DIVISION 625
ROAD CONSTRUCTION AND MAINTENANCE

PURPOSE
OAR 629-625-0000

(1) Forest roads are essential to forest management and contribute to providing jobs, products, tax base and other social and economic benefits.

(2) OAR 629-625-0000 through 629-625-0700 shall be known as the road construction and maintenance rules.

(3) The purpose of the road construction and maintenance rules is to establish standards for locating, designing, constructing and maintaining efficient and beneficial forest roads; locating and operating rock pits and quarries; and vacating roads, rock pits, and quarries that are no longer needed; in manners that provide the maximum practical protection to maintain forest productivity, water quality, and fish and wildlife habitat.

(4) The road construction and maintenance rules shall apply to all forest practices regions unless otherwise indicated.

APPLICATION:

This rule, sections (1) through (4), is not used for enforcement. Enforcement action should be taken under OAR 629-625-0100 through 629-625-0700.

ADMINISTRATION:

This rule provides the broad framework under which the remainder of the road construction and maintenance rules are administered. Note: Division 623 rules distinguishes between road construction and reconstruction, OAR 629-623-0450.

This rule establishes the key role of forest roads in contributing to the economic and social benefits of forests. The overall intent of the individual rules in this division is to set standards for building and maintaining roads and quarries that limit their negative effects on forest productivity, water quality, and fish and wildlife habitat as much as practical.

There is further purpose in the statute, ORS 527.765(1) which states that the rules must "... insure that to the maximum extent practicable nonpoint source discharges of pollutants resulting from forest operations on forest lands do not impair the achievement and maintenance of water quality standards." Road location, design, construction, reconstruction, maintenance and use are forest operations that have great potential to impair waters of the state with crossing structures and turbidity and sediment transport. Therefore, forest road rule administration must incorporate this statutory requirement or the Department of Environmental Quality (DEQ) may seek forest
practice rulemaking to maintain the state water quality standards. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Road Construction and Reconstruction.** OARs 629-625-0100 through 0440 apply when roads are being newly constructed or reconstructed. In this context, “road reconstruction” includes such activities as road relocation, road widening, replacement of stream crossing structures, and substantial fill repair. Road reconstruction does not include removal of brush, bank slough, or the addition or replacement of cross drainage structures, but these activities are considered routine road maintenance. See definition of “road reconstruction” in the Forest Practices Technical Note No. 8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.

**Routine Road Maintenance, examples not requiring a notification:** On-going activity that involves the road surface and ditches and minor debris removal from culverts and streams, such as mechanical roadside brushing, ditch cleaning from raveling cut slopes and slumps, cross drain installation (for structures that are not in stream channels), road surface rocking that doesn’t significantly change the road prism, and grading road surfaces. OAR 629-605-0140(2)(b).
**WRITTEN PLANS FOR ROAD CONSTRUCTION**  
**OAR 629-625-0100**

(1) A properly located, designed, and constructed road greatly reduces potential impacts to water quality, forest productivity, fish, and wildlife habitat. To prevent improperly located, designed, or constructed roads, a written plan is required in the sections listed below.

**APPLICATION:**

Section (1) is not used for enforcement. This section is the purpose statement for the following sections describing situations that require a written plan. Sections (2) through (5) of this rule can be used for enforcement. The requirement for a non-statutory written plan under this rule may be waived if the Stewardship Forester (SF) determines that the formal plan process is not needed to help ensure resource protection. Unless the department grants the waiver, a non-statutory written plan is required and must be submitted before the practice or operation begins. Consideration of the waiver begins when the operator requests the waiver.

**ADMINISTRATION:**

A written plan is required in situations among the road rules where there is a high potential for impacts to water quality, forest productivity, fish, and wildlife habitat. See also Forest Practices Technical Note No. 7, *Avoiding Roads in Critical Locations*.

The wording of this purpose rule, the preceding purpose rule, OAR 629-625-0000, and the guidance throughout this rule division illustrates the balance to be sought between practically building and maintaining roads and, where practicable and feasible, eliminating their negative effects on water quality, forest productivity, fish, and wildlife habitat. If there is a physically practicable and feasible method of limiting these negative effects, compliance requires that method or practice to be employed. Failure to do so places the operator/landowner at risk of enforcement action.

- Written recommendations may be used to help the operator avoid an unsatisfactory condition, OAR 629-670-0100(2).
- Written statements of unsatisfactory condition are an important tool to use whenever the potential for damage is observed by the SF, and there is an opportunity to avoid damage by timely corrective action, OAR 629-670-0115.
WRITTEN PLANS FOR ROAD CONSTRUCTION
OAR 629-625-0100

(2) In addition to the requirements of the water protection rules, operators must submit a written plan to the State Forester before:
(a) Constructing a road where there is an apparent risk of road-generated materials entering waters of the state from direct placement, rolling, falling, blasting, landslide or debris flow;
(b) Conducting machine activity in Type F, Type SSBT or Type D streams, lakes or significant wetlands; or.
(c) Constructing roads in riparian management areas.

APPLICATION:

Subsections (2)(a) and (c) can be used for enforcement of the non-statutory written plan requirement.
• Subsection (2)(a) applies where planned road construction or reconstruction may result in road-related material or machinery entering waters of the state either during or after the operation.
• Subsection (2)(c) for enforcement of the statutory written plan requirement for the RMAs of Type F, Type SSBT, and Type D streams.
• Subsection (2)(c) is used specifically for enforcement in the RMAs of medium and large Type N streams.

Subsection (2)(b) can be used for enforcement the following rules:
• OAR 629-605-0170(2) for operating within 100 feet of a Type F, Type SSBT, or Type D stream without a statutory written plan.
• OAR 629-605-0170(3) for operating within 100 feet of a significant wetland (over 8 acres) without a statutory written plan.
• OAR 629-650-0005 for operating within 100 feet of a large lake (over 8 acres) without a non-statutory written plan.

COMPLIANCE:

Upon request, the requirement for a non-statutory written plan under section (2) may be waived if the SF determines that the formal plan process is not needed to help ensure resource protection. Unless the SF grants the waiver, a non-statutory written plan is required and must be submitted before the practice or operation begins. Consideration of the waiver begins when the operator requests the waiver.

Enforcement of section (2) is supported when the operator begins an activity listed in this section without the required plan. If the operator is discovered in the act, the SF should direct the operator to suspend activities listed in this section until the written plan requirement is met and the road location and alternatives are reviewed.
If the requirement for a non-statutory written plan was waived, take enforcement action only for resource damage under the applicable specific road location or design rule.

An operator is in compliance with section (2) when they submit a required written plan before:
1. Constructing roads where there is a risk of material entering a stream, lake or wetland;
2. Conducting machine activity, including stream crossings, in any Type F, Type SSBT, or Type D waters; lakes or significant wetlands; or
3. Constructing roads or reconstructing roads within any RMA.

**Unsatisfactory Condition:** An unsatisfactory condition exists when an operator does not submit a required written plan for operations described in section (2).

**Damage:** Resource damage is not a prerequisite for taking enforcement action. The operator, by not submitting a written plan, denies the SF the opportunity to review and comment on the operation to prevent resource damage.

**Written Statement of Unsatisfactory Condition:** Generally, if there is an unsatisfactory condition, there is a violation. Under specific conditions listed in OAR 629-670-0125, a written statement of unsatisfactory condition may be issued instead of a citation.

**ADMINISTRATION**
Statutory written plans are required for Type F, Type SSBT, and Type D streams by OAR 629-605-0170(2), and for significant wetlands by OAR 629-605-0170(3). Non-statutory written plans are required for large lakes by OAR 629-650-0005. Non-statutory written plans are not required for other lakes (8 acres or less). Stream crossings must also be designed and constructed according to OAR 629-625-0320(1), (2) and (3). See also OAR 629-625-0200(4) and Forest Practices Technical Note No. 7, Avoiding Roads in Critical Locations.

**Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Example:** An operator plans to replace an existing bridge that is too weak to support heavy equipment, which will involve using an existing low-water crossing on a Type F stream to get his equipment across the stream and back again. A statutory written plan is required per OAR 629-605-0170(2), 629-625-0100(2) and 629-625-0320(1) and (2). The plan must address:
- Timing of the crossing (seek ODFW’s input if outside the in-stream work guidelines),
- Adequacy of the streambed to support the equipment crossing,
- Necessity of importing rock fill material or temporary placement of a log crib,
- Prevention of sedimentation from the approaches to the crossing and
- Prevention of petroleum contamination into the stream during crossings.

See additional discussion on fords and fish passage in Forest Practices Technical Note 4.
WRITTEN PLANS FOR ROAD CONSTRUCTION
629-625-0100

(3) Operators shall submit a written plan to the State Forester before constructing roads on high landslide hazard locations. Operators and the State Forester shall share responsibility to identify high landslide hazard locations and to determine if there is public safety exposure from shallow, rapidly moving landslides using methods described in OAR 629-623-0000 through 0300. If there is public safety exposure, then the practices described in OAR 629-623-0400 through 0800 shall also apply.

APPLICATION:

Section (3) can be used for enforcement.

The requirement for a non-statutory written plan under section (3) may be waived if the SF determines that the formal plan process is not needed to help ensure resource protection. Unless the department grants the waiver, a non-statutory written plan is required and must be submitted before the practice or operation begins. Consideration of the waiver begins when the operator requests the waiver.

COMPLIANCE:

An operator is in compliance with section (3) when high landslide hazard locations (HLHL) are identified and initially screened for downslope public safety risks. An operator is in compliance with section (3) when a required written plan is submitted before constructing any roads on HLHL.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator fails to investigate and identify HLHL on a steep operation site. An unsatisfactory condition exists when an operator fails to submit a required written plan before beginning any road construction, road reconstruction, or right of way cutting on a HLHL.

Damage: Resource damage is not a prerequisite for taking enforcement action. The operator, by not submitting a written plan, denies the SF the opportunity to review and comment on the operation to prevent resource damage or injury to the public.

Written Statement of Unsatisfactory Condition: Generally, if there is an unsatisfactory condition, there is a violation. Under specific conditions listed in OAR 629-670-0125 (Using the Written Statement of Unsatisfactory Condition for Noncompliance with Procedural Rules), a written statement of unsatisfactory condition may be issued instead of a citation.

ADMINISTRATION

The SF, in coordination with the ODF geotechnical specialist, conducts the initial screening of the proposed operations for identification of HLHL and determination of risk public safety exposure. ODF will notify operators when such locations are present in the operation area.
Operators are then required to conduct further screening for possible public safety risks below the operation area as described in OAR 629-623-0100(1).

If there is substantial or intermediate public safety risk, OAR 629-623-0450 or 0550 will also apply to the operation, and may prohibit road construction or reconstruction on these locations. Forest Practices Technical Note No. 2 includes all necessary information for identification of HLHL. Forest Practices Technical Note No. 7 describes identification of critical locations and consultation processes.

Operators must describe in a written plan the specific practices, as directed by a ODF geotechnical specialist, they will use to reduce landslide risk. This written plan should describe specific actions taken to comply with the following rules:

- OAR 629-625-0200(3) Avoid locating roads on HLHL
- OAR 629-625-0310(1) Use variable grades and alignments
- OAR 629-625-0310(2) End-haul excess material
- OAR 629-625-0310(3) Design roads no wider than necessary
- OAR 629-625-0310(4) Design cut and fill slopes to minimize the risk of landslides
- OAR 629-625-0330(2) Avoid road drainage discharge onto HLHL
- OAR 629-625-0340 Use stable areas for disposal of end-haul waste
- OAR 629-625-0410 Do not place debris, sidecast, or other waste materials on HLHL
- OAR 629-625-0440(1) Stabilize exposed material that is potentially unstable.

Maps must show the exact road location and all potentially affected HLHLs. Cross drainage structures, cuts, and fills should also be shown. A road profile should generally be supplied. As a minimum, proposed road grades must be shown on the plan. On spur roads, grades which require use of an assist vehicle (over 20 percent) are appropriate if this will reduce impacts to HLHLs.

Road specifications should include road width and end-haul standards. Use of fill on steep slopes, erosion-prone slopes, and HLHL are unacceptable unless a slope stability analysis indicates such a fill will remain stable. Roads across steep HLHL should have no more than one foot of sidecast. Width should be the minimum that can be safely constructed with an excavator, typically 16 feet, including the ditch.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly-erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).
**WRITTEN PLANS FOR ROAD CONSTRUCTION**

*OAR 629-625-0100*

(4) *In addition to the requirements of the water protection rules, operators shall submit a written plan to the State Forester before placing woody debris or boulders in stream channels for stream enhancement.*

**APPLICATION:**

Section (4) can be used for enforcement. Use this section when operators propose to undertake stream enhancement projects as a component of a proposed forest operation. Such activities are not forest operations when there is no associated forest practice, e.g., harvesting or road construction.

The requirement for a non-statutory written plan under section (4) may be waived if the SF determines that the formal plan process is not needed to help ensure resource protection. Unless the department grants the waiver, a non-statutory written plan is required and must be submitted before the practice or operation begins. Consideration of the waiver begins when the operator requests the waiver.

**COMPLIANCE:**

Operators comply with section (4) when they submit a required written plan before undertaking any stream enhancement projects associated with a forest operation.

**Unsatisfactory Condition:** There is an unsatisfactory condition when the operator fails to submit a required written plan prior to placing woody debris or boulders in stream channels as stream enhancement associated with a forest operation.

**Damage:** Resource damage is not a prerequisite for taking enforcement action. The operator, by not submitting a written plan, denies the SF the opportunity to review and comment on the operation to prevent resource damage.

**Written Statement of Unsatisfactory Condition:** Generally, if there is an unsatisfactory condition, there is a violation. Under specific conditions listed in OAR 629-670-0125 (Using the Written Statement of Unsatisfactory Condition for Noncompliance with Procedural Rules), a written statement of unsatisfactory condition may be issued instead of a citation.

**ADMINISTRATION:**

Operators are encouraged to conduct stream enhancement work. **However, stream enhancement work is subject to section (4) only when the work is part of a Forest Practices Act (FPA) operation. Otherwise, the FPA does not apply to the enhancement activity.**

The intent of the written plan is to communicate how waters of the state will be protected during placement of woody material and boulders in the stream. Consult with the Oregon Department
of Fish and Wildlife (ODFW) regarding the enhancement value of woody debris or boulders to be placed in channels. Consult the ODF staff hydrologist or geotechnical specialist if there are questions as to the stability of materials and debris in the stream channel.

If there is a substantial volume of material added to or removed from the channel, altering stream integrity and resulting in damage, take enforcement action under OAR 629-660-0040(2).

OAR 629-642-0200 authorizes placement of large wood to improve fish habitat in conjunction with a forest operation, and affirms the Environment Protection Agency’s approval of the forest practices written plan process as adequate to conduct such fish habitat improvement projects without permitting by the Army Corps of Engineers. This approval was granted in 2006.

Refer to the "Administration" guidance under OAR 629-642-0300(1) and (2) for information regarding coordination with Department of State Lands (DSL) on fill and removal requirements and the “Other Agency Programs” guidance on the Fill and Removal Act. See guidance for “Other Agency Coordination.”
ROAD LOCATION
OAR 629-625-0200

(1) The purpose of this rule is to ensure roads are located where potential impacts to waters of the state are minimized.

APPLICATION:

Section (1) cannot be used for enforcement. It is the purpose statement for the following sections regulating road location. Use sections (2) through (4) for enforcement actions.

ADMINISTRATION:

Protection of water quality and fish habitat is a critical consideration in the location of proposed new roads.

Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
ROAD LOCATION
OAR 629-625-0200

(2) When locating roads, operators shall designate road locations which minimize the risk of materials entering waters of the state and minimize disturbance to channels, lakes, wetlands and floodplains.

APPLICATION:

Section (2) can be used for enforcement.

COMPLIANCE:

An operator complies with section (2) when they locate roads so that materials are kept out of waters of the state and their associated floodplains to minimize disturbance to waters of the state.

