

Attachment #1. The Tsunami Warning System

An international effort to save lives and protect property

The following material is excerpted from [Tsunami! The Great Waves](#)

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Overview of the Tsunami Warning System

The Tsunami Warning System (TWS) in the Pacific, comprised of 26 participating international [Member States](#), has the functions of monitoring seismological and tidal stations throughout the Pacific Basin to evaluate potentially tsunamigenic earthquakes and disseminating tsunami warning information. The Pacific Tsunami Warning Center (PTWC) is the operational center of the Pacific TWS. Located near Honolulu, Hawaii, PTWC provides tsunami warning information to national authorities in the Pacific Basin. [Tsunami.gov](#) lists current warnings, advisories and watches.

Tsunami Warning Centers

As part of an international cooperative effort to save lives and protect property, the [National Oceanic and Atmospheric Administration's](#) (NOAA) [National Weather Service](#) operates [two tsunami warning centers](#). The [West Coast/Alaska Tsunami Warning Center](#) WCATWC in Palmer, Alaska, serves as the regional Tsunami Warning Center for Alaska, British Columbia, Washington, Oregon, and California.

The [Pacific Tsunami Warning Center](#) in Ewa Beach, Hawaii, serves as the regional Tsunami Warning Center for Hawaii and as a national/international warning center for tsunamis that pose a Pacific-wide threat. This international warning effort became a formal arrangement in 1965 when PTWC assumed the international warning responsibilities of the Pacific Tsunami Warning System (PTWS). The PTWS is composed of 26 international [Member States](#) that are organized as the International Coordination Group for the Tsunami Warning System in the Pacific.

Tsunami Watch and Warning Determination

The objective of the PTWS is to detect, locate, and determine the magnitude of potentially tsunamigenic earthquakes occurring in the Pacific Basin or its immediate margins. Earthquake information is provided by seismic stations operated by PTWC, ATWC, the U.S. Geological Survey's [National Earthquake Information Center](#) and international sources. If the location and magnitude of an earthquake meet the known criteria for generation of a tsunami, a tsunami warning is issued to warn of an imminent tsunami hazard. The warning includes predicted tsunami arrival times at selected coastal communities within the geographic area defined by the maximum distance the tsunami could travel in a few hours. A tsunami watch with additional predicted tsunami arrival times is issued for a geographic area defined by the distance the tsunami could travel in a subsequent time period.

If a significant tsunami is detected by sea-level monitoring instrumentation, the tsunami warning is extended to the entire Pacific Basin. Sea-level (or tidal) information is provided by NOAA's [National Ocean Service](#), PTWC, WCATWC, university monitoring networks and other participating nations of the PTWS. The [International Tsunami Information Center](#), part of the Intergovernmental Oceanographic Commission, monitors and evaluates the performance and effectiveness of the Pacific Tsunami Warning System. This effort encourages the most effective data collection, data analysis, tsunami impact assessment and warning dissemination to all TWS participants.

Tsunami Warning Dissemination

Tsunami watch, warning, and information bulletins are disseminated to appropriate emergency officials and the general public by a variety of communication methods.

- Tsunami watch, warning and information bulletins issued by [PTWC](#) and [WCATWC](#) are disseminated to local, state, national and international users as well as the media. These users, in turn, disseminate the tsunami information to the public, generally over commercial radio and television channels.
- The NOAA Weather Radio System, based on a large number of VHF transmitter sites, provides direct broadcast of tsunami information to the public.
- The [US Coast Guard](#) also broadcasts urgent marine warnings and related tsunami information to coastal users equipped with medium frequency (MF) and very high frequency (VHF) marine radios.
- Local authorities and emergency managers are responsible for formulating and executing evacuation plans for areas under a tsunami warning. The public should stay-tuned to the local media for evacuation orders should a tsunami warning be issued. And, **the public should NOT RETURN to low-lying areas until the tsunami threat has passed and the local authorities announce the "all clear"**.

<http://www.ess.washington.edu/tsunami/general/warning/warning.html> 06 FEB 2013