

**Oregon Department of Geology and Mineral Industries**  
**800 NE Oregon Street #28, Suite 965, Portland, OR 97232**  
**503.731.4100 FAX 503.731.4066 WEB <http://www.oregongeology.com>**

---

***NEWS RELEASE***

December 29, 2004

CONTACT: James Roddey 503.731.4100 x242 or cell phone at 503.807.8343

**FOR IMMEDIATE RELEASE**

**Could a large tsunami  
strike the Oregon coast?**

**Portland, Oregon:** Could a natural disaster like the tsunami that hit the countries around the Indian Ocean happen here in Oregon? "In a word, yes," says James Roddey, Community Education Coordinator with the Oregon Department of Geology and Mineral Industries (DOGAMI). "We have a similar active fault offshore, so we will someday experience an earthquake and tsunami similar to the one that just hit Southeast Asia. We can expect a magnitude 9 earthquake and resulting tsunami that would devastate the Pacific Northwest coast from Cape Mendocino to British Columbia. The bad news is that it would be a horrible event. The good news for Oregon and the Pacific Northwest is that we are much better prepared than the countries around the Indian Ocean to respond to an event like this."

DOGAMI, Oregon Emergency Management (OEM) and many other state and local agencies, under a mandate from the Governor's Office and the State Legislature, have been working for the last decade to prepare coastal communities for the possibility of a devastating tsunami.

Beginning in 1995, tsunami inundation maps were produced for the whole coast to implement Oregon Senate Bill 379, which limits construction of critical and essential facilities in tsunami inundation zones. Working in close partnership with the National Oceanic and Atmospheric Administration (NOAA), OEM, Oregon Graduate Institute of Science and Technology (now part of OHSU), and local governments, DOGAMI has produced detailed tsunami inundation maps and evacuation route maps for most of the populated communities of the Oregon coast.

DOGAMI is also working with OEM, Oregon Department of Transportation, and the Oregon Parks and Recreation Department to place tsunami information signs along the coast and at many state parks. Many communities have installed warning systems to alert people of an approaching tsunami and many coastal towns have installed tsunami evacuation route signs.

On a national level, NOAA has created a Pacific Ocean-based tsunami monitoring and warning system that can pinpoint where and when a tsunami might strike the coast from distant

## Oregon Department of Geology & Mineral Industries News Release - page 2 of 3

---

sources. These warnings are relayed to coastal communities throughout Oregon, the West Coast, Alaska, and Hawai'i. This is all part of an international effort to reduce the loss of life and property along the coastlines of the Pacific Rim.

Learn more at: <http://www.noaa.gov/tsunamis.html>

NOAA has also partnered with DOGAMI and OEM to develop an innovative tsunami hazard educational pilot program that is currently underway in Seaside. Cannon Beach, Manzanita, Nehalem and Wheeler have been named TsunamiReady communities by NOAA for the work they have done in preparation for a tsunami.

Learn more about TsunamiReady communities at:

<http://www.prh.noaa.gov/ptwc/tsunamiready/faq.htm>

"Tsunamis certainly rank as one of the most dangerous natural disasters that could affect the Oregon coast," notes State Geologist Dr. Vicki McConnell. "As we have just witnessed from the Sumatra earthquake and tsunami in the Indian Ocean, these processes can cause millions of dollars in property damage and result in the death or injury of thousands of people."

There are actually two types of tsunamis that can cause damage in Oregon – local and distant. The most destructive type of tsunami would be generated locally by a Cascadia subduction zone earthquake. More likely to affect Oregon are the distant tsunamis, which can be generated from underwater disturbances anywhere in the Pacific Ocean. Most distant tsunamis would be generated by earthquakes and would probably arrive four hours or more from the time of the earthquake. The National warning system would be effective in issuing warnings for these events.