Unsatisfactory Condition: An unsatisfactory condition exists when an operator locates any portion of a road in any of the following areas, noted in Forest Practices Technical Note No. 7, Avoiding Roads in Critical Locations:

1. Below the high water level of a stream, lake, or wetland, exclusive of stream crossings in compliance with OAR 629-625-0320.
2. Parallel to or within 50 feet of a stream channel for a distance exceeding 500 feet per mile of road length, exclusive of stream crossings compliance in OAR 629-625-0320.
3. Where the road crosses a wetland for a distance greater than 500 feet.
4. HLHL where rock is likely to be highly sheared or otherwise unstable so that it is not possible to excavate a stable cutslope. If such a cutslope failure may divert road surface drainage to a HLHL and could trigger a debris flow below the road, that road should not be constructed unless the operator demonstrates that the cutslope can be stabilized by buttressing or other means.
5. Locations cutting through the toe of active or recently active deep-seated landslide deposits and where a reactivated landslide would likely enter the stream channel (wet or dry) or waters of the state.
6. Extremely dissected, steep slopes where it is not possible to fit the road to the topography with full bench end haul construction.

Operators may locate roads in these areas if the State Forester agrees beforehand that there are no practical alternatives, through a plan for an alternate practice.

Damage: Damage means the consequences of a poorly designed or constructed road causes an unsatisfactory condition that is not feasible to eliminate the adverse disturbance occurring from runoff, sidecast or erosion unnecessarily entering any channel, lake, wetland, or floodplain, OAR 629-670-0105(1) and -0115(1)(c).
Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when damage has not yet occurred, and complete repair is immediately feasible and practical. However, in most cases, damage occurs when roads are constructed in these locations and methods that impact waters of the state.

ADMINISTRATION:

Operators must keep roads out of channels, lakes, wetlands, and flood plains when there are alternative road locations. Use this section when road location disturbs, or is likely to disturb, streams, lakes and wetlands that do not have an RMA. In addition, use section (2) when roads are located in floodplains, outside an RMA, and parallel to streams. Use OAR 629-625-0100(2) or OAR 629-625-0200(3) for any disturbance to Type F, Type SSBT, or Type D streams, or RMAs.

Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

Except at stream crossings and approaches, operators should not locate roads where fill and other material are likely to enter a stream channel, side channel, wetland, or lake. Roads should not be located parallel to streams if the road is likely to be reached by flood flows. Roads should never be located below the high water level of a lake. Roads must also be located in places that minimize the risk of road-generated material entering waters of the state. Risk of material entering waters of the state is defined in OAR 629-625-0100(2)(a) as road-generated material entering waters of the state from direct placement, rolling, falling, blasting, landslide or debris flow.
(3) Operators shall avoid locating roads on steep slopes, slide areas, high landslide hazard locations, and in wetlands, riparian management areas, channels or floodplains where viable alternatives exist.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (3) when they locate roads away from steep slopes, slide areas, HLHLs, wetlands, riparian management areas, channels or floodplains if there are viable alternatives. The SF and landowner should consult with ODF’s staff specialists (geotechnical specialist, wildlife biologist, or water quality specialist) when proposed road construction or reconstruction is located in one of the six identified critical locations as described in Forest Practices Technical Note No. 7, Avoiding Roads in Critical Locations. An ODF-approved Plan for an Alternate Practice (PFAP) is required for road construction or reconstruction in critical locations, when viable alternatives exist or where construction in the critical location using available engineering controls, can be shown to be non-impactive to water or slope stability. The approved PFAP must address adequate protection measures.

“Viable alternatives.” When preliminary road construction or reconstruction locations cross any critical location, evaluate alternative locations using different grades and alignments that will serve the intended road use. For the six most sensitive critical locations described in Forest Practices Technical 7, use of very steep grades is often warranted. If steep grades or alternative alignments will not work, alternative logging techniques must be evaluated. Compelling reasons should include a determination that long span cable yarding, helicopter logging, or other alternative techniques, or waiting for additional forest growth will result in an economic loss. If there are no alternative management options, a special written plan must be submitted and reviewed by the appropriate ODF technical specialist(s).

“Steep slopes” exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials, or other highly erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).

Unsatisfactory Condition: An unsatisfactory condition exists when any portion of a road is located on the aforementioned locations when alternative locations, or in some cases alternative harvesting techniques, were available. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state and could have been prevented by better road location, OAR 629-670-0115. An unsatisfactory condition exists when an operator reopens an abandoned or vacated skid road located on the mid-slope, and sidecast material or drainage is likely to or has begun to enter the stream channel (wet or dry) or waters of the state and could have been prevented by not reopening the skid road.
unsatisfactory condition exists when erodible material has entered a dry stream bed but the material has not been removed or placed in a stable location to prevent enter into the channel or waters of the state, OAR 629-630-0800(5). An unsatisfactory condition exists when sidecast material is likely to cause slides and adverse disturbance to forest productivity, water quality, and fish and wildlife habitat, OAR 629-630-0100(3).

**Damage:** Damage occurs when the unsatisfactory condition results in landslides or preventable, unnecessary sediment or debris enters the wetted or dry stream channel or waters of the state. Damage exists if adverse disturbance has occurred and cannot be immediately corrected. A violation occurs when the operator fails to correct an unsatisfactory condition, regardless if damage has resulted, OAR 629-670-0010,

There is damage, an exceedance of the turbidity water quality standard, when forest practices disturbance causes a visible increase in turbidity compared to the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), and it continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when complete repair is feasible and practicable before damage occurs.

**ADMINISTRATION:**

Use section (3) if roads are located on steep slopes, slide areas, or HLHL when there is no need to do so. Use section (3) where roads may disturb streams, lakes, or wetlands with riparian management areas, or the riparian management areas. Use OAR 629-625-0200(2) where roads may disturb streams, lakes, or wetlands without riparian management areas.
**ROAD LOCATION**
**OAR 629-625-0200**

*(4) Operators shall minimize the number of stream crossings.*

**APPLICATION:**

Section (4) can be used for enforcement.

**COMPLIANCE:**

Operators comply with section (4) when their layout eliminates unnecessary stream crossings in determining road locations.

**Unsatisfactory Condition:** An unsatisfactory condition exist when stream crossings are planned or constructed when available alternative locations would have resulted in less potential effect on streams. An unsatisfactory condition exists when road construction debris enters or is likely to enter the stream channel (wet or dry) or waters of the state and could have been prevented by better road location reducing stream crossings.

**Damage:** Damage occurs when the unsatisfactory condition results in unnecessary channel disturbance or preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

There is damage, an exceedance of the turbidity water quality standard, when forest practices disturbance causes a visible increase in turbidity compared to the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), and it continues for two or more hours in a twenty-four hour period.

Because excess channel disturbance is damage, a violation exists when stream crossings are located for purposes other than the following: to substantially reduce road length in or near riparian management areas and stream channels; to avoid slopes where a stable roadway cannot readily be constructed; or to access essential landings. Stream crossings should not be constructed for the sole purpose of road alignment or minimizing logging costs. When an alternate location would have lower long-term impacts on the stream, the SF may require road relocation as part of the repair order.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practicable prior to damage occurring.

On completed construction it is seldom practical to fully repair the effects of an unnecessary stream crossing without more disturbance than just retaining the extra crossing structure(s).
ADMINISTRATION:

Stream crossings impact water quality and aquatic habitat because crossings necessarily cause some channel disturbance and increase the risk of material entering waters of the state.

Appropriately used, stream crossings may:
   a) Significantly reduce road length in or near riparian management areas and stream channels;
   b) Avoid slopes where a stable roadway cannot readily be constructed; or
   c) Access essential landings.

Example: A road must be extended to access timber in the bottom of a small canyon. The slopes around the channel are flat and the channel meanders. It would be easy to build a road next to the channel by constructing five stream crossings. The other option would be to build the road up on the uniform side slopes which average 45 percent steepness. This second road would be harder to build, but that option complies with this section, while the first option would be a violation of section (4).
ROAD LOCATION
OAR 629-625-0200

(5) To reduce the duplication of road systems and associated ground disturbance, operators shall make use of existing roads where practical. Where roads traverse land in another ownership and will adequately serve the operation, investigate options for using those roads before constructing new roads.

APPLICATION:

Section (5) cannot be used for enforcement unless it is to support non-compliance with another rule. This section encourages use of existing roads, including joint use by adjacent landowners to reduce duplicate road systems. An abandoned or vacated mid-slope haul road or skid road is not considered an existing road.

ADMINISTRATION:

The intent of section (5) is to reduce the duplication of road systems and associated disturbance, thereby reducing the potential for road-related resource damage. New roads are not necessary when existing roads can be used to meet the forest management objectives of the landowner.

The SF should explain the benefits of reduced road construction to the landowner and operator when applicable. Such benefits include not only water quality and fish habitat maintenance, but also the reduced amount of land taken out of production and savings of construction and maintenance costs.
**ROAD DESIGN**
**OAR 629-625-0300**

(1) The purpose of OARs 629-625-0300 through 629-625-0340 is to provide design specifications for forest roads that protect water quality.

**APPLICATION:**

Section (1) cannot be used for enforcement action. It is the purpose statement for the following sections regulating road design specifications.

**ADMINISTRATION:**

Protection of water quality, including fish habitat, is a critical consideration in the design of proposed new roads.
**ROAD DESIGN**
**OAR 629-625-0300**

(2) Operators shall design and construct roads to limit the alteration of natural slopes and drainage patterns to that which will safely accommodate the anticipated use of the road and will also protect waters of the state.

**APPLICATION:**

Section (2) can be used for enforcement. This section requires some level of pre-construction planning to “fit” the road to the terrain and minimize overall disturbance.

**COMPLIANCE:**

Operators comply with section (2) when they, at a minimum, conduct pre-construction reconnaissance and flag the proposed centerline. Full plan and profile design with slope staking is generally appropriate if there is a substantial risk of materials entering waters of the state.

**Unsatisfactory Condition:** An unsatisfactory condition exists when the operator makes no effort to design and lay out the road prior to construction and adverse disturbance to forest productivity, water quality, or fish and wildlife habitat has occurred or is likely. An unsatisfactory condition exists when new construction includes large cuts, fills, or impacts on drainage patterns that could reasonably have been avoided. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state, so as a result of inappropriate road design and location.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Inadequate design and construction may result in an increased risk of damage to waters of the state for a long period and is therefore a violation.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

**ADMINISTRATION:**

Section (2) requires a level of design necessary to minimize impacts to waters of the state.

**Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

For gentle terrain away from streams, acceptable design might be limited to pre-construction reconnaissance and a flagged centerline. For roads on steep slopes or across Type F or Type
SSBT streams, designs must include site-specific determination of cut and fill slopes, disposal locations of waste material, and culvert sizing and installation techniques. Care must be taken, even with ridge top roads in high rainfall areas, to minimize moving runoff from one draw area to another.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials, or other highly erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).

**Note:** Roads designed and constructed for the primary purpose for land development are not considered forest roads under the FPA design jurisdiction, even though forest harvest equipment and products are hauled on the roads. **Example:** A two lane secondary road to access a homesite development must follow county design and grading regulations. The FPA jurisdiction applies to the forest practice activities related to the harvest and completion of the operation, in order to provide a stable road surface and operating drainage system to protect waters of the state.
ROAD PRISM
OAR 629-625-0310

(1) Operators shall use variable grades and alignments to avoid less suitable terrain so that the road prism is the least disturbing to protected resources, avoids steep sidehill areas, wet areas and potentially unstable areas as safe, effective vehicle use requirements allow.

APPLICATION:
Section (1) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (1) when they vary grades and alignment to conform the road location to the terrain.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator maintains constant grades, or eliminates curves, thereby increasing required cuts, fills, stream crossings, or incursions into unstable or wet areas. An unsatisfactory condition exists when sediment has entered or is likely to enter the waters of the state as a result of inappropriate road design or location.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The written statement may require re-vegetation, pulling back fill, buttressing, or other actions necessary to prevent surface erosion or landslides.

ADMINISTRATION:

Section (1) is intended to minimize soil erosion. Direct impacts to water quality may not be immediately visible. Locating the road where excavation and filling are kept to a minimum will reduce long-term soil erosion and the subsequent entry of eroded material into waters. The SF is encouraged to make pre-operation inspections and recommendations prior to road construction and reconstruction projects through steep or irregular slopes. When risks to waters associated with fitting the road to the topography are anticipated, require a written plan under OAR 629-625-0100(2)(a). See also Forest Practices Technical Note 7, Avoiding Critical Road Locations.
Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).

Variable road grades on steep slopes minimize the amount of standing water in the road ditch, which reduces the opportunity for ditch water to saturate the road prism, leading to road failures.
(2) Operators shall end-haul excess material from steep slopes or high landslide hazard locations where needed to prevent landslides.

APPLICATION:
Section (2) can be used for enforcement.

COMPLIANCE:
Operators comply with section (2) when they end-haul excess material where, if sidecast, it would pose a substantial landslide risk.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator constructs a road with sidecast construction across steep side slopes or HLHL resulting in risk to public safety or risk of sediment entering waters of the state. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state. An unsatisfactory condition exists when an operator reopens an abandoned or vacated skid road located on the mid-slope and sidecast materials or drainage is likely to or has begun to enter the stream channel (wet or dry) or waters of the state and could have been prevented by not reopening the skid road.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly erodible materials as determined by the State Forester. OAR 629-630-0150(2) and (3). Material sidecast onto such slopes may fail in the future and enter waters of the state, or initiate slope failure or increase surface erosion.

Damage: Damage occurs when the unsatisfactory condition results in unnecessary sediment entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action is feasible and practical prior to damage (i.e., all sidecast can be pulled back).

If sidecast on steep slopes resulted from construction problems rather than lack of design, take enforcement action under OAR 629-625-0410, Disposal of Waste Materials.

Example: A landowner submits a non-statutory written plan to end-haul excess material from HLHL to a stable waste area, but the dozer operator ignores the plan and sidecast material enters waters of the state. The operator is responsible for resource damage.
ADMINISTRATION:

End-haul should be required for road construction or reconstruction on all steep or designated HLHL when alternate road locations are not feasible. This section will generally apply to slopes over 60 percent, and slopes over 40 percent in decomposed granite-type materials and other highly-erodible materials, where there is a risk of materials entering waters of the state. This section also applies to other slopes where sidecast is likely to fail sometime in the future, and to seep and spring areas with slopes generally over 50 percent.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly-erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).
ROAD PRISM
OAR 629-625-0310

(3) Operators shall design roads no wider than necessary to accommodate the anticipated use.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

Operators comply with section (3) when they minimize road width.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator designs and constructs a road wider than necessary for the intended use. An unsatisfactory condition exists when any road segment, 100 feet or longer, exceeds the maximum acceptable width listed below. **Maximum width for roads on HLHL is 16 feet, including the ditch.** An unsatisfactory condition exists when excessive road width results in, or is likely to result in, sediment entering the stream channel (wet or dry) or waters of the state and adverse disturbance to forest productivity and fish and wildlife habitat.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

The operator should be directed to pull back fill and/or stabilize exposed materials with mulch as necessary to prevent sediment from entering waters of the state.

ADMINISTRATION:

The intent of section (3) is to keep the road width to the minimum necessary for planned uses of the road. Though direct impacts may not be visible, excess soil disturbance and exposure will result in greater long-term risk of erosion and subsequent effects on waters.
Section (3) will be used only when roads are clearly and grossly wider than needed. The problem of determining anticipated uses makes it difficult to prove a violation has occurred.

**Maximum acceptable widths and target (goal) widths for the running surfaces**

<table>
<thead>
<tr>
<th>Road Running Surface¹</th>
<th>Maximum Widths</th>
<th>Goal Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads on HLHL</td>
<td>16 feet</td>
<td>12 feet</td>
</tr>
<tr>
<td>Minor spurs and temporary roads</td>
<td>18 feet</td>
<td>12 feet</td>
</tr>
<tr>
<td>Collector road</td>
<td>22 feet</td>
<td>16 feet</td>
</tr>
<tr>
<td>Mainline² haul roads</td>
<td>30 feet</td>
<td>24 feet</td>
</tr>
</tbody>
</table>

¹These widths do not include ditches, curve widening, turnouts, or areas used as landings.

