



Forest Practices Protections for Timber Harvest in Landslide-Prone Areas

Forest Practices Protections Against Landslides

The Washington State Department of Natural Resources (DNR) takes seriously its responsibility to protect the public from landslides and from forest practices activities that may contribute to landslides. In this factsheet, you will learn how DNR regulates forest practices to protect the communities and wildlife habitats of Washington, the steps we've taken as recently as February of 2014 to improve our ability to prevent and respond to landslides, and the investigation we're conducting into forestry activities around the Oso Landslide.

Forestry Activities and the Oso Landslide

Immediately after the massive Oso Landslide, DNR initiated a review of forestry-related activities in the area. This investigation is being led by **State Forester Aaron Everett**, who is also DNR Deputy Supervisor for Forest Practices.

“We will rely on scientific expertise, not speculation, to ascertain the contributing factors to this tragedy,” said Everett. “The restrictions on timber harvest in this area were designed to prevent forest practices from contributing to increased landslide risks. We are in the process of vigorously reviewing the history of forest practices in the surrounding region. There have been reports that harvesting may have occurred in a prohibited area designed to protect groundwater adjacent to the landslide during the previous DNR administration, but we are still investigating and ask that our inquiry be allowed to conclude before rushing to judgment. We will share more once we have access to the site for a more thorough review.”

“The Oso landslide is part of a landslide complex in the glaciated Stillaguamish River valley that experienced deep-seated landslides – meaning the slide plane is below the depth of tree roots,” said **State Geologist Dave Norman**. “Groundwater, excessively charged from periods of heavy rainfall, weakens these glacial sediments, and river erosion along the base of the valley slopes also contributes to the potential for landsliding.”



CONTACTS:

Diana Lofflin | Interim Communications Director | 360-902-1023 | diana.lofflin@dnr.wa.gov
Washington State Department of Natural Resources

PRINTED 03/27/2014

Forest Practices Background

DNR regulates [forest practices](#) on non-federal forestland, including timber harvest, road-building, and other activities. [Forest practices rules](#) are set by the [Forest Practices Board](#), a 13-member, independent state agency which DNR chairs. Landslide risk and unstable slopes are among the many significant public resource protections that are addressed by the rules. Rules like those that apply to unstable slopes are developed by an independent [Adaptive Management Program](#), which contains a science development branch ([Cooperative Monitoring, Evaluation, and Research](#), or “CMER”) and a [Policy Committee](#), whose job is to interpret the science and advise the Board. The unstable slopes rules were last [updated in 2011](#) and have been the subject of significant recent work in the Adaptive Management Program.

After nearly six years of science, operational review, and policy discussions about the rules’ overall approach to landslides, the Adaptive Management Program delivered [recommendations](#) to the Forest Practices Board in February 2014. This third-party review resulted in no new rule changes regarding landslides being recommended, although a number of improvements in DNR’s ability to detect landslide hazards were cited as being needed, along with further scientific inquiry.

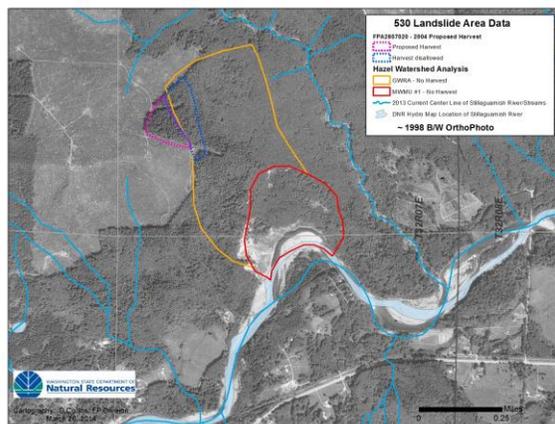
Landslide Hazards in the Hazel Watershed

The 2014 landslide near Oso, Washington is located in the “Hazel” Watershed Analysis Unit. Prior to the 2011 rule changes, unstable slope risks were addressed using a site-by-site set of forest practices protections (called “prescriptions”) through a process called [Watershed Analysis](#). The rule change was to replace Watershed Analysis prescriptions that were not site-specific enough and had not been updated in some time. The Hazel Watershed Analysis, however, contained detailed prescriptions that were the product of rigorous geologic review. It was completed in 1997 and meets or exceeds all current rule requirements for harvest restrictions. Some areas are prohibited from any timber harvest or road-building, while other areas have significant restrictions on those activities. The Analysis also contains a helpful, detailed history and summary of the geology and landslide activity in the area.

