

Division 623 Proposed Permanent Rule Changes

DEPARTMENT OF FORESTRY

DIVISION 600

DEFINITIONS

629-600-0100

Definitions

- (xx) “**Convergent slope**” means a concave slope where surface or subsurface water flow may be concentrated.
- (15) “**Debris torrent-prone stream**” means a stream designated by the State Forester that contains Steep Gradient Slopes in its watershed and has characteristics conducive to debris torrents.
- (xx) “**Deliverability**” means the potential for shallow, rapidly moving landslides to deliver soil, rock, and debris to areas with public safety risk.
- (20) “**Exposure categories**” are used to designate the likelihood of persons being present in structures or on public roads during periods when shallow, rapidly moving landslides may occur:
- (a) Exposure Category A includes habitable residences, schools, and other buildings where people are normally present during periods when wet season rain storms are common.
 - (b) Exposure Category B includes paved public roads averaging over 500 vehicles per day, as determined, if possible during periods when wet season rain storms are common.
 - (c) Exposure Category C includes barns, outbuildings, recreational dwellings not included in Exposure Category A, low-use public roads, and other constructed facilities where people are not usually present when wet season rain storms are common.
- (xx) “**Geotechnical professional**” means a person with geotechnical expertise, licensed by the State of Oregon to practice engineering or geology. Refer to Oregon Revised Statutes Chapter 672.
- (31) “**Steep Gradient Slope**” means a site that might be subject to initiation of a shallow, rapidly moving landslide that could pose a hazard to downslope public safety. Steep Gradient Slopes are defined as:
- (a) in western Oregon, excluding the Tye Core Area:
 - (i) slopes steeper than 80 percent; and/or,
 - (ii) convergent slopes steeper than 70 percent.
 - (b) in the Tye Core Area:
 - (i) slopes steeper than 75 percent; and/or,
 - (ii) convergent slopes steeper than 65 percent.
 - (c) other slopes in the state determined by the State Forester to have a hazard equivalent to (a) or (b).
- (37) “**Landslide mitigation**” means actions taken to reduce potential landslide velocity or re-direct shallow, rapidly moving landslides near structures and roads so risk to persons is reduced.
- (61) “**Shallow, rapidly moving landslide**” means any detached mass of soil, rock, or debris that begins as a relatively small mass movement on steep slopes and grows to sufficient size to cause damage as it moves down a slope or stream channel at a velocity difficult for people in its path to escape. Shallow, rapidly moving landslides are commonly also referred to as debris slides, debris avalanches, debris flows, debris torrents, mudslides, and mudflows.
- (74) “**Tye Core Area**” connotes a geographic area with geologic and geomorphic characteristics such that lower slope thresholds are appropriate. It is not a “formation” in the geologic sense, but represents an area more prone to shallow, rapidly moving landslides due to a combination of factors--not just geology. The other factors include long, steep slopes, higher drainage density, shallow coarse-grained low cohesion soil (with an abrupt transition to an impermeable layer or rock), interbedded siltstone/sandstone beds which can route water to slope faces. The Tye Core area is located within coastal watersheds from the Siuslaw watershed south to and including the Coquille watershed, and that portion of the Umpqua watershed north of Highway 42 and west of Interstate 5.

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SHALLOW, RAPIDLY MOVING LANDSLIDES AND PUBLIC SAFETY

629-623-0000

Purpose

(1) Shallow, rapidly moving landslides may be a public safety risk affected by forest operations. There is a high natural landslide hazard in certain locations. In the short term, forest practices regulations can reduce the effect that forest practices have on the risk to the public in locations prone to shallow, rapidly moving landslides. In the long term, effective protection of the public can only be achieved through the shared responsibilities of homeowners, road users, forestland owners, and state and local governments to reduce the number of persons living in or driving through locations prone to shallow, rapidly moving landslides.

(2) OAR 629-623-0000 through 629-623-1100 must be known as the shallow, rapidly moving landslide and public safety rules.

(3) The purpose of the shallow, rapidly moving landslides and public safety rules is to reduce the risk of serious bodily injury or death caused by shallow, rapidly moving landslides directly related to forest practices. These rules consider the exposure of the public to these safety risks and include appropriate practices designed to reduce the occurrence, timing, or effects of shallow, rapidly moving landslides.

(4) These rules are based on the best scientific and monitoring information currently available. The department will continue to monitor factors associated with shallow, rapidly moving landslides and also review new research on this issue. The department will recommend rule changes if this new information suggests different forest practices may be appropriate.