²Generally, only one mainline haul road for 50,000 acres of ownership is necessary.

An excessively-wide road may be an indication of a planned conversion to a residence or other non-forest use. SFs should be mindful of such wide roads at the planning stage, especially where an operator may be attempting to circumvent another agency’s rules by building a residential or other non-forest-use road under the forest practices rules rather than the potentially more onerous rules of another agency. **Example:** An operator may attempt to build a residential-width road across wetlands under the forest practices rules in order to circumvent a removal-fill permit from the DSL.
ROAD PRISM
OAR 629-625-0310

(4) Operators shall design cut and fill slopes to minimize the risk of landslides.

APPLICATION:

Section (4) can be used for enforcement.

COMPLIANCE:

Operators comply when road design and constructed cut and fill slopes minimize landslide risk.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator designs and constructs cut and fill slopes at an excessively steep slope angle, usually steeper than 1 1/4 to 1 (80 percent) and adverse disturbance to forest productivity or fish and wildlife habitat has occurred or is likely. An unsatisfactory condition exists when fills are constructed on slopes over 60 percent regardless of the fill angle. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel or waters of the state. An unsatisfactory condition exists when an operator reopening an abandoned or vacated skid road or haul road located on the mid-slope, and sidecast materials or drainage is likely to or has begun to enter the stream channel or waters of the state and could have been prevented by not reopening the skid road or haul road.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: Issue a written statement of unsatisfactory condition when corrective action or complete repair is feasible and practical prior to damage occurring. The operator may be directed to flatten cut slopes and/or pull back fill slopes. Vegetative stabilization or other slope stabilization techniques may be necessary if slope alteration is not feasible.

For sidecast slopes (excess material is not part of the road), enforce under OAR 629-625-0410.

ADMINISTRATION:

Section (4) is intended to prevent damage to water quality caused by failure of over-steep cut and fill slopes. In most situations, over-steep cut-banks do not directly result in damage. Depending on the soil characteristics, the cut soil may have a greater strength than fill soil. However, cut slope failures may re-route ditch water to steep fills or may block culverts and thereby cause damage. Over-steep fills pose the greatest risk to waters of the state. Consult the ODF geotechnical specialist prior to enforcement action under this section.
### ROAD PRISM
**OAR 629-625-0310**

(5) *Operators shall stabilize road fills as needed to prevent fill failure and subsequent damage to waters of the state using compaction, buttressing, subsurface drainage, rock facing or other effective means.*

#### APPLICATION:

Section (5) can be used for enforcement.

#### COMPLIANCE:

An operator is in compliance with section (5) when road fills are stabilized by compaction, buttressing, subsurface drainage, rock facing or other effective means as needed to prevent fill failure.

**Unsatisfactory Condition:** An unsatisfactory condition exists when the operator fails to compact, armor, or otherwise stabilize fills and water quality is threatened. Evidence of an unsatisfactory condition may include slumping or cracking of the fill surface. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The written statement may direct the operator to pull back fill slopes, or remove and rebuild fills. Buttressing, rock armor, mulching, vegetative stabilization, or other slope stabilization techniques may be required. For sidecast slopes, enforcement should be based on OAR 629-625-0410.

#### ADMINISTRATION:

As needed, consult the ODF geotechnical specialist prior to taking enforcement action under this Section (5). **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
STREAM CROSSING STRUCTURES
OAR 629-625-0320

(1) Operators shall design and construct stream crossing structures (culverts, bridges and fords) to:
   (a) Minimize excavation of side slopes near the channel.
   (b) Minimize the volume of material in the fill.
         (A) Minimizing fill material is accomplished by restricting the width and height of the fill to the amount needed for safe use of the road by vehicles, and by providing adequate cover over the culvert or other drainage structure.
         (B) Fills over 15 feet deep contain a large volume of material that can be a considerable risk to downstream beneficial uses if the material moves downstream by water. Consequently, for any fill over 15 feet deep operators shall submit to the State Forester a written plan that describes the fill and drainage structure design. Written plans shall include a design that minimizes the likelihood of:
             (i) Surface erosion;
             (ii) Embankment failure; and
             (iii) Downstream movement of fill material.
   (c) Prevent erosion of the fill and channel.

APPLICATION:

Section (1) can be used for enforcement action.

The requirement for a non-statutory written plan under section (1) may be waived if the SF determines that the formal plan process is not needed to help ensure resource protection. Consideration of the waiver begins when the operator requests the waiver. Unless the SF grants the waiver, a non-statutory written plan is required and must be submitted before the practice or operation begins.

COMPLIANCE:

An operator complies with section (1) when stream crossings are constructed with a design that:
   (a) Minimizes excavation of the side slopes near the channel; and
   (b) Minimizes fill of the stream banks; and
   (c) Limits erosion of fill material and the channel to that necessary and unavoidable, during and after the operation.

When fills over 15 feet are planned, an operator complies with paragraph (1)(b)(B) by submitting a required written plan addressing the listed criteria.

 Unsatisfactory Condition: An unsatisfactory condition exists when:

1. A stream crossing is begun or completed at a location where excessive cutting or filling is required and there is a better alternative crossing location. Enforcement action should be
taken for a violation of subsection (1)(a) for excessive cutting, or subsection(1)(b) for oversized fills (which may be less than 15 feet deep).

2. A stream crossing structure is begun or completed as a site for waste (excess soil or rock) disposal. Enforcement action should be taken for a violation of subsection (1)(b).

3. A stream crossing is begun or completed with a fill over 15 feet deep without first submitting a required written plan. This is a violation of paragraph (1)(b)(B) and enforcement action should be taken under this section.

4. Erosion protection is not provided on stream crossing fills and unnecessary erosion is threatened or occurs. This is noncompliance with subsection (1)(c) and should be handled through a written statement unless unnecessary fill erosion has occurred.

5. There is potential for or evidence of erosion of fill and/or stream channel as a result of the design where an alternative design practice would have prevented such erosion. This is a violation of subsection (1)(c).

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** Issue a written statement of unsatisfactory condition when impending erosion into waters can be prevented or minor erosion can be stopped.

**ADMINISTRATION:**

Section (1) is intended to prevent damage to aquatic habitat and water quality caused by direct physical alteration, sedimentation, turbidity, and channel scour during and after construction of stream crossing structures.

Operators must carefully design and construct all stream crossing structures and approaches to minimize channel disturbance. Operators must also prevent erosion of all stream crossing fills. Finally, **operators must not use stream crossings for disposal of excess material.**

Subsections (1)(a) and (b) of section (1) must be balanced by the operator. The end result should be a stream crossing which results in the least possible ground disturbance.

Paragraph (1)(b)(B) is an additional requirement for all stream crossing fills more than 15 feet deep. A written plan **must always** be submitted prior to construction of these high fills unless a waiver of this requirement has been granted by the SF. In addition to design and construction details, a written plan for high fills must show:

1. There are no alternative stream crossing locations (using different grade or alignment) which would result in lower impacts to the stream; and
2. Lower fill heights would result in extensive cutting of slopes adjacent to streams.
There is also authority through OAR 629-625-0100(2)(a) to require a written plan for any fill if there is a "risk of material entering waters of the state". All stream crossing fills pose some risk of material entering waters of the state. Use the "risk of material entering waters" rule to require a written plan when site conditions threaten erosion or slumping into the water, but fills will be less than 15 feet deep. Crossings of steep gradient channels, crossings over weak soils, or crossings constructed by an operator who has little experience constructing stable fills across streams are situations where written plans are prudent.

Measure fill depth as the vertical distance from the road edge of the downhill side of the road to the native stream bed below, include the depth of the road surfacing. Do not measure fill depth at the toe of the fill on the downhill side of the fill. See Figure 1.

Figure 1. Measure Road Fill Depth

Subsection (1)(c) must be applied to all stream crossings (culvert, bridge, or ford). Erosion control measures are always required at crossing locations because if stream crossing fills erode, it is very likely that the eroded material will enter the channel. Therefore, the road designer and road builder must provide effective protection from surface erosion (seeding and mulching, riprapping, etc.) on all fill slopes at stream crossings (regardless of the size of the fill, or the size or type of stream). Fords are regulated by subsection (1)(c) since the driving surface of a ford is either a fill or the channel. Operators should not use unimproved fords, except those on solid rock, for hauling because truck traffic usually breaks down stream gravel and tires carry soil into the channel.

Example: An operator plans to replace an existing bridge that is too weak to support heavy equipment, which will involve using an existing low-water crossing on a Type F stream to get his equipment across the stream and back again. A statutory written plan is required per OAR 629-605-0170(2), 629-625-0100(2) and 629-625-0320(1) and (2). The plan must address:
   • Timing of the crossing (seek ODFW’s input if outside the in-stream work guidelines),
   • Adequacy of the streambed to support the equipment crossing,
   • Necessity of importing rock fill material or temporary placement of a log crib,
   • Prevention of sedimentation from the approaches to the crossing and
   • Prevention of petroleum contamination into the stream during crossings.

See additional discussion on fords and fish passage in Forest Practices Technical Note 4.
STREAM CROSSING STRUCTURES
OAR 629-625-0320

(2) Operators shall design and construct stream crossings (culverts, bridges, and fords) to:
   (a) Pass a peak flow that at least corresponds to the 50-year return interval. When determining the size of culvert needed to pass a peak flow corresponding to the 50-year return interval, operators shall select a size that is adequate to preclude ponding of water higher than the top of the culvert; and
   (b) Allow migration of adult and juvenile fish upstream and downstream during conditions when fish movement in that stream normally occurs.

APPLICATION:

Section (2) can be used for enforcement action.

COMPLIANCE:

An operator is in compliance with section (2) when stream crossings are designed and constructed or reconstructed to pass a 50-year peak flow. An operator is in compliance with section (2) when fish-bearing streams’ crossings are designed and constructed to allow for fish passage as specified in rule.

Unsatisfactory Condition: An unsatisfactory condition exists when a stream crossing is installed that does not pass a 50-year peak flow. An unsatisfactory condition exists when a culvert, ford, or bridge has been installed in a Type F or Type SSBT stream and is not likely to pass adult and juvenile fish upstream or downstream. SFs should confirm stream crossing structure shortcomings with a staff specialist prior to taking enforcement action. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel or waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel or waters of the state as a result of installing an undersized crossing structure. Damage occurs when the unsatisfactory condition prevents the normal migration of adult or juvenile fish upstream or downstream during times when fish normally access these areas.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.
ADMINISTRATION:

Section (2) is intended to prevent damage to aquatic habitat and water quality caused by direct physical alteration, sedimentation, turbidity, and/or channel scour and hindrance of fish movement through construction or reconstruction of stream crossing structures. Routine road maintenance activities do not require a notification, OAR 629-605-0140(2)(b).

Operators must carefully design all stream crossing structures to pass the 50-year peak flow without washing out and to pass adult and juvenile fish upstream and downstream (on Type F or Type SSBT streams). These requirements apply to all new road construction and reconstruction of any partial or complete stream crossing washout, or replacement of any crossing structure.

Subsection (2)(a) requires operators to design culverts and bridges for the 50-year return interval peak flow. Culvert size should be determined using the standard ODF methodology described in the Forest Practices Technical Note No. 5, Determining the 50-Year Peak Flow and Stream Crossing Structure Size for New and Replacement Crossings, May 2002. However, if an operator presents nearby stream gage data which has been analyzed by a hydrologist to determine the 50-year flow, the operator should use that information for culvert sizing. Bridges should also be designed using the information found in the Forest Practices Technical Note No. 5. The only exception to subsection (a) applies to wide flood plains as described in OAR 629-625-0320(3).

Existing under-sized culverts that may cause fill failures should be evaluated for their damage potential and accorded enforcement action when there is significant potential for damage under the Road Maintenance rule OAR 629-625-0600(2) or (3). Consult with Salem staff to discuss solutions.

Subsection (2)(b) requires operators to design and construct culverts, fords and bridges to allow passage of adult and juvenile fish both upstream and downstream through the structures on Type F or Type SSBT streams. Design for fish passage often requires a detailed engineering analysis, see Forest Practices Technical Note No. 4, Fish Passage Guidelines for New and Replacement Crossing Structures, May 2002.

Note: Subsections (2)(a) and (b) apply to any temporary crossing which remains in place during the winter, and to temporary crossing structures which might affect fish passage.

Example: An operator plans to replace an existing bridge that is too weak to support heavy equipment, which will involve using an existing low-water crossing on a Type F stream to get his equipment across the stream and back again. A statutory written plan is required per OAR 629-605-0170(2), 629-625-0100(2) and 629-625-0320(1) and (2). The plan must address:

- Timing of the crossing (seek ODFW’s input if outside the in-stream work guidelines),
- Adequacy of the streambed to support the equipment crossing,
- Necessity of importing rock fill material or temporary placement of a log crib,
- Prevention of sedimentation from the approaches to the crossing and
- Prevention of petroleum contamination into the stream during crossings.

See additional discussion on fords and fish passage in Forest Practices Technical Note 4.
Other fish passage requirements:

- OAR 629-625-0600(10) acknowledges that, under the authority of ORS 509.580 through 509.910 and OAR 635-412-0005 through OAR 635-412-0040, other state agencies (ODFW) administer fish passage requirements that may be applicable to water crossing structures, including those constructed before September 1, 1994 under the “Class I” stream classification system.
- See additional guidance for fish passage requirements in OAR 629-625-0600(10).

However, since 2020, some projects (e.g., large wood placement in streams and stream crossing projects) in certain counties have triggered county floodplain development permit requirements, including flood modeling. FEMA rescinded an old policy that allowed counties some leeway in evaluating “fish” projects that potentially impact stream hydrology and flooding.
STREAM CROSSING STRUCTURES
OAR 629-625-0320

(3) An exception to the requirements in subsection (2)(a) of this rule is allowed to reduce the height of fills where roads cross wide flood plains. Such an exception shall be allowed if the operator obtains approval of a plan for an alternate practice. The State Forester will approve such a plan when the plan demonstrates:
   (a) The stream crossing site includes a wide flood plain; and
   (b) The stream crossing structure matches the size of the active channel and is covered by the minimum fill necessary to protect the structure;
   (c) Except for culvert cover, soil fill is not placed in the flood plain; and
   (d) The downstream edge of all fill is armored with rock of sufficient size and depth to protect the fill from eroding when a flood flow occurs.

APPLICATION:

Section (3) is not used for enforcement action, but provides an opportunity for a PFAP. If an operator does not obtain approval of a PFAP, the operator must comply with the applicable standards as described in rule or statute.

COMPLIANCE:

An operator is in compliance with section (3) if a PFAP is approved by the State Forester with the conditions of section (3) for an exception to the requirements in subsection (2)(a). The operator must comply with the provisions of the approved PFAP, OAR 629-605-173(4).

Unsatisfactory Condition: An unsatisfactory condition exists when an approved PFAP is not followed and resources have been adversely impacted. Noncompliance should generally be handled using subsection (2)(a), the standard rule for design of stream crossings. However, if most criteria in this section were met in the design of the crossing. For example, there is a wide flood plain and the culvert is sized to match the active channel, but there is an inadequate overflow. As such, a written statement issued under section (3) is appropriate provided high flows have not yet caused fill washout damage. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel or the waters of the state.

