Tsunamis

- A tsunami is a series of powerful waves accompanied by unusually strong currents.
- The first wave may not be the largest or most damaging.
- A tsunami can strike any ocean coast at any time.
- Tsunamis are a serious threat to life and property on the coast.
- Even small tsunamis can be dangerous, especially to swimmers, surfers, and boats in harbors.
- Tsunamis cannot be prevented.

But, there are things you can do to keep yourself and your loved ones safe in the event of a tsunami!
How a Tsunami Works

Most tsunamis are caused by large earthquakes below or near the ocean floor, but they can also be caused by landslides, volcanic activity, certain types of weather, and near-earth objects (e.g., asteroids, comets).

1. A plate shifts abruptly, causing an earthquake and displacing the water.

2. Waves are generated and move out in all directions across the ocean, some traveling as fast as 600 mph.

As waves enter shallower water, they compress, their speed slows, and they build in height.

3. The wave height increases, and associated currents intensify, becoming a threat to life and property.
Know Your Risk

In the U.S., tsunami risk is greatest for states and territories with Pacific and Caribbean coastlines. Ask your local or state emergency management office or your local National Weather Service office about your community’s tsunami risk.

Links to tsunami evacuation maps:
http://nws.weather.gov/nthmp/maps.html
Tsunami Preparedness

Understand U.S. Tsunami Alerts

Official warnings are broadcast through radio, TV, and wireless emergency alerts. They may also come through outdoor sirens, officials, text message alerts, and telephone notifications.

**Warning**

**Take Action**—Danger! A tsunami that may cause widespread flooding is expected or occurring. Dangerous coastal flooding and powerful currents are possible and may continue for several hours or days after initial arrival. Follow instructions from local officials. Evacuation is recommended. Move to high ground or inland.

**Advisory**

**Take Action**—A tsunami with potential for strong currents or waves dangerous to those in or very near the water is expected or occurring. There may be flooding of beach and harbor areas. **Stay out of the water and away from beaches and waterways. Follow instructions from local officials.**

**Watch**

**Be Aware**—A distant earthquake has occurred. A tsunami is possible. Stay tuned for more information. **Be prepared to take action if necessary.**

**Information Statement**

**Relax**—An earthquake has occurred, or a tsunami warning, advisory or watch has been issued for another part of the ocean. Most information statements indicate there is no threat of a destructive tsunami.

Note: Tsunami warnings, advisories, and watches may be updated or cancelled as information becomes available. Advisories and watches may be upgraded if the threat is determined to be greater than originally thought.
Respond to a Natural Warning

Natural tsunami warnings are as important as official warnings. There may not be time to wait for an official warning. If you are in a tsunami hazard zone 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 could arrive in minutes. Take action!

- In case of an earthquake, protect yourself. Drop, cover, and hold on.
- When you can move safely, move quickly to high ground or inland.
- Stay out of the tsunami hazard zone until officials say it is safe.
Prepare for a Tsunami

These simple steps could save your life and the lives of those you care about.

If your home, school, workplace, or other places you visit often are in tsunami hazard zones:

• Have multiple ways to receive warnings.
• Make an emergency plan; include family communication and evacuation plans.
• Map out routes to safe places on high ground or inland; practice walking them to make them familiar.
• Put together portable disaster supplies kits for home, work, and cars.

If you are visiting the coast, find out about local tsunami safety. Your hotel or campground should have this information.

Be a role model. Share your knowledge and plans with others!

www.weather.gov/tsunamisafety