

State geologists seek money for landslide mapping

By HILLARY BORRUD
Capital Bureau

SALEM — State geologists say Oregon should do more to map past landslides and areas at risk of slides in the future.

They've asked for more than \$280,000 to do this work over the next two years, and the proposal gained support from Gov. John Kitzhaber going into the 2015 legislative session.

If geologists can also win over lawmakers, they will be able to expand the use of laser-mapping technology that has already led to highly detailed landslide maps for Astoria, Vernonia, northwest Clackamas County and a couple other areas of the state.

The technology known as LIDAR, which uses light pulses from equipment on aircraft to collect topographic data, made a big difference in mapping Vernonia's landslides. State maps previously did not show any landslides in the community, but with LIDAR the state was able to locate 630 slides.

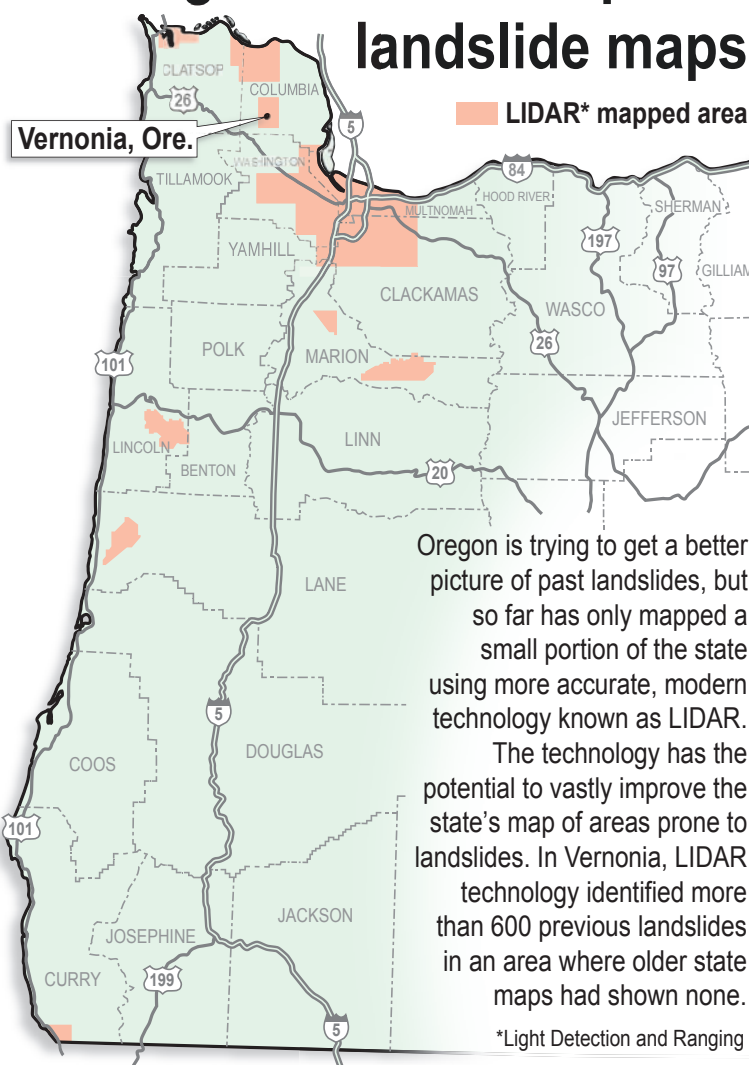
Unfortunately, that information only became available after a series of storms in December 2007 caused devastating flooding and landslides in the community. The disaster prompted then-Gov. Ted Kulongoski to support better mapping of the area.

In front of disaster

State geologists want to provide that type of information before disaster strikes to land use planners and other decision makers across the state, so they can make more informed decisions about future development proposals and efforts to protect existing structures in landslide hazard areas.

