

# **Forest Practices Technical Guidance**

## **Road Condition Assessment for Small Forestland Owners**

### **Objective**

Forest Practices Technical Guidance is advisory guidance, developed by the State Forester through a stakeholder process, to assist landowners and resource professionals to implement the Oregon Forest Practices Act and forest practices rules. OAR 629-625-0920 requires small forestland owners (SFOs) to complete a road condition assessment (RCA) when submitting a notification that includes the harvest of timber.

The objective of this Forest Practices Technical Guidance is to provide a resource to SFOs for the process of completing an RCA. This Technical Guidance includes a link to the RCA webpage where a standardized RCA form and illustrated how to guide can be downloaded. Some road issues identified by an RCA may be eligible for state funding through the Small Forestland Investment in Stream Habitat (SFISH) Program.

### **Background**

In 2022, the legislature passed Senate Bills 1501 and 1502 which changed the Forest Practices Act and directed the Board of Forestry to adopt administrative rules consistent with the Private Forest Accord (PFA) Report. The PFA Report memorializes the negotiated agreements between authors of a conservation coalition and working forest coalition. They negotiated to modify Oregon's forest practice regulations in support of developing a habitat conservation plan to provide the means to seek an Incidental Take Permit under Section 10 of United States Endangered Species Act for the covered species identified in the PFA Report.

Included in the PFA policy package were incentives, minimum management options, and road assessment requirements specifically afforded to SFOs.

For purposes of the forest practices rules and this Technical Guidance, a "small forestland owner" means a landowner who:

- (a) Owns or hold common ownership interest in less than 5,000 acres of forestland in this state;
- (b) Has harvested no more than an average yearly volume of two million board feet of merchantable forest products from the landowner's forestlands in this state, when averaged over the three prior years to:
  - (A) The date the department receives a harvest notification from the landowner; or
  - (B) If applying for a Small Forestland Investment in Stream Habitat Program grant, the date the landowner submits a grant application; and

- (c) Affirms that they do not expect to exceed an average yearly volume of two million board feet of merchantable forest products to be harvested from the landowner's forestlands in this state for 10 years after the department receives the harvest notification or grant application; or
- (d) Emergency exception: A landowner who exceeds the two million board feet average harvest threshold from their land in the three years prior to submitting a harvest notification or grant application to the department, or who expects to exceed the threshold during any of the following 10 years, shall still be deemed a "small forestland owner" if the landowner establishes to the department's reasonable satisfaction that the harvest limits were, or will be, exceeded to raise funds to pay estate taxes or for a compelling and unexpected obligation, such as a court-ordered judgement or for extraordinary medical expenses.

The RCA was outlined in the PFA Report, and its purpose is to ensure that roads used for harvest and owned by SFOs comply with the road rules and to help identify road improvement projects eligible for state grants.

## Terms

The following are some key definitions of terminology used in this guidance:

**Abandoned roads** (OAR 629-600-0100) – Roads that were constructed prior to 1972 and do not meet the criteria of active, inactive, or vacated roads. This does not include skid trails.

**Active roads** (OAR 629-600-0100) – Roads currently being used or maintained for the purpose of removing commercial forest products.

**Culvert** – A type of stream crossing buried beneath the road surface creating a tunnel to channel water under the road allowing vehicles to travel over the stream.

**Cutslope** – Created when earth is removed or cut back to establish or widen a road that bisects a slope.

**Fish-bearing or fish stream** - Type F and Type SSBT streams.

**Fish passage barrier** – A water crossing that hinders upstream fish passage when fish are expected to move. Movement is most often restricted by increased water velocities, insufficient flow depths, excessive jump heights, or blockage.

**Ford** (OAR 629-600-0100) – A type of stream crossing where the vehicle travels on the streambed or other installed structure with the wheels of the vehicle in the water if present.

**Forest road inventory and assessment** (OAR 629-600-0100) – The road inventory, project planning, and reporting process required of forestland owners that do not qualify to manage forestlands under the small forestland owner minimum option.

