiological insecticides) are not directly applied aerially within 60 horizontal feet of any of the specific types of waters of the state listed.

Unsatisfactory Condition: An unsatisfactory condition exists when chemicals are directly applied aerially within 60 horizontal feet of the specific types of waters of the state listed in this section.

Damage: Observed natural resource damage is not a prerequisite for a violation of this section. An unsatisfactory condition under this section is automatically a violation. There is no opportunity to correct the unsatisfactory condition to avoid a violation.

ADMINISTRATION:

Note that sections (2), (6), and (7) contain additional restrictions based on protection of retained vegetation for the use of fertilizers, fungicides, or nonbiological insecticides.

"Other areas of standing open water" are bodies of still or nearly still waters of the state, regardless of their classification. Examples of these waters include ponded water (e.g., beaver ponds, ponded pump chances, or other slow or ponded water) in Type N streams, other lakes without fish, or other wetlands, as long as the ponded or slow water covers more than one-quarter acre at the time of application.

"Direct application" means chemical is applied at at least the same concentration as applied to the target area. To visually assess if direct application of herbicides has occurred, compare vegetation within the target unit and within the buffer strip. If the chemical effects are the same or similar between the two areas, then direct application and damage has occurred in the buffer.

The goal for this rule section is to buffer the listed waters to avoid direct entry of the chemicals into these waters and to protect the vegetative components of riparian areas. **The purpose is not to maintain a chemical-free zone.**

If a chemical has been **directly applied** within the 60-foot distance, there is no opportunity to eliminate the consequences of not complying with the rule.

Direct aerial application of a herbicide between 10 and 60 feet from a water body listed in section (4) of this rule is considered a rule violation, while a direct ground application to the same area is not. A wider aerial application buffer is necessary because of its higher potential for off-target drift into adjacent waters. In contrast, some ground application methods with extremely low potential for drift, such as pellets or hack and squirt, can be applied closer to water without damage to protected vegetation or water quality.

The 60-foot buffer should be viewed as minimum distances from water for direct applications. Weather conditions and application methods may require even wider buffers to ensure compliance with the label, the water protection rules, and the chemical rules.

The water protection rules require vegetation retention within RMAs up to 100 feet (up to 200 feet for estuaries) from the aquatic area. Therefore, even though this rule section requires a 60-foot buffer, a wider buffer may be needed to comply with section (2) of this rule. Weather conditions at the time of application (especially winds blowing toward the water) may dictate an even wider application distance between the aircraft and the water to comply with both this section and section (2).

Type N streams:
Except where there are areas of standing open water greater than one-quarter acre, enforcement action cannot be taken under this rule section for failure to maintain a no-direct application buffer along Type N streams. However, chemical applications near or over these streams must be conducted in compliance with the restrictions described on the chemical label **and** must maintain the vegetative components required by the water protection rules (see OAR 629-620-0400 (1) and (2)). Most pesticide product labels prohibit direct application to, or introduction of chemicals into, streams, lakes, ponds, or open water. In addition, the water protection rules require retention of undisturbed vegetation along many Type N streams (see OAR 629-640-0200(6)).

Some herbicides are labeled for aquatic use and may be used over water during forest operations under limitations specified by the label, the chemical rules, and the water protection rules. Such applications may only occur outside the direct application buffers prescribed by the chemical rules and only in a manner that retains the vegetation required by the water protection rules. Permissive label language does not void these rule requirements.

REFERENCES:

- Vegetation retention requirements listed in OAR 629-640, 645, and 650, and 655

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(5) Except where the product label or sections (2) or (6) apply more stringent requirements, when applying chemicals from the ground, operators shall not directly apply chemicals within 10 feet of:
(a) Significant wetlands,
(b) The aquatic areas of Type F and Type D streams,
(c) The aquatic areas of large lakes,
(d) The aquatic areas of other lakes with fish use, or
(e) Other areas of standing open water larger than one-quarter acre at the time of the application.

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

Operators comply with this section if chemicals (other than fertilizers) are not directly applied from the ground within ten horizontal feet of any of the specific types of waters of the state listed.

Unsatisfactory Condition: An unsatisfactory condition exists when chemicals are directly applied by ground within 10 horizontal feet of the specific types of waters of the state listed in this section.

Damage: Observed natural resource damage is not a prerequisite for a violation of this section. An unsatisfactory condition under this section is automatically a violation. There is no opportunity to correct the unsatisfactory condition to avoid a violation.

ADMINISTRATION:

Note that sections (2) and (6) contain additional restrictions based on protection of retained vegetation or the use of fertilizers.

"Other areas of standing open water" are bodies of still or nearly still waters of the state, regardless of their classification. Examples of these waters include ponded water (e.g., beaver ponds, ponded pump chances, or other slow or ponded water) in Type N streams, other lakes without fish, or other wetlands, as long as the ponded or slow water covers more than one-quarter acre at the time of application. Although ground application is allowed up to ten feet from the aquatic area, applicators must still protect vegetation along these waters as required by the Water Protection Rules.

