

What is a tsunami?

A tsunami is a series of waves most commonly caused by an earthquake beneath the ocean floor.

As tsunamis enter shallow water near land, they increase in height and can cause great loss of life and property damage. The first wave is often not the largest; successive waves may be spaced many minutes apart and continue to arrive for several hours.



Recent research suggests that tsunamis have struck the Oregon coast on a regular basis. They can occur any time, day or night. Typical wave heights from tsunamis occurring in the Pacific over the last 80 years have been 20–45 feet at the shoreline. A few waves however have been much higher—as much as 100 feet or more—because of local conditions.

A local tsunami is caused by an undersea earthquake near the Oregon coast could come onshore within 15 to 20 minutes after the earthquake – before there is time for official warning from a national warning system. Ground shaking from the earthquake may be the only warning. Evacuate quickly!

A distant tsunami is caused by an undersea earthquake far away from the coast and will take four hours or more to come onshore. You will feel no earthquake. The tsunami will generally be smaller than that from a local earthquake. There will typically be time for an official warning and evacuation to safety.

Some communities will signal the need for evacuation for a distant tsunami by a sounding a ***STEADY 3-MINUTE SIREN BLAST***.

All coastal communities will receive announcements over **NOAA weather radio** that the local area has been put into an official **TSUNAMI WARNING**.

In isolated areas along beaches and bays you may not hear a warning. A sudden change of sea level should prompt you to move immediately inland to high ground.

If you hear the 3-minute blast or see sudden sea level changes, evacuate away from shoreline areas, then turn on your local broadcast media or NOAA weather radio for further information.

FOR BOTH DISTANT AND LOCAL TSUNAMIS:

1. Evacuate on foot if at all possible because of potential traffic jams.
2. Stay away from potentially hazardous areas until you receive an **ALL CLEAR** from local officials. Dangerous waves can persist for several hours, and local officials must inspect all flooded or earthquake-damaged structures before anyone can go back into them.

3. If you need help evacuating, tie something **WHITE** (sheet or towel) to the front door knob. Make it large enough to be visible from the street. If the emergency is a distant tsunami, then help may arrive. In the event of a local earthquake and tsunami, it may be unlikely that anyone will help you, so make a plan and be prepared.

4. After evacuation, check with the local area commander if you can help with special skills or need assistance with locating lost family.

Are you in a tsunami inundation zone?

To find out if you are in a tsunami inundation zone, check these [tsunami hazard maps](#) developed by the Oregon Department of Geology and Mineral Industries. These PDF documents may take a few moments to download. These maps were created to show areas where construction of certain critical and essential facilities are limited. These maps are not intended for emergency evacuation purposes and do not necessarily represent tsunami inundation from a worst-case scenario.

- [Astoria](#)
- [Knappa](#) (east to Aldrich Point)
- [Cathlamet Bay](#)
- [Olney](#)
- [Warrenton-Hammond](#) (includes Clatsop Plains south to Camp Rilea)
- [Gearhart](#) (Camp Rilea to north Seaside)
- [Cannon Beach - Tillamook Head](#) (south Seaside to Cannon Beach)
- [Arch Cape](#) (Tolovana Park south to Oswald West State Park)

Where do I evacuate?

Go to an area 50 feet above sea level, if possible. Go on foot if necessary, particularly if an earthquake has caused damage to roads, power lines, and resulted in significant debris.

If you don't have time to travel to high ground, but are in a multi-story building, go to an upper level of the home or building. If you are on the beach and unable to get to high ground go inland as far as you can. Take your disaster supply kit with you.

Tsunami evacuation routes were developed to assist coastal residents and visitors find safer locations in case of an earthquake and tsunami. Evacuation signs have been placed along roadways to indicate the direction inland or to higher ground. In some places, there may be more than one direction available to reach safer areas. These routes may be marked with several signs showing additional options for evacuation.

Maps of recommended [evacuation areas](#) are available for some communities through the [State of Oregon Department of Geology and Mineral Industries](#). The evacuation zones are intended to represent a worst-case scenario for a tsunami caused by an undersea earthquake near the Oregon coast.

Evacuation routes were developed by local officials.

PDF maps of evacuation routes are available for:

- [Gearhart](#)
- [Seaside](#)
- [Warrenton](#)

More information about tsunamis is available from the [Federal Emergency Management Agency](#) and the [National Tsunami Hazard Mitigation Program](#).

For Seaside area residents, check out the [Tsunami Awareness Program](#).

Remember:

- Never go to the coast to watch a tsunami. Tsunamis move faster than a person can run. If you are camping on or near the beach, you may have to abandon your campsite to go inland or to higher ground to save your life.
- Do not return to shore after the first wave. Wait for Emergency Management officials to give the "All Clear" before you return.
- If you see an unexpected rise or fall in the coastal water, a tsunami may be approaching. Do not wait - instead move inland or uphill as quickly as possible.
- Stay tuned to your radio, marine radio or NOAA Weather Radio during a disaster. Bulletins will be issued regularly through local Emergency Management officials and National Weather Service.
- Call 9-1-1 only for life threatening emergencies.

What should I do if an earthquake occurs while at the coast?

- Drop, cover and hold. Get under a sturdy object and hold on. Watch for falling objects. As soon as the shaking is over, move to high ground or inland. Do not wait for an official warning.
- Stay away from the coast. Waves may continue to arrive for hours. Listen to your local radio station for an official "All Clear" notice before returning to the coastal area.
- Be alert for aftershocks.

What can I do to protect myself from a tsunami?

- Develop a family disaster plan. Everyone needs to know what to do on their own to protect themselves from an earthquake.
- Be familiar with local Emergency Management earthquake and tsunami plans. Know where to go to survive a tsunami.
- Be prepared to survive on your own for a minimum of three days.
- Prepare a disaster supply kit for you home, automobile and work. A list of recommended supplies for your kit may be found below.
- Take a first aid course and learn survival skills. Knowledge is your greatest defense against potential disaster.

When you feel the ground shake:

- Drop, cover and hold.
- Evacuate inland or to higher ground immediately. (Do not wait for notification.)
- Take your 3-day disaster supply kit.
- Listen to NOAA Weather Radio or your local radio station for information on shelter locations and emergency broadcasts.

NOAA Weather Radio Frequencies:

Astoria 162.40 Mhz

- Be aware of aftershocks.
- Do not return to the beach until emergency officials give the "All Clear" notice.

Disaster Supply Kit

Assemble a 3-day minimum supply:

- First-aid supplies and personal prescriptions
- Non-perishable food and utensils
- Water (one gallon per person per day)
- Water carrying bag or container
- Extra blankets, ponchos and clothes
- Plastic bags for garbage and waste
- Rubber, latex, and heavy-duty gloves
- Pocket knife, flat 12" pry bar, and duct tape
- Tube tent
- Flashlights (extra batteries)
- Battery-operated AM radio (extra batteries)
- Whistles
- Dental and personal hygiene items
- Dust masks
- Matches