**Habitat conservation plan** (OAR 629-600-0100) – A federal agencies' planning document designed to accommodate economic development to the extent possible by authorizing the limited and unintentional take of listed species when it occurs incidental to otherwise lawful activities. The plan is

designed not only to help landowners and communities but also to provide long-term benefits to species requirements as identified in the Endangered Species Act.

**Incidental take permit** – A permit issued to any private landowner, corporation, state or local government, or other non-Federal landowner wishing to conduct activities on their land that may impact an animal species listed as threatened or endangered under the federal Endangered Species Act.

**Parcel** (OAR 629-600-0100) - A contiguous single ownership recorded at the register of deeds within the county or counties where the property is located, including any parcel(s) touching along a boundary, but a railroad, road, stream, or utility-right-of-way may intersect the parcel. Single ownership is defined in ORS 527.620(14).

**Perched fill** - Road sidecast or fill that has the potential to fail and deliver sediment to a downslope fish-bearing stream.

**Road surface** – Flat area of the road intended for vehicular use.

**Road surfacing** – Aggregate material used to cover the road surface.

**Single ownership** (ORS 527.620) – Ownership by an individual, partnership, corporation, limited liability company, trust, holding company or other business entity, including the state or any political subdivision thereof. Single ownership includes ownership held under different names or titles where the same individual or individuals, or their heirs or assigns, are shareholders (other than those of public corporations whose stock is traded on the open market), partners, business trustees or officers, or otherwise have an interest in or are associated with each property.

**Small Forestland Investment in Stream Habitat** – A grant program established by the Legislature in 2022 to help small forestland owners implement road repair projects that improve fish habitat and mitigate risks to natural resources arising from forest roads.

**Type F** (OAR 629-600-0100) – A stream with fish use, or both fish use and domestic water use.

**Type SSBT** (OAR 629-600-0100) – A stream that is classified as a Type F stream and has SSBT use.

**Water crossing** – Stream crossing, where a road crosses waters of the state, including bridges, culverts, and fords.

**Waters of the state** (OAR 626-600-0100) – Includes lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, wetlands, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

## Overview

Roads are essential infrastructure for a managed forest, but improperly drained forest roads can deliver sediment directly to streams, poorly designed or installed water crossings such as culverts can delay or prevent fish movement, and roads constructed on steep side slopes may have unstable fill that can fail and enter streams. Proper planning, construction, maintenance, and vacating of forest roads help minimize negative impacts to streams and the organisms that live in them. Table 1 categorizes potential road related fish and water quality problems.

Table 1. Potential road related fish and water quality problems.

<b>Source of Problem</b>	<b>Potential Impacts to Fish</b>	<b>Potential Impacts to Water Quality</b>
<b>Road Surface Erosion</b>	Source of fine sediments that produce turbidity and fills spaces between gravel and rocks used by fish for spawning and cover.	Significant source of fine sediment and related turbidity.
<b>Water Crossing Structures</b>	Blockage, jumping, or velocity barriers that restrict fish access to stream reaches above the crossing.	Failures, washouts, and erosion associated with undersized structures are major sources of stream channel impacts and fine sediment.
<b>Road Surfacing</b>	Source of fine sediments that produce turbidity and fills spaces between gravel and rocks used by fish for spawning and cover.	Poor quality or limited depth of surfacing is a significant sediment source during thaw cycles and wet periods.
<b>Perched fill</b>	Source of fine sediments that produce turbidity and fills spaces between gravel and rocks used by fish for spawning and cover. And can greatly alter channel morphology.	Primary source of road associated landslides that enter streams. Major source of stream channel impacts and fine sediment.
<b>Cutslopes</b>	Diverted drainage can cause landslides below the road.	Failure or sloughing can block ditches and divert water onto the road surface.

This Technical Guidance identifies landowners who can submit an RCA, when an RCA should be submitted, the roads that should be assessed, details the information that must be included in an RCA, and outlines road improvements that are eligible for state funding.