"Direct application" means chemical is applied at at least the same concentration as applied to the target area. To visually assess if direct application of herbicide has occurred, compare vegetation within the target unit and within the buffer strip. If the chemical effects are the same or similar between the two areas, then direct application and damage has occurred in the buffer.

The goal for this rule section is to buffer the listed waters to avoid direct entry of the chemicals into these waters and to protect the vegetative components of riparian areas. **The purpose is not to maintain a chemical-free zone.**

If a chemical has been **directly applied** within the ten-foot distance, there is no opportunity to eliminate the consequences of not complying with the rule.

The water protection rules require vegetation retention within RMAs up to 100 feet (up to 200 feet for estuaries) from the aquatic area. Therefore, even though this rule section requires a ten-foot buffer, a wider buffer may be needed to comply with section (2) of this rule. Weather conditions at the time of application (especially winds blowing towards the water) may dictate an even wider application distance between the applicator and the water to comply with both this section and section (2).

Direct aerial application of a herbicide between 10 and 60 feet from a water body listed in section (5) of this rule is considered a rule violation, while a direct ground application to the same area is not. In contrast, some ground application methods with extremely low potential for drift, such as pellets or hack and squirt, can be applied closer to water without damage to protected vegetation or water quality.

The 10-foot buffer should be viewed as the minimum distance from water for direct applications. Weather conditions and application methods may require even wider buffers to ensure compliance with the label, the water protection rules, and the chemical rules. For example, a broadcast ground application adjacent to a stream would probably require more than the required 10-foot buffer to prevent drift into the stream in violation of the label, or the water protection rules, or the chemical rules.

<u>Type N streams:</u>
Except where there are areas of standing open water greater than one-quarter acre, enforcement action cannot be taken under this rule section for failure to maintain a no-direct application buffer along Type N streams. However, chemical applications near or over these streams must be conducted in compliance with the restrictions described on the chemical label **and** must maintain the vegetative components required by the water protection rules (see OAR 629-620-0400 (1) and (2)). Most pesticide product labels prohibit direct application to, or introduction of chemicals into, streams, lakes, ponds, or open water. In addition, the water protection rules require retention of undisturbed vegetation along many Type N streams (see OAR 629-640-0200(6)).

Some operations may propose the use of a herbicide that has a label allowing direct application to water, for roadside applications to control vegetation in ditches and to control visibility-limiting vegetation. Aquatic use herbicides may be applied from the ground over ditches,

whether dry or wet, provided the vegetation retention requirements of the water protection rules are met and provided that direct application does not occur within 10 feet of the waters listed in this rule section. Near such waters, mechanical vegetation control methods may be used as an alternative to herbicides, provided that those methods also comply with the water protection rules. (Road maintenance guidance for OAR 629-625-0600 discusses such mechanical vegetation control methods near streams.)

Any herbicide labeled for aquatic use that reaches the waters listed in this rule section (such as through ditch water transport), but otherwise was applied in accordance with the chemical rules and the water protection rules, is tolerable because of the chemical's label. Note that labels allowing aquatic application also restrict other aspects of application such as the proximity to domestic water intakes.

REFERENCES:

- OAR 629-625-0600 Road maintenance
- Vegetation retention requirements listed in OAR 629-640, 645, and 650, and 655

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(6) Operators shall not directly apply fertilizers within 100 feet of Type D streams and the domestic use portions of Type F streams. For other waters of the state, no untreated strips are required to be left by operators when applying fertilizers, except that operators shall not directly apply fertilizers to:
- ***(a) The aquatic areas of other Type F streams or to large and medium Type N streams,***
- ***(b) Significant wetlands,***
- ***(c) The aquatic areas of large lakes,***
- ***(d) The aquatic areas of other lakes with fish use, or***
- ***(e) Other areas of standing open water larger than one-quarter acre at the time of the application.***

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

An operator complies with this section when fertilizer is not directly applied within 100 horizontal feet of any Type D stream or the domestic use portion of a Type F stream, and if fertilizer is not directly applied to the other specific waters of the state listed.

Unsatisfactory Condition: An unsatisfactory condition exists if:
- An operator directly applies a fertilizer within 100 horizontal feet of a Type D stream or the domestic use portion of a Type F stream; or
- An operator directly applies a fertilizer within any of the other waters listed in subsections (5)(a) though (5)(e) of this rule.

Damage: Observed natural resource damage is not a prerequisite for a violation of this section. An unsatisfactory condition under this section is automatically a violation. There is no opportunity to correct the unsatisfactory condition to avoid a violation.

