

Appendix 2: Roles and Responsibilities for Tsunami Alerting (Warning and Advisory)

Roles and Responsibilities for Alerting for a Tsunami Warning

Federal

- **The National Oceanic and Atmospheric Administration (NOAA):** NOAA’s National Tsunami Warning Center (NTWC) is responsible for determining whether an earthquake event has produced a tsunami, the estimated wave heights, and when the first tsunami wave will arrive at pre-determined forecast points. If the NTWC determines a tsunami is possible, and the first waves will be over 3.3 feet in height, or will arrive in under 3 hours, they will issue a tsunami warning. Within 5 minutes of the earthquake origin time, they will issue a tsunami alert:
 - via the Integrated Public Alert and Warning System (IPAWS) as a wireless emergency alert (WEA), NAWAS, ISC Fax, iNWS, NWWS, and OMNIXX to state, local, and tribal emergency management.
 - via the National Weather Service (NWS) Gateway and NWS Chat to the Weather Forecast Office (WFO) in Seattle.
 - via social media (Facebook and Twitter) to the public.
- **The National Weather Service (NWS):** The NWS WFO in Seattle will be alerted directly by the NTWC. The WFO will then issue a tsunami warning message via the Emergency Alert System (EAS), NOAA Weather Radios (NWR), and social media by sharing NTWC Facebook and Twitter posts.
- **The United States Coast Guard (USCG):** The safety and security of the navigable for Puget Sound and Washington’s outer coast are the responsibility of Coast Guard Sector Puget Sound. Upon receipt of a tsunami warning, Coast Guard Sector Puget Sound will broadcast the warning to boaters on marine radio channel 16 (156.800 MHz) and Vessel Traffic Service (VTS) channels for the Puget Sound (for more information on the VTS see appendix 1).

State

Upon receiving a tsunami warning from the NTWC via NAWAS, email, OMNIXX, phone and/or fax, the Washington Emergency Management Division (WA EMD) will:

- Activate the All-Hazards Alert Broadcast Sirens
- Relay the message over the state NAWAS to affected warning points
- Call and notify WA EMD staff for immediate response and recall to the State EOC

- Relay the alert via Everbridge to local emergency managers
- Shortly after the WFO disseminates the alert via EAS, relay the alert via EAS and WEA (including the inner coast when instructed to by NTWC)
- Call any NAWAS Primary Warning Points who failed to respond during roll call
- Call and notify affected tribal nations not on NAWAS
- Call and notify WA DOT Ferry Operations Center
- Participate in NTWC initiated conference calls
- Conduct state/local conference calls via Microsoft Teams between the state and impacted jurisdictions and tribes
- WA EMD will **NOT** send Tsunami Cancellation or All Clear messages unless a local jurisdiction requests assistance.

Vessel Owners

- If you are on the water in your vessel
 - At or near shore or in the Inner Coastal areas of WA
 - Immediately free any bottom attachments, cut lines if necessary
 - Return to shore and dock your vessel
 - If no docking is available, consider beaching vessel
 - Evacuate inundation zone
 - In the open ocean or if shore is unreachable at less than 100 fathoms depth
 - Stop fishing operations, free bottom attachments
 - Head to depth of more than 100 fathoms
 - Remain as perpendicular to shore as possible
 - Sail directly into wind waves, which may be amplified by tsunami currents
 - Maintain as much separation from other vessels as possible
 - In the open ocean at depth greater than 100 fathoms
 - You are relatively safe from tsunami waves and currents
 - Deeper water is safer, so consider heading to even deeper water if possible
- If you are on shore or on or near your vessel at a dock
 - Immediately leave your vessel and evacuate to high ground on foot
 - You do not have time to save your vessel and could die trying