# Main Content

## Who can complete a Road Condition Assessment?

Landowners meeting the definition of a small forestland owner as defined in OAR 629-600-0100 and described above, can complete an RCA instead of a Forest Road Inventory and Assessment.

## When are Road Condition Assessments required?

When an SFO submits a notification that includes the harvest of timber using the department's reporting and notification system (FERNS) an RCA must be completed. Examples of operations that require an RCA are overstory removal, clearcutting, commercial thinning, road right-of-way harvest, and salvage logging.

An RCA is also required if seeking road improvement funding through the Small Forestland Investment in Stream Habitat (SFISH) Program.

Notifications for activities that do not include the harvest of timber do not require completion of an RCA, but SFOs are encouraged to complete an RCA at any time. SFOs wanting to complete an RCA prior to when one is required should contact a local ODF office or visit the [RCA webpage](#).

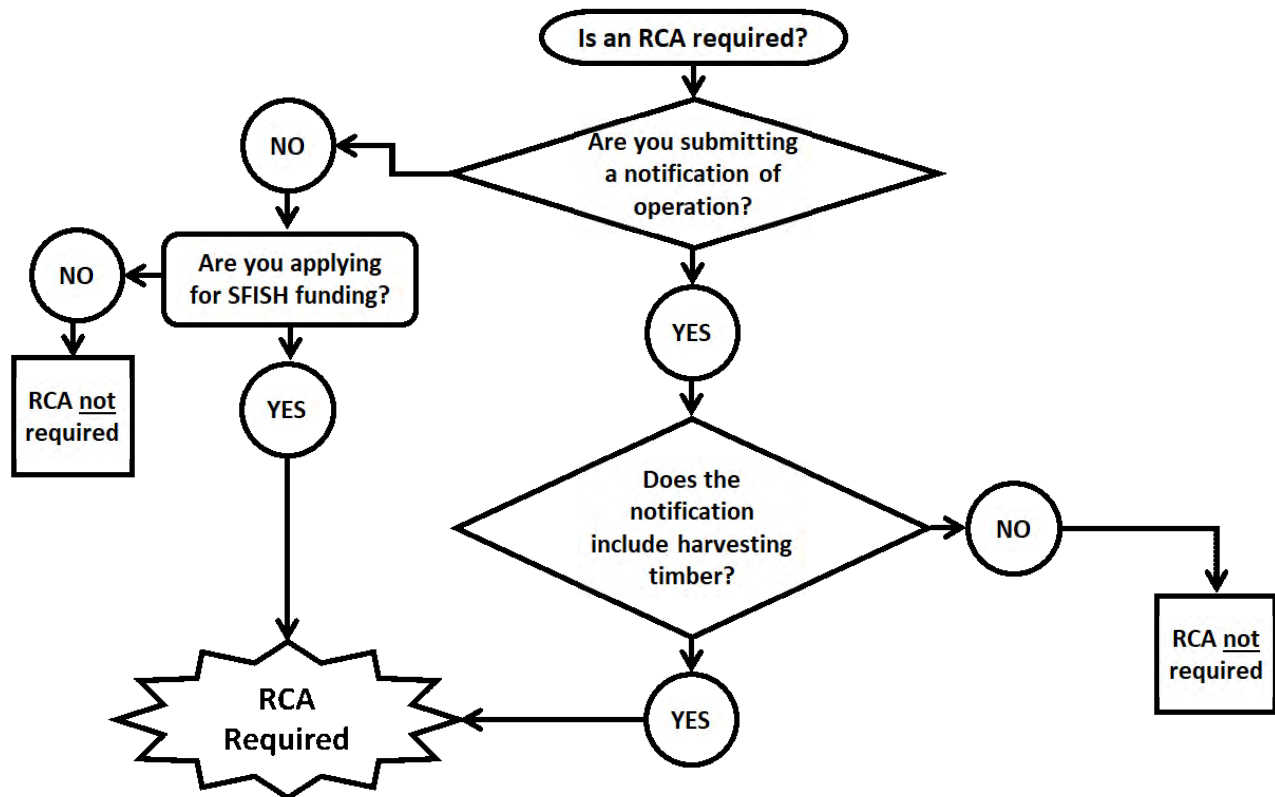


Figure 1. Road condition assessment flow chart.