ADMINISTRATION:

The goal for this rule section is to avoid direct entry of fertilizer into the listed waters and to provide an even higher level of protection to domestic-use waters by requiring a buffer. The introduction of nutrients into domestic-use streams can make water treatment for human consumption more difficult and expensive. This buffer width was based upon research literature introduced during the development of the water protection rules (see Bisson et al. 1992 under REFERENCES). The research literature showed evidence that maintaining a wide buffer is key to preventing fertilizer from reaching waters. This conclusion is linked to the application method

and the granular form of most fertilizers. Any plans for alternate practices proposing narrower buffers must adequately address how water quality protection will be assured.

"Other areas of standing open water" are bodies of still or nearly still waters of the state, regardless of their classification. Examples of these waters include ponded water (e.g., beaver ponds, ponded pump chances, or other slow or ponded water) in Type N streams, other lakes without fish, or other wetlands, as long as the ponded or slow water covers more than one-quarter acre at the time of application.

To visually assess if compliance has occurred, it may be possible to compare the "prill" deposition in the ground within the target unit and within the buffer strip. If the quantity of prills present is the same or similar between the two areas, then direct application has occurred and the rule section has been violated.

Listed aquatic areas that do not contain water at the time of application still require protection because prills entering the aquatic area will remain in place and enter into solution when water returns.

ODF's GIS water classification layers show stream segments that are classified as Type D or as domestic use portions of Type F streams. Where domestic use classifications still need to be made on stream segments, use the criteria in OAR 629-635-0200 (6) and (7)(a). As they are identified, these upper limits should be noted on the GIS water classification layers.

REFERENCES:

- OAR 629-635-0200 Water classification
- Bisson, P.A., G.G. Ice, C.J. Perrin, and R. Bilby. 1992. Effects of Forest Fertilization on Water Quality and Aquatic Resources in the Douglas-Fir Region. pp. 179-193 *In* Chappell, H.N., G.F. Weetman, and R.E. Miller, eds. 1992. Forest fertilization: sustaining and improving nutrition and growth of western forests. Institute of Forest Resources Contrib. 73. University of Washington, Seattle.

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(7) (a) Except as allowed under subsections (d) and (e), operators shall not directly apply fungicides or non-biological insecticides by aircraft, within 300 feet of:
(A) Significant wetlands,
(B) The aquatic areas of Type F and Type D streams,
(C) The aquatic areas of large lakes,
(D) The aquatic areas of other lakes with fish use, or
(E) Other areas of standing open water larger than one-quarter acre at the time of the application.
(b) Operators shall not directly apply fungicides or non-biological insecticides by aircraft within 60 feet of the aquatic areas of Type N streams containing flowing water at the time of application.
(c) For the purpose of this rule, "biological insecticide" means any insecticide containing only naturally occurring active ingredients including, but not limited to, viruses, bacteria, semiochemicals (pheromones), or fungi.

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

An operator complies with this rule when fungicides and non-biological insecticides are not directly applied aerially within 300 horizontal feet of any of the specific types of waters of the state listed under subsection (a) or within 60 horizontal feet of any Type N streams containing flowing water at the time of application.

Unsatisfactory Condition: There is an unsatisfactory condition when any of the following occur:
- Fungicides or non-biological insecticides are directly applied within 300 horizontal feet of any waters listed in subsection (a) this rule or within 60 horizontal feet of waters described in subsection (b) of this rule; and
- There is no approved plan for alternate practice under subsection (7)(d) of this rule that would allow the practice.

Damage: Observed natural resource damage is not a prerequisite for a violation of this section. An unsatisfactory condition under this section is automatically a violation. There is no opportunity to correct the unsatisfactory condition to avoid a violation.

ADMINISTRATION:

"Other areas of standing open water" are bodies of still or nearly still water, regardless of their classification. Examples of these waters include ponded water (e.g., beaver ponds, ponded pump chances, or other slow or ponded water) in Type N streams, other lakes without fish, or other

wetlands, as long as the ponded or slow water covers more than one-quarter acre at the time of application.

The goal for this rule section is to buffer the listed waters to avoid direct entry of the chemicals into the listed waters and to prevent unacceptable levels of water contamination. The purpose is not to maintain a chemical-free zone.

The rule section is violated if a plan for an alternate practice has not been approved under the provisions of OAR 629-620-0400(7)(d) and the Stewardship Forester determines through visual observation, water sample results, or other methods that either type of chemical was applied directly within the specified 300-foot or 60-foot buffers.

Since fungicides and non-biological insecticides are relatively more toxic than other forest chemicals, and because the common aerial application methods for non-biological insecticides make them more likely to drift off target, the rules contain more stringent buffer requirements.

Stewardship Foresters are encouraged to inform Private Forests Division staff as soon as they become aware of any planned fungicide or non-biological insecticide applications. Such applications are a high priority for rule effectiveness monitoring.

A definition for "biological insecticide" is provided in (7)(c). The definitions of "fungicide" and "insecticide" are provided in ORS 634.006(8).

