## OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES VICKI S. MCCONNELL, STATE GEOLOGIST



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## Tsunami inundation scenario data released for entire Oregon coast

Seamless GIS data set reflects latest computer modeling

Portland, Oregon: The Oregon Department of Geology and Mineral Industries (DOGAMI) has released **Open-File Report O-13-19, Tsunami Inundation Scenarios for Oregon**, by George R. Priest, Robert C. Witter, Y. Joseph Zhang, Kelin Wang, Chris Goldfinger, Laura L. Stimely, John T. English, Sean G. Pickner, Kaleena L.B. Hughes, Taylore E. Wille, and Rachel L. Smith.

This digital data release includes seamless, statewide tsunami inundation scenarios in the form of Esri® ArcGIS® shapefiles for seven scenarios selected for depiction on published Oregon Department of Geology and Mineral Industries (DOGAMI) tsunami inundation maps (<u>TIM series</u>). The data were also used to create the latest generation of <u>tsunami evacuation</u> <u>maps</u> for Oregon. A 14-page text report describes the numerical model used to create the scenarios and the assumptions and criteria used to make the inundation lines.

The scenarios include five from local Cascadia subduction zone (CSZ) earthquakes (SM1, M1,

L1, XL1, and XXL1) and two maximum-considered distant tsunamis from subduction zone

earthquakes in the Gulf of Alaska: a historical maximum that occurred in 1964 (AK64) and a

hypothetical maximum (AKMax) with higher uplift and more efficient focusing of tsunami

energy at the Oregon coast than in 1964.

Example mapviews of tsunami shapefile data for (left) five Cascadia Subduction Zone and (riaht) two distant tsunami scenarios in the Ophir - Nesika Beach - Gold Beach area. These seamless inundation lines cross Tsunami Inundation Map (TIMs) series publication boundaries (grey outlines). The seamless data cover the entire Oregon coast. See text report for more details.

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

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In addition to the scenario shapefiles, the publication includes the following shapefiles for data used to create the TIM maps and tsunami evacuation maps, as well as other supporting files such as map indexes and project area model and grid boundaries: assembly areas, critical facilities, evacuation zones, high ground outside the hazard area, evacuation map index polygons, TIM map index polygons, and tsunami data grid seams.

The work to create the data provided in this publication was funded under award #NA09NW54670014 by the National Oceanic and Atmospheric Administration (NOAA) through the National Tsunami Hazard Mitigation Program. Other contributing partners include Oregon Emergency Management, NOAA's National Weather Service, and the many local emergency management and response representatives who provided input and guidance for the creation of the TIM maps and tsunami evacuation maps.

To learn more about the O-13-19 publication visit: http://www.oregongeology.org/pubs/ofr/p-O-13-19.htm

DOGAMI Open-File Report O-13-19 can be purchased on CD-ROM for \$30 each from the **Nature of the Northwest Information Center (NNW**), 800 NE Oregon Street, Suite 965, Portland, Oregon, 97232. You may also call NNW at (971) 673-2331 or order online at <u>http://www.naturenw.org</u>. 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.

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