## What roads need to be included in a Road Condition Assessment?

Four types of roads are defined in the forest practice rules and apply to an RCA: active, inactive, abandoned, and vacated roads (Table 2). All these roads need to be considered when completing an RCA.

Table 2. Descriptions and examples of road types.

Road Type	Description	Example
<b>Active</b>	Currently used and maintained for the purpose of removing commercial forest products.	Mainline, connectors, and spurs on a route during active harvest and log hauling.
<b>Inactive</b>	Currently used for forest management purposes but not being used for timber harvest and log hauling.	Roads used for planting, growing, and tending trees, forest products, and other vegetation. Roads used for identifying and marking boundaries, fire suppression, and prescribed burning.
<b>Abandoned</b>	No longer used or maintained and constructed before 1972, excluding skid trails.	Roads that have not been maintained or used. These roads can be difficult to detect due to their age, size, and drivability. These roads may resemble trails and often have vegetation growing in the road prism.
<b>Vacated</b>	No longer in use for timber harvest or forest management. Vacated roads must be blocked to prohibit vehicle access.	The road was effectively blocked and notified to the State Forester as vacated in compliance with OAR 629-625-0650. <i>Note: if a road has not been vacated according to this rule, it could potentially be defined as an abandoned road.</i>

## What area of my forestland should be included in a Road Condition Assessment?

Roads located within the SFO's parcel where the activity that includes the harvest of timber will take place are required to be included in the RCA. A "Parcel" is defined in OAR 629-600-0100 and means a contiguous single ownership recorded at the register of deeds within the county or counties where the property is located, including any parcel(s) touching along a boundary, but a railroad, road, stream, or utility-right-of-way may intersect the parcel. Single ownership is defined in ORS 527.620(14).

"Single ownership" means ownership by an individual, partnership, corporation, limited liability company, trust, holding company or other business entity, including the state or any political subdivision thereof. Single ownership includes ownership held under different names or titles where the same individual or individuals, or their heirs or assigns, are shareholders (other than those of public corporations whose stock is traded on the open market), partners, business trustees or officers, or otherwise have an interest in or are associated with each property.

Landowners are encouraged to include roads from all their owned parcels when completing an RCA.



Figure 2. The RCA should include roads located in the parcel represented by the shaded area.

### **What Information is Required in a Road Condition Assessment?**

Information collected when completing an RCA enables SFOs to document compliant roads and water crossings and helps identify issues that can be fixed with proper maintenance or improved with state funds through the SFISH program.

Completing an RCA, along with proper maintenance and improvements will protect roads, save money, and reduce negative impacts on the environment, particularly streams and fish. Proper maintenance means your roads have a stable surface and a fully functioning drainage system. A fully functioning drainage system should drain water from the road surface as quickly as possible and route the water onto the forest floor not directly into streams. In addition, road ditches should only be cleaned when they are full or almost full of sediment, water crossings should be kept free of debris, culverts should not be plugged with sediment or have excessive vegetation growth, and water crossings in fish streams should not impede the movement of fish.

An RCA must identify road conditions that contribute to active or potential delivery of sediment to waters of the state. Common indicators of drainage or stability problems include:

- ✓ water from the road or ditch runs directly into a stream
- ✓ there is flowing water or ponding water on the road surface
- ✓ there are signs of erosion or sediment is present on the road surface
- ✓ the road surface has potholes, ruts, or washboarding
- ✓ the road surface has wet spots or water pooled on the road edge
- ✓ there is erosion, scouring, or downcutting of a road ditch
- ✓ dirt from the uphill side of the road is moving towards or falling into the road ditch or has signs of erosion
- ✓ there are cracks on the outside of the edge of the road, road fill is on top of vegetation or debris, or there are nearby landslide scars
- ✓ the road has sinkholes

For more details on roads with unstable or perched fill that present a significant hazard to fish streams see Appendix A and Forest Practices Technical Guidance: Standard Methodology for Identifying and Prioritizing Projects for the Small Forestland Investment in Stream Habitat Program.