REFERENCES:

- ORS 634.006 Definitions - *(8) "Pesticides"*

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(7) (d) Plans for alternate practices that modify the requirements of subsections (a) and (b) may be approved by the State Forester. Approvals of such plans shall be based on a written finding by the State Forester determining that:

(A) Such a modification is essential to control a fungus or a population of an insect species to reduce damage to, and to better provide for, the overall maintenance of forest resources protected under the Forest Practices Act;

(B) The operational or weather condition constraints placed on the application by the plan for alternate practice, in addition to the requirements of the forest practice rules and the product label, will reduce the potential for the fungicide or non-biological insecticide to drift outside the operation area or to enter the waters of the state; or

(C) Adequate documentation has been submitted by the operator indicating the toxicity to humans, fish populations, or to aquatic invertebrate populations of the fungicide or non-biological insecticide to be applied is lower than the documented toxicity of the fungicide chlorothalonil or the non-biological insecticide carbaryl, as used in forestry prior to September 4, 1996.

APPLICATION:

This rule section is not used for enforcement action. If a plan for an alternate practice is not submitted by the operator and approved by the State Forester, the standards in subsections (7)(a) through (c) of this rule apply.

ADMINISTRATION:

Paragraphs (7)(d)(A) through (C) list three scenarios where the aerial application buffer requirements of sections (7)(a) or (7)(b) can be reduced. During the development of OAR 629-620-0400(7), the department acknowledged that the technical basis for the required buffer widths was based primarily on a very small number of water samples following aerial carbaryl insecticide applications. Given this limited information, the rule takes a very conservative approach, but allows specific opportunities to modify the buffer requirements. Such modifications require that a plan for an alternate practice be submitted for approval and that, as part of its approval, the department issue a written finding establishing that at least one of the requirements of OAR 629-620-0400(7)(d) has been met. **Stewardship Foresters should contact Private Forests Division staff for assistance in evaluating such alternate plans and in developing findings for plans that will be approved**.

Paragraph (7)(d)(A) of this rule allows reductions in the aerial buffer requirements when a department finding can be made that the damage to protected resources (over time and/or space)

from the target pest would be greater using the standard buffer widths than the damage to protected resources that would result if these chemicals were applied closer to the waters.

Paragraph (7)(d)(B) of this rule allows reductions in the aerial buffer requirements when a department finding can be made that the additional self-imposed operational or weather constraints placed on the application by the operator will reduce the potential for off-target chemical drift compared to an application of the same chemical without these constraints. Examples of such constraints include, but are not limited to:

1. Applications only under favorable wind speed and direction conditions.
2. Application heights above ground averaging 100 feet or less.
3. Nozzle configurations that result in an average volume mean diameter of spray droplets of 400 microns or larger.
4. Use of drift control additives.

Paragraph (7)(d)(C) of this rule allows reductions in the aerial buffer requirements when a department finding can be made that the fungicide or non-biological insecticide is less toxic to humans, fish, or aquatic invertebrates than formulations of either chlorothalonil or carbaryl available for use in 1996. The rule paragraph acknowledges that fungicides and non-biological insecticides may be developed for forestry use in the future that are less toxic that the chemicals most frequently used at the time the rules were adopted. This rule paragraph rewards operators who use less toxic chemicals by potentially allowing treatments closer to the waters of the state.

In no case should a plan for an alternate practice be approved under the provisions of OAR 629-620-0400(7)(d)(B) and (C) that would reduce the buffer requirements below the standards set in OAR 629-620-0400(4).

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(7) (e) The requirement of sections (a) and (b) do not apply to pest eradication programs conducted on forestland by the Department of Agriculture.

APPLICATION:

This rule section is not used enforcement action.

ADMINISTRATION:

ODF policy is that pest eradication programs conducted by the Oregon Department of Agriculture under that agency's statutory authority are not considered forest operations and therefore are not subject to the requirements of the Forest Practices Act. Since the most common type of ODA pest eradication project of forestlands will likely be insect control, this rule section highlights that ODA applications of non-biological insecticides are not regulated in the rule section's requirements. Although they are not directly addressed in the rules, other ODA pest eradication programs on forestland involving chemicals, such as herbicide applications for noxious weed control, are also not subject to forest practices regulation.

PROTECTION OF THE WATERS OF THE STATE AND OTHER RESOURCES WHEN APPLYING CHEMICALS
OAR 629-620-0400

(8) The operator shall make all aerial chemical applications parallel to the edge of the water when applying chemicals within 100 feet of:
- ***(a) Significant wetlands,***
- ***(b) The aquatic areas of Type F and Type D streams,***
- ***(c) The aquatic areas of large lakes,***
- ***(d) The aquatic areas of other lakes with fish use, or***
- ***(e) Other areas of standing open water larger than one-quarter acre at the time of the application.***

APPLICATION:

This rule section is used for enforcement action.

