

Be Prepared: Regional landslide risks increasing

October 5, 2023



State agencies and the National Weather Service are urging travelers to be aware of the potential for landslides triggered by fall and winter heavy rain events.

Moderate to heavy rain may result in landslides in areas of steep terrain, as well as debris flows in and near burn scars from recent wildfires including the Smith River Complex, the Flat Fire, the Anvil Fire, and the Tyee Complex.

Find the latest information here: <https://alerts.weather.gov/cap/or.php?x=1>

Travel danger

The Oregon Department of Transportation (ODOT) and the Oregon Department of Geology and Mineral Industries (DOGAMI) urge travelers and residents to be aware of the potential flood and landslide dangers during and after such heavy rain events.

Landslides are caused by a combination of factors, including the type of geology, the slope, and usually water, according to the DOGAMI, repeating rainstorms saturate soils, which do not have enough time to

drain. The water builds up in the soil and leads to failure or a landslide.

According to a DOGAMI study, landslides and debris flows are common in the Oregon Coast Range due to the combination of high precipitation, steep slopes, and landslide-prone geologic units.

People, structures and roads located below steep slopes in canyons and near the mouths of canyons may be at serious risk.

Dangerous places can include:

Canyon bottoms, stream channels and areas of rock and soil accumulation at the outlets of canyons.

Bases of steep hillsides.

Road cuts or other areas where slopes of hills have been excavated or over-steepened.

Places where slides or debris flows have occurred in the past.

Debris flows are rapidly moving, extremely destructive landslides. They can contain boulders and logs transported in a fast-moving soil and water slurry down steep hillsides and through narrow canyons.

Debris flows can easily travel a mile or more and can often move faster than a person can run. People, structures, and roads located below steep slopes in canyons and near the mouths of canyons may be at serious risk.

If your home, work, or route is in a watch area:

Stay alert. Track the flood watch by radio, TV, weather radio or online. If told to evacuate, do so immediately.

Listen. Unusual sounds might indicate moving debris, such as trees cracking or boulders knocking together. A trickle of falling mud or debris may precede larger landslides. If you think there is danger of a landslide, leave immediately.

Watch the water. If water in a stream or creek suddenly turns muddy or the amount of water flowing suddenly decreases or increases, this is a warning that the flow has been affected upstream. You should immediately leave the area because a debris flow may soon be coming downstream.

Travel with extreme caution. Assume roads are not safe. Be alert when driving, especially at night. Embankments along roadsides may fail, sending rock and debris onto the road.

For more landslide and debris flow information, visit
<https://www.oregongeology.org/Landslide/debrisflow.htm>

According to DOGAMI's A Homeowners Guide to Landslides, a landslide is the downward slope movement of rock, soil or debris. Debris flow, earth flow, rock fall, mudflow, mudslide, and slump are also terms for landslide.

Landslides can take human life. However, even a few inches of slope movement can disrupt septic, sewer and water lines and crack foundations severely damaging or destroying your home, according to the guide.

If you live on or near a steep slope, the guide encourages you to look for warning signs of landslides by evaluating your property for signs of landslide movement. Many, but not all, signs of landslide activity are listed below.

Inside Your Home:

- Cracks in walls
- Nails popping out of walls
- Bulging walls
- Separation of chimney from walls
- Creaking/popping noises
- Light switches coming out of walls
- Doors/windows hard to shut
- Twisted beams
- Cracks in floors
- Water seeping into basement

Outside Your Home:

- Changes in surface drainage
- Bulges in retaining walls or tilting of walls
- Cracks developing in the soil
- Pistol-butted or bent trees
- Broken water, utility, or sewer lines
- Cracks in sidewalks or foundation
- Stretched or leaning utility lines

The guide also recommends actions property owners can take to reduce the chances of landslides, which include:

Draining water from surface runoff, downspouts, and driveways well away from slopes.

Planting native ground cover on slopes.

Consulting with a professional before significantly altering existing slopes uphill or downslope of your home.

The Oregon Department of Transportation (ODOT) is also keeping a close watch on the landslide potential.

During periods of heavy rainfall, travelers should recognize that there is a higher likelihood that slides can happen, according to ODOT officials, who said drivers need to slow down, drive carefully, pay attention to their driving, avoid distractions, and watch for hazards.

According to DOGMI, average annual repair costs for landslides in Oregon exceed \$10 million, and severe winter storm losses can exceed \$100 million, according to DOGMI. As population growth continues and development into landslide susceptible terrain occurs, damage and loss from this natural hazard will continue to grow.

For more information:

Visit <https://www.oregongeology.org/Landslide/landslidehome.htm>

View the DOGAMI web map to see landslide areas <https://gis.dogami.oregon.gov/maps/slido/>

View the homeowner's guide to landslides at

https://www.oregongeology.org/Landslide/ger_homeowners_guide_landslides.pdf