ADMINISTRATION:

The intent of section (3) at less material is available to be delivered to the stream in case of a failure during an extreme flood event. In order to allow a low fill design, the rules give the operator the option to install a culvert or bridge with a lower flow capacity than would otherwise be required. A low fill design must contain the following elements to be approved, as described in Forest Practices Technical Note No. 5, Determining the 50-Year Peak Flow and Stream Crossing Structure Size for New and Replacement Crossings, May 2002:
   • The crossing must provide fish passage (for Type F or Type SSBT).
   • The stream flood plain must be at least five times the width of the active channel.
   • The culvert or bridge must be the same width as the active channel.
• An overflow depression must be constructed in the road fill at a location away from the crossing and at an elevation lower than the top of the culvert, or the bottom of the bridge.
• The road surface and downstream edge of the overflow depression must be armored with rock of sufficient size and depth to protect the fill from eroding when a flood flow occurs.
DRAINAGE 629-625-0330

(1) The purpose of this rule is to provide a drainage system on new and reconstructed roads that minimizes alteration of stream channels and the risk of sediment delivery to waters of the state. Drainage structures should be located based on the priority listed below. When there is a conflict between the requirements of sections (2) through (6) of this rule, the lowest numbered section takes precedence, and the later-numbered and conflicting section shall not be implemented.

APPLICATION:

Section (1) cannot be used for enforcement. It is the purpose statement for the following sections regulating road location. Use sections (2) through (6) for enforcement actions, selecting the priority section as described by this rule in case of conflicting practices.

ADMINISTRATION:

Protection of stream channels and reducing the risk of sediment delivery to waters of the state are the objectives of road drainage for all new and reconstructed roads. See also Forest Practices Technical Note No. 8, *Installation and Maintenance of the Cross Drainage Systems on Forest Roads*.

Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
DRAINAGE
OAR 629-625-0330

(2) Operators shall not concentrate road drainage water into headwalls, slide areas, high landslide hazard locations, or steep erodible fill slopes.

APPLICATION:

Section (2) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (2) when road drainage water is diverted into stable areas not affecting headwalls, slide areas, HLHL, or steep erodible fill slopes. See also Forest Practices Technical Note No. 2, *High Landslide Hazard Locations, Shallow, Rapidly Moving Landslides and Public Safety: Screening and Practices*, January, 2019.

Unsatisfactory Condition: An unsatisfactory condition exists when a lack of cross drainage or the improper location of cross drainage will direct drainage water into headwalls, slide areas, and HLHL or steep erodible fill slopes. An unsatisfactory condition exists when such drainage water begins destabilizing these sites that are especially vulnerable to soil movement and surface erosion into waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: Issue a written statement of unsatisfactory condition when corrective action/complete repair is feasible/practical prior to damage occurring.

ADMINISTRATION:

The intent of section (2) is to prevent landslides, fill erosion, and subsequent water quality damage. Section (2) is commonly used to evaluate written plans, OAR 629-623-0700. The plan must address the drainage design to prevent water concentration on erodible fill slopes, steep, unstable slopes, and HLHL. See also Forest Practices Technical Note No. 8, *Installation and Maintenance of the Cross Drainage Systems on Forest Roads*.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly-erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).
DRAINAGE
OAR 629-625-0330

(3) Operators shall not divert water from stream channels into roadside ditches.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

Operators comply with section (3) when stream crossing structures are installed whenever the road crosses a stream.

Unsatisfactory Condition: An unsatisfactory condition exists when water is diverted from an active channel into a roadside ditch. An unsatisfactory condition exists when channel alignment is shifted into road ditches by a poorly-placed crossing structure. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The written statement should direct the operator to install a culvert or other drainage structure that is effective in continuing the stream in its natural channel where the road crosses the stream channel.

ADMINISTRATION:

Section (3) requires the road to be designed so that the hydrologic changes associated with diversion of water from natural drainage ways are avoided. See also Forest Practices Technical Note No. 8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.

Section (3) does not apply to temporary diversions necessary for road construction or reconstruction when the stream is at relatively low flow.
DRAINAGE
OAR 629-625-0330

(4) Operators shall install dips, water bars, or cross drainage culverts above and away from stream crossings so that road drainage water may be filtered before entering waters of the state.

APPLICATION:

Section (4) can be used for enforcement.

COMPLIANCE:

Operators comply with section (4) when they install drainage structures to direct runoff away from waters of the state or in such a way that runoff carrying sediment is effectively settled out or filtered before entering waters of the state. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

Unsatisfactory Condition: An unsatisfactory condition exists when a lack of cross drainage or the improper location of cross drainage outlets allows road drainage water to discharge directly into waters of the state without being filtered. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state.

Damage: There is damage when the unsatisfactory condition results in preventable, unnecessary sediment from road drainage water entering the waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity compared to the water conditions 100 feet upstream of the disturbance entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: Use a written statement when there is inadequate drainage prior to storms that can cause sediment entry, or when there are minor sediment or turbidity effects. The written statement should require the operator to install adequate culverts, dips or water bars up-grade from the stream crossing at a location that provides effective sediment settling or filtering before runoff water reaches a water of the state.

ADMINISTRATION:

Section (4) requires drainage to be installed above stream crossings so that muddy runoff will be diverted away from waters of the state, and settled out or filtered through a vegetated area prior to entering waters. When operators plan to reconstruct or otherwise use older roads, additional cross drainage above streams to improve filtering will usually be needed. Such drainage can be required through this section (road reconstruction) or through the road maintenance rules (operation changes inactive roads to active roads; OAR 629-625-0600(9). See FP Technical Note No. 8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.
**DRAINAGE**
OAR 629-625-0330

(5) Operators shall provide drainage when roads cross or expose springs, seeps, or wet areas.

**APPLICATION:**

Section (5) can be used for enforcement.

**COMPLIANCE:**

Operators comply with section (5) when they install drainage structures to keep water from springs, seeps, or wet areas away from roads.

**Unsatisfactory Condition:** An unsatisfactory condition exists when a lack of drainage structures or the improper location of drainage structures where roads cross springs, seeps or wet areas poses a risk of road destabilization and resulting sediment has entered or is likely to enter the stream channel or waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment delivery into waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and condition cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The written statement should require the operator to install effective drainage as necessary to prevent destabilization of the road that would result in sediment delivery into waters of the state. See also OAR 629-625-0600(9).

**ADMINISTRATION:**

Section (5) applies to all hill slope wet areas, regardless of whether or not they are identified before construction or reconstruction. Road fill should not be placed on potential spring areas, unless adequate subsurface drainage is constructed. In areas with high groundwater, it may be necessary to use French drains in the ditch area, or to use a free draining fill. Where cutslopes or road surfaces expose flowing water, roads must be graded and cross-drained to remove this water before ditch cutting or severe road surface pumping occurs. See also Forest Practices Technical Note No. 8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.
**DRAINAGE**
**OAR 629-625-0330**

(6) Operators shall provide a drainage system using grade reversals, surface sloping, ditches, culverts and/or waterbars as necessary to minimize development of gully erosion of the road prism or slopes below the road.

**APPLICATION:**
Section (6) can be used for enforcement.

**COMPLIANCE:**
Operators comply with section (6) when they construct a road drainage system that controls surface erosion from the road prism and slopes below the road.

**Unsatisfactory Condition:** An unsatisfactory condition exists when a drainage system is inadequate to prevent development of a gully on the surface, in the ditch, the fill slope, or the slopes below the road and sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment delivery into waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** Use a written statement prior to damage. The written statement should require the operator to install culverts, dips or waterbars and/or change the road surface slope.

**ADMINISTRATION:**
The intent of section (6) is to require a drainage system that effectively manages surface water so erosion of the road surface, ditch, fill, or cut slopes is minimized. Use this section for newly constructed roads that are generally less than two years old. Use road maintenance rules for roads that were constructed or last reconstructed more than two years ago. See also Forest Practices Technical Note No. 8, *Installation and Maintenance of the Cross Drainage Systems on Forest Roads.*

Most landowners, at least in western Oregon, use ditches and culverts on the majority of roads. When landowners choose this option, they must use sufficient cross drain culverts to prevent erosion of ditches and at culvert outlets. Minor erosion of ditches can be expected during the first winter after road construction and reconstruction. Down cutting approaching several inches
within the road ditch should be considered an unsatisfactory condition. Drainage structures of any kind (culverts, dips, waterbars, etc.) must provide adequate filtering, as described in section (4) of this rule. Outsloping should be encouraged on summer-use roads that are less than about eight percent gradient and where rutting can be prevented by use of additional drainage structures (waterbars and dips). **Waterbars must be installed on outsloped roads prior to the wet season.**
**WASTE DISPOSAL AREAS**  
**OAR 629-625-0340**

Operators shall select stable areas for the disposal of end-haul materials, and shall prevent overloading areas which may become unstable from additional material loading.

**APPLICATION:**

This rule can be used for enforcement action.

**ODF WASTE AREA POLICY:**

A written plan for waste disposal areas (which include any site where excess excavated material or debris is hauled by truck, moved by loader, or drifted by cat, and in excess of that needed for a minimum size road or landing) is required when:

1. There is a risk of slope failure at the site; **and**
2. There is a risk of material from that slope failure entering waters of the state.

ODF’s written plan comments or recommendations for protecting waters of the state do not relieve the operator of responsibility for the activities associated with the waste area site. Requiring of written plans is authorized by OAR 629-625-100(2)(a) and OAR 629-605-0170.

**COMPLIANCE:**

An operator is in compliance with this rule when areas selected for disposal of end-haul materials are stable and will remain stable after additional material loading.

**Unsatisfactory Condition:** An unsatisfactory condition exists when end-haul material is disposed of in unstable locations, or when end-haul disposal locations begin to become unstable after additional material loading. Evidence of instability includes tension cracks on the surface on or near the disposal site. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel (wet or dry) or waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state, or when such events are likely and there is no opportunity to immediately stabilize the disposal site. Failure to follow the written plan is not enforceable. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.
Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

ADMINISTRATION:

Operators may be required to submit non-statutory written plans for waste disposal areas which have a risk of slope failure and also a risk of material from that failure entering waters of the state. The plan is required under authority of OAR 629-625-0100(2)(a) "risk of material entering waters of the state." A statutory written plan would be required for any waste disposal site within the usual regulated distance for a statutory written plan.

Waste disposal areas may fail because waste is placed too close to streams or at too steep a slope. However, the most serious problems occur when the weight of the waste material causes or contributes to the cause of a much larger slide, which includes the in-place soil and rock under and around the waste site.

Steep slopes are slopes over 60 percent as well as slopes over 40 percent where soils consist of decomposed granite-type materials, or other highly erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).

SFs should always inspect waste disposal areas when road construction or reconstruction involves the need to end-haul material or to drift a substantial volume of excavated materials (over about 2,000 yards) to any one location. SF are advised to consult with the ODF geotechnical specialist for any waste area proposed to store more than 2,000 yards of material, or less if there is risk of slope failure and impact to waters of the state.

When there is a reasonable risk of such a failure, and there is any way slide material could enter a stream, an operator is required to submit a written plan. That plan must include the following three provisions:

1. Site History: Describe if the site has previously been used as a waste area, and if so, when that happened and how much material was placed there.

2. Size and Shape: Provide a drawing to scale of the site; maximum volume of waste to be placed on the site; limits where waste is to be placed (generally flagged on the ground); and other data as required by the SF.

3. Monitoring and Maintenance: Describe how the site will be monitored and maintained to protect waters of the state. There may be instances where measures required to actually stabilize a pre-existing site may be cost prohibitive. It is in these cases where off-site measures to minimize impacts to waters of the state may be appropriate.

Proposed waste disposal areas involving large volumes of fill material and/or on sites of questionable stability may require operator-provided evaluation, at the discretion of the SF. Evaluations may range from a statement of the stability based on surface indicators to a fully-engineered design (includes subsurface information and an engineering analysis of site stability). The amount of engineering required, and ultimately the decision to allow placement of waste
material, will be commensurate with the value of the protected resource that is at risk from failure and the degree of confidence in the stability of the site.

**When written plans include information about waste disposal areas, they shall be reviewed and comments may be provided by the ODF geotechnical specialist.**

The February 2009 Guidance for OAR 629-625-0340 required the written plan include a maintenance provision.
ROAD CONSTRUCTION
OAR 629-625-0400

OARs 629-625-0400 through 629-625-0440 provide standards for disposal of waste materials, drainage, stream protection, and stabilization to protect water quality during and after road construction.

APPLICATION:

This purpose statement is not used for enforcement action.

ADMINISTRATION:

The intent of the rules for road construction and reconstruction is to prevent material related to such disturbances from entering the waters of the state. Protected resources are water quality and aquatic habitat.
**DISPOSAL OF WASTE MATERIALS**

OAR 629-625-0410

Operators shall not place debris, sidecast, waste, and other excess materials associated with road construction in locations where these materials may enter waters of the state during or after construction.

**APPLICATION:**

This rule is used for enforcement.

**COMPLIANCE:**

An operator is in compliance with this rule when road construction or reconstruction is planned and conducted in such a way as to protect waters of the state by placing materials associated with such activities in stable locations above the high water level. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Unsatisfactory Condition:** An unsatisfactory condition exists when:
1. Road construction materials have been placed in an unstable location that could allow them to move into waters of the state;
2. Road construction materials have been placed in areas subject to future erosion by and into waters of the state.
3. Sediment has entered or is likely to enter the stream channel or waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary road construction materials (including fill, sidecast, clearing and grubbing material, and muck) entering the stream channel or waters of the state by any means, direct or indirect (placement, erosion, landslide, rolling, etc.) Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

**ADMINISTRATION:**

This is a very useful road construction rule for protecting waters of the state from excess construction materials. Generally, this rule will apply to newly-constructed or reconstructed roads in their early years of use.
Material must be removed from all HLHL and taken to a stable location.

Operators must not place any end-haul material, clearing and grubbing debris, or other soil, rock, muck or road maintenance material where it could be subject to surface erosion, cause slope instability, or be eroded by a flooding stream. OAR 629-625-0600(7). Excess material is not to be placed below high water levels unless for stream enhancement as described in OAR 629-625-0100(5).
DRAINAGE
OAR 629-625-0420

(1) Operators shall clear channels and ditches of slash and other road construction debris which interferes with effective roadway drainage.

APPLICATION:

Section (1) can be used for enforcement action.

COMPLIANCE:

An operator is in compliance with section (1) by maintaining effective road drainage during and after road construction or reconstruction activities.

Unsatisfactory Condition: An unsatisfactory condition exists when road construction or reconstruction debris of sufficient size and quantity is present and interferes with or is likely to interfere with roadway drainage. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary, sediment or debris entry into waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. A written statement might direct the operator to place all woody debris well above the level reached by very high flows.

ADMINISTRATION:

The intent of section (1) is to maintain proper drainage by removing material capable of causing jams in drainage ways, plugging culverts, or causing other erosion or sedimentation problems that degrade water quality. Drainage ways include man-made drainage, such as ditches, and natural drainage, such as streams.

Channels above the inlet ends of culverts should be checked for floatable material that could plug culverts. As a minimum, such material that will move with high flows should be removed if it is within 25 feet of the inlet. All floatable material capable of interfering with effective drainage should be removed from ditches.
**DRAINAGE**  
OAR 629-625-0420

(2) Operators shall provide effective cross drainage on all roads, including temporary roads.

**APPLICATION:**

Section (2) can be used for enforcement.

**COMPLIANCE:**

An operator is in compliance with section (2) when cross drainage structures are installed on all roads, including temporary roads, to effectively remove water from the road surface to protect waters of the state.

**Unsatisfactory Condition:** An unsatisfactory condition exists when any roads, including temporary roads, are not properly drained due to the lack of cross drainage structures. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state. An unsatisfactory condition exists when an operator reopens an abandoned or vacated skid road or haul road, and sidecast materials or drainage is likely to or has begun to enter the stream channel or waters of the state and could have been prevented by not reopening the skid road or haul road.

**Damage:** Damage exists when the unsatisfactory condition results in preventable, unnecessary sediment entry into the waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

**ADMINISTRATION:**

A temporary road is a road constructed for one use (no long-term purpose) which has not been vacated (see OAR 629-625-0650(2)). A temporary road must be maintained as an inactive road after its use for timber harvest is complete. Both temporary and inactive roads must have drainage that affords the same level of water quality protection required of active roads. Enforcement action is appropriate when temporary roads are not effectively cross drained and sediment has entered or is likely to enter the stream channel or waters of the state.