"You really shouldn't do this work after a disaster happens," said

Oregon works to improve landslide maps



Oregon is trying to get a better picture of past landslides, but so far has only mapped a small portion of the state using more accurate, modern technology known as LIDAR. The technology has the potential to vastly improve the state's map of areas prone to landslides. In Vernonia, LIDAR technology identified more than 600 previous landslides in an area where older state maps had shown none.

*Light Detection and Ranging

Source: Oregon Dept. of Geology and Mineral Industries

Hillary Borrud and Alan Kenaga/
EO Media Group

Bill Burns, an engineering geologist with the Oregon Department of Geology and Mineral Industries. "You want to do it before ... the idea behind this (proposal) is to try to get in front of these things, not behind them. It's for us to set up a permanent landslide program."

Unlike with other types of hazardous events, property insurance is not available for damages caused by landslides.

"So what we see over and over is most people when a landslide occurs, they tend to lose everything," Burns told lawmakers during a hearing

earlier this month. "And one of the biggest investments we make in our lives is a home, and losing all that is just devastating."

Most existing topographic maps were drawn up in the 19th century and these are usually accurate within a range of 10 to 40 feet, State Geologist Vicki McConnell told lawmakers during a December legislative hearing. LIDAR technology maps geologic features with a range of accuracy to within a few inches.

"It's like putting your glasses on and really being able to see what's there," McConnell said.

The Oregon Department of Land Conservation and Development has also proposed hiring a new temporary employee to help communities incorporate new landslide data into their land use planning, and the governor has also signaled his support for that proposal.

Landslides are one of the hazards Oregon cities and counties must consider in their land use decisions under state law, and employees of the DLCDC are required to work with local communities to determine how to respond to new hazard inventories, such as landslide data.

More mapping

LIDAR technology was not widely available at an affordable price until the early 2000s, Burns said. Since then, state land use and geology employees have been working to improve landslide data and planning on a piecemeal basis, as they received grants for specific projects. This allowed the Department of Geology and Mineral Industries to develop a methodology to generate landslide maps from LIDAR data.

Oregon has collected LIDAR data on approximately 25 percent of the state, although the agency has not

had the resources to map much of that data.

A grant from the Federal Emergency Management Agency recently helped the state map and analyze landslide hazards in northwest Clackamas County.

In a report completed last year, geologists found that more than 7,000 residents and 3,000 buildings in the area were located on large, deep landslides. Matt Crall, a division manager who works on natural hazards issues for the Department of Land Conservation and Development, said the agency is working with Clackamas County to include the new landslide data in its planning process.

Similarly, the city of Astoria is also working to update its landslide hazard planning documents, to include the new data. Astoria City Planner Rosemary Johnson said the city has contracted with a geologist to combine state data with the city's existing information on landslides that occurred over the last 75 years.

"It's still in the early stage," Johnson said.

Next up for the Department of Geology and Mineral Industries is Multnomah County, for which the agency just received another federal grant to do the same type of work as in Astoria and northwest Clackamas County.

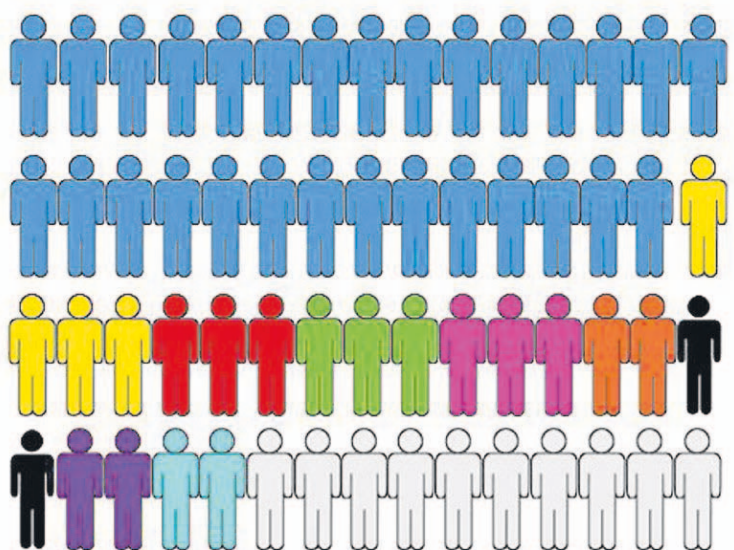
Although the agency already mapped landslides in Multnomah County using LIDAR data, geologists have not yet analyzed risk levels or generated maps of land susceptible to future landslides. Burns said this will likely be an 18-month project.