An RCA must also include water crossing locations (geographic coordinates expressed as the latitude and longitude) and status of compliance with the forest practice rules. In addition, water crossings in fish streams that may be a barrier to fish passage must be identified. Common indicators of water crossing problems include:

- ✓ culverts that have damage, separated joints, holes in the bottom, or a rusty bottom
- ✓ culverts with water flowing under, over, or around them
- ✓ culverts with ponding upstream
- ✓ culverts with undercutting at the downstream end
- ✓ culverts with whorls or eddies at the entrance
- ✓ culverts with fill material falling into the stream
- ✓ culverts with fill material that has sloughing, gullies, holes, or cracks
- ✓ culvert crossings that have more than one culvert or bridges and fords with culverts present
- ✓ bridges or fords that catch debris
- ✓ culverts or bridges that are narrower than the stream channel width
- ✓ culverts that don't have streambed material in them
- ✓ culverts or fords that require fish to jump when passing
- ✓ culverts or fords where fish are not completely covered with water when passing
- ✓ culverts, fords, or bridges that fish have difficulty passing because of fast moving water

For more details on potential fish passage barriers see Appendix A and Forest Practices Technical Guidance: Standard Methodology for Identifying and Prioritizing Projects for the Small Forestland Investment in Stream Habitat Program.

An RCA must indicate if any abandoned roads are present. These roads are likely to be overgrown with vegetation or closed off and may resemble trails. For more details on abandoned roads see Appendix A and Forest Practices Technical Guidance: Standard Methodology for Identifying and Prioritizing Projects for the Small Forestland Investment in Stream Habitat Program.



## **What are the Road Maintenance Obligations of a Small Forestland Owner?**

If a road on land owned by an SFO is used to haul timber, the SFO needs to ensure these roads are maintained to the standards of the forest practice rules. In general, this means road surfaces need to be maintained, and drainage features and water crossings need to function properly. Forest road maintenance rules can be found in Division 625 of the forest practice rules and associated Forest Practices Technical Guidance. All new roads constructed, or water crossings installed or replaced by SFOs must satisfy the standards of the forest practice rules which are also found in Division 625 and associated Forest Practices Technical Guidance.

## **What are the Road Improvement Obligations of a Small Forestland Owner?**

An SFO is not required to undertake road improvement projects that can be funded by the state through the SFISH Program. These include replacement of culverts for Type SSBT and Type F streams, the repair of abandoned roads, and remediation of roads with a perched fill that present a significant hazard to fish streams. However, the timing of these projects will be dependent on the State's ability to prioritize and fund them. Details for SFISH are provided in Forest Practices Technical Guidance: Standard Methodology for Identifying and Prioritizing Projects for the Small Forestland Investment in Stream Habitat Program.

If the State fails to fund eligible and approved projects on an SFO's road under the SFISH Program, the non-implementation of those projects will not preclude the SFO from using the road for any purpose unless the road is actively delivering sediment to waters of the state or the road has one or more culverts with an imminent risk of failure as defined in OAR 629-600-0100.

"Culvert with imminent risk of failure" means a culvert in all waters of the state that:

- (a) Is actively diverting streams or ditchline runoff;
- (b) Is actively eroding the road prism or stream channel in a manner that has the potential to undermine the integrity of the culvert;
- (c) Is completely blocked, plugged, crushed, or buried;
- (d) Has partially or completely failed fill; or
- (e) Has high plugging potential as determined by the Stream Blocking Index or other comparable methodology, high magnitude of fill at risk, and high diversion potential in one or both directions.

If the RCA identifies necessary maintenance or improvements, other than those where sediment is being actively delivered to waters of the state or the road has one or more culverts with an imminent risk of failure, there shall be no time limit in which the landowner must complete those repairs, though the obligation to improve roads when used for harvest remains.