Generally, this rule will apply to newly-constructed, reconstructed, or temporary roads in their early years of use. Evaluate the road for compliance with the road maintenance rules in OAR 629-625-0600.
(3) Operators shall install drainage structures on flowing streams as soon as feasible.

APPLICATION:

Section (3) can be used for enforcement action.

COMPLIANCE:

An operator is in compliance with section (3) when, during road construction or reconstruction operations, stream crossing structures are installed rapidly in live stream crossings.

Unsatisfactory Condition: An unsatisfactory condition exists when stream crossing structures are not installed promptly after initial road pioneering and equipment repeatedly traverses the stream without a crossing structure, producing preventable, unnecessary, disturbance to the stream bed and banks. An unsatisfactory condition exists when excessive disturbance to the bed and banks of stream channels is a result of a stream crossing structure not being installed in a timely manner. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state, because of delay in drainage structure placement.

Damage: Damage exists when unsatisfactory condition results in preventable, unnecessary sediment delivery into the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The statement should direct the operator to install stream crossing structures before resuming road construction.

ADMINISTRATION:

One focus of section (3) is to minimize the crossing of streams with equipment during road construction without a stream crossing structure. Any method that eliminates preventable, unnecessary, sediment entry into waters of the state is acceptable.
**DRAINAGE**

**OAR 629-625-420**

(4) **Operators shall effectively drain uncompleted roads which are subject to erosion.**

**APPLICATION:**

Section (4) can be used for enforcement.

**COMPLIANCE:**

An operator is in compliance with section (4) when effective drainage is facilitated throughout the road construction or reconstruction process.

**Unsatisfactory Condition:** An unsatisfactory condition exists when cross drainage is not installed where needed to prevent unnecessary sedimentation from uncompleted roads. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or water of the state.

**Damage:** There is damage when the unsatisfactory condition results in preventable, unnecessary, sediment delivery to stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. A written statement might direct the operator to immediately install drainage structures.

**ADMINISTRATION:**

Section (4) requires that when work on uncompleted roads is halted for any period of time and the road might be subject to erosion, adequate cross drainage must be installed. Cross drainage may be provided by culverts, water bars, dips, or other suitable structures.
**DRAINAGE**  
**OAR 629-625-0420**

(5) Operators shall remove berms on the edges of roads or provide effective drainage through these berms, except for those berms intentionally designed to protect road fills.

**APPLICATION:**

Section (5) can be used for enforcement.

**COMPLIANCE:**

An operator is in compliance with section (5) when roadside berms are either removed or effective drainage is provided through the berms, except for those berms intentionally designed to protect road fills.

**Unsatisfactory Condition:** An unsatisfactory condition exists when a roadside berm has not been removed or adequately drained and that berm is not essential to protect a road fill from erosion. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state.

**Damage:** Damage exists when the unsatisfactory condition results in preventable, unnecessary, sediment entering the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. The written statement should direct the operator to either remove the berm or provide effective drainage into stable locations where the runoff will be adequately settled out or filtered prior to entry into waters of the state.

**ADMINISTRATION:**

The intent of section (5) is to use berms properly in the drainage system on roads during and after construction or reconstruction.
STREAM PROTECTION  
OAR 629-625-0430

(1) When constructing stream crossings, operators shall minimize disturbance to banks, existing channels, and riparian management areas.

APPLICATION:

Section (1) can be used for enforcement.

COMPLIANCE:

Operators comply with section (1) when they minimize disturbance to the bed, banks, and RMAs when constructing stream crossings.

Unsatisfactory Condition: An unsatisfactory condition exists when crossings are constructed and the disturbance is wider or otherwise greater than necessary to accommodate anticipated road use adversely impacting forest productivity, water quality, or fish and wildlife habitat. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

ADMINISTRATION:

Statutory written plans are required for Type F, Type SSBT, and Type D streams by OAR 629-605-0170(2). Stream crossings must also be designed and constructed according to OAR 629-625-0320(1), (2), and (3). SFs can also require written plans under authority of the road location rule for risk of material entering waters of the state (OAR 629-625-0100(2)(a)).
STREAM PROTECTION
OAR 629-625-0430

(2) In addition to the requirements of the water protection rules, operators shall keep machine activity in beds of streams to an absolute minimum. Acceptable activities where machines are allowed in streambeds, such as installing culverts, shall be restricted to periods of low water levels. Operators shall submit a written plan to the State Forester for machine activity in Type F, Type SSBT or Type D streams; lakes; and significant wetlands.

APPLICATION:

Section (2) can be used for enforcement.

The written plan requirements should be enforced as described below.

COMPLIANCE:

Operators comply with section (2) by limiting as much as possible machine activity in Type F, Type SSBT or Type D streams, lakes, and significant wetlands. Operators comply with this section when a statutory written plan is submitted for machine activity in Type F, Type SSBT or Type D streams or significant wetlands as required by ORS 527.670(3). Operators comply with this section when a non-statutory written plan is submitted for machine activity in lakes as required by this rule.

Unsatisfactory Condition: An unsatisfactory condition exists when construction could have been accomplished with less activity in the channel, lake or significant wetland; or equipment was operated during periods of moderate to high water levels without an approved PFAP. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action can be completed prior to damage occurring.

ADMINISTRATION:

Operators must restrict both the amount of time and the time of year of machine activity in all listed waters during road construction or reconstruction to that which results in the least channel impact and lowest generation of sediment (low water level).
A statutory written plan is required for any machine activity in Type F, Type SSBT, or Type D streams, or significant wetlands during road construction. A non-statutory written plan is required to operation within 100 feet of large lakes (greater than 8 acres), OAR 629-605-0170(10)(n) and OAR 629-650-0005. A non-statutory written plan is not required for operations along other lakes (8 acres or less, even those with fish), unless there is risk of road-generated materials entering waters of the state or machine activity is conducted in the lake.

The local ODFW fish biologist may be consulted for determination of acceptable PFAP to operate equipment in a stream during times other than the low flow periods published by ODFW in their publication, “Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources.”

Low water levels in most of western Oregon normally occur in summer and early fall, exclusive of short periods (two days or so) after summer and early fall storms. In eastern Oregon, low flows may also occur during very cold periods in winter, when no warming, rain, or snow melt has occurred. Low levels normally can be determined by clear water and stable flows where water levels are consistent.

Acceptable activities include crossing the stream only as reasonably necessary to construct the stream crossing, and the actual construction of the stream crossing. Excessive activity is considered to be any operation of equipment or placing materials in streambeds which is not reasonably necessary to construct a minimum stream crossing.

Example: Excavating water holes for fire protection "pump chances" or for chemical mixing water sources is a commercial activity requiring a notification. It is an aspect of forest management, ultimately for income or profit. ODF may determine that a PFAP is required for machine work in the stream in order to minimize the activity as required in OAR 629-625-0430(2), Stream Protection.
STREAM PROTECTION
OAR 629-625-0430

(3) For all roads constructed or reconstructed operators shall install water crossing structures where needed to maintain the flow of water and passage of adult and juvenile fish between side channels or wetlands and main channels.

APPLICATION:

Section (3) is used for enforcement.

COMPLIANCE:

An operator is in compliance with section (3) when, during road construction or reconstruction, water crossing structures are installed as needed to maintain fish passage between side channels, wetlands, and main channels.

 Unsatisfactory Condition: An unsatisfactory condition exists when construction or reconstruction of a road across any side channel or wetland occurs without installation of a water crossing structure adequate to maintain water flow at low water levels, and/or which does not allow adult and juvenile fish passage. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel or waters of the state.

 Damage: Damage occurs when the unsatisfactory condition prevents the normal movement of adult or juvenile fish back and forth during times when fish normally access these areas. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

 Written Statement of Unsatisfactory Condition: Issue a Written Statement during or immediately after construction when correction can be accomplished prior to damage occurring.

If the construction may have already prevented fish migration, a citation may be appropriate. Consult an ODFW fish biologist or Forest Resources Division staff prior to taking enforcement action under this section.

ADMINISTRATION:

Operators must construct stream crossing structures between main channels and side channels, between main channels and wetlands, and when crossing either side channels or wetlands. This applies to all new construction and also to all road reconstruction projects. In general, these structures should meet the same requirements as live stream crossing structures, except for peak flow passage. Minimizing culvert gradient and outlet drop is critical to successful fish passage.

Reconstruction includes minor road relocation, stream crossing structure replacement, road widening, and clearing of any road closed by trees growing on the road surface. Road reconstruction does not include removal of brush, bank slough, or the addition or replacement of
cross drainage structures, but these activities are considered routine road maintenance. See definition of “road reconstruction” in the Forest Practices Technical Note No. 8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.

For sites where achieving culvert design standards for fish passage is difficult, SFs should consult with the Forest Resources Division water quality specialist and the ODFW fish biologist to assure that the proposed structure will be adequate to provide fish passage. Providing passage for juvenile fish may be difficult under many circumstances, so consultation is recommended. See also Forest Practices Technical Note No. 4, Fish Passage Guidelines for New and Replacement Stream Crossing Structures, May 2002.
**STREAM PROTECTION**

**OAR 629-625-0430**

(4) **Operators shall leave or re-establish areas of vegetation between roads and waters of the state to protect water quality.**

**APPLICATION:**

Section (4) is used for enforcement.

**COMPLIANCE:**

An operator is in compliance with section (4) when areas of vegetation between roads and waters of the state are protected during construction and reconstruction to the extent possible, and re-established promptly when disturbance cannot be avoided.

**Unsatisfactory Condition:** An unsatisfactory condition exists when sufficient vegetation is not left between roads and waters of the state to protect water quality or maintain forest productivity and fish and wildlife habitat, OAR 629-625-0000(3). An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the stream channel or waters of the state. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Damage:** Damage exists when the unsatisfactory condition results in preventable, unnecessary sediment delivery into the stream channel or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** Issue a Written Statement during or immediately following construction when mulching or re-establishment of vegetation will adequately control sediment entering waters of the state, prior to damage occurring.

**ADMINISTRATION:**

Section (4) should generally be limited to small Type N streams, but includes all waters of the state. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

Statutory written plans are required for roads in RMAs of Type F, Type SSBT and Type D streams. When reviewing written plans for roads in RMAs, the SF should make sure that roads near and parallel to streams are avoided if there are alternative locations (See OAR 629-625-0200(3)). If there are no alternatives, roads should be located as far from streams as possible.
As a general rule, trees and shrubs should be left or re-established within 25 feet of streams where side slopes are less than 40 percent, and within 50 feet where side slopes are over 40 percent. If new roads must be located within these distances of a stream, written plans should be required under OAR 629-625-0100(2) and should address mulching and planting to replace lost or disturbed vegetation between the road and the stream.
STREAM PROTECTION
OAR 629-625-0430

(5) Operators shall remove temporary stream crossing structures promptly after use, and shall construct effective sediment barriers at approaches to channels.

APPLICATION:

Section (5) is used for enforcement.

COMPLIANCE:

 Operators comply with section (5) when temporary crossings are removed as soon as use is completed, and all feasible and practical measures are taken to minimize sediment entry from the crossing site. Re-vegetation of stream approaches should be part of sediment barrier installations whenever feasible for long-term soil stability.

Unsatisfactory Condition: An unsatisfactory condition exists when temporary crossings have not been removed prior to expected high flows and periods of fish migration. An unsatisfactory condition exists when the approaches have not been water barred or otherwise prepared to keep all preventable erosion of soil into waters of the state. An unsatisfactory condition exists when sediment has entered or is likely to enter the stream channel or waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in a barrier to fish passage during times when fish normally access these areas. Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entry into waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

ADMINISTRATION:

Temporary crossings should be removed and effective sediment barriers constructed as soon as use of the crossing has ceased, and always before high flows are expected. If a major storm is forecast, sediment barriers should be installed immediately, even if the crossing is still being used.

"Effective" means the barriers divert water away from the stream and onto non-compacted soil, through vegetation or slash or other sediment barriers, so that sediment does not enter flowing
waters. Large berms with cross ditches are generally suitable. Such structures should be placed a short distance (20 feet or so) above the high water level (the top of streambank for high banks, and the edge of floodplain for low banks) so that filtering is possible. For medium and large streams, sediment barriers should also be placed at the outside boundaries of the RMA. Consideration should be given to ensuring that unauthorized users cannot access vacated stream crossings.
**STABILIZATION**

OAR 629-625-0440

**APPLICATION:**

Section (1) can be used for enforcement.

**COMPLIANCE:**

Operators comply with section (1) when all unstable or erodible soils have been effectively shielded from the erosive effects of rainfall, surface runoff, dry ravel, slope failure, and the like. Example: “Unstable” means there is sufficient evidence, such as “cracking” sidecast to convince a “reasonable person” that the soils are likely to move down slope.

Unsatisfactory Condition: An unsatisfactory condition exists when exposed soils have not been stabilized and adverse disturbance to forest productivity, water quality, or fish and wildlife habitat has occurred or is likely. An unsatisfactory condition exists when sediment has entered or is likely to enter waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entry into the stream channel (wet or dry) or waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and cannot be immediately corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

Stream-crossing fills are particularly vulnerable to delivering soil to the waters of the state. For stream crossing fills, also consider whether enforcement action applies under OAR 629-625-0320(1)(c).

**ADMINISTRATION:**

The intent of section (1) is to prevent exposed materials from entering waters of the state. Corrective measures should be completed in a timely manner (i.e., before heavy rains) to prevent erosion and/or landslides.

The FPA applies to roads built after July 1972, as well as roads built before July 1972 if the road has been used since July 1972.
(2) During wet periods operators shall construct roads in a manner which prevents sediment from entering waters of the state.

APPLICATION:

Section (2) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (2) when road construction and reconstruction during wet weather conditions is planned and conducted using precautions effective in preventing sediment from entering waters of the state.

Unsatisfactory Condition: An unsatisfactory condition exists when road construction or reconstruction takes place during wet weather conditions, creating a potential for sediment to enter waters of the state, and inadequate measures are in place to control erosion. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective measures can be taken prior to damage occurring. The written statement should direct the operator to either cease work and/or install effective erosion control structures.

ADMINISTRATION:

The intent of section (2) is to prevent sediment entry into waters any time when road construction or reconstruction exposes soils to washing or sliding into those waters. Road construction during times of the year when soils are wet or thawing and when storms are likely is particularly vulnerable.

When it is not practical to limit the timing of construction, erosion prevention measures such as limiting the type of activity (e.g., clearing and grubbing rather than final grading) and the type of
equipment (e.g., excavator rather than dozer) should be utilized. If erosion is possible, measures must be taken to prevent sediment from reaching waterbodies through the use of hay bales, silt fences, settling ponds, or the like. Such measures must effectively keep sediment out of waters of the state. Failing to apply available practices that are capable of preventing erosion into waters is a violation of this section.
STABILIZATION
OAR 629-625-0440

(3) Operators shall not incorporate slash, logs, or other large quantities of organic material into road fills.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (3) when clean fill material (free of slash, logs or other large quantities of organic debris) is used in road and landing construction.

Unsatisfactory Condition: An unsatisfactory condition exists when organic material such as stumps, logs or slash is incorporated into road fills and adverse disturbance to forest productivity, water quality, or fish and wildlife habitat has occurred or is likely. An unsatisfactory condition exists when erosion and/or a fill failure occurs due to organic material incorporated into road fills. An unsatisfactory condition exists when sediment has entered or is likely to enter waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entry into waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring. Consult the ODF geotechnical specialist when useful to determine appropriate corrective actions.

ADMINISTRATION:

The intent of section (3) is to prevent the burying of slash, logs, and other large quantities of organic material in road fills where a potential fill failure could enter waters of the state.

Road grades should be cleared to mineral soil to comply with the basic intent of section (3). When organic material is buried, it decomposes after a period of time. Decomposition will reduce the strength of the fill and a landslide may eventually result.

