

Japan earthquake, tsunami spell need for preparedness

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Perhaps lost in the recent debates related to the earthquake and tsunami in Japan is that natural disasters and not nuclear energy should be the focus, says Oak Ridge National Laboratory's John Sorensen, an emergency preparedness expert.

Sorensen, who has produced several videos to help people survive manmade and [natural disasters](#), noted that the Pacific Northwest is especially vulnerable to events similar to the March 11 earthquake and subsequent tsunami that devastated cities in northeastern Japan.

"The Oregon coast is definitely at risk, especially to what scientists call a near-term tsunami caused by an earthquake within about 50 miles of the coast," Sorensen said. "Such an earthquake could easily generate 25- to 30-foot waves that would engulf the coast within minutes."

While more work in the area of preparedness remains, since 2004 the nation has made significant progress by improving the ability to detect and forecast tsunamis, according to the National Research Council report "Tsunami Warning and Preparedness." This is in large part because of the Deep-ocean Assessment and Reporting of Tsunamis, a [sensor network](#) of buoys, and legislation enacted over the last few years.

"Other federal and state activities to increase tsunami safety include: improvement to tsunami hazard and evacuation maps for many [coastal communities](#); vulnerability assessments of some coastal populations in several states; and new efforts to increase public awareness of the hazard

and how to respond," the National Research Council report stated.

Still, if a near-term tsunami were to occur, people living in Oregon's Cannon Beach and Seaside, for example, would have just five to 10 minutes to move to higher ground.

"If the source were so close to shore that only minutes were available before the [tsunami](#) reached the coast, the public would need to recognize natural cues - mainly, ground shaking from the tsunami-triggering earthquake - and know to evacuate even without official warnings," the report stated.

The report also noted that organization between the National Oceanic and Atmospheric Administration's West Coast and Alaska [Tsunami warning](#) centers has not been optimized. Problems cited include different areas of responsibility, management by different regional offices, the use of different technologies, and separate support and organizational cultures.

"As a result, the public could receive conflicting warning messages from the two centers," according to the report, which also noted that "the content of the warning messages is inconsistent with social science findings on the composition and delivery of effective warning messages."

Despite the many challenges, Sorensen said the events in Japan have increased awareness and he expects that to spur further activities to increase preparedness. For example, within a few years, people could receive text messages on their personal mobile devices, Sorensen said.

The National Research Council report was commissioned in 2006 when Congress requested that the National Academy of Sciences review the nation's ability to detect and forecast tsunamis. The academy expanded the study's scope to include assessment of the nation's ability to reduce

losses by educating and preparing the public.

Provided by Oak Ridge National Laboratory

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