## **What Resources are Available for Completing a Road Condition Assessment?**

A standardized form and illustrated how to guide were developed to help SFOs complete an RCA. Contact a local ODF office for assistance with an RCA or visit the [RCA webpage](#).

Oregon Department of Forestry Field Offices:

<https://www.oregon.gov/ODF/Working/Pages/FindAForester.aspx>

Oregon Department Forestry Road Condition Assessment Webpage:

<https://www.oregon.gov/odf/working/pages/road-condition-assessments.aspx>

Oregon Department of Forestry Small Forestland Investment in Stream Habitat Program Webpage:

<https://www.oregon.gov/odf/pages/sfish-program.aspx>

## **References**

ODF. 2000. Forest Road Management Guidebook. Maintenance and Repairs to Protect Fish Habitat and Water Quality. Oregon Department of Forestry Forest Practices Program.

Weaver, W.E., E.M. Weppner, and D.K. Hagans. 2015. Handbook for Forest, Ranch, and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads (Rev. 1<sup>st</sup> ed.). Mendocino County Resource Conservation District, Ukiah, California.

## Appendix A: Potential Fish Passage Barriers, Abandoned Roads, and Perched Road Fill

Table 1. Description of Potential Fish Passage Barriers and Possible Effects.

Barrier Type	Description	Impact
Drop	Drop at outlet exceeds fish jumping ability.	Fish cannot enter structure, can be injured, or will expend too much energy entering the structure to pass other obstacles.
Velocity	High velocity exceeds fish swimming ability.	Fish tire before passing the crossing.
Turbulence	Turbulence within structure prevents fish from entering or confuses sense of direction.	Fish do not enter structure or are unable to successfully navigate through the structure.
Depth	Low flow depth causes fish not to be fully submerged.	Fish will be unable to swim efficiently or unable to pass the structure.
Debris	Debris caught within or on a structure can block flow or portions of flow.	Fish may not be able to pass by the debris, or constricted flow may create a velocity or turbulence barrier.