"Large quantities of organic material" does not necessarily mean large material. Though small quantities of needles, duff, grass, or fern are usually not a problem, constructing a road without
first removing a solid cover of such materials on a road with a side slope exceeding about 40 percent may eventually contribute to fill failure. Decomposition of organic material is a relatively slow process and, therefore, the timing of corrective action may not be as critical as with other practices. However, the corrective measures should be completed as soon as is practical to minimize the opportunity to forget about the problem.
ROCK PITS AND QUARRIES
629-625-0500

(1) The development, use and abandonment of rock pits or quarries which are located on forestland and used for forest management shall be conducted using practices which maintain stable slopes and protect water quality.

APPLICATION:

Section (1) may be used for enforcement action if sections (2) through (5) don’t fit to address water quality protection. For example, an operator proposes development of a pit or quarry site on a HLHL. See division 623 rules, Shallow, Rapidly Moving Landslides and Public Safety.

ADMINISTRATION:

The intent of this rule is to place these surface mining operations under the jurisdiction of the FPA to ensure that protected resources are not adversely affected.

This rule is intended to meet the provisions of ORS 527.710, which requires forest practice rules to meet the objectives of other agencies’ rules and regulations on forestland. This rule is directly related to the Mined Land Reclamation Act (ORS 517.750 to 517.900) administered by the Department of Geology and Mineral Industries (DOGAMI).

The Mined Land Reclamation Act (MLRA) regulates surface mining operations through permits. The MLRA contains an exemption for surface mining operations on forestlands where the rock is used on forest roads or for other forest management purposes. There is no quantity limit on this exemption as long as the rock is used only for forest road construction, reconstruction, or maintenance purposes by the landowner on whose land the rock pit is located. The rock may NOT be sold or traded to another forest landowner, unless permitted by DOGAMI.

If during any 12-month period, more than 5000 cubic yards of rock is sold from a rock pit located on forestlands, that rock pit will be subject to DOGAMI permit requirements. Thus, where rock is used for both forest operation and commercial non-forestry uses (joint quarry), forest practice rules and DOGAMI permit requirements will apply to the rock pit if commercial sale exceeds 5000 cubic yards. DOGAMI will be the lead regulatory agency for joint quarries where 5000 yards or more of rock is sold each year. ODF is the only regulating agency for joint quarries on forestlands when less than 5000 yards of rock is sold in any year. Note: Rock sales of less than 5000 cubic yards require a DOGAMI “exclusion certificate,” but not a permit.

Coordinate regulation and enforcement actions on joint quarries with DOGAMI. Reclamation program staff that administer the surface mining regulations are located in Albany and can be reached by finding the current contacts on their webpage.

In additional to the forest practice and DOGAMI rules, National Pollutant Discharge Elimination System (NPDES) permits (for example, a NPDES 1200A permit) are required for quarries that discharge stormwater directly to surface waters or to a drainage ditch, culvert, or other natural or
human-made conveyance system that discharges to surface waters. Such discharges are considered point sources of pollution when they are associated with quarries.

Operators should be informed of these NPDES requirements if a quarry has or could have a drainage ditch, culvert, or other conveyance system which discharges directly into any water of the state. Typically, DEQ administers NPDES permits. However, through a memorandum of agreement with DEQ, DOGAMI acts as DEQ’s agent in administering NPDES permits for any rock pits that have a DOGAMI exclusion certificate or operating permit. For forest rock pits that don’t have a DOGAMI exclusion certificate or operating permit, DEQ administers the required permits directly. Operators should contact the regional DOGAMI or DEQ office for specific permitting information. If NPDES permits are applicable, operators will be required to both obtain a permit from the DOGAMI or DEQ and still comply with FPA rules.

SFs should consult the ODF geotechnical specialist for additional information about DEQ and DOGAMI requirements for surface mining sites on forestlands, and also for information on interagency coordination.
ROCK PITS AND QUARRIES
OAR 629-625-0500

(2) Operators shall not locate quarry sites in channels.

APPLICATION:
Section (2) can be used for enforcement.

COMPLIANCE:
An operator is in compliance with section (2) when a rock source or waste area, or any portion thereof, is located well away from any stream channel, as defined in OAR 629-600-0100.

Unsatisfactory Condition: An unsatisfactory condition exists when a quarry operation encroaches into a channel area. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when complete repair or restoration is possible and feasible and can be done prior to damage occurring. Consultation with the ODF geotechnical specialist is recommended prior to enforcement action.

ADMINISTRATION:
On rare occasions, locating a quarry in a streambed may result in lower environmental impact than would compliance with this section. In such a case, the operator must obtain approval of a PFAP as described in OAR 629-605-0100(2)(b). Consultation with the ODF geotechnical specialist, DEQ, DSL, and ODFW is recommended prior to approval of such a plan.
ROCK PITS AND QUARRIES
OAR 629-625-0500

(3) When using rock pits or quarries, operators shall prevent overburden, solid wastes, or petroleum products from entering waters of the state.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (3) when rock pit and quarry operations are planned and conducted so that overburden, solid wastes, and petroleum products are removed or placed in stable locations to prevent them from entering waters of the state. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Unsatisfactory Condition:** An unsatisfactory condition exists when overburden, solid wastes, or petroleum products from rock pit and quarry operations are located where they may enter waters of the state. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

**Damage:** Damage occurs when excessive overburden, solid wastes, or any petroleum products from rock pit and quarry operations enter waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical before damage occurs. The written statement should direct the operator to remove or place overburden, solid wastes, and petroleum products in stable locations where they cannot enter waters of the state.

ADMINISTRATION:

Section (3) applies to rock pits that have not been abandoned as material sources. Refer to section (5) of this rule when there are compliance problems with pits that have been abandoned.

Contact Salem staff and perhaps the ODF geotechnical specialist in cases where blasting shots have apparently gone awry and material has been deposited in a water of the state; the proper course of enforcement action may not always be clear.
(4) Operators shall stabilize banks, headwalls, and other surfaces of quarries and rock pits to prevent surface erosion or landslides.

APPLICATION:

Section (4) is used for enforcement.

COMPLIANCE:

Operators comply with section (4) when they stabilize working faces, floors, overburden, and waste areas before wet weather or other operating conditions preclude needed work.

Unsatisfactory Condition: An unsatisfactory condition exists when the operator fails to stabilize all portions of a quarry operation to minimize the risk of erosion or landslides. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

Damage: Damage occurs when preventable, unnecessary sediment or debris enters waters of the state from soil erosion or mass soil movement as a result of a failure to stabilize surfaces in a quarry. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when correction is feasible and practical before damage occurs with time or the next anticipated rain or snowmelt event. The written statement may direct the operator to pull back waste areas, terrace working faces, and/or re-vegetate overburden and waste areas. Buttressing, rock armor, vegetative stabilization, or other slope stabilization techniques may be required.

ADMINISTRATION:

Section (4) applies to active surface mining sites that are utilized on an ongoing or annual basis. Use section (5) of this rule for sites that are inactive or vacated.

Consult the ODF geotechnical specialist prior to taking enforcement action under section (4), especially regarding slope stability problems or structural rock stability problems. The DOGAMI reclamationist may be consulted for revegetation and surface erosion control.
**ROCK PITS AND QUARRIES**

OAR 629-625-0500

(5) When a quarry or rock pit is inactive or vacated, operators shall leave it in the conditions described in section (4) of this rule, shall remove from the forest all petroleum-related waste material associated with the operation, and shall dispose of all other debris so that such materials do not enter waters of the state.

**APPLICATION:**

Section (5) can be used for enforcement. Any surface mine unused for more than twelve months should be considered inactive.

**COMPLIANCE:**

Operators comply with section (5) when petroleum-related waste material and other debris are removed. Operators comply with this section when all other debris associated with the operation is disposed of so that such materials do not enter waters of the state. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

**Unsatisfactory Condition:** An unsatisfactory condition exists when the inactive or vacated rock pit operator fails to remove from the forest all petroleum-related waste material associated with the operation. An unsatisfactory condition exists when the operator fails to dispose of all other debris associated with the operation to prevent entry or likelihood into waters of the state.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage occurs when the unsatisfactory condition results in any petroleum products entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

**Written Statement of Unsatisfactory Condition:** Issue a written statement of unsatisfactory condition when corrective action/complete repair is feasible/practical prior to damage occurring.

**ADMINISTRATION:**

Inactive and vacated surface mines should be left in a stable condition. Any surface mine unused for more than twelve months should be considered inactive. Final stabilization and reclamation work should be completed within three years of cessation of use. Coordination with DOGAMI and/or DEQ, and consultation with a geotechnical specialist are appropriate actions.
ROAD MAINTENANCE
OAR 629-625-0600

(1) The purpose of this rule is to protect water quality by timely maintenance of all active and inactive roads.

APPLICATION:

Section (1) is the purpose statement which cannot be used for enforcement action.

ADMINISTRATION:

Sections (2) through (8) of this rule shall be used for enforcement action whenever maintenance or lack of maintenance may impact water quality.
ROAD MAINTENANCE
OAR 629-625-0600

(2) Operators shall maintain active and inactive roads in a manner sufficient both to provide a stable surface and to keep the drainage system operating as necessary to protect water quality.

APPLICATION:

Section (2) can be used for enforcement. This section applies to all roads used and/or constructed since 1972, which have not been effectively vacated.

COMPLIANCE:

Operators comply with section (2) when all active and inactive roads are maintained as needed to maintain a stable road surface. In addition, operators comply with this section when drainage systems are maintained to control all preventable, unnecessary sediment entering or potentially entering waters of the state.

Unsatisfactory Condition: An unsatisfactory condition exists when road running surfaces are allowed to develop ruts that channel runoff along the road rather than off to the sides. An unsatisfactory condition exists when cross drains are not maintained, and blockages or reduced capacities divert water onto the roadway or overload ditches, forcing runoff to flow to a lower drainage structure. An unsatisfactory condition exists when surface runoff is channeled directly into waters of the state or is not adequately filtered before entering waters of the state. An unsatisfactory condition exists when sediment has entered or is likely to enter waters of the state. An unsatisfactory condition exists when, through no fault of the landowner or operator, a road section fails, but the landowner does not take corrective action in a reasonable time period.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring, OAR 629-670-0115.

ADMINISTRATION:

Section (2) requires operators to maintain stable road surfaces and maintain an operating drainage system on all active and inactive roads to achieve the protection of water quality. OAR 629-600-0100 for definitions of "Active road," "Inactive roads," and "Vacated roads."
Notification is not required for routine road maintenance as long as it involves only the road surface and ditches. Written plans are not required for routine road maintenance within these bounds when a road crosses a stream within a riparian management area. Maintenance outside these bounds, such as brush control with herbicides, requires notification and statutory written plans for stream protection.

- A **stable surface** is one that is of sufficient strength to remain relatively smooth (up to small ruts) so that water will not run down and erode the surface, and traffic will not lead to water running down ruts into waters of the state. A surface is stable if surfacing materials hold up under traffic, without pumping mud through the surface aggregate during use, which eventually enters waters of the state through the road drainage system or lack thereof. For example, remove a log puncheon if holes are visible in the road surface above the stream crossing.

- An **operating drainage system** ensures that water is conveyed across or under the road to disperse without entering waters of the state, and that provisions are in place to maintain drainage if ravel, slumps, or other roadway deterioration can be anticipated. For example, a log puncheon may remain in place if the structure is visible, otherwise remove it.

Determining the appropriate operator(s) responsible for road maintenance can be difficult. Using a forest road for any commercial forest management activity constitutes an "operation" as defined in ORS 527.620. Anyone, including landowners, log truck drivers, and rock truck drivers, conducting such an "operation" is an operator and shares in the maintenance responsibility, OAR 527.620. There may be more than one responsible party, as when multiple operations are using a common road.

Road maintenance is ultimately the responsibility of the landowner. There are multiple ways to work through the “operator,” which can also be the landowner, to have the maintenance done. Landowners often have road use agreements or easements with other landowners and operators who need to use their road. Here, ODF would work through the landowner, holding them responsible to activate road maintenance through the road use agreement. If the road is a county or state road, operators may try to divert the road maintenance responsibility to the government, reasoning that they pay taxes to have the road maintained. This reasoning does not shift responsibility off the operator or the operator’s landowner. ODF requires the on-site operator to implement the proper BMPs, taking enforcement action to achieve the FPA-required outcomes as necessary. It’s between the operators and the landowners, including the county or state, to work out who does the maintenance work and who pays for it. Resource protection through needed road maintenance will be enforced, and the operator(s) causing damage will receive the enforcement action. This also applies if the operator is using a federal agency-owned road.

Excepting certain mixed ownerships, landowners have the authority to control access on their roads. Landowners must make every reasonable effort to control use of their roads. Recreational users such as hunters or picnickers have no responsibility for road maintenance under the FPA. The department encourages cooperative road closures and coordination with the ODFW and
other agencies to reduce damage caused by recreational users. The landowner is responsible for road maintenance regardless of how a road user impacts the road surface and drainage system.

Under the FPA, operators are not required to maintain roads for adjacent homeowners or other public uses. Landowners are required to perform only maintenance, which is necessary to protect water quality, not "drivability."
ROAD MAINTENANCE
OAR 629-625-0600

(3) Operators shall inspect and maintain culvert inlets and outlets, drainage structures and ditches before and during the rainy season as necessary to diminish the likelihood of clogging and the possibility of washouts.

APPLICATION:

Section (3) can be used for enforcement. This section applies to all roads used and/or constructed since 1972, unless adequately vacated.

COMPLIANCE:

An operator is in compliance with section (3) when all active and inactive road drainage systems are inspected and maintained before and during the rainy season as necessary to prevent clogging and the possibility of washouts.

Unsatisfactory Condition: An unsatisfactory condition exists when drainage structures are not inspected and maintained, and blockages or reduced capacities have the potential to divert water onto the roadway or overload ditches, forcing runoff to flow to a lower drainage structure and increasing the likelihood of road failure. An unsatisfactory condition exists when drainage structures are poorly maintained and have the potential to channel surface runoff directly into waters of the state, without adequate settling and filtering. An unsatisfactory condition exists when sediment has entered or is likely to enter waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

ADMINISTRATION:

The operator/landowner is required to clean drainage systems before and during the rainy season to reduce the likelihood of clogging and subsequent washout. "Cleaning" should include removal of all drainage obstructions, including damaged portions of culverts themselves. In-stream large woody debris and beaver dams that do not pose an imminent danger to the drainage structure (due to proximity) should not be removed, OAR 629-660-0050.
Operators are responsible for ensuring that vehicle use and equipment activities on roads are not causing turbid water to enter waters of the state. This applies to all roads (including county, state, and federal) where forestry is a user of the road. Roads should be inspected during major storm events to ensure the drainage system will continue to operate properly.
(4) Operators shall provide effective road surface drainage, such as water barring, surface crowning, constructing sediment barriers, or outsloping, prior to the rainy and runoff seasons.

APPLICATION:

Section (4) can be used for enforcement. This section applies to all roads used and/or constructed since 1972, unless adequately vacated.

COMPLIANCE:

An operator is in compliance with section (4) when all active and inactive road surfaces are appropriately maintained before the rainy and runoff seasons.

Unsatisfactory Condition: An unsatisfactory condition exists when there is potential for erosion and sediment delivery to waters of the state because road surfaces have not been outsloped, crowned, water barred, or protected by other suitable means. An unsatisfactory condition exists when there is evidence of erosion, and sediment has entered or is likely to enter waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: Issue a written statement of unsatisfactory condition when corrective actions are feasible and practical before damage occurs.

ADMINISTRATION:

Operators must take whatever action is appropriate to prevent surface runoff from traveling a significant distance down the road surface. For roads designed without ditches, this requires outsloping, removal of unnecessary berms, and water barring. For roads with ditches, this usually requires crowning and removal of berms, but may also require water barring and rolling dips.

Berms in some locations may be essential for fill protection. Such fill protection berms should seldom exceed 100 feet in length, see OAR 629-625-0420(5).