(To learn more, go to: <http://www.oregongeology.com/earthquakes/oratrisk.htm>)

"Since 1946, several tsunamis have struck the US Pacific Northwest coast and Hawai'i, killing hundreds of people, including 4 deaths in Oregon, and causing a half billion dollars in property damage," says McConnell. "While we cannot prevent these disasters, adequate preparedness measures by the people who live at and visit coastal areas can save hundreds of lives."

Dr. George Priest, a coastal geologist with DOGAMI, has been studying tsunamis for years and has guided development of the tsunami hazard mapping and mitigation program for the State. According to Priest, scientific research in the past ten years has established that great (magnitude 8 to 9) undersea earthquakes off the Oregon coast have resulted in devastating tsunamis, which have struck at intervals ranging from as little as 200 to as much as 1000 years apart. The overall average recurrence interval is on the order of 500 to 600 years. "The last event was about 305 years ago, on January 26, 1700, so another could happen at any time," says Priest. "The earthquake itself might last up to four minutes, damaging roads, bridges, and other facilities. Within 10 to 30 minutes after the start of the earthquake, the first of several large tsunami waves will strike the coast. People must realize that strong shaking at the coast means that it is vital to evacuate immediately inland or to high ground. That is our challenge – to create a culture of tsunami awareness before this event can happen."

Jay Wilson, Earthquake and Tsunami Program Coordinator with OEM echoes Priest's warning and has important advice on how to be prepared. "Strong earthquakes along the Oregon Coast may create a local tsunami that can reach the shore in minutes. The earthquake may be

## Oregon Department of Geology & Mineral Industries News Release - page 3 of 3

---

your only signal to move quickly inland and to high ground.” Wilson urges coastal residents and visitors to learn where the tsunami evacuation zones are for their communities. “You should regularly practice drop, cover and hold for earthquakes and also practice tsunami evacuation drills at home, school and work. Prepare a disaster supply kit, an emergency contact list, and a safe meeting location. During a tsunami evacuation, do not linger or return to the beach to watch for the tsunami. An approaching tsunami travels at jet speeds in the open ocean and cannot be outrun when making landfall. Wait for the ‘All Clear’ from local officials, before returning,” says Wilson.

As much as has been done to prepare coastal communities in Oregon for tsunamis, there is still much more to do. A survey of coastal residents taken in 1998 showed that many people remain unclear on what causes tsunamis and what to do if they felt a large earthquake at the coast.

“We realize that our work is only partially finished when we release a tsunami hazard map. As much as we’ve done to get the word out, we have to continue to educate, inform and advise coastal residents and visitors that they have to be prepared,” says State Geologist McConnell. “Our warning systems need to work better and people at the coast really need to take the tsunami threat seriously. Their lives depend on knowing what to do when a large earthquake and tsunami occur at the coast.”

Learn more about tsunamis and the Oregon coast at:

<http://www.oregongeology.com/earthquakes/Coastal/CoastalHazardsMain.htm>

Learn more about Oregon Emergency Management at:

<http://www.osp.state.or.us/oem/>

The Oregon Department of Geology and Mineral Industries is an independent agency of the State, and has a broad responsibility in developing a geologic understanding of natural hazards. We then make this information available to communities and individuals to help reduce the risks from earthquakes, tsunamis, landslides, floods and volcanic eruptions. We assist in the formulation of state policy where understanding of geologic materials, geologic resources, processes, and hazards are key to decision-making. The Department is also the lead state regulatory agency for mining, oil, gas and geothermal exploration, production and reclamation.

For more information on upcoming events and current projects, contact James Roddey at 800 NE Oregon St., Portland, OR 97232, (503) 731-4100, ext. 242 or on cell phone at (503) 807-8343.

DOGAMI field offices can be contacted at: 1510 Campbell St., Baker City, (541) 523-3133; 5375 Monument Drive, Grants Pass, (541) 476-2496; and the Mined Land Regulation and Reclamation Program, 229 Broadalbin St. SW, Albany, (541) 967-2039.

This release can be found online at:

<http://www.oregongeology.com/news&events/NewsReleases.htm>

Learn more about Oregon’s geology by going online at:

<http://www.oregongeology.com>