

Addressing California's Tsunami Hazard

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California faces tsunami threats from both local and distant sources. North of Cape Mendocino, large earthquakes on the Cascadia Subduction Zone have the potential of causing tsunamis greater than 50 feet high as they travel onshore. For areas south of Cape Mendocino, smaller offshore reverse and thrust faults as well as submarine landslides are also capable of creating moderate to large local tsunamis which could impact adjacent coastal communities. All of California's coastal communities face a legitimate distant-source threat capable of producing tsunamis of 20 to 30 feet for portions of the central coast and 10 to 15 feet for southern California. These tsunami threats overall put over 300,000 coastal residents and millions of coastal visitors at risk on a daily basis. Recent tsunamis, primarily the February 27, 2010 Chilean event and the March 11, 2011 Japan event, have been wake-up calls for emergency managers, harbor masters, and other coastal planners. These two events have resulted in inconsistencies in coastal evacuation and response, and caused over \$100M in damages to 27 harbors in California.

An overview of the tsunami hazard and vulnerability of California will be summarized. Results from new hazard analyses and new planning tools being developed by the state will be presented. How these new tools address preparedness, response, mitigation, and recovery will also be discussed.

Biography: Rick Wilson is a Senior Engineering Geologist with the California Geological Survey who has worked for over 25 years in the geologic and seismic hazard fields, much of it with the state Seismic Hazard Mapping Program. For the past ten years, Mr. Wilson has been the Science Coordinator for the State of California Tsunami Preparedness and Hazard Mitigation Program, a program headed by the California Governor's Office of Emergency Services. Mr. Wilson is also the state Science Representative on the Coordinating Committee of the National Tsunami Hazard Mitigation Program (NTHMP), a partnership between federal and state governmental agencies designed to reduce the impact of tsunamis through hazard assessment, warning guidance, and mitigation. More recently, Mr. Wilson has been working on new planning tools to help ports and harbors improve tsunami response activities, and provide background information for making harbor improvements. These tools have been integrated into national NTHMP guidance for other states to use. For his tsunami planning work, Mr. Wilson was the recipient of the 2015 Andy Lee Award for Extraordinary Public Service for State Activities from the Floodplain Management Association.