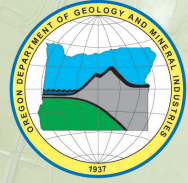


# OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

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NEWS RELEASE: December 18, 2013

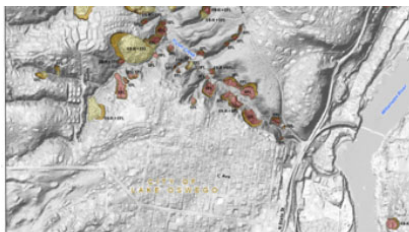
## New report finds landslide risks are high for Clackamas County in Portland metro area

*Mapping and susceptibility study reveals landslide hot spots, but can help reduce risk through awareness, planning, and regulation*

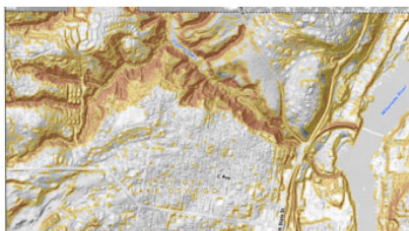
PORTLAND, Ore. –The Oregon Department of Geology and Mineral Industries (DOGAMI) has released landslide susceptibility maps that will aid land use and emergency planners in northwestern Clackamas County and could help make residents safer.

The study area contains densely developed land and many landslides. From Milwaukie to Canby and from Wilsonville to Sandy, it's home to thousands of residents and important infrastructure like roads and electrical transmission lines.

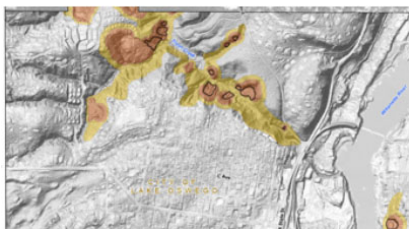
Scientists identified 2,885 existing landslides, on top of which sits \$1 billion worth of buildings and land with almost 8,000 people. The new study helps us understand the potential scale of future landslides; we can estimate damage and losses. We found that \$7.5 billion of buildings and land with over 20,000 people are in high risk areas for shallow and deep landslides. Moreover, in the event of a large, local crustal earthquake, damage and losses from landslides alone would be high, with up to \$1 billion in losses and about 4,500 buildings moderately to completely destroyed.



*Landslide **inventory** map detail of Lake Oswego. Colors show existing mapped landslides.*



*Corresponding **shallow** landslide **susceptibility** map. Colors show areas at risk for landslides with depths of failure less than 15 feet.*



*Corresponding **deep** landslide **susceptibility** map. Colors show areas at risk for landslides with depths of failure more than 15 feet.*

*Map scale for full-size maps is 1:8,000.*

*To preview this publication, visit:*

<http://www.oregongeology.org/pubs/ofr/p-O-13-08.htm>

*DOGAMI's mission is to provide earth science information and regulation to make Oregon safe and prosperous.*

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To locate landslides, DOGAMI scientists used lidar, a laser-mapping technology that allows for amazingly detailed and accurate mapping of the earth's surface. From 1964-2009, there were 370 recorded landslides in this area. The authors estimated direct losses in dollars from past landslides ranged from hundreds of thousands to millions in typical winter storm years, with up to tens of millions to \$75 million in severe storm years, such as 1996.

"Clackamas County appreciates having state of the science hazard tools like these new landslide susceptibility maps," says Jay Wilson, the County's hazard mitigation coordinator. "We will work with the State to integrate them into existing plans and share their benefits to residents for the sake of being aware of the hazard though improved mapping."

These maps and loss estimation products can be used by planning and emergency management officials in emergency response plans, public outreach activities, the selection of appropriate safe-haven sites, and mitigation of critical facilities and infrastructure. For example, by combining the hazard maps with transportation data, potential road blockages can be identified and alternative routes located.

"It's important to remember that these maps are valuable for regional screening, but they aren't for site specific evaluations," says Bill Burns. "However, they give planners an idea of what's out there and where to focus their efforts."

Funding for the landslide susceptibility study was provided by Clackamas County, Federal Emergency Management Agency, Oregon Emergency Management, Metro, and the cities of Happy Valley, Lake Oswego, Wilsonville, and Oregon City.

To see a preview of **DOGAMI Open-File Report O-13-08, Landslide Hazard and Risk Study of Northwestern Clackamas County, Oregon**, visit: <http://www.oregongeology.org/pubs/ofr/p-O-13-08.htm>

The report can be purchased on disc for \$30 each from Nature of the Northwest Information Center, 800 NE Oregon Street, Suite 965, Portland, Oregon, 97232. You may also call (971) 673-2331 or order online at <http://www.NatureNW.org>. There is a \$4.95 shipping and handling charge for all mailed items.

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The Oregon Department of Geology and Mineral Industries is an independent agency of the State and has a broad responsibility in developing an understanding of the state's geologic resources and natural hazards. The Department then makes this information available to communities and individuals to help inform and reduce the risks from natural hazards, such as earthquakes, tsunamis, landslides, floods and volcanic eruptions. The Department assists in the formulation of state policy where an understanding of geologic materials, geologic resources, processes, and hazards is key to decision-making. The Department is also the lead state regulatory agency for mining, oil, gas and geothermal exploration, production and reclamation. Learn more at [www.OregonGeology.org](http://www.OregonGeology.org).

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