COMPLIANCE:

An operator complies with this rule when aerial application of chemicals within 100 horizontal feet of the listed waters of the state are made along a flight line parallel to the edges of these waters.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator aerially applies chemicals within 100 horizontal feet of the listed waters in this section in a flight line that is not generally parallel to those waters.

Damage: Observed natural resource damage is not a prerequisite for a violation under this section. An unsatisfactory condition under this section is automatically a violation. There is no opportunity to correct the unsatisfactory condition to avoid a violation.

ADMINISTRATION:

The intent is of this rule section is protect the waters of the state and riparian vegetation by requiring an aerial application pattern that minimizes the potential for direct application, drift, and spills.

Applicators are not required by the rule section to apply these parallel spray swaths before treating the rest of the unit. However, such a practice is desirable and should be encouraged whenever possible.

DISPOSAL OF CHEMICAL CONTAINERS
OAR 629-620-0500

Operators shall dispose of chemical containers in accordance with the Department of Environmental Quality's disposal requirements. Operators may apply flushing solution resulting from cleaning of chemical containers to the operation area.

APPLICATION:

This rule may be used for enforcement action; however, ODF will generally defer to DEQ for enforcement action.

COMPLIANCE:

Operators comply with this rule if they dispose of chemical waste and containers in accordance with DEQ rules.

ADMINISTRATION:

This rule requires proper disposal of chemical waste to comply with waste disposal regulations of the DEQ (OAR 340-109-0010 and 0020). DEQ regulations allow jet rinsing and returning containers to the chemical manufacturer, as well as triple rinsing. The regulations also require physical breakdown of some containers.

When containers are not properly disposed of, as required by OAR 340-109-0020, Stewardship Foresters should contact the local DEQ office and relay information for that agency's enforcement action. ODF will not take enforcement action in this circumstance.

When expert consultation is required, contact the DEQ regional office in your specific area (see the second DEQ fact sheet listing in REFERENCES below).

REFERENCES:

- OAR 340-109-0010 Pesticide Residue Waste Management
- OAR 340-109-0020 Empty Container Management
- Oregon Department of Environmental Quality Fact Sheets
  - (managing pesticide wastes and empty pesticide containers) at http://www.deq.state.or.us/pubs/factsheets.htm#pesticides
  - Free Technical Assistance in dealing with Hazardous Wastes http://www.deq.state.or.us/lq/pubs/docs/hw/TABrochure.pdf

DAILY RECORDS OF CHEMICAL APPLICATIONS
OAR 629-620-0600

(1) Whenever pesticides are aerially applied or applied using a pressurized, ground-based, broadcast application system on forestland, the operator shall maintain a daily record of application operations which includes:
- ***(a) The legal description of the location of the operation area actually treated with chemicals;***
- ***(b) The acreage actually treated with chemicals;***
- ***(c) Brand name or EPA registration number of the chemicals used, the carrier used, and the application rate;***
- ***(d) Date and time of application;***
- ***(e) Air temperature, to be measured within the operation area and recorded at least hourly for aerial applications and at least at the beginning and end of each day's application for ground applications;***
- ***(f) Relative humidity, to be measured within the operation area and recorded at least hourly for aerial applications and at least at the beginning and end of each day's application for ground applications;***
- ***(g) Wind velocity and direction, to be measured within the operation area and recorded at least hourly for aerial applications and at least at the beginning and end of each day's application for ground applications;***
- ***(h) The name of the person making the application, including the contractor's name and pilot's name when applied aerially, or the contractor's name and/or employee's name for ground application;***

(2) Whenever pesticides are applied on forestland using methods other than those described in section (1) of this rule, the operator shall maintain a daily record of all information listed in subsections (a), (b), (c), (d), and (h) of section (1).

(3) Whenever fertilizers are applied on forestland, the operator shall maintain a record of all information listed in subsections (a), (b), (d), and (h) of section (1) of this rule and shall also record the application rate and the formulation used.

(4) The records required in sections (1), (2) and (3) of this rule shall be maintained by the operator for three years from the date of application and be made available at the request of the State Forester.

APPLICATION:

This rule is used for enforcement action.

COMPLIANCE:

Operators are in compliance with this rule when they:
1. Collect the application information required by the rule.
2. Maintain this information for three years, and

3. Make these records of chemical applications available to the department within seven days of a request.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator fails to provide chemical application records within seven calendar days after a department request for the records that is made within three years after the date of the application.

Damage: Resource damage is not a prerequisite for taking enforcement action. If the operator fails to provide the chemical application records by the deadline in the written statement, a violation exists.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should allow the operator up to seven more calendar days after the initial request to provide the records.

ADMINISTRATION:

Enforcement Summary:
The Stewardship Forester should make a written request for records when they are needed for an investigation. Document when, how and to whom the request was made.

