

Appendix 3: Roles and Responsibilities for Tsunami Alerting (Warning and Advisory)

Roles and Responsibilities for Alerting at the Port of Bellingham 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 approximate size of the tsunami, and when the first tsunami wave will arrive. If the NTWC determines a tsunami wave is possible, and the wave 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, NWWWS, 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 waters in and around Puget Sound 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 **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 AlertSense 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 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.

County

Upon receipt of an official tsunami warning the Whatcom County Sheriff's Office Division of Emergency Management will take the following actions, broken down by responsibility:

- The Whatcom County Division of Emergency Management Duty Officer will:
 - Notify the WCSO DEM Director or Deputy Director that a tsunami warning has been issued for Whatcom County
 - Convene a Whatcom County Tsunami teleconference as soon as possible
 - Ensure all county All Hazard Alert Broadcast warning system sirens are activated
 - Review the tsunami warning message for wave arrival time for Whatcom County shoreline
- The Whatcom County Division of Emergency Management Director/Deputy Director will:
 - Activate the Whatcom Unified Emergency Operations Center (EOC)
 - Chair the Coastal Disruptive Event Group Teleconference and address:
 - Evacuation requirements
 - Road closures
 - Activation time for Whatcom County AHAB sirens if not already activated
 - Activation of the Whatcom Unified Emergency Operations Center Call Center
 - Determine "not later than" departure time for first responders aiding evacuations in inundation area(s)
 - Participate in WA EMD teleconferences
- The Whatcom County Sheriff's Office Public Information Officer will:
 - Participate in Coastal Disruptive Event Group teleconference
 - Develop Public Information Statements for traditional and social media outlets for release based upon direction from the Director/Deputy Director

- Activate the Whatcom County Public Information Officer Group, if required
- Report to the Whatcom Unified EOC if it has been activated
- The Whatcom County Sheriff's Office will:
 - Serve as the initial Incident Commander
 - At the direction of the WCSO DEM deploy resources to prevent entry into the inundation area(s) while allowing for evacuations
 - Send Command Staff Duty Officer to the Whatcom Unified EOC to coordinate law enforcement actions county wide.
 - Recall all available personnel to assist with evacuations
- The Whatcom County Fire/EMS will
 - Participate in the Coastal Disruptive Event Group teleconference
 - Mobilize and deploy resources as required
 - Ensure the AHAB sirens located within jurisdiction is operating (wailing sound and vocal evacuation message)
 - Upon activation of the Whatcom Unified EOC, provide command staff officer for Operations section
- The Whatcom County Department of Public Works will:
 - Deploy signs and personnel to close or block roads leading into inundation areas while allowing for evacuation of the area to continue at the direction of the WCSO DEM or WCSO
 - Send Senior Liaison to Whatcom Unified EOC to coordinate road closure and diversion actions
 - Provide personnel, as required, to assist with evacuation
- The Whatcom County Sheriff's Office recognizes that the decision to attempt to leave the harbor and try to get to deep water rests with the vessel's Captain. **However, the WCSO does not recommend, suggest, or plan for any evacuation by water under any condition or situation. All Marina personnel, boaters and live-aboards should immediately leave their vessel and proceed to high ground and not return until the "All Clear" signal is given.**

Port

- During business hours, the port of Bellingham will do the following in order:
 - i. Immediately go out on the docks with bullhorns and announce evacuation order
 - ii. If time allows, send out a mass email informing people to stay away until further notice.
 - iii. If time allows, barricades will be put up at the entrance to Coho Way and Bellwether Way asking for people to go to high ground.
 - iv. All port employees will leave the evacuation zone with no less than 30 minutes remaining before anticipated wave arrival. Port employees will head to the AARF building if possible and await further orders.

- v. When the all-clear message is received, designated port employees will enter the facility and assess damage.
- After-hours:
 - i. Tell any guards to vacate the property.
 - ii. When the all-clear message is received, designated port employees will enter the facility and assess damage.

