

Oregon GEO

The Newsletter of the Geological Survey & Services Program

Fall 2022

Agency Update New Governing Board Members

In late September, the Oregon Legislature approved Governor Kate Brown's two new appointments to the DOGAMI Governing Board. Please join us in welcoming new board members Erica Medley and Anne MacDonald! We look forward to working with our new and incumbent board members as we move forward. We would also like to thank our outgoing board members, Katie Jeramiah and Chair Laura Maffei, for their years of service. Dr. Scott Ashford now Chairs the Governing Board with Linda Kozlowski as Vice Chair.



Erica Medley



Anne MacDonald

Staff Highlights



DOGAMI geologists Carli Azzopardi and Christina Appleby mapping the geology of the Wildhorse Creek area in northeast Oregon.



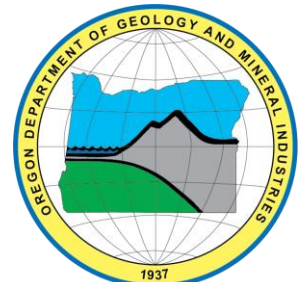
In August 2022, DOGAMI participated in the City of Cottage Grove's Emergency Preparedness Fair. The fair was held at Coiner Park in Cottage Grove and approximately 1,500 to 2,000 community members were in attendance. DOGAMI staff, including Director and State Geologist Ruarri Day-Stirrat, Christina Appleby, Lowell Anthony, and Alex Lopez were there to talk with the public about geologic hazards in the southern Willamette Valley, and strategies for mitigating those risks.

Get Ready for Landslide Season!

The winter/rainy season is landslide season in Oregon. Landslides are one of Oregon's most common and destructive (and sometimes fatal) natural hazards. There are three primary factors which make certain areas more prone to landslides: geology, slope, and water. DOGAMI scientists have identified more than 50,000 landslides in Oregon. Land that has slid once tends to slide again and therefore knowing where landslides have occurred in the past is critical to understanding, and preparing for, future landslides. DOGAMI maintains a database of landslide information called The Statewide Landslide Information Database for Oregon or SLIDO, available at: <https://www.oregongeology.org/slido/index.htm>.

Prior to the landslide season is the time to become familiar with the land around you. Do you live or work in a landslide prone area? Do you know where to evacuate to if needed? Watch the patterns of storm water discharge on slopes near your home. During intense storms, stay alert and monitor the weather. If you are in an area susceptible to landslides, consider leaving and remember that driving can also be hazardous. Find more information for homeowners at: https://www.oregongeology.org/Landslide/ger_homeowners_guide_landslides.pdf.

In addition to the statewide landslide inventory, DOGAMI also studies landslide risks and mitigation strategies in individual Oregon communities. For example, several communities have been impacted by recent wildfires, which can result in an elevated risk of post-fire debris flows. DOGAMI applied for and received FEMA grant funding to work with communities in the Columbia River Gorge, North Santiam River, McKenzie, River, and the North Umpqua River to map the hazard zones, evaluate the risk, and work on risk reduction. More information on this new project is available at: <https://www.oregongeology.org/Landslide/PostFireDebrisFlow.htm>.



New Tsunami Routable Roads Resource Added

The key to surviving a local Cascadia tsunami is evacuation preparation. Visitors and locals alike need to know where safety is and how to get there **BEFORE** the next Cascadia earthquake and tsunami. It will be too late to look up this information during the earthquake shaking or in the ~10-30 minutes before the tsunami arrives on the Oregon Coast.

To make this information as accessible as possible, DOGAMI, in partnership with the Northwest Association of Networked Ocean Observing System (NANOOS), researchers at the University of Oregon (UO) Infographics Lab, and the UO Safety and Risk Services Location Innovation Lab, have developed the ability to automatically generate evacuation routes for any location on the Oregon coast within the tsunami zone via a web portal (<http://nvs.nanoos.org/TsunamiEvac>). Users can enter an address for a specified location and an evacuation route is automatically generated from that starting point to the nearest high ground outside of the tsunami zone. Additional information such as the distance to safety and travel speed needed to “Beat the Wave” is also included.

The ability to easily and quickly look up evacuation routes allows families to develop a plan for the many locations they occupy during the course of their daily activities, i.e. home, work, school, beach visitation, etc. This tool also provides visitors with an easy way to become informed about their evacuation options in a place they may not be familiar with.

It has been proven that practicing evacuation is a key indicator of survival. DOGAMI's tsunami evacuation tool provides a quick and easy way to encourage preparation by providing information (including routes and recommended travel speeds) for people to use when developing their own evacuation plans.



New Publications

Open-File Report O-22-06, Earthquake and tsunami impact analysis for coastal Lane, Douglas, and Coos Counties, Oregon (<https://www.oregongeology.org/pubs/ofr/O-22-06/p-O-22-06.htm>)

Open-File Report O-22-05, Multi-Hazard Risk Report for Marion County, Oregon (<https://www.oregongeology.org/pubs/ofr/O-22-05/p-O-22-05.htm>)

Open-File Report O-22-04, Natural Hazard Risk Report for Washington County, Oregon (<https://www.oregongeology.org/pubs/ofr/O-22-04/p-O-22-04.htm>)

Fact Sheet - Cascadia Earthquake Knowledge Points for Emergency Managers and the Public (<https://www.oregongeology.org/pubs/fs/cascadia-planning-for-em-and-public.pdf>)

Special Paper SP-53, Protocol for Channelized Debris Flow Susceptibility Mapping (<https://www.oregongeology.org/pubs/sp/SP-53/p-SP-53.htm>)

Open-File Report O-22-03, Multi-Hazard Risk Report for Wallowa County, Oregon, including the Cities of Enterprise, Lostine, Joseph, and Wallowa (<https://www.oregongeology.org/pubs/ofr/O-22-03/p-O-22-03.htm>)

Featured Resources

- Tsunami Clearinghouse (www.oregontsunami.org)
- Oregon HazVu: Statewide Geohazards Viewer (www.oregongeology.org/hazvu/index.htm)
- DOGAMI Lidar Data (www.oregongeology.org/lidar/index.htm)
- USGS ShakeAlert Earthquake Early Warning System (www.oregon.gov/oem/hazardsprep/Pages/orshakealert.aspx)

About the GS&S Program

DOGAMI's Geological Survey & Services program develops maps, reports, and data to help Oregon manage natural resources and prepare for natural hazards such as earthquakes, tsunamis, landslides, floods, volcanoes, coastal erosion, and climate change.

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