Tsunami Awareness and Safety

What is a tsunami and where do they happen?
A tsunami is a series of large ocean waves usually caused by a major earthquake on the sea floor, a landslide, or volcanic activity. Tsunamis are not affected by tides or currents; a tsunami in the ocean means the whole water column is moving, not just the surface. A tsunami can strike any ocean shoreline.

When tsunami waves enter shallow water, they rise to form massive moving water called “runup.” The runup, which can be many feet high, then rushes onto shore, striking the coast with tremendous, destructive force.

If you are on the shore and in a low coastal area, you should know that a tsunami could arrive within minutes after the earth shakes. A devastating tsunami can also happen when a major earthquake happens far away. Recent earthquakes in Chile and Japan have caused tsunami strikes in Hawaii, Alaska, Washington, Oregon, and California, causing loss of life and millions of dollars in property damage.

The tsunami danger period can continue for many hours as the waters move onto land, recede, and return. Sometimes, the second or third waves are more devastating than the first. A tsunami can occur during any season of the year and at any time, day or night.

What is the best source of information in a tsunami situation?
Listen to local news reports and visit the NOAA/National Weather Service website, tsunami.gov.

The International Tsunami Warning System monitors oceans through a network of buoys and scientific instruments. When the instruments detect a major earthquake and the potential for a tsunami to occur, warnings are issued to local authorities who can order the evacuation of low-lying areas, if necessary.

The National Oceanic and Atmospheric Administration’s (NOAA) National Weather Service operates two tsunami warning centers:

The National Tsunami Warning Center (NTWC) in Palmer, Alaska, serves all U.S. states except Hawaii. It also serves Puerto Rico, the Virgin Islands, and Canada.

The Pacific Tsunami Warning Center (PTWC) in Ewa Beach, Hawaii, serves Hawaii and the U.S. Pacific territories. It also serves as an international warning center for the Pacific Ocean and the Caribbean and South China Seas.

This information provided by the National Tsunami Hazard Mitigation Program, a partnership of the NOAA/National Weather Service, the Federal Emergency Management Agency, the U.S. Geological Survey, and 28 U.S. states and territories.
What should I do when a tsunami may happen?

If you are in a coastal area and feel a strong earthquake:

• Drop, cover, and hold on. You should first protect yourself from the earthquake.

• When the shaking stops, move quickly to higher ground away from the coast. A tsunami may be coming within minutes.

• Be prepared for aftershocks, which happen frequently after earthquakes. Each time the earth shakes, drop, cover, and hold on.

• Move to your designated safe location or as far inland and uphill as possible.

During a tsunami watch:

• Use a NOAA Weather Radio All Hazards or listen to local radio or TV for updated information.

• Locate loved-ones and review evacuation plans. Be ready to move quickly if a tsunami warning is issued.

During a tsunami advisory:

• Because of the threat of a potential tsunami that may produce strong currents or waves dangerous to those in or near the water, local officials may close beaches, evacuate harbors and marinas, and ask ships to reposition to deep water. Obey their directions.

During a tsunami warning:

• If you hear a tsunami warning siren, detect signs of a tsunami, or hear about a tsunami warning on the radio or TV, leave immediately.

• Ask neighbors who may need help leaving to come with you and offer assistance.

• Bring pets with you to keep them safe.

• Take your disaster supplies kit. Having supplies will make you more comfortable.

• Move to higher ground as far inland as possible. Watching a tsunami near the shore is dangerous, and it is against the law to remain in an evacuated area.

• Keep listening to NOAA Weather Radio All Hazards or local radio or TV for the latest updates.

What should I do after a tsunami?

• Return home only after local officials tell you it is safe. A tsunami is a series of waves that may continue for hours. Do not assume that after one wave the danger is over. The next wave may be larger than the first.

• Stay away from damaged areas so emergency responders can have full access.

• Stay out of any building that has water around it.

• Be careful reentering buildings or homes. Tsunami-driven floodwater may have damaged buildings.