(5) The State Forester publishes technical guidance for evaluating and rating deliverability of shallow, rapidly moving landslides and downslope public safety risk for any exposed population. Procedures to be followed are available from the State Forester and on-line at http://egov.oregon.gov/ODF/PRIVATE_FORESTS/PCFPubIndex.xhtml/:

(a) Forest Practices Technical Note Number 2 (“Steep Gradient Slopes, Shallow Rapidly Moving Landslides, and Public Safety: Screening and Practices”, Version 3.0, ?????, 2009); and,

(b) Forest Practices Technical Note Number 6 (“Determination of Deliverability Rating for Shallow, Rapidly Moving Landslides”, Verson 2.0, ?????, 2009).

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-0100

Screening for Steep Gradient Slopes and Exposed Population

(1) The State Forester and operator must share responsibility to use Further Review Area maps and/or other information to screen proposed operations for Steep Gradient Slopes that may deliver impacts to exposed populations in structures or on paved public roads.

(2) Upon notification by the State Forester, the operator must identify:

(a) portions of the operation that contain Steep Gradient Slopes;

(b) their respective Further Review Areas; and,

(c) structures and paved public roads within each Further Review Area, and assign the appropriate Exposure Category.

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(3) The operator must provide the results of the review required in 2(a), (b), and (c) in writing to the State Forester. When applicable, this information may be provided in the written plan required by 629-623-1000.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-0200

Shallow, Rapidly Moving Landslide Deliverability Rating

(1) The State Forester makes the initial determination of deliverability rating and notifies the operator. Deliverability rating factors may include, but are not limited to: characteristics of the potential initiation sites, characteristics of the slopes and channels downslope of the initiation sites, and the location of the structures or roads in relation to the delivering slopes or channels.

(2) Shallow, rapidly moving landslide deliverability is rated as low, moderate, high, and extreme. The extreme rating applies to limited cases in which unusual conditions pose a severe risk to public safety.

(3) The deliverability rating may include the potential for the failure of a structure in the direct path of a shallow, rapidly moving landslide resulting in a substantial risk to the exposed population downslope of that structure.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-0300

Public Safety Risk Level

(1) The Exposure Categories described in OAR 629-600-0100 (xx) and the deliverability rating described in OAR 629-623-0200 are used to determine the public safety risk level, as shown in Table 1.

Table 1. Public Safety Risk Level

Exposure Category	Deliverability Rating			
	Extreme	High	Moderate	Low
A	1	1	2	3
B	1	2	3	3
C	2	3	3	3

(2) The State Forester makes the initial determination of public safety risk level and notifies the operator.

(3) The State Forester may require the operator to submit a geotechnical report that evaluates the public safety risk level for the proposed operation. When applicable, the report becomes part of the written plan required by 629-623-1000.

(4) The State Forester makes the final determination of the public safety risk level.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

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629-623-0400

Public Safety Risk Level 1

- (1) The operator may not remove trees from a Steep Gradient Slope.
- (2) The operator may not construct new roads or reconstruct roads on a Steep Gradient Slope.
- (3) Notwithstanding (1) and (2) of this section, the operator may be allowed to remove trees and reconstruct roads in certain limited situations per OAR 629-623-0900. A written plan is required under OAR 629-623-1000.

629-623-0500

Public Safety Risk Level 2

- (1) The operator may not remove trees from a Steep Gradient Slope unless a geotechnical report is provided to the State Forester per OAR 629-623-1000 and 629-623-1100.
- (2) The operator may not construct new roads or reconstruct roads on a Steep Gradient Slope unless a geotechnical report is provided to the State Forester per OAR 629-623-1000 and 629-623-1100.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-0600

Public Safety Risk Level 3

Operations are regulated by all applicable rules, OAR Chapter 629.

629-623-0700

Windthrow Considerations

The operator must leave a sufficient number and arrangement of trees adjacent to a Steep Gradient Slope with public safety risk level 1 or 2, to reduce the likelihood of trees retained in these locations blowing down.

629-623-0800

Protection Along Debris Torrent-Prone Streams

- (1) The purpose of this rule is to retain large standing trees in locations where they might slow debris torrent movement along debris torrent-prone streams with public safety risk level 1 or 2.
- (2) During timber harvesting operations, the operator must fell and yard trees in a manner to minimize slash and other debris accumulations in debris torrent-prone stream channels with public safety risk level 1 or 2.
- (3) The operator must treat slash according to OAR 629-630-0600(3).
- (4) The operator must leave, and during felling and yarding activity, protect large standing trees along the likely depositional reaches of debris torrent-prone streams, as determined by the State Forester, in locations with public safety risk level 1 or 2. Trees larger than 20 inches in diameter breast height, within 50 feet of the edge of the active channel along both sides of the stream, must be left for a distance of 300 feet or the depositional length of the channel, whichever is less, as measured from the beginning of the forested portion of the stream reach upstream of the road or structure.