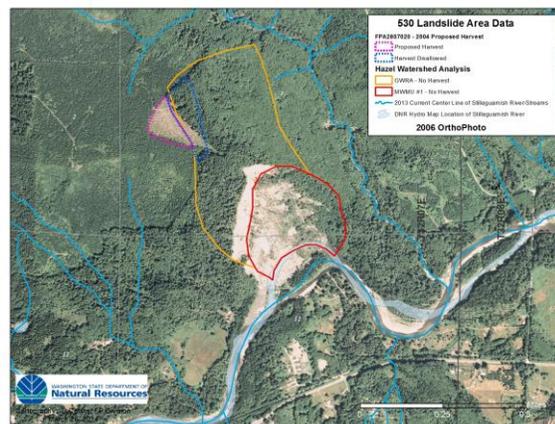
- [Watershed Analysis](#)
- [Restrictions Map](#)
- [Restrictions Summary](#)
- [Restrictions Detail](#)

Land Ownership and Recent Timber Harvest in the Hazel Watershed

The Hazel Watershed has a history of timber harvest dating back to the 1800s. The most recent harvest activity in the area was conducted by a private forest landowner in 2004 and 2012. An initial 2004 harvest proposal was rejected by DNR because it would have removed trees within a restricted groundwater recharge area. Approximately one acre of harvest appears to have been removed within the restricted groundwater recharge area.



Pre-Harvest Map – 1998

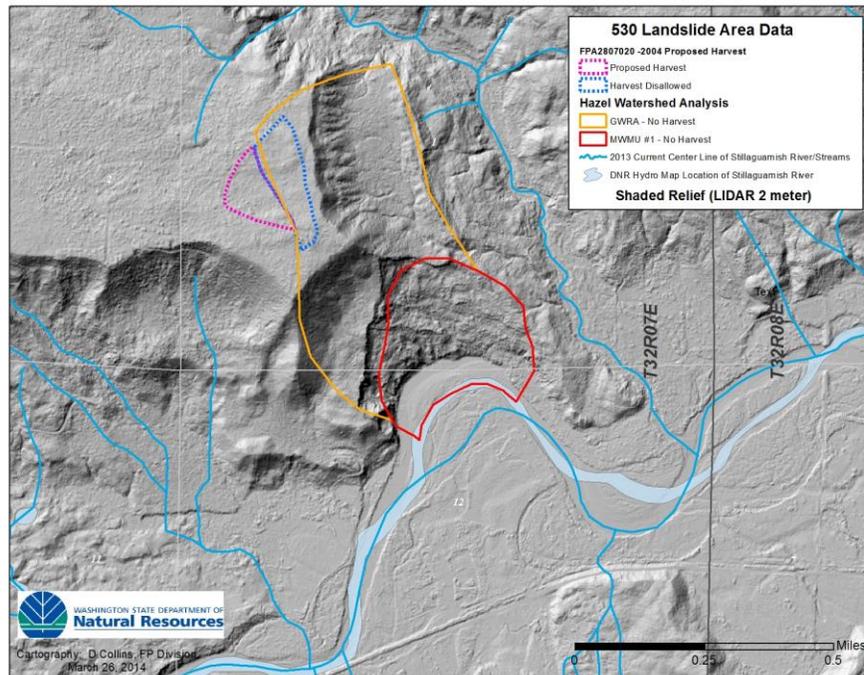


Post-Harvest Map – 2006

CONTACTS:

Diana Lofflin | Interim Communications Director | 360-902-1023 | diana.lofflin@dnr.wa.gov
Washington State Department of Natural Resources

PRINTED 03/27/2014



Terrain Map - 2013

Recent Forest Practices Reviews of Landslide Rules

In December 2007, an historic series of storms hit Western Washington. In some places, within a span of two days, 20 inches of rain fell on top of several inches of recent snow, [causing thousands of landslides](#). After the storm, concerns arose regarding how well unstable slopes protections in the forest practices rules were working. DNR and the Forest Practices Board requested follow-up analysis to address this concern. The first analysis was to examine where landslides had occurred and which of those locations had been identified as hazards by the rules in place at the time. This study, [The Mass Wasting Effectiveness Monitoring Project: An examination of the landslide response to the December 2007 storm in Southwest Washington](#), was completed in 2012.

DNR also proceeded with a follow-up review of a subset of areas to ascertain whether rule compliance was adequate. This report, the [Southern Willapa Hills Retrospective Study](#), was completed in 2013. Of the 103 forest practice applications reviewed, the *Willapa* study found only one that had a compliance issue. However, 28 of the 103 applications would likely have been done differently under the rules that were tightened in 2011, as compared with the rules in place at the time of the application.

CONTACTS:

Diana Lofflin | Interim Communications Director | 360-902-1023 | diana.lofflin@dnr.wa.gov
 Washington State Department of Natural Resources

PRINTED 03/27/2014