If lawmakers fund a permanent landslide hazard program, the state will no longer have to wait for grants to map landslide risk. Burns said the current proposal would allow the state to set its own priority list to map certain communities and key areas such as transportation corridors.

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Feeling poor?

Although feeling sorry for yourself is one of the great comforts of humankind, when it comes to money we Americans should count our blessings.

In the past couple years, different economic analysts have come up with figures of \$850, \$1,225 or \$2,920 as the average annual income for individuals worldwide. See tinyurl.com/oovskxj, tinyurl.com/kxgzbv6 and tinyurl.com/7zo6fd5. (The wide range reflects different assumptions about who to include and big information gaps for much of the world, where there is no effort to collect official income statistics.)

A couple years ago when the protests were going on about unfair wealth distribution, with much anger directed at the richest 1 percent in America, the UK's Daily Mail pointed out that an annual personal income of just \$34,000 would place you among wealthiest

1 percent in the world as a whole. In 2012, only about 60 million people on earth made that much money, and 29 million of them lived in the USA. Little will have changed since then.

Of course even \$34,000 is a pipe dream for many U.S. citizens in this age of a national minimum wage of \$7.25 an hour (\$9.10 in Oregon.) A year ago, Gallup reported based on polling that \$15,480 is the U.S. median income, meaning half make more and half make less.

An online calculator at CNN (tinyurl.com/nlgkd69) lets you see how your income compares with others around the globe. It rather unrealistically reports the official average U.S. annual wage as \$42,200. If you make that much, CNN says your income about equals that of 17 industrious Guatemalan farmers.

Diversifying news

Nigel Duara in "The Late Show" in Oregon Humanities magazine (Fall/Winter issue) writes:

What I can offer is this: as media splinters and diversifies, more of us will be in more places for longer periods of time. This time, it was Vice News with a live-streaming camera and Argus Streaming News, a news outlet that materialized wholesale at the (Ferguson, Mo.) protests. There was Infowars, the right-wing conspiracy theorist site, and the Huffington Post, winner of a Pulitzer Prize.

We're going to be in these places, with these people, affecting the nature of the news. Our role is absolutely necessary — that's true. But it's also true that we are altering the story as we report it, and there's probably no satisfying solution to this conundrum. <http://bit.ly/1xwatnn>



AP Photo Riedel

A protester squirts lighter fluid on a police car as the car windows are shattered near the Ferguson (Mo.) Police Department. The unrest erupted after a white police officer shot an unarmed black 18-year-old in suburban St. Louis.

In Russia, one is 'for' or 'against'

John Freeman in "Russian Winter" in Opera News, (January) reports:

In Russia today one is either "for" or "against." As always, in any society, the indifferent middle lends its weight to the camp that is "for" thus leading to the astronomical 87 percent approval rate that Putin enjoyed in August.

Meanwhile, for their loyal support of Putin's government, Russian artists can expect to continue receiving perks at home and the occasional metaphorical kick in the pants abroad. <http://bit.ly/1HZxIc4>

Submissions by Matt Winters and Steve Forrester.



AP Photo/ Maxim Shipenkov, Pool

From left, Armenian President Serge Sarkisian, Belarus' President Alexander Lukashenko, Kyrgyz President Almazbek Atambayev, Russian President Vladimir Putin and Kazakh President Nursultan Nazarbayev arrive for the Eurasian Economic Union summit in Moscow's Kremlin, Russia, Dec. 23.

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