

Fact Sheet

Tsunamis

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Tsunamis (pronounced soo-ná-mees), also known as seismic sea waves (mistakenly called “tidal waves”), are a series of enormous waves created by an underwater disturbance such as an earthquake, landslide, 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.

From the area where the tsunami originates, waves travel outward in all directions. Once the wave approaches the shore, it builds in height. The topography of the coastline and the ocean floor will influence the size of the wave. There may be more than one wave and the succeeding one may be larger than the one before. That is why a small tsunami at one beach can be a giant wave a few miles away.

Most tsunamis are generated by earthquake-induced movement of the ocean floor. 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 a mile of the shoreline.

Know Your Risk and What to Do

- Contact your local emergency management office to learn about community emergency plans and what you should include in your own family and individual emergency plans.
- Get additional information from the U.S. Geological Survey (www.usgs.gov), the National Oceanographic and Atmospheric Administration (www.noaa.gov), and the American Red Cross (www.redcross.org).
- Inquire about emergency plans and procedures at your child’s school, your workplace, and day care, assisted living center or nursing home where a member of your family receives care.
- Make a family disaster plan that includes out-of-town contacts and locations to reunite if you become separated. Be sure everyone knows home, work and cell phone numbers, and how to call 9-1-1.
- Assemble a 3-day disaster supplies kit with food, water, medical supplies, battery-powered radio and NOAA Weather Radio All Hazards, batteries, flashlights, and other items.
- For more information about assembling a disaster supplies kit, visit www.fema.gov/areyouready/.
- Put important documents such as birth and marriage certificates, social security cards, passports, wills, deeds, financial and insurance records in a fire- and water-safe location or safe deposit box.

Know the Terms

Advisory – An earthquake has occurred which might generate a tsunami.

Watch- A tsunami was or may have been generated, but is at least two hours travel time to the area in Watch status.

Warning – A tsunami was, or may have been generated, which could cause damage; therefore, people in the warned area are strongly advised to evacuate.

If a Tsunami WATCH Is Issued

- Listen to a NOAA Weather Radio All Hazards, Coast Guard emergency frequency station, or other reliable source for updated emergency information. As the energy of a tsunami is transferred through open water, it is not detectable. Seismic action may be the only advance warning before the tsunami approaches the coastline.
- Locate family members and review evacuation plans. Make sure everyone knows there is a potential threat and knows the best way to safer ground.
- If you have special evacuation needs (small children, elderly people or persons with disabilities), consider early evacuation. Evacuation may take longer, allow extra time.

If a Tsunami WATCH Is Issued (Continued)

- If time permits, secure unanchored objects around your home or business. Tsunami waves can sweep away loose objects. Securing these items or moving them inside will reduce potential loss or damage.
- Be ready to evacuate. Being prepared will help you to move more quickly if a tsunami warning is issued.

If a Tsunami WARNING Is Issued

- Listen to a NOAA Weather Radio All Hazards, Coast Guard emergency frequency station, or other reliable source for updated emergency information. Authorities will issue a warning only if they believe there is a real threat from tsunami.
- Follow instructions issued by local authorities. Recommended evacuation routes may be different from the one you use, or you may be advised to climb higher.

If you are in a tsunami risk area, do the following:

- If you hear an official tsunami warning or detect signs of a tsunami, evacuate at once. A tsunami warning is issued when authorities are certain that a tsunami threat exists, and there may be little time to get out.
- Get to higher ground as far inland as possible. Officials cannot reliably predict either the height or local effects of tsunamis. Watching a tsunami from the beach or cliffs could put you in grave danger. If you can see the wave, you are too close to escape it.

During a Tsunami

- Turn on your radio to learn if there is a tsunami warning if an earthquake occurs and you are in a coastal area.
- Move inland to higher ground immediately and stay there.
- If there is noticeable recession in water away from the shoreline this is nature's tsunami warning and it should be heeded. You should move away immediately.

After a Tsunami

- Stay away from flooded and damaged areas until officials say it is safe to return.
- Stay away from debris in the water; it may pose a safety hazard to boats and people.

The Recovery Process

- For direct assistance to individuals and families for immediate needs contact the American Red Cross or other local voluntary agencies.
- Check newspapers, television, or radio news for information on disaster assistance available.
- For more information about tsunamis and warning systems, visit www.noaa.gov/tsunamis.html.
- For information on helping children deal with disaster, visit www.fema.gov or get a copy of FEMA 478 **Helping Children Cope with Disaster**. To obtain other fact sheets and publications call the FEMA Distribution Center at 1-800-480-2520.

Dangerous Tsunami Myth!	The Facts:
A tsunami is a single wave.	A tsunami is a series of waves. Often the initial wave is not the largest. The largest wave may occur several hours after the initial activity starts at a coastal location. There may also be more than one series of tsunami waves if a very large earthquake triggers local landslides.