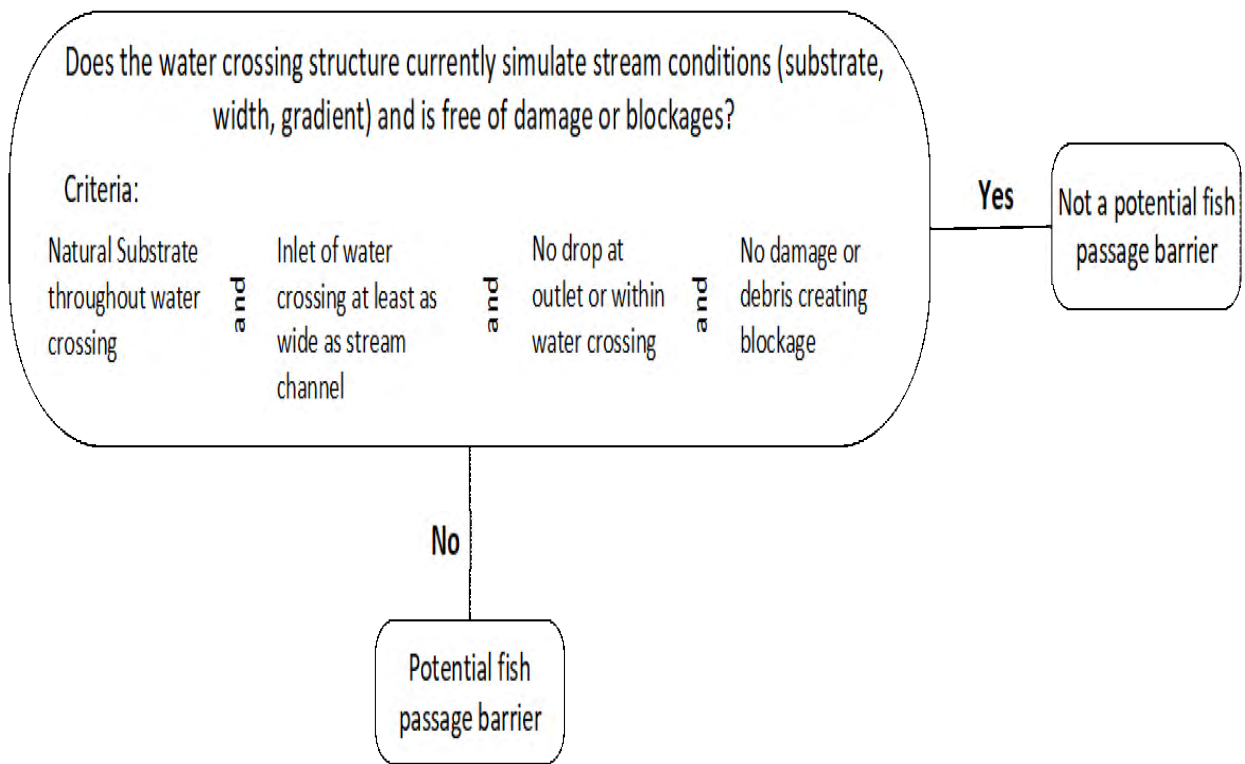


Figure 1. Criteria that can be used to help determine if a water crossing is a potential fish passage barrier. If all four conditions are not met, the water crossing is a potential fish passage barrier.



Figure 2. Examples of what an abandoned road may look like.



Figure 3. Example of a road segment with perched fill that presents a significant hazard to a fish-bearing stream.