Preparation of the repair order will necessitate an evaluation of what machinery or methods can be used without further damage. Hand-dug water bars, settling areas, straw filters, etc., may be appropriate as interim measures. When complete repairs cannot be applied immediately, the repair order should include a date by which final repairs shall occur. Alternatively, a two-staged
repair order may be appropriate, where stage 1 calls for manual work as an interim measure, while stage 2 requires the final repair (usually involving machinery).
ROAD MAINTENANCE
OAR 629-625-0600

(5) When applying road oil or other surface stabilizing materials, operators shall plan and conduct the operation in a manner as to prevent entry of these materials into waters of the state.

APPLICATION:

Section (5) can be used for enforcement.

COMPLIANCE:
An operator is in compliance with section (5) when the application of road oil or other surface-stabilizing material is done in such a way as to prevent their entry into waters of the state. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.

Unsatisfactory Condition: An unsatisfactory condition exists when road oil or other surface stabilizing material is applied or maintained in a manner where it is likely to enter waters of the state. An unsatisfactory condition exists when there is evidence of road oil, or other surface stabilizing material beginning to enter or likely to enter waters of the state.

Damage: There is damage when road oil or other surface stabilizing material has entered waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

The operator may be directed to divert, filter, or capture runoff containing road oil or other surface stabilizing material prior to or after it enters waters of the state.

ADMINISTRATION:

Section (5) is intended to ensure that waters of the state are not contaminated with road surface stabilizing material. When this material threatens waters, timely and appropriate action is to remove the material so it does not enter waters. This may be done by capturing the material in a dike, ditch, absorptive material, or by some other effective means. If such material enters waters of the state, the DEQ and Health Division, Drinking Water Section. Refer to the Pesticide Complaint Investigation and Reporting Policy, Procedures, and Guidance Documents, ODF Forest Resources Division.

Use of waste oil on roads is prohibited by DEQ regulations. Notify DEQ if you believe waste oil was applied on forest roads.

If the road surface stabilizing material such as bio-cement, enters waters, the repair order should attempt to capture and remove the material much the same as in other oil or chemical spills. In
extreme incidents, repair may include stream habitat rehabilitation measures. Consult with the ODFW fish biologist to determine beneficial rehabilitation practices.
**ROAD MAINTENANCE**
OAR 629-625-0600

(6)  *In the Northwest and Southwest Oregon Regions, operators shall maintain and repair active and inactive roads as needed to minimize damage to waters of the state. This may include maintenance and repair of all portions of the road prism during and after intense winter storms, as safety, weather, soil moisture and other considerations permit.*

**APPLICATION:**

Section (6) can be used for enforcement. It is particularly designed to prevent sediment and debris from entry into waters. This section applies to all roads used and/or constructed since 1972, which have not been adequately vacated. In the Northwest and Southwest Oregon Regions, intense winter storms and rain on snow events are most likely to result in extreme runoff events that damage road systems.

**COMPLIANCE:**

An operator is in compliance with section (6) rule when roads are surveyed and maintained so that they are in a condition to prevent the sedimentation into waters that major storm events can cause. Maintenance is expected in these regions before, during, and after intense storm events.

Unsatisfactory Condition: An unsatisfactory condition exists when an active or inactive road is in a condition that threatens or has already impacted waters of the state through the delivery of sediment from the roadway. An unsatisfactory condition exists when timely and appropriate action has not been taken, and there is evidence of erosion and sediment delivery to a water of the state, or sediment delivery to a water of the state is likely.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when preventive action or complete repair is feasible and practical prior to damage occurring.

**ADMINISTRATION:**

Section (6) is a very powerful erosion prevention tool. It is intended to minimize sediment delivery to waters of the state by requiring maintenance or repair (including reconstruction) of active or inactive roads. Required repair is any reasonable practice which will prevent damage to the waters of the state. Such practices may include reconstruction of portions of road, pull back
and/or end-haul of unstable sidecast material, stabilization of cut and fill slopes, culvert cleaning, and the like. These practices are to be applied to all active and inactive roads, including those built prior to the Forest Practices Act (July, 1972). Abandoned roads—those not used for motorized vehicle traffic by a landowner or representative since 1972—are the only exceptions to this section.

The landowner is required to take whatever reasonable action is necessary to prevent material from entering waters of the state. Landowners with a quality road maintenance plan that has been well-administered may in some cases not be cited for damage resulting from an unusual storm. Consult local supervisors and Salem staff if you believe that a landowner took reasonable action, yet damage occurred. If appropriate, consultation with the ODF geotechnical specialist is also recommended, especially when major repairs involving slope stability are necessary. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
ROAD MAINTENANCE
OAR 629-625-0600

(7) Operators shall place material removed from ditches in a stable location.

APPLICATION:

Section (7) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (7) when materials removed from ditch cleaning operations are placed in a stable location above the 100-year flood level.

Unsatisfactory Condition: An unsatisfactory condition exists when materials removed from ditches are placed in an unstable location or where they may enter the waters of the state. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

Damage: Damage occurs when the unsatisfactory condition results in ditch cleaning materials’ entry into waters of the state, and it was preventable. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action can be completed prior to damage occurring.

ADMINISTRATION:

One objective of section (7) is to prevent soil and debris removed from ditches during grading and/or cleaning from causing slope instability. Unstable locations include steep embankments or other slopes below the road (usually over 50 percent) on slide areas, on the edge of any steep fills (within about three feet of the edge), or locations which can be eroded by high stream flows.

Potentially unstable material should be removed and placed in a stable location through the use of a written statement. If ditch material has slid, or otherwise caused a slide, enforcement action appropriate to the effect should be taken under this section. See also OAR 629-625-0410 Disposal of waste materials.
ROAD MAINTENANCE
OAR 629-625-0600

(8) In order to maintain fish passage through water crossing structures, operators shall:
   (a) Maintain conditions at the structures so that passage of adult and juvenile fish is not impaired during periods when fish movement normally occurs.
       This standard is required only for roads constructed or reconstructed after September 1994, but is encouraged for all other roads; and
   (b) As reasonably practicable, keep structures cleared of woody debris and deposits of sediment that would impair fish passage.

APPLICATION:

Section (8) is used for enforcement action involving roads constructed or reconstructed after September 1994. The SF should facilitate collaborative efforts between the landowner and ODFW to improve fish passage.

COMPLIANCE:

An operator is in compliance with section (8) when fish passage is maintained to allow both upstream and downstream movement of adult and juvenile fish at those crossings where fish passage is required.

Unsatisfactory Condition: An unsatisfactory condition exists when debris is partially blocking any culvert on a Type F or Type SSBT stream. An unsatisfactory condition exists when any condition prevents passage of adult or juvenile fish during periods when fish movement normally occurs. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state, for example, removing deposits of sediment outside the low water period or the ODFW guidelines for in-water work.

Damage: Damage occurs when there is evidence of the unsatisfactory condition during periods when fish movement normally occurs. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected without cause additional damage.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when repairs or maintenance can be completed prior to damage.

ADMINISTRATION:

Operators must maintain fish passage through all stream crossing structures constructed after September 1, 1994. Section (8) applies only to crossings of Type F or Type SSBT streams. To comply with section (8), landowners must routinely inspect stream crossing structures.

Necessary maintenance may include:

1. Removal of debris lodged in or on the crossing structure;
2. Repair outlet drops through pool (backwater) construction;
3. Removal of accumulations of gravel or cobbles near the culvert inlet which cause any step.

In some cases, reconstruction of the structure may be necessary.
ROAD MAINTENANCE
629-625-0600

(9) Where needed to protect water quality, as directed by the State Forester, operators shall place additional cross drainage structures on existing active roads within their ownership prior to hauling to meet the requirements of OAR 629-625-0330.

APPLICATION:

Section (9) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with section (9) when, prior to hauling on an active road, the drainage system is assessed and upgraded as necessary to adequately provide for drainage and prevent sediment delivery into waters of the state. An operator is in compliance with section (9) when additional road cross drainage structures are installed as directed by the State Forester prior to hauling. Section (9) is an administrative requirement, so an unsatisfactory condition would automatically be a violation, although the SF has the option to use a written statement under the conditions described in OAR 629-670-0125.

Unsatisfactory Condition: An unsatisfactory condition exists when a lack of cross drainage structures or the improper location of cross drainage structures poses a risk of sediment delivery to waters of the state from active road use. An unsatisfactory condition exists when an operator does not follow the direction of the SF in providing drainage structures on haul roads, and the drainage structures are needed to protect water quality.

Damage: Damage should be addressed in OAR 629-625-0330.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective actions can be completed prior to damage. The operator should be directed to add additional drainage structures as necessary to protect water quality.

ADMINISTRATION:

Section (9) requires drainage upgrades on existing roads that will be used for hauling (active use) if the current drainage is inadequate and poses a water quality threat. Refer to Technical Note #8, Installation and Maintenance of the Cross Drainage Systems on Forest Roads.

Effective cross drainage must be directed onto undisturbed soils and slope steepness should be less than 60 percent, if possible. Cross drains should be installed 50 to 200 feet from the stream crossing, as measured along the road. There should be between 15 and 200 feet of ground filtering between the outlet of the cross drain and the stream high water level, as measured from the stream.
ROAD MAINTENANCE
629-625-0600

(10) Other fish passage requirements under the authority of ORS 509.580 through 509.910 and OAR 635-412-0005 through 635-412-0040 that are administered by other state agencies may be applicable to water crossing structures, including those constructed before September 1, 1994.

APPLICATION:
OAR 629-625-0600(10) acknowledges, under the authority of ORS 509.580 through 509.910 and OAR 635-412-0005 through 635-412-0040, that other state agencies (ODFW) administer fish passage requirements that may be applicable to water crossing structures, including those constructed before September 1, 1994.

ADMINISTRATION:
A memorandum of agreement between U.S. Forest Service and DEQ addresses implementation of the Clean Water Act and fish passage.

Other fish passage requirements are acknowledged in OAR 629-625-0600 (10) under the authority of ORS 509.580 through 509.910 and OAR 635-412-0005 through 635-412-0040 which are administered by other state agencies and may be applicable to water crossing structures, including those constructed before September 1, 1994.

See also guidance for OAR 629-600-0100 which addresses FPA jurisdiction federal forestland.
**VACATING FOREST ROADS**
**OAR 629-625-0650**

(1) **The purpose of this rule is to ensure that when landowners choose to vacate roads under their control, the roads are left in a condition where road related damage to waters of the state is unlikely.**

**APPLICATION:**

Section (1) cannot be used for enforcement. It is the purpose statement for the following sections addressing vacating roads. Section (2) of this rule may be used for enforcement action.

**ADMINISTRATION:**

This rule is intended to provide an exception to continuous maintenance of a road if certain conditions are met. If the landowner eliminates vehicular access to a road and leaves the road in a stable, self-maintaining condition, then no further maintenance will be required.

Nothing in this rule is intended to require the landowner to vacate a road or keep it vacated. However, if any of the conditions of a vacated road are not met, the landowner will be required to meet the maintenance requirements of an inactive road. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
### VACATING FOREST ROADS

**OAR 629-625-0650**

(2) To vacate a forest road, landowners shall effectively block the road to prevent continued use by vehicular traffic, and shall take all reasonable actions to leave the road in a condition where road-related damage to waters of the state is unlikely.

### APPLICATION:

Section (2) can be used for enforcement.

### COMPLIANCE:

Operators comply with section (2) when a road has been completely blocked, drainage structures have been removed, and the surface has been out-sloped, re-vegetated or otherwise treated to make future damage to water quality unlikely.

Unsatisfactory Condition: An unsatisfactory condition exists when a road to be vacated remains accessible to vehicles. An unsatisfactory condition exists when reasonable actions were not taken to ensure damage to waters of the state does not occur.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment or debris entering waters of the state. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practical prior to damage occurring.

### ADMINISTRATION:

A properly vacated road should present a very low risk of erosion by eliminating any potential maintenance problems. Culverts that might carry flow (including all stream and cross drain culverts) should be removed, and unstable sidecast should be pulled back to essentially re-establish the natural drainage systems. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100. “Vehicular traffic” in this rule includes ATVs in addition to other vehicles.
**VACATING FOREST ROADS**  
**OAR 629-625-0650**

(3) **Reasonable actions to vacate a forest road may include removal of stream crossing fills, pullback of fills on steep slopes, frequent cross ditching, and/or vegetative stabilization.**

**APPLICATION:**

Section (3) cannot be used for enforcement. This section primarily defines “reasonable actions” as used in section (2).

**ADMINISTRATION:**

A properly vacated road should present a very low risk of erosion by eliminating any potential maintenance problems. Culverts that might carry flow, including both stream and cross drains, should be removed or bypassed by open drains such as water bars; unstable sidecast should be pulled back; bare surfaces re-vegetated, etc. Section (3) should be used to support section (2) of this rule.

Steep slopes exceed 60 percent. Steep slopes may exceed 40 percent where soils consist of decomposed granite-type materials or other highly erodible materials as determined by the State Forester, OAR 629-630-0150(2) and (3).
VACATING FOREST ROADS
OAR 629-625-0650

(4) Damage which may occur from a vacated road, consistent with Sections (2) and (3) of the rule, will not be subject to remedy under the provisions of the Oregon Forest Practices Act.

APPLICATION:

Section (4) is not used for enforcement.

ADMINISTRATION:

Landowners may request inspection of roads they have vacated or plan to vacate. The SF must conduct a thorough inspection to confirm that adequate measures have been taken to achieve a very low risk of erosion by eliminating any potential maintenance problems.

If the SF determines that all necessary actions have been completed and the road poses no risk of mass failure or surface erosion in excess of natural background levels, the SF should write an inspection report stating that the road has been acceptably vacated. If there are any questions regarding stability of the road, a geotechnical specialist should be consulted prior to completing the inspection report. The SF should provide a copy of the report to the landowner.
**WET WEATHER ROAD USE**  
629-625-0700

(1) The purpose of this rule is to reduce delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F, Type SSBT or Type D streams.

**APPLICATION:**

Section (1) is not to be used for enforcement. It is the purpose statement for the following sections of the rule. This rule supplements the OAR 629-625-0600, Road Maintenance regulations on road surfacing, drainage, and use during wet periods. It applies specifically to road segments that can deliver turbidity and sediment to streams. Use sections (2) and (3) of this rule and OAR 629-625-0600, for enforcement actions in accordance with the associated guidance.

**ADMINISTRATION:**

Fine sediment (fine sand, silt and clay) generated by road use can travel far downstream, impairing water quality and aquatic habitat for long distances. See also Forest Practices Technical Note No. 9, Wet Weather Road Use.

“Wet weather,” also called wet periods, includes the time of year when rainfall or thawing normally occurs. In western Oregon, this typically includes the period from October through April. In eastern Oregon this period may be shorter. Wet periods from individual storms, at any time of year, and periods of snowmelt, are also considered wet weather.

This rule adds to the requirements of OAR 629-625-0600, by requiring specific preventive practices, those being: 1) placement of durable surfacing; or 2) other effective surfacing, drainage, or filtering measures, on road segments that are connected to streams. It also sets a specific threshold when operators must cease hauling. This rule is intended to greatly limit sediment delivery associated with roads and their use during wet weather.

This rule addresses the effects of road use during wet periods on any type and size of stream hydrologically connected to a road. Even though the rule mentions the subsequent effect on water quality in Type F, Type SSBT, or Type D streams, it also applies to Type N streams hydrologically connected the Type F, Type SSBT or Type D streams.

**Note:** Administer this rule in conjunction with OAR 629-625-0600. If a road segment is delivering turbidity or sediment to any stream, evaluate compliance with OAR 629-625-0600. In brief, this means determining if there is connectivity to a stream that must be controlled by establishing a stable running surface and/or establishing a functioning drainage system to prevent or stop delivery of turbidity or sediment to waters of the state. Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See definitions of “water development” and “waters of the state” in OAR 629-600-0100.
If, in spite of practices applied to control turbidity and sediment delivery to reaches of Type N or other streams, turbidity or sediment caused by the road is visible in a Type F, Type SSBT or Type D stream, the operator must also cease road use to comply with section (3) of this rule. Ceasing road use is not enough in itself. The visible turbidity should be traced to determine whether it was caused by noncompliance due to failure to use durable surfacing or other effective measures. All practicable and feasible practices should be applied to stop the water pollution.

