

## **National Weather Service** Portland, Oregon

## Marine and Coastal Hazard Criteria

#### **Marine Hazards**

Coastal Waters (CW) and Columbia River Bar (CRB)			
Hazard	Criteria	Preparedness Actions	
CRB Small Craft Advisory	Seas 7-9 ft with strong tidal currents.  Wave conditions met using local criteria (table below).	Strong ebb currents may overpower smaller vessels causing a mariner to lose control.  Inexperienced mariners, especially those operating a smaller vessel, should avoid navigation.	
CW Small Craft Advisory	Sustained wind, or frequent gusts, of 21-33 knots  Wave conditions met using local criteria (table below)	Inexperienced mariners, especially those operating a smaller vessel, should avoid navigation.	
Gale Force Wind Warning	Sustained wind, or frequent gusts, of 34-47 knots	Mariners without the proper experience should seek safe harbor.	
Storm Force Wind Warning	Sustained wind, or frequent gusts, of 48-63 knots	Mariners should remain in port, alter course, and/or secure the vessel for severe conditions.	
Hurricane Force Wind Warning	Sustained wind, or frequent gusts, of <b>64 knots or more</b>	Mariners should remain in port, alter course, and/or secure the vessel for severe conditions.	
Hazardous Seas Warning	Wave conditions met using local criteria (table below)	Very steep and hazardous seas could capsize or damage vessels. Bar crossing will become especially treacherous.	
Dense Fog Advisory	Widespread or localized fog reducing visibility to 1 nautical mile or less	If you must navigate, proceed with caution. Use proper fog signals. Make sure all running lights are on. Remember to use your radar and compass.	
Special Marine Warning	Sustained, or frequent gusts, greater than 33 knots not adequately covered by the Coastal Waters Forecast  Thunderstorm wind gusts greater than 33 knots  Hail with diameter of 3/4 inch or more  Waterspout indicated	Return to safe harbor if possible.	
Marine Weather Statements	Product to provide mariners with details on significant or potentially hazardous conditions not otherwise covered in existing marine warnings and forecasts.		



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#### **Local Wave Criteria** No Hazard (green) Small Craft Advisory (yellow) and Hazardous Seas (red) Dominant Wave Period (seconds) <= 7 8 9 10 11 12 >= 13 <=5 6 7 8 Significant Wave Height (ft) 9 10 11 12 13 14 >= 15



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Coastal Hazards			
Hazard	Criteria	Preparedness Actions	
Beach Hazard Statement for Sneaker Waves	A long period swell has the potential to run-up