

Tsunami Awareness in Washington State

What is a tsunami?

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

If you see an unexpected rise or fall in the coastal water, a tsunami may be approaching. Do not wait — move inland or uphill as quickly as possible.

If a large earthquake displaces the sea floor near the coast, the first waves may reach the shore minutes after the ground stops shaking. There would be no time for authorities to issue a warning.

The waves can kill and injure people and cause great property damage. The first wave is often not the largest; successive waves may arrive for several hours.

Where do tsunamis occur?

Tsunamis can occur at any time of the day or night, under any and all weather conditions, and in all seasons. Beaches open to the ocean, by bay entrances or tidal flats, and the shores of coastal rivers are especially vulnerable to tsunamis.



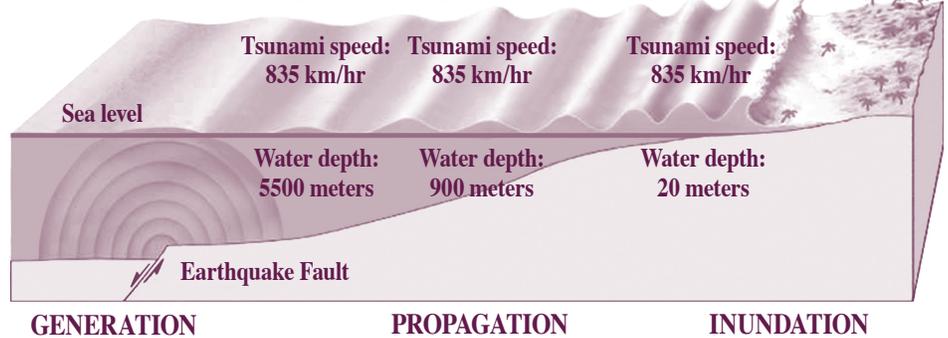
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Tsunamis evolve through three stages:



- 1. Generation:** A disturbance of the ocean floor, most commonly an earthquake along a fault line, pushes up the overlying water.
- 2. Propagation:** The wave moves across the deep ocean at jetliner speeds but is hardly noticeable in deep water. The wave slows down to highway speeds upon entering shallow water. The wave's energy is squeezed into smaller and smaller volumes as it moves through the shallower water. The wave's direction may change as it crosses bumps and groves on the ocean floor. Each individual wave must slow down because of the decreasing water depth. This process squeezes the same amount of energy into a smaller volume of water, creating higher waves and faster currents.
- 3. Inundation:** When the tsunami reaches and runs up on the dry land causing damage and possibly loss of life.

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

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

When should I evacuate?

An off-shore earthquake may generate a tsunami. If you feel the ground shake, evacuate inland or to high ground immediately. During distant source tsunami events, authorities will advise citizens to evacuate. Listen to

your NOAA Weather Radio or local radio or TV station for emergency instructions.

Where do I evacuate?

Go to an area 50 feet above sea level, if possible. 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 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.

Disaster Supply Kit

Prepare a 3-day disaster kit that is adapted to your personal needs — but keep it light in case you must evacuate on foot. Have your kit ready to go if told to evacuate immediately. The following is a list of survival kit supplies:

- Road maps showing safe evacuation routes to high ground

- First-aid supplies and personal prescriptions
- Non-perishable food, cooking and eating utensils
- Water (one gallon per person per day)
- Water carrying bag or container
- Extra blankets, ponchos and clothes
- Special food and supplies for infants
- 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