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(5) The operator may not construct new roads or reconstruct roads across debris-torrent-prone streams unless the operator provides a geotechnical report to the State Forester, demonstrating that the public safety risk is not increased by the road crossing.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-0900

Hazard Mitigation and Risk Reduction

- (1) Landslide mitigation projects are designed to reduce the likelihood of a shallow, rapidly moving landslide impacting a structure or public road.
- (2) The landowners who own structures and are directly affected by the impact rating must agree to landslide mitigation.
- (3) The operator may submit a mitigation strategy or design prepared by a geotechnical professional that lowers the public safety risk. The State Forester may determine to what extent the proposed mitigation strategy reduces the public safety risk.
- (4) The State Forester may waive the requirement that trees be retained if the public safety risk from trees falling or blowing over is equal to or higher than the public safety risk from shallow, rapidly moving landslides.
- (5) The State Forester may allow harvest of dead or dying trees if the operator can demonstrate that the operation results in no increased overall downslope public safety risk. A written plan for an alternate practice is required (OAR 629-605-0173).
- (6) A homeowner may assume the public safety risk by demonstrating that (a) through (d) are met:
 - (a) An evacuation plan that substantially reduces the risk to residents and visitors during periods when shallow, rapidly moving landslides may occur;
 - (b) A copy of the property title showing full disclosure of the elevated landslide hazard on that property, including a statement that it is the homeowner's responsibility to inform residents and visitors of the elevated landslide hazard, and to maintain an evacuation plan;
 - (c) Assumption by the homeowner of all liability for injury and property damage associated with shallow, rapidly moving landslides initiating within the operation; and,
 - (d) The signatures of the homeowner and of a notary public.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5) & ORS 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03

629-623-1000

Written Plans to Evaluate Public Safety Risk

- (1) The operator must submit a written plan to the State Forester for all timber harvesting, road construction, or road reconstruction operations with public safety risk level 1 or 2. The operator must submit a written plan for operations across or adjacent to debris-torrent-prone streams. The State Forester also may require a written plan for operations in sensitive or wind-prone areas adjacent to sites with public safety risk level 1 or 2.
- (2) Written plans must include the following information, if applicable:

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- (a) A geotechnical report addressing public safety risk or other elements as determined by the State Forester;
- (b) A map showing Steep Gradient Slopes and debris-torrent-prone streams;
- (c) The location of all existing and proposed new roads crossing Steep Gradient Slopes or debris-torrent-prone streams;
- (d) A detailed road design for all new or reconstructed roads crossing Steep Gradient Slopes or debris torrent-prone streams;
- (e) The location of habitable residences, schools, and other routinely occupied structures (Exposure Category A) and paved public roads (Exposure Category B) downslope of the operation within Further Review Areas;
- (f) Locations where timber harvesting will occur and the silvicultural prescription;
- (g) Locations where timber harvesting will not occur;
- (h) Locations of proposed waste fill areas within a drainage with public safety risk levels 1 or 2; and,
- (i) Additional information as requested by the State Forester.

Stat. Auth.: ORS 527.710(11)

Stats. Implemented: ORS 527.630(5), 527.674 & 527.714

Hist.: DOF 13-2002, f. 12-9-02 cert. ef. 1-1-03; DOF 6-2005(Temp), f. & cert. ef. 8-2-05 thru 1-27-06; DOF 8-2005, f. 12-13-05, cert. ef. 1-1-06

629-623-1100

Geotechnical Reports

- (1) The purpose of the geotechnical report is to provide a detailed, on-the-ground assessment of site characteristics that may be used by the State Forester in the final determination of public safety risk levels. The geotechnical professional may demonstrate in a report that practices in Division 623 should be modified to reflect site-specific characteristics and other factors influencing initiation, transport, and deposition of shallow, rapidly moving landslides.
- (2) A geotechnical report may include, but is not limited to, determination of the presence and distribution of Steep Gradient Slopes, likelihood of debris flow initiation, evidence of existing or potential debris transport and deposition, existing public safety risk, and the effects of harvesting, road building, and mitigation activities on public safety risk levels.
- (3) Geotechnical reports must demonstrate the effect of harvesting and road activities on the downslope public safety risk:
 - (a) Geotechnical reports written per OAR 629-623-0400 must demonstrate that harvesting and road activities result in no net increase in the likelihood of debris flow initiation and downslope public safety risk, beyond that inherent in naturally occurring shallow, rapid landslides.
 - (b) Geotechnical reports written per OAR 629-623-0500 must demonstrate that where harvesting and road activities will increase the likelihood of debris flow initiation and downslope public safety risk, the increase will be substantially less than what would result from operations regulated per 629-623-0600.
- (4) If the operator plans an alternate practice based on the findings of the geotechnical report, the State Forester requires a written plan for alternate practice under OAR 629-605-0173.