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 shore unreachable at less than 100 fathoms depth
 - Stop fishing operations, free bottom attachments
 - If shore is reachable before waves arrive evacuation to high ground is the best option
 - 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 of 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 at the Port of Bellingham for 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 approximate size of the tsunami, and when the first tsunami wave will arrive. 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.
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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 AlertSense 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 between the state and impacted jurisdictions and tribes
- WA EMD will **NOT** activate AHAB sirens for an Advisory alert. 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.

County

Whatcom County Sheriff's Office Division of Emergency Management (WCSO DEM) has developed a robust and comprehensive Tsunami Action Plan to augment their county's All Hazards Plan. This plan applies to all areas of Whatcom county that have been determined to be at risk of tsunami inundation. This includes the City of Bellingham as well as the Port of

Bellingham locations in the waterfront district and the Fairhaven district. Upon receipt of an official tsunami warning the Whatcom County Sheriff's Office Division of Emergency Management will take the following actions, broken down by responsibility:

- The Whatcom County Division of Emergency Management Duty Officer will:
 - Notify the WCSO DEM Director or Deputy Director that a Tsunami Advisory has been issued for Whatcom County
 - Notify City of Bellingham Emergency Manager
 - Notify Port of Bellingham Emergency Manager and Security Officer
 - When directed by the WCSO DEM Director or Deputy Director convene a Coastal Disruptive Event Group Teleconference as soon as possible, but not more than 60 minutes from the time the advisory was received
- The Whatcom County Division of Emergency Management Director/Deputy Director will:
 - Create and Chair Coastal Disruptive Event Group Teleconference
 - Determine if evacuation is required
 - Determine areas to be closed or evacuated
 - Establish a time to activate appropriate Whatcom County AHAB sirens based on best information at hand if not already activated
 - Activate the Whatcom Unified Emergency Operations Center (WUEOC) call center to assist in taking phone calls from the public
 - Establish first responder evacuation times (at least 30 minutes prior to expected wave arrival time)
 - Participate in WA EMD coordinated teleconferences
 - Activate the WUEOC
- The Whatcom County Sheriff's Office Public Information Officer will:
 - Participate in Coastal Disruptive Event Group teleconference
 - Prepare traditional and social media messages as directed by the WCSO Emergency Manager or Deputy Director
- The Whatcom County Sheriff's Office will:
 - Serve as the initial Incident Commander
 - Participate in Coastal Disruptive Event Group teleconference
 - At the direction of the WCSO DEM deploy resources to prevent entry into the inundation area(s) while allowing for evacuations
 - Send a Command Staff Duty Officer to WUEOC to coordinate law enforcement action County-wide
 - Recall all available personnel to assist with evacuations, if required
- The Whatcom County Fire/EMS will
 - Participate in the Coastal Disruptive Event Group teleconference
 - If WUEOC has been activated, provide command Staff officer to Operations Section
 - Mobilize and deploy resources, as required

- Assist with notifications, including door-to-door, if necessary
- The Whatcom County Department of Public Works will:
 - Participate in the Coastal Disruptive Event Group teleconference
 - Deploy signs and personnel to close or block roads into inundation areas
 - Send Senior Liaison to WUEOC to coordinate road closures and diversion actions
 - Provide personnel, as required, to assist with evacuation

Port

- During business hours, the port of Bellingham will do the following in order:
 - i. Immediately go out on the docks with bullhorns and announce evacuation order
 - ii. If time allows, send out a mass email informing people to stay away until further notice.
 - iii. If time allows, barricades will be put up at the entrance to Coho Way and Bellwether Way asking for people to go to high ground.
 - iv. All port employees will leave the evacuation zone with no less than 30 minutes remaining before anticipated wave arrival. Port employees will head to the AARF building if possible and await further orders.
 - v. When the all-clear message is received, designated port employees will enter the facility and assess damage.
- After-hours:
 - i. Tell any guards to vacate the property.
 - ii. When the all-clear message is received, designated port employees will enter the facility and assess damage.

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 shore is unreachable due to time or danger head to the deepest, most open water nearby
 - Ensure a depth of at least 30 fathoms at least ½ mile from shore
 - If on the open ocean
 - Head vessel to depth of 30 fathoms or deeper
 - Remain at least ½ mile from shore

- If time or conditions do not 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 leave the inundation zone
 - 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: <https://mil.wa.gov/preparedness>.