In summary, the enforcement process described above is:
- The Stewardship Forester makes a written request to an operator for the records.
- If the operator does not comply within seven days of the request, issue a written statement of unsatisfactory condition requiring submittal of the records within an additional seven days.
- If the operator does not comply with the written statement, there is a violation.

Purpose of Requesting the Records; Public Records:
ODF requests the daily application records when they are needed for an ODF investigation related to compliance with the forest practice rules or for investigations being conducted by the Oregon Department of Agriculture, Pesticide Analytical and Response Center, or other cooperating agencies. Based on advice from Oregon Attorney General to the department, ODF is not obligated to request the records simply because a FACTS subscriber or other party wants information related to a chemical application. However, if ODF already has possession of the records for an investigation, the documents are considered public record and are available to any person making a public records request, as described in ODF's public records directive.

Other Information:
Pressurized, ground-based broadcast application systems include all motorized and nonmotorized application methods that use a pressurized spray solution that is applied in a sweeping manner rather than directed at a specific target points. Rights-of-way treatments are examples of broadcast applications. Hack and squirt applications and maple stump treatments are examples of directed applications.

The department, in cooperation with the Oregon Department of Agriculture, has developed a standard form for the collection of data required under this rule. The form is available in ODF

Forest Practice Note Number 3 or as a separate document (see REFERENCES below) Stewardship Foresters should make this form available to operators, but operators are not required to use it.

REFERENCES:

- Forest Practices Daily Chemical Application Information Form. Available as a separate form or as part of: Oregon Department of Forestry. 2007. Forest Practice Note Number 3. Oregon Department of Forestry. Salem, Oregon. The note and the form are available at http://egov.oregon.gov/ODF/privateforests/pesticides.shtml
- ODF Directive 0-5-1-301 Department Public Information and Public Records

CHEMICAL AND OTHER PETROLEUM PRODUCT RULES: EFFECTIVENESS MONITORING AND EVALUATION
OAR 629-620-0700

(1) In cooperation with state agencies, landowners, and other interested parties, the department shall conduct monitoring to evaluate the effectiveness of the chemical and other petroleum product rules. The monitoring shall determine the effectiveness of the rules to meet the goals of the Forest Practices Act and the purposes stated in the rules, as well as their workability and operability.

(2) It is the Board of Forestry's intent that the department and its cooperators place a high priority on assessing the monitoring needs and securing adequate resources to conduct the necessary monitoring. The department shall work with its cooperators and the Legislature to secure the necessary resources, funding and coordination for effective monitoring.

(3) The department shall report to the Board of Forestry annually about current monitoring efforts and, in a timely manner, present findings and recommendations for changes to practices. The Board of Forestry shall consider the findings and recommendations and take appropriate action.

APPLICATION:

This rule is not used for enforcement action.

ADMINISTRATION:

This rule commits ODF to monitoring compliance with, and the effectiveness of, the chemical and other petroleum product rules. Stewardship Foresters are not expected to conduct routine water or vegetation sampling, but they may become involved in monitoring in the following ways:

1. Inspections of high priority operations for compliance with these rules.
2. Prompt response and investigation of citizen and other state agency complaints **(see note below)**.
3. Cooperative investigations with other state agencies on incidents reported to the Pesticide Analytical and Response Center (PARC.
4. Prompt response to and investigation of spills of chemicals and other petroleum products.
5. Cooperation with landowners and community water system managers on joint monitoring efforts.
6. Alerting and cooperating with Private Forests Division staff in Salem in identifying operations that meet pre-determined criteria for rule effectiveness monitoring.
7. Participating in designed monitoring studies on forest chemical applications.

Note: Receipt of a complaint regarding forest chemical operations requires a quick response by field offices. At a minimum, the following information should be provided to complainants at the time of first contact:

1. If the complaint includes claims of adverse health effects or widespread environmental damage, encourage the complainant to also contact the Pesticide Analytical Response Center (PARC) at 503-986-6470 or parc@oda.state.or.us. PARC staff is available 8:00 a.m. to 5:00 p.m. Monday through Friday, with a message system available at other times. PARC is **not** an emergency service; for emergency needs related to pesticide exposures, complainants should call 911 or the Oregon Poison Center (see below).
2. If the complainant begins to relay specific information on adverse health effects or medical symptoms, **interrupt the complainant and inform them that due to public records laws, ODF may not be able to keep any information we receive confidential.** If they wish their medical information to be kept confidential, they should contact the Oregon Public Health Service at the PARC phone number listed above. The Health Service can then provide ODF with the information needed to conduct a complaint investigation without compromising the confidentiality of the medical information.
3. Upon request, the ODF office should provide the complainant with any information we have about the chemicals that may have been used in the operation that resulted in the complaint.
4. Refer the complainant to other sources of technical information on chemicals, such as PARC; the Oregon Poison Center (1-800-222-1222); OSU Extension's "EXTOXNET" pesticide profiles at http://extoxnet.orst.edu/; or the National Pesticide Information Center at http://npic.orst.edu/ or 1-800-858-7378).

