

## **TSUNAMIS**

Tsunamis, also known as seismic sea waves, are a series of enormous waves created by an underwater disturbance such as an earthquake, volcanic eruption, or meteorite. A tsunami can move hundreds of miles per hour in the open ocean and smash into land with waves as high as 100 feet or more. If a major earthquake or landslide occurs close to shore, the first wave in a series could reach the beach in a few minutes, even before a warning is issued. Areas are at greater risk if they are less than 25 feet above sea level and within one mile of the shoreline.

Tsunamis are a year-round, 24-hour-a-day threat and hazard to all shoreline areas of Hawaii. When a potential tsunami with significant widespread inundation is imminent or expected, the Pacific Tsunami Warning Center issues a tsunami warning. This alerts the public that widespread, dangerous coastal flooding and powerful currents are possible, and may continue for several hours after the arrival of the initial wave. From the area where the tsunami originates, waves travel outward in all directions. As the wave approaches the shore, it builds in height. The coastline and ocean floor landscape will influence the size of the wave. There may be one wave and succeeding waves may be larger than the ones before.

Drowning is the most common cause of death associated with a tsunami. Tsunami waves and the receding water are very destructive to structures in the run-up zone (the area where waves come onshore). Other hazards include flooding, contamination of drinking water and dire from gas lines or ruptured tanks.



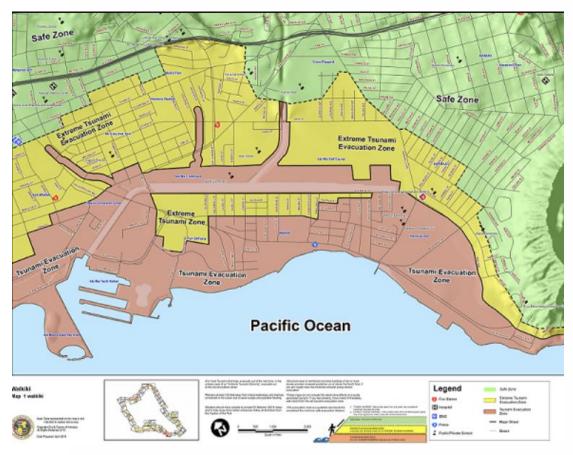
## **Alerts Related to Tsunamis**

For Hawaii, tsunami messages

will be issued by the Pacific Tsunami Warning Center (PTWC). This is the tsunami warning center which will notify emergency managers and other local officials, the public and other partners about the potential for a tsunami following a possible tsunami-generating event. There are four levels of tsunami alerts: warning, advisory, watch and information statement.

There may not always be enough time for an official warning, so it is important that you understand natural warnings. If you are at the coast and feel a strong or long earthquake, see a sudden rise or fall of the ocean or hear a loud roar from the ocean, a tsunami may follow. This is your warning. Act and move to a safe place. Do not wait for official instructions.





## Know your zone:

- ❖ Tsunami Evacuation Zone (TEZ): Evacuation zone based on distance tsunami events that have impacted the State of Hawaii and Island of Oahu in the past 100 years. Colored in Brown Red
  - For most TSUNAMI WARNINGS, evacuate out of the red zone. These are the most likely tsunami events to occur.
- Extreme Tsunami Evacuation Zone (EXTEZ): Evacuation zone for a tsunami that exceeds the historic distant Tsunami Evacuation Zone (TEZ). Colored in Yellow.
  - Extreme Tsunami Warning: Evacuate out of the red AND yellow zones. These events have a low probability of occurring and will have 4 to 5 hours of warning time for evacuation.
- Tsunami Safe Zone: Safe Zones are areas outside of evacuation zones. Colored in Green.

If you cannot get out of the evacuation zones, you can *vertically evacuate* to the FOURTH FLOOR or higher of a building that is 10 stories or more.

**NOTE:** Atlas is CFT is on the  $10^{th}$  and  $11^{th}$  floors. If the building is structurally safe, this is an adequate evacuation zone.

Be sure to stay informed, check local Hawaii radio and local TV stations, HNL.info or NOAA Weather Radio for emergency information, regarding long-term public shelters and/or disaster assistance centers.