TSUNAMIS

A Guide For SUQUAMISH BOATERS

THE SUQUAMISH TRIBE

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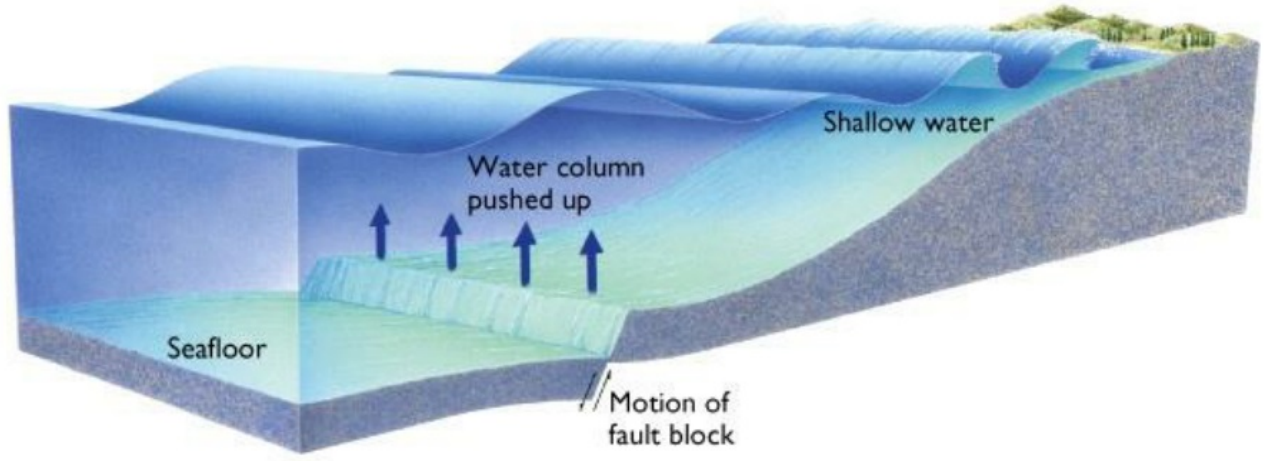
What is a Tsunami?



TSUNAMIS ARE

a **series of long waves** that can last **over 24+ hours** and are usually caused by earthquakes beneath the sea floor or landslides. Tsunamis cause **dangerous flooding** and **strong currents.** They are very fast and powerful, like a moving wall of cement.

LOCAL SOURCE

Tsunamis originating near WA's coasts are considered **LOCAL SOURCE** tsunamis. Local source tsunamis can **arrive within minutes** and typically are **the most dangerous. Extreme flooding** and **destructive currents** can last for hours.

DISTANT SOURCE

Tsunamis originating far from WA's coast will take multiple hours to arrive and are considered **DISTANT SOURCE** tsunamis. Typically, distant source tsunamis cause less flooding and fewer strong currents but can still pose a **high risk for the maritime community.**

NATURAL WARNING SIGNS

If you are ONSHORE, you might:

- Feel strong ground shaking
- Hear a loud roar from the ocean
- See water rapidly receding, possibly exposing the sea floor
- See water surging towards the shore faster than any tide

If you are OFFSHORE, you might:

- Feel shaking through the hull of your vessel
- See rapid or extreme shift in currents and changes in wind wave heights

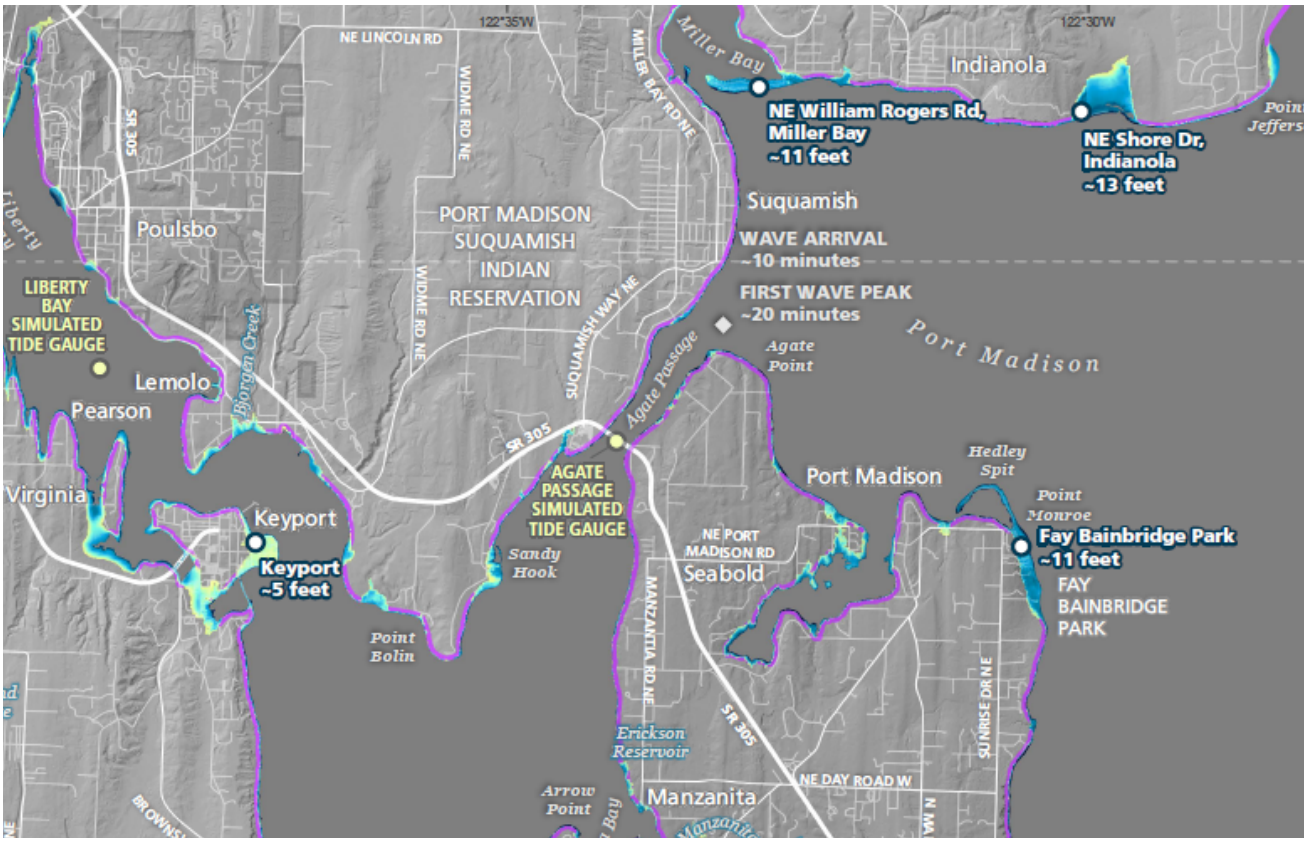
Video: Tsunami Animation

SCAN QR CODE

TSUNAMI HAZARDS FOR BOATERS

Tsunamis can be deadly for boaters. Tsunami hazards that directly affect vessels and boaters include:

- Sudden water-level fluctuations
- Grounding of vessels as water level drops
- Capsizing of vessels from tsunami surges, bores, and complex coastal waves
- Strong and unpredictable currents
- Drag on large-keeled vessels
- Collision with other vessels, docks, and debris
- Spillage of toxic waste and chemicals
- Docks overtopping pilings
- Moored vessels tearing cleats from docks
- Eddies/whirlpools



TSUNAMI MODELING FOR SEATTLE FAULT EARTHQUAKE SCENARIO

ACTIONS TO TAKE

If you are on land, tied up at a dock, or nearshore:

It is **NOT** recommended that you take your vessel offshore during a tsunami; you could put yourself at greater risk. Your local harbormaster, port captain, or emergency manager may provide the best advice.

If you choose to go offshore, consider:

- How much time you have before waves arrive
- How much time it will take to reach a safe location
- The preparedness and readiness of the vessel and its captain
- The weather at sea could be as dangerous as the tsunami itself
- The congestion onroads and boat ramps

DO NOT go offshore if you don't have the TIME

If you are far out on the water:

- Get your vessel to shore and evacuate to high ground before the first waves are expected to arrive

If that is NOT possible:

- Head out to the deepest water you can
- Proceed as perpendicular to the shore as possible
- Sail directly into waves, keeping in mind that wind waves opposed by tsunami currents will be amplified
- Maintain as much separation as possible from other vessels
- Synchronize movements with any other vessels to avoid collisions

TSUNAMI ALERTS

Tsunami alerts are most important for distant tsunamis for which you will not feel shaking. These are the alert levels:

WARNING Move to high ground!

Tsunami wave heights could exceed 3 feet. Very strong, dangerous currents and inundation of dry land is expected.

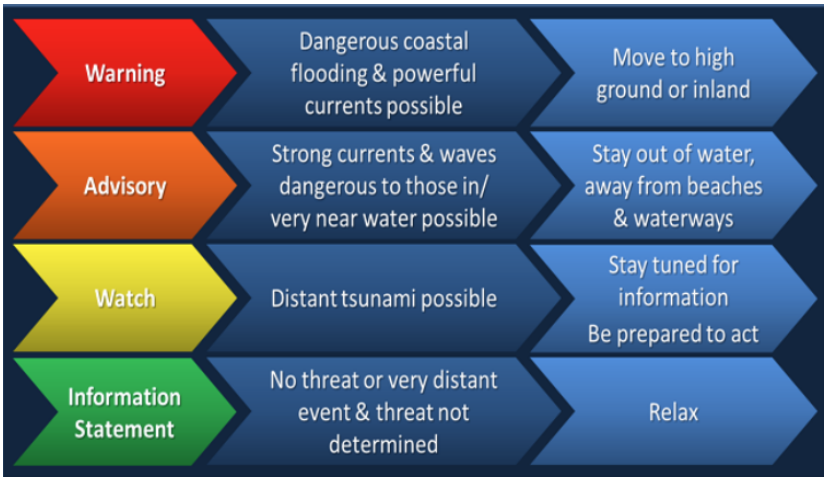
ADVISORY Stay away from the shore.

Peak tsunami wave heights of 1-3 feet are expected, indicating strong and dangerous currents can be produced in harbors, channels and local waters.

WATCH Be prepared to take action.

An incident has occurred which may have created a tsunami. More information will follow; be prepared to act and listen for further instructions.

When an advisory or warning is issued, the US Coast Guard broadcasts it on VHF channels 13, 14, and 16. Washington's network of tsunami sirens are activated for a warning only.



TSUNAMI PREPAREDNESS

Learn your hazards

- Look up tsunami inundation and current velocity maps where you take your vessel
- Learn about natural and official warning signs for tsunamis

Make a plan

- Create a plan with you and your crew in case a tsunami happens while you are on the water OR onshore
- Practice and update plans regularly
- Have a way to receive tsunami alerts (marine radio, NOAA weather radio)
- Monitor VHF channels 13, 14, and 16 for urgent broadcasts from the US Coast Guard
- Have a plan to quickly cease any activities and release bottom attachments so your vessel is not dragged by currents
- Securely tie your vessel when you dock
- Replace degraded mooring lines
- Check with your local harbor and office of emergency management about tsunami procedures
- Sign up for tsunami alerts and local alerts with the Tribe and County

Build a kit

- Prepare to be self-sufficient onboard your vessel with enough food, fuel, and supplies to last at least 3 days
- If you live on your vessel, store at least 2 weeks of emergency supplies outside of the inundation zone

RESOURCES

Suquamish Office of Emergency Management

- 360-394-8443
- emergencymgmt@suquamish.nsn.us
- https://suquamish.nsn.us
    - Departments>Emergency Management

Washington Emergency Management Department

- https://mil.wa.gov/tsunami

National Oceanic and Atmospheric Administration (NOAA)

- https://tsunami.gov

Washington Department of Natural Resources (DNR)

- https://dnr.gov
    - Programs and hazards
        - Geology
            - Geologic hazards
                - Tsunamis