Landowners and operators are generally not required by the forest practice rules to collect and report monitoring information for their operations. In special circumstances, such as operations involving experimental uses of new chemicals or new application methods, Stewardship Foresters **may** require sampling or other types of monitoring to be included in plans for alternate practices, when such plans are required. However, sampling **should not** be imposed as a blanket requirement for all plans for alternate practices involving chemical applications. The level of potential risk to protected resources, or the likelihood of rule violations, must be considered before requiring sampling.

Stewardship Foresters should also encourage landowners and operators to cooperate with ODF and community water system managers in joint monitoring efforts.

REFERENCES:

- Oregon Department of Forestry Directive 6-4-0-001 - *"Complaint Investigation and Reporting"*
- OAR 629-620-0800 Notification of community water system managers when applying chemicals

NOTIFICATION OF COMMUNITY WATER SYSTEM MANAGERS WHEN APPLYING CHEMICALS
OAR 629-620-0800

(1) The purpose of this rule is to ensure that community water system managers are appropriately notified of planned chemical operations so that they can coordinate their monitoring activities with planned operations.

(2) This rule applies to community water systems where the surface water drainage area upstream of their intake is 100 square miles or less. The State Forester shall maintain a list of community water systems for which notification is required. A community water system with a drainage area of more than 100 square miles upstream of its intake may request to be added to the list based upon its ability to conduct effective monitoring in the watershed. The list shall be available at department field offices where notifications are submitted.

APPLICATION:

These rule sections are not used for enforcement action.

ADMINISTRATION:

A "community water system" means a public water system which has 15 or more service connections used by year-round residents, or which regularly serves 25 or more year-round residents.

Initially only watersheds with drainage areas of 100 square miles (64,000 acres) or less upstream from the intake will be considered under this rule. Larger watersheds may be added on a case-by-case basis.

A list of community water systems is available from Private Forests Division staff in Salem. It identifies those systems that qualify for pre-operation notification.

REFERENCES:

- 2000. Oregon Department of Forestry. Community Water Systems List. Oregon Department of Forestry. Salem, Oregon. (Microsoft Access 2000 or 2003 database format)

NOTIFICATION OF COMMUNITY WATER SYSTEM MANAGERS WHEN APPLYING CHEMICALS
OAR 629-620-0800

(3) When chemicals will be aerially applied within 100 feet or applied from the ground within 50 feet of domestic portions of Type F or Type D streams, and the water use is by a community water system as designated under section (2) of this rule, the operator shall notify the water system manager of a planned chemical operation at least 15 days before the operation commences.

(4) The operator shall provide the following additional information before commencing the operation if requested by the manager of the affected water system at the time of notification required in section (3) above:
(a) The application technology that will be used;
(b) Practices that will be followed to minimize drift toward the stream;
(c) Any monitoring efforts that will be conducted by the landowner; and
(d) The planned time schedule for the application.

APPLICATION:

These rule sections are used for enforcement action.

COMPLIANCE:

To comply with section (3) of this rule, the operator must notify the community water system manager at least 15 days prior to the start of any chemical operation that meets the specifications listed.

To comply with section (4) of this rule, the operator must provide the additional information listed in the rule section to the water system manager, if requested, prior to the start of the operation.

Unsatisfactory Condition: There is an unsatisfactory condition under section (3) if an operator fails to notify the manager of an affected community water system at least 15 days before starting the described chemical application operations. There is an unsatisfactory condition under section (4) if the community water system manager requests the specified information and the operator fails to provide it before the operation begins.

Damage: Observed resource damage is not a prerequisite for enforcement action. An unsatisfactory condition automatically results in a violation.

Written Statement of Unsatisfactory Condition: There is no opportunity to issue a written statement of unsatisfactory condition under section (3) or (4). Failure to provide the required information in the mandated timeframes deprives the community water system manager of the opportunity to act on the information.

Note: Because this rule deals with communications between two parties external to ODF, it may be difficult to sort out potential enforcement situations. Consultation with Private Forests Division staff is recommended before taking enforcement action under section (3) or (4) of this rule. Repeated, iterative communication between the operator and community water system manager may be necessary to fully satisfy the requirements of section (4). An operator has not violated section (4) simply because the water system manager requests more information or clarification regarding what was submitted.

ADMINISTRATION:

These rule sections are intended to encourage community water systems to participate in water sampling to enhance the overall monitoring of chemical use practices. This goal will be achieved through the requirement for operators to notify community water system managers at least 15 days before planned spray operations begin and to provide additional information on planned operations to water system managers upon request. The notification requirement only applies when chemicals will be aerially applied within 100 feet or applied from the ground within 50 feet of domestic portions of Type F or Type D streams.

