







- Training and Exercise Support
- Live Code System Testing
- TsunamiReady[®] Program Support

What is a Tsunami?

- A tsunami is a series of waves generated most often by an earthquake or coastal or undersea landslide.
- The entire California coastline is vulnerable to these events.
- Beaches, lagoons, bays, estuaries, tidal flats, and river mouths are some of the most dangerous places to be.



Tsunami facts....

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- A tsunami always has many waves or surges
- The first wave is almost never the largest
- The danger period can last 24 hours or more! (like the March 2011 tsunami in Calif)
- Cannot be Surfed No Face & Usually Debris-Filled













2011 North Coast California

- March 11, 2011 Small group of friends went down to the coast near the mouth of the Klamath River. It was later in the day, <u>hours after</u> the first tsunami wave had arrived.
- They thought that the waves would be smaller and they went to take pictures.
- A large wave came in knocked them down and took one person out to sea. They were not able to rescue him.
- One month later his body was recovered 330 miles to the north in Oregon.



Santa Cruz Harbor, March 11, 2011 - video at 11AM (about 3 hours after first arrival of tsunami) within Santa Cruz Harbor



Lessons Learned from Recent Tsunamis in California

Public messaging / education

- Keeping people away from the water
- Language barriers

Evacuation issues

- Near source events
- Over-Evacuation

Maritime issues

Who should evacuate to sea?

Response

 Duration Staffing fatigue / jurisdiction inconsistencies

































The answer to this question depends on:

1)The SIZE of the tsunami.
2)How much TIME you have.
3)The PREPAREDNESS of the boat and its captain (see back).
4)The WEATHER at sea could be as dangerous as the tsunami itself.

Your harbor master or port captain may provide the best advice. For most harbors in California, it is safer to keep your boat docked during a tsunami because most tsunamis are relatively small. On the rare occasion when a larger tsunami is expected (Warning level), the boat owner may consider taking their boat offshore using the criteria above. Do not go offshore unless you are very sure that you can get to 30 fathoms (180 feet) before the tsunami arrives.

Note for trailer boat owners: Expect congested boat ramps and remember that you have to get your boat to the trailer, out of the water, and out of the tsunami zone before the tsunami arrives





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ready.gov/tsunami

Federal Emergency Management Agency

- Preparedness Information All Hazards
- Multi-Hazard Weather Alerts
- Disaster Resources

tsunamizone.org

Local, National & International **Tsunami Information & Resources**

- Register Preparedness Activities

National Tsunami Warning Centers

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Tsunami Alert &