It is conceivable that weather conditions, such as continued heavy rains, could raise the background water turbidity levels and mask turbidity contributed by road use. This will make it difficult to determine whether the OAR 629-625-0700(3), visible turbidity standard for ceasing road use is occurring.

When these sediment delivery conditions occur, evaluate compliance with the road maintenance rule by checking for rutting and running water on the road surface and for direct connections between the road surface or road-generated turbidity and any stream. If any turbid runoff can be traced from the road directly to a stream, check that all practicable and feasible road maintenance practices are in place. If not, use the appropriate enforcement action to have these practices applied. Use a written statement of unsatisfactory condition if the input to the stream is of short duration and minor amount. Use a citation if you judge the condition has been going on for longer than it should have taken for the operator to observe it and take immediate preventive action. In the Order to Cease Violation, it would be appropriate to direct the operator to stop using the road until weather conditions change enough to stop the direct delivery of turbid water into streams.

You are not required to observe a visible change to the turbidity level in the nearest Type F, Type SSBT, or Type D stream before taking enforcement action. It is sufficient that you judge the turbidity has affected or will affect the nearest stream, whether it is a Type N, Type F, Type SSBT, or Type D stream. This enforcement action will be based upon OAR 629-625-0600, Road Maintenance, and its guidance that turbidity in any stream is an unsatisfactory condition, not upon OAR 629-625-0700(3), Wet Weather Road Use, which refers to turbidity in Type F, Type SSBT or Type D streams.

Judgment must be applied in administering this guidance. The intent of the FPA and rules is to limit as necessary, but not eliminate, all road use during wet periods in order to prevent, as much as practicable, sediment delivery and degradation of water quality in streams. A visible increase in turbidity in a stream that cannot be directly traced to the road influence, is acceptable temporary disturbance if all practicable and feasible measures have been taken to achieve compliance with the Road Maintenance rule and this Wet Weather Road Use rule, section (2). However, when operations and conditions combine to produce a visible increase in turbidity over background levels in downstream Type F, Type SSBT or Type D streams, road use must be stopped until wet weather conditions dry sufficiently that operations do not cause visibly-delivered additions to turbidity and sediment loading in the waters. Road use may also resume upon the application of effective measures to stop delivery of turbidity to streams.
WET WEATHER ROAD USE
629-625-0700

(2) **Operators shall use durable surfacing or other effective measures that resist deep rutting or development of a layer of mud on top of the road surface on road segments that drain directly to streams on active roads that will be used for log hauling during wet periods.**

**APPLICATION:**

Section (2) can be used for enforcement. It is a stringent requirement and should be used to motivate landowners and operators to prepare their roads for water quality protection before wet periods.

**COMPLIANCE:**

An operator is in compliance with this rule when durable surfacing or other effective measures are used successfully on road segments that drain directly to streams on active haul roads that will be used during wet periods.

These road design, surfacing, and drainage measures must also maintain the stable surface and the working drainage system required by OAR 629-625-0600, Road Maintenance.

This preventive road preparation practice is required specifically on:
- Road segments that can deliver turbidity or sediment to streams
- Roads planned for hauling wood products or gravel for a commercial forest operation during wet weather

For any other road use that produces turbidity in streams, such as recreation traffic, apply OAR 629-625-0600.

**Unsatisfactory Condition:** An unsatisfactory condition exists when durable surfacing or other effective measures have not been applied on wet-season-use roads at locations that drain to and can deliver muddy runoff to Type N, Type F, Type SSBT or Type D streams. The SF will make professional judgments on the adequacy of the road to prevent water quality damage from turbid runoff into waters. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

Landowners are expected to use durable surfacing and other effective measures such as subgrade reconstruction, ditching, cross drains, settling basins, mulching, filtering, seeding, and water bars.

**Damage:** Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entering any stream. Evidence of sediment delivery to a stream, such as deposits in the stream bed is sufficient to establish that damage has occurred. Damage exists if adverse
disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

A citation is appropriate when the operator fails to apply durable surfacing or other effective measures as directed by the State Forester in a Written Statement of Unsatisfactory Condition.

Written Statement of Unsatisfactory Condition: A written statement of unsatisfactory condition should be issued when corrective action or complete repair is feasible and practicable prior to damage occurring.

The SF will make professional judgments on the adequacy of the road to prevent water quality damage from turbid runoff into waters of the state.

Use a written recommendation prior to wet weather when you judge active road use combined with wet weather is likely to cause turbidity and sediment entry into any water of the state.

Use a written statement when there are indications that the road surface is about to or is beginning to break down. Signs may include mud pumping to the surface or developing ruts that will carry muddy water down the road and ultimately into a stream or other waters of the state.

Use a written statement when the visible effect on a Type N stream: a) is still very limited in intensity and over time and space; b) is not yet visible in the downstream Type F, Type SSBT or Type D stream; and c) can be immediately corrected with proper road maintenance practices. A citation may already be appropriate under OAR 629-625-0600 because of the turbidity in the Type N stream.

The written statement should require the operator to apply durable surfacing and/or apply such additional effective road maintenance methods as reducing road segment length draining to streams and providing additional cross drains above stream crossings. Operators should be encouraged to develop innovative, effective methods to prevent turbid water from reaching waters.

ADMINISTRATION:

This is a preventive rule section. Educational work with landowners and operators should be a primary focus for SFs. Section (2) sets a high standard for road maintenance in preparation for wet periods. Landowners were given training on this rule and were allowed the summer of 2003 to prepare their roads for the first wet season in which it was applied. SFs should issue written statements as necessary to prompt landowners to prepare their roads for and maintain them during wet period use.

In order to limit turbidity from roads to comply with this rule and the Road Maintenance rule, roads must be well-designed, well-constructed, well-drained, and well-surfaced. This rule places
emphasis on “durable surfacing” specifically and “other effective measures” generally. There are numerous “other effective measures,” such as subgrade reconstruction, ditching, cross drains, settling basins, mulching, filtering, seeding, and water bars. Whatever combination the landowner chooses is acceptable, if the standard is met:

“Durable surfacing” is any material of sufficient thickness, strength, and lack of fines to resist rutting, breaking down, and direct delivery of turbid water to any stream during wet weather road use. Forest Practices Technical Note No. 9, Wet Weather Road Use, is a guide to identifying rock durability and other elements of an all-weather road. The quality of a durable surface depends on several variables, including adequacy of the subgrade, hardness of the rock, limited fines, depth of surfacing, and the weight and amount of hauling. Heavily-traveled, all-winter-use roads need deeper and stronger surfacing. Lightly-used road segments with little rock surfacing may withstand limited use restricted to dry weather.

Landowners can reduce the need for durable surfacing through well-designed, effectively-constructed, and well-maintained road drainage systems. Also, situations exist in which placement of a durable surface may not be necessary to prevent sediment delivery to streams. The practice need be applied only where necessary to achieve its water quality protection purpose.

When there is turbidity or sediment entering streams that is not the result of a lack of durable surfacing or other effective measures, evaluate compliance with the relevant section(s) of OAR 629-625-0600.

Note: Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See the full definitions of “water development” and “waters of the state” in OAR 629-600-0100.
WET WEATHER ROAD USE
629-625-0700

(3) Operators shall cease active road use where the surface is deeply rutted or covered by a layer of mud and where runoff from that road segment is causing a visible increase in the turbidity of Type F, Type SSBT or Type D streams as measured above and below the effects of the road.

APPLICATION:

Section (3) can be used for enforcement.

COMPLIANCE:

An operator is in compliance with this rule when they stop using roads because of potential or actual delivery of a visible increase in turbidity in a Type F, Type SSBT or Type D stream.

Unsatisfactory Condition: An unsatisfactory condition exists when there is a visible turbidity increase in any Type N stream, likely to reach a Type F, Type SSBT or Type D stream, resulting from hauling wood products or rock on a road associated with a commercial forest operation. An unsatisfactory condition exists when preventable, unnecessary sediment has entered or is likely to enter the waters of the state.

An unsatisfactory condition exists when an operator continues to actively use roads with unstable surfaces resulting in a visible increase in turbidity in Type F, Type SSBT or Type D streams. Turbidity in any Type N stream, caused by road use, is likely to be an unsatisfactory condition under OAR 629-625-0600, Road Maintenance. See that rule’s guidance.

Damage: Damage occurs when the unsatisfactory condition results in preventable, unnecessary sediment entering a Type F, Type SSBT or Type D streams. Damage exists if adverse disturbance has occurred or is likely to occur and the unsatisfactory condition cannot be corrected.

Damage exists when a visible increase in turbidity from the water conditions 100 feet upstream of the entry site (a 10% or more increase over background turbidity), continues for two or more hours in a twenty-four hour period.

If damage occurs, the operator should cease road use immediately and apply effective practices that usually involve providing additional surfacing and additional drainage that diverts runoff water onto stable ground away from streams. A citation and order to cease road use should direct the operator to cease hauling if the operator has not voluntarily done so.

There is adverse damage, that supports a citation if there is evidence of excessive sediment has reached a Type F, Type SSBT, or Type D stream from the road segment, even though there is no active turbidity at the time the SF is present on the site. There must be sufficient evidence, such
as sediment deposits in the stream, to convince a “reasonable person” that conditions met the
definition of damage for this section prior to the SF’s inspection.

There may be rare situations where durable surfacing and road drainage appear adequate to
protect streams from road runoff, yet there is still a visible increase in turbidity in the Type N
stream below the road crossing. This condition may be the natural background water quality
condition, or the condition may constitute an acceptable, temporary level of forest management-
related disturbance. Neither of these situations would constitute damage, a violation of this
section, or a requirement to cease hauling. However, if the SF determines the turbidity in the
Type N stream exceeds the natural background level or the acceptable level of management
disturbance, and is likely to affect water quality in a Type F, Type SSBT, or Type D stream
below, enforcement would likely be warranted.

Written Statement of Unsatisfactory Condition: A written statement referencing this section
should be used if turbidity from a road has reached a Type N stream, and is likely to reach and
cause a visible increase in turbidity in a downstream Type F, Type SSBT or Type D stream. The
written statement should require the operator to use methods such as adding rock and/or reducing
road segment length draining to streams. To avoid a violation of this rule, the timely action must
stop the traceable delivery of turbidity or sediment into the Type N stream. A citation may
already be appropriate under OAR 629-625-0600 because of the turbidity in the Type N stream.

ADMINISTRATION:

For your reference, the italicized guidance immediately following is repeated from the guidance
for section (1), the purpose statement for this rule. This guidance applies equally to this section.

Fine sediment (fine sand, silt and clay) generated by road use can travel far downstream,
impairing water quality and aquatic habitat for long distances. See also Forest Practices
Technical Note No. 9, Wet Weather Road Use.

“Wet weather,” also called wet periods, includes the time of year when rainfall or thawing
normally occurs. In western Oregon, this typically includes the period from October through
April. In eastern Oregon this period may be shorter. Wet periods from individual storms, at
any time of year, and periods of snowmelt, are also considered wet weather.

This rule adds to the requirements of OAR 629-625-0600, by requiring specific preventive
practices, those being: 1) placement of durable surfacing; or 2) other effective surfacing,
drainage, or filtering measures, on road segments that are connected to streams. It also sets
a specific threshold when operators must cease hauling. This rule is intended to greatly limit
sediment delivery associated with roads and their use during wet weather.

This rule addresses the effects of road use during wet periods on any type and size of stream
hydrologically connected to a road. Even though the rule mentions the subsequent effect on
water quality in Type F, Type SSBT, or Type D streams, it also applies to Type N streams
hydrologically connected the Type F, Type SSBT or Type D streams.
**Note:** Administer this rule in conjunction with OAR 629-625-0600. If a road segment is delivering turbidity or sediment to any stream, evaluate compliance with OAR 629-625-0600. In brief, this means determining if there is connectivity to a stream that must be controlled by establishing a stable running surface and/or establishing a functioning drainage system to prevent or stop delivery of turbidity or sediment to waters of the state. **Note:** Waters of the state include springs, canals, and some water developments, in addition to streams, wetlands, and certain other waters. See definitions of “water development” and “waters of the state” in OAR 629-600-0100.

If, in spite of practices applied to control turbidity and sediment delivery to reaches of Type N or other streams, turbidity or sediment caused by the road is visible in a Type F, Type SSBT or Type D stream, the operator must also cease road use to comply with section (3) of this rule. Ceasing road use is not enough in itself. The visible turbidity should be traced to determine whether it was caused by noncompliance due to failure to use durable surfacing or other effective measures. All practicable and feasible practices should be applied to stop the water pollution.

It is conceivable that weather conditions, such as continued heavy rains, could raise the background water turbidity levels and mask turbidity contributed by road use. This will make it difficult to determine whether the OAR 629-625-0700(3), visible turbidity standard for ceasing road use is occurring.

When these sediment delivery conditions occur, evaluate compliance with the road maintenance rule by checking for rutting and running water on the road surface and for direct connections between the road surface or road-generated turbidity and any stream. If any turbid runoff can be traced from the road directly to a stream, check that all practicable and feasible road maintenance practices are in place. If not, use the appropriate enforcement action to have these practices applied. Use a written statement of unsatisfactory condition if the input to the stream is of short duration and minor amount. Use a citation if you judge the condition has been going on for longer than it should have taken for the operator to observe it and take immediate preventive action. In the Order to Cease Violation, it would be appropriate to direct the operator to stop using the road until weather conditions change enough to stop the direct delivery of turbid water into streams.

You are not required to observe a visible change to the turbidity level in the nearest Type F, Type SSBT, or Type D stream before taking enforcement action. It is sufficient that you judge the turbidity has affected or will affect the nearest stream, whether it is a Type N, Type F, Type SSBT, or Type D stream. This enforcement action will be based upon OAR 629-625-0600, Road Maintenance, and its guidance that turbidity in any stream is an unsatisfactory condition, not upon OAR 629-625-0700(3), Wet Weather Road Use, which refers to turbidity in Type F, Type SSBT or Type D streams.

Judgment must be applied in administering this guidance. The intent of the FPA and rules is to limit as necessary, but not eliminate, all road use during wet periods in order to prevent, as much as practicable, sediment delivery and degradation of water quality in streams. A visible increase in turbidity in a stream that cannot be directly traced to the road influence, is acceptable temporary disturbance if all practicable and feasible measures have been taken.
to achieve compliance with the Road Maintenance rule and this Wet Weather Road Use rule, section (2). However, when operations and conditions combine to produce a visible increase in turbidity over background levels in downstream Type F, Type SSBT or Type D streams, road use must be stopped until wet weather conditions dry sufficiently that operations do not cause visibly-delivered additions to turbidity and sediment loading in the waters. Road use may also resume upon the application of effective measures to stop delivery of turbidity to streams.

Compliance with Section (2) of this rule should reduce or eliminate need for evaluation under Section (3). See Forest Practices Technical Note No. 9, Wet Weather Road Use.

Since stream size effects stream color, water must be removed from the stream to accurately evaluate differences in turbidity. A visible increase exists if you can see a difference when comparing water samples in clear jars, taken above and below the road’s influence on the stream. The jars should be large enough, at least a quart, so that turbidity differences can be seen.

The upstream sample should be just above the first site of potential road influence on the Type F, Type SSBT, or Type D stream. The downstream sample should be taken just below the last site of potential road influence on the stream. For streamside roads, several miles of road may be involved. In such cases it is essential to check that there are no other major sediment sources between the sampling points that are not associated with the road.

The periods of highest risk for increased turbidity:
- After 1-2 inches of rain over 3 days
- First 1/2 inch rain event after long dry period
- During a rapid thaw after deep freeze

REFERENCES:

- ODF. Forest Road Management Guidebook, Maintenance and Repairs to Protect Fish Habitat and Water Quality. January 2000.
- Forest Practices Technical Notes:
  - # 4 - Fish Passage Guidelines for New and Replacement Stream Crossing Structures, Version 1, effective May 10, 2002.