ODF's GIS water classification layers show stream segments that are classified as Type D or as domestic use portions of Type F streams. Where domestic use classifications still need to be made on stream segments, use the criteria in OAR 629-635-0200 (6) and (7)(a). As they are identified, these upper limits should be noted on the GIS water classification layers.

The landowner, operator, and water system manager should be encouraged to jointly develop and implement monitoring efforts appropriate to each operation and consistent, if possible, with ODF monitoring protocols. Contact Private Forests Division Staff for more information about these protocols.

Notification is the obligation of the "operator", which includes both the applicator and the landowner. Notification may be accomplished by telephone, by written notice, or in person, but in any case, the notification should be documented by the operator. When a Stewardship Forester becomes aware of a planned operation that will require community water system manager notification, a written reminder of this requirement should be provided as a courtesy to the operator.

It is up to the water system manager to request the additional information listed under section (4). Operators should keep a record of when the requested information was provided. Information provided by the operator must be in sufficient detail to be useful to the water system manager, and may vary by operation. Information that may be useful includes:

- **The application technology that will be used:** type of aircraft, boom and nozzle configuration, carrier and additives, planned average droplet size.
- **Practices that will be followed to minimize drift toward the stream:** flight pattern, use of half-boom systems, additives, weather conditions, ground spraying in sensitive areas.
- **If and how the landowner will monitor resource protection during the operation**, including details on methods, timing, and sample analysis plans.

- **The planned time schedule for the application:** the approximate time window for the planned application, recognizing the exact date and time of application cannot be set.

REFERENCES:

- 2000. Oregon Department of Forestry. Community Water Systems List. Oregon Department of Forestry. Salem, Oregon. (Microsoft Access 2000 or 2003 database format)
- OAR 629-635-0200 Water classification

SUMMARY OF THE LAW
ORS 527.670, Subsections (6) and (9)

The law requires the forester to provide copies of notices of chemical applications to persons who hold downstream surface water rights within ten miles of the chemical application, and who request such notices in writing.

The 15-day notice requirement for operations involving aerial application of chemicals cannot be waived.

APPLICATION:

These subsections of the statute are not used for enforcement action. The subsections qualify what the State Forester may do, but do not require or forbid any action on the part of an operator. If an operator starts an operation without waiting at least 15 days after submitting a notification, take enforcement action under OAR 629-605-0150(1). See the guidance under that rule for more information.

ADMINISTRATION:

The law states that the State Forester (i.e., field offices) will provide what amounts to a free subscription to people holding legal surface water rights who are within ten miles downstream from an operation where chemicals are to be applied. Water rights "holders" do not include renters who use the water right held by a landlord or citizens connected to a community water system. The community water system manager is included as a water right holder, however. Water right holders must request the free subscription in writing. Interpret ten miles as straight lineal air miles, not stream miles. The purpose is to inform the requesting party that a chemical application will be conducted which may affect their resource.

Legal surface water right holders may include irrigators or domestic water users. Water rights are filed with the State Water Resource Department. The free subscription applies **only** to chemical applications.

Chemicals are defined in OAR 629-600-0100 to include all classes of pesticides, petroleum products used as carriers, fertilizers, and adjuvants.

The Notification of Operation and any other appropriate information (i.e., written plans) should be mailed to the subscriber within three working days of receipt of the information.

This information is also available to the general public, either through paid subscriptions or walk-in request". These requests can be handled by normal office procedures.

If interested parties submit comments related to specific proposed chemical application operations, Stewardship Foresters should review the comments relative to whether the operations are likely to comply with the applicable forest practice rules.

15-day waiting period

ORS 527.670(9) prohibits the State Forester from waiving the 15-day notification of operation waiting period when the planned operation is an aerial application of chemicals. Stewardship Foresters should advise landowners and operators to plan ahead by submitting notifications of operations at least 15 days prior to beginning aerial chemical application operations.

Waivers shall not be granted when a subscriber has requested copies of notifications and written plans under ORS 527.670(6) (water users downstream from chemical applications) or ORS 527.670(8) and OAR 629-674-0100 (Access to Notifications and Written Plans), unless:

1. The Stewardship Forester confirms that subscriber(s) have had copies of the notification and any required written plans for at least 24 hours; or
2. The notification and written plans have been sent by first-class mail and four working days have passed (this allows for adequate mail delivery and review by the applicant); or
3. The water user or subscriber states on their subscription application that they do not need to be informed before operations begin.

There are more directions and considerations related to waiving the 15-day waiting period. See the guidance for OAR 629-605-0150(2) for more information.

REFERENCES:

- OAR 629-600-0100 Definitions - *"Chemicals"*
- OAR 629-605-0150 (2) Notification to the State Forester - when, where and how