

Precautionary Measures Ocean Going Ships/Barges:

- a. Collect information
 - i. Determine Humboldt Bay Bar Conditions and Forecast.
 - a. Note: A Tsunami event may trigger unusually large ebb current conditions followed by flood current conditions.
 - ii. If pilotage required, establish contact with Humboldt Bay Pilots.
 - iii. If Tug assistance required, determine availability of tug assist.
 - iv. Determine Means of Broadcasting Traffic information between ships and tug/barges. VHF Ch 16 and 13
 - v. Establish contact with USCG
 - vi. Alert USCG of possible evacuation and emergency request for clearance if necessary.
 - vii. Establish availability and location of land shelters.
- b. Tank Barges and tugs at dock, should in cooperation with the Oil Terminal Manager, ensure adequate safety measures as far in advance as possible taking into consideration the consequences in the event the tank barge is damaged by the Tsunami.
- c. Definitions
 - i. Tsunami Warning – Inundating wave possible – Full evacuation suggested.
 - ii. Tsunami Advisory – Strong currents likely – Stay away from Shore.
 - iii. Tsunami Watch – Alert that an event may later impact the Watch Area. Normally issued based on seismic information without confirmation that a destructive tsunami is underway.

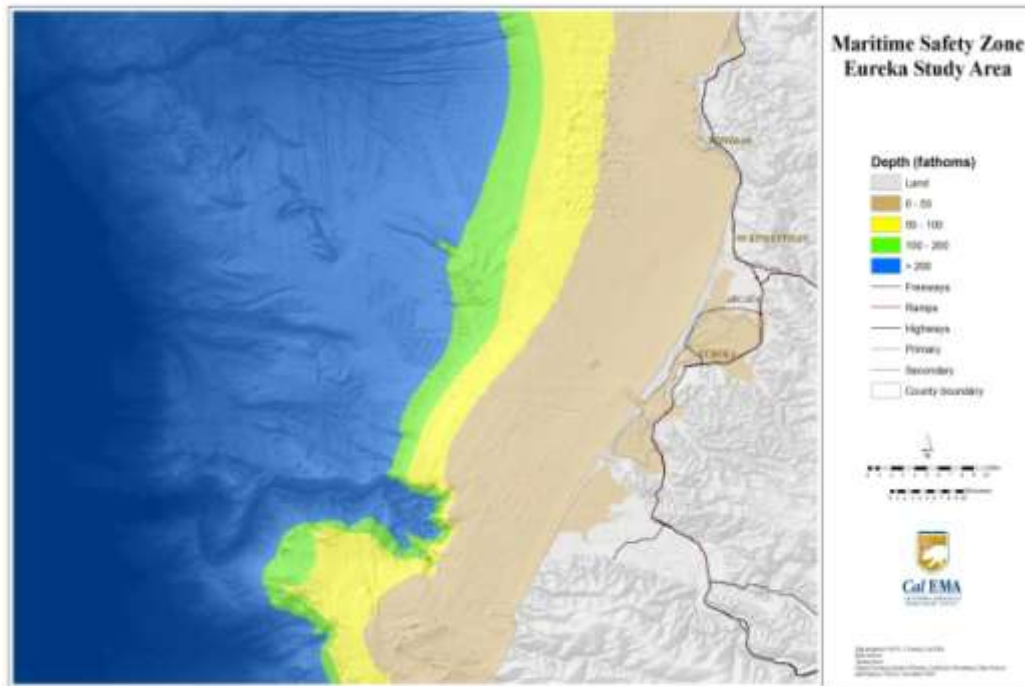
NOAA currently states Mariners in deep water 600 feet or greater should stay at sea. Those in shallow water or harbors should move to deep water if there is enough time and weather conditions are suitable.

There may be vessel congestion in the harbor as SHIPS, BARGES, TUGS, COMMERCIAL FISHING and RECREATIONAL vessels attempt to depart at the same time. All vessels should monitor VHF Channel 16 and use extreme caution.

TABLE OF TSUNAMI COUNTERMEASURES FOR SHIPS AND BARGES IN PORT

Type of Information	Response Time	Ship/Barges at Dock		Ship/Barges At Anchorage or Mooring Buoy	Ships in Channel
		Tank Barges	Cargo Ships/Barges		
Tsunami Warning	Equal to or Less than 3 hours	Suspend Cargo Transfer Operations, Secure for Sea, and Evacuate, if possible, for Sea. If unable to Evacuate consider pushing on barge at dock.	Suspend Cargo Operations, Secure for Sea, and Evacuate, if possible, for Sea or to Land Shelters. If unable to evacuate consider additional mooring lines.	Use Main Engines, or if possible, Evacuate for Sea.	Evacuate for Sea.
Tsunami Warning	Greater than 3 Hours	Suspend Cargo Transfer Operations, Secure for Sea, and Evacuate, if possible, for Sea.	Suspend Cargo Operations, Secure for Sea, and Evacuate, if possible, for Sea	Use Main Engines, or if possible, Evacuate for Sea.	Evacuate for Sea.
Tsunami Advisory		Suspend Cargo Transfer Operations, Secure for Sea, and Evacuate, if possible, for Sea. If unable to Evacuate consider pushing on barge at dock.	Suspend Cargo Operations, Secure for Sea, and Evacuate, if possible, for Sea or to Land Shelters. If unable to evacuate consider additional mooring lines.	Use Main Engines, or if possible, Evacuate for Sea, depending on conditions.	Evacuate for Sea.
Tsunami Watch		Monitor for updated information. Complete Precautionary Measures.			

OCEAN CONDITIONS AND TIDES MAY INFLUENCE RESPONSE TIME



Emergency Marine Information:

NOAA Weather Radio
VHF Marine Radio Channel 16

USCG
1-707-839-6110

Humboldt Bay Bar Pilots
1-707-845-4938 Capt. John Powell
1-707-845-4939 Capt. Tim Petrusha

Bar Pilots will be in contact with the USCG. Bar Pilots will also be able to provide Masters of vessels with information regarding, tug availability, weather and tide conditions, land evacuation sites if needed, land transportation, etc.

West Coast Alaska Tsunami Warning Center
<http://wcatwc.arh.noaa.gov/>

National Weather Service Eureka California – Marine Weather Page
<http://www.wrh.noaa.gov/eka/marine/>
1-707-443-6484

Conclusion

In summary, all Best Maritime Practices are intended as a guide for the mariners of Humboldt Bay. All Mariners are encouraged to obtain up to date information regarding current conditions prior to departure.

For information on Safe Boating classes, please contact the local US Coast Guard Auxiliary at (707) 839-6123

For more tsunami information visit www.tsunamiready.noaa.gov or www.humboldt.edu/rctwg/