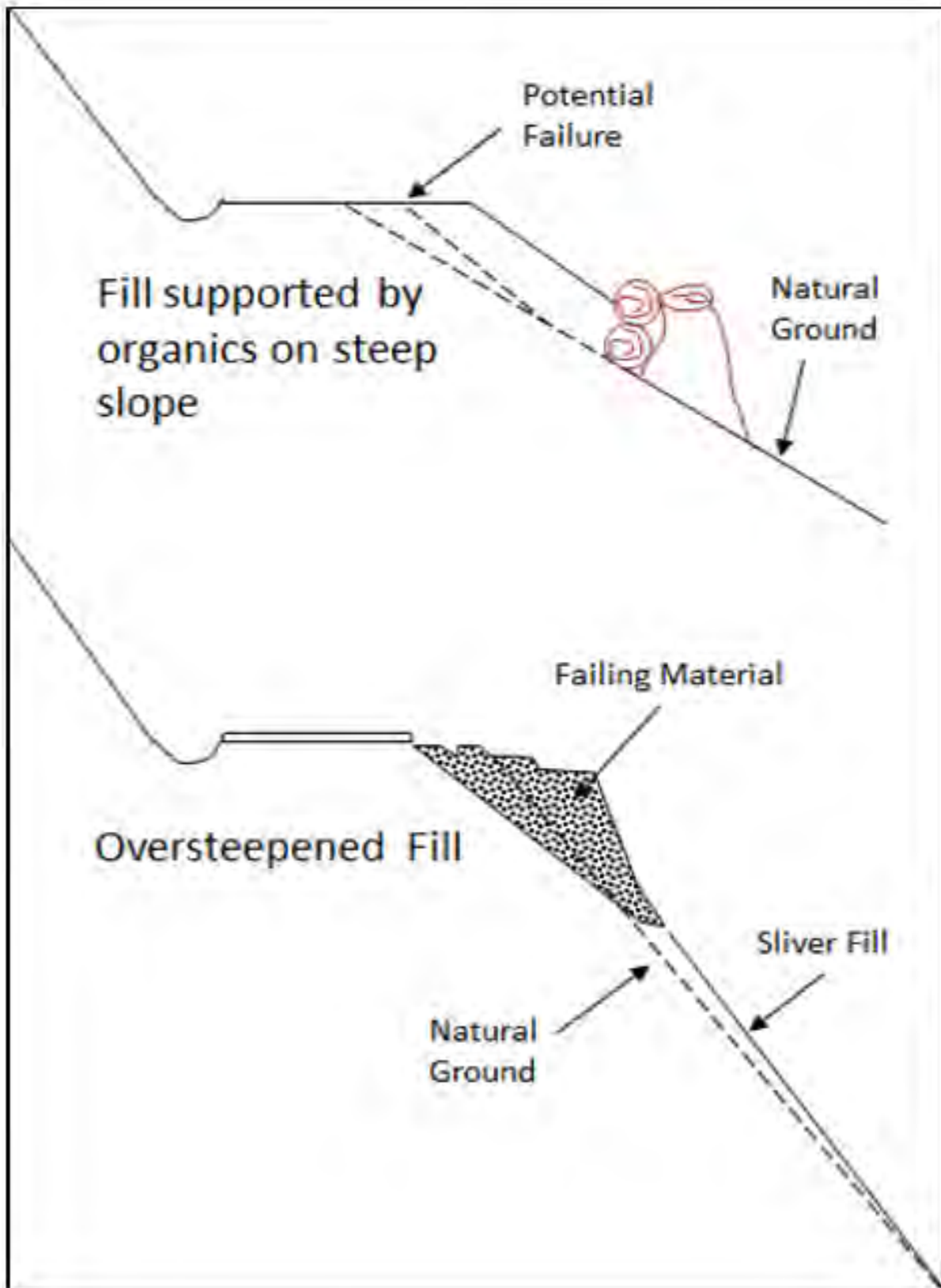


Figure 4. Illustration of perched fill or oversteepened fill on steep slopes that can fail and deliver sediment to streams.

## **Appendix B: Oregon Administrative Rules**

### **629-625-0920**

#### **Road Condition Assessment**

- (1) The purpose of this rule is to ensure that roads used for harvest and owned by small forestland owners, as defined by OAR 629-600-0100, comply with the standards of the forest practice rules.
- (2) The requirements of the Forest Road Inventory and Assessment program described in OAR 629-625-0900 do not apply to small forestland owners.
- (3) When a small forestland owner submits a notification including the harvest of timber using the department's reporting and notification system, they shall complete the department road condition assessment. Notifications for activities other than timber harvest shall not require completion of a road condition assessment. The small forestland owner is encouraged to complete the road condition assessment for all roads in their parcel without a planned timber harvest.
- (4) The road condition assessment shall include all roads in the parcel owned by the small forestland owner where the harvest will take place, including the following descriptions:
  - (a) The road condition that contributes to active or potential delivery of sediment to waters of the state;
  - (b) Water crossing's locations and the status of compliance with the forest practice rules;
  - (c) Potential fish passage barriers on Type F and Type SSBT streams;
  - (d) Abandoned roads; and
  - (e) Roads with a perched fill that present a significant hazard to fish-bearing streams.
- (5) The department, in consultation with the Department of Fish and Wildlife, shall review eligibility for state grants to improve the road conditions described in section (4)(c), (d), and (e) of this rule.
- (6) The small forestland owners are not required to undertake the following road improvements projects, without funding by the State of Oregon:
  - (a) Replacement of culverts for Type F and Type SSBT streams;
  - (b) Repair of abandoned roads; or
  - (c) Reconstructing, vacating, or relocating roads with a perched fill that present a significant hazard to fish-bearing streams.
- (7) If the State of Oregon, under the small forestland investment in stream habitat program described in OAR 629-607-0300, fails to fund an eligible and approved road improvement project for a small forestland owner, the non-implementation of those projects shall not prevent the small forestland owner from using the road for any purpose, except for the following conditions:
  - (a) The road is actively delivering sediment to waters of the state; or
  - (b) The road has one or more culverts with an imminent risk of failure, as defined in OAR 629-600-0100.
- (8) If the road condition assessment identifies necessary road repairs, other than the road conditions in section (7)(a) and (b) of this rule, there shall be no time limit in which the small forestland owner must complete those repairs, though the obligation to improve roads when used for harvest remains.