Roles and Responsibilities for Alerting a Tsunami Advisory

Federal

- **The National Oceanic and Atmospheric Administration (NOAA):** NOAA's National Tsunami Warning Center (NTWC) is responsible for determining whether an earthquake event has produced a tsunami, the estimated wave heights, and when the first tsunami wave will

arrive at forecasted points. If the NTWC determines a tsunami wave is possible, and the wave will be between 1 to 3.3 three feet in height, they will issue a tsunami advisory. Within 5 minutes of the earthquake origin time, they will issue a tsunami alert:

- via NAWAS, ISC Fax, iNWS, NWWS, and OMNIXX to state, local, and tribal emergency management.
- via the National Weather Service (NWS) Gateway and NWS Chat to the Weather Forecast Office (WFO) in Seattle.
- via social media (Facebook and Twitter) to the public.
- **The National Weather Service (NWS):** The NWS WFO in Seattle will be alerted directly by the NTWC. The WFO will then issue a tsunami advisory message over NOAA Weather Radios and social media by sharing NTWC Facebook and Twitter posts.
- **The United States Coast Guard (USCG):** The safety and security of the navigable for Puget Sound and Washington’s outer coast are the responsibility of Coast Guard Sector Puget Sound. Upon receipt of a tsunami warning, Coast Guard Sector Puget Sound will broadcast the warning to boaters on marine radio channel 16 (156.800 MHz) and Vessel Traffic Service (VTS) channels for the Puget Sound (for more information on the VTS see appendix 1).

State

Upon receiving an advisory from the NTWC via NAWAS, email, OMNIXX, phone and/or fax, the Washington Emergency Management Division (WA EMD) will:

- Relay the message over the state NAWAS to affected warning points
- Call and notify WA EMD staff for immediate response and recall to the State EOC
- Relay the alert via Everbridge to local emergency managers
- Call any NAWAS Primary Warning Points who failed to respond during roll call
- Call and notify affected tribal nations not on NAWAS
- Call and notify WA DOT Ferry Operations Center
- Participate in NTWC initiated conference calls
- Conduct state/local conference calls via Microsoft Teams between the state and impacted jurisdictions and tribes
- WA EMD will **NOT** activate AHAB sirens for advisory alerts. If a local jurisdiction wants their AHAB sirens activated, they need to activate them locally or contact WA EMD and specifically request the sirens be activated.
- WA EMD will **NOT** send Tsunami Cancellation or All Clear messages unless a local jurisdiction requests assistance.

Vessel owners

- If you are on the water in your vessel

- Cease any activities and free any bottom attachments
- Prepare for heavy seas and strong currents
- Monitor VHF channel 16 for Urgent Marine Information Broadcasts from the USCG
- If in the Inner Coastal areas of WA
 - Return to shore if possible, secure vessel, and evacuate from shore until event is over and all clear is given by authorities
 - If the shore is unreachable due to impending wave arrival or danger head to the deepest open water nearby
 - Ensure a depth of at least 30 fathoms at least ½ mile from shore
- If on the open ocean (off Washington’s outer coast)
 - Head vessel to depth of 30 fathoms or deeper
 - Remain at least ½ mile from shore
 - If time or conditions permit, return to shore, dock your vessel, and leave the inundation zone
- If you are on shore or on or near your vessel at a dock
 - Taking vessels offshore during a tsunami event is not recommended
 - Ensure vessel is secured to moorings
 - Retrieve go bag from vessel and head inland to high ground
 - Do not return to vessel or shore area until authorities have given the all-clear
- Prior to any alerts
 - Have a plan in case an event happens while you are on the water.
 - Prepare by having enough food, fuel, and supplies for at least 3 days on your vessel.
 - Replace degraded mooring lines as necessary.
 - Securely tie up your vessel every time you return to the harbor.
 - If you live on your vessel, consider storing emergency supplies in a location outside of the inundation zone.
 - Evacuate the area to high ground immediately and do not return to the inundation area until authorities declare the area safe.
 - Plan and prepare to be self-sufficient for at least 2 weeks during a disaster. For more information on becoming 2 Weeks Ready visit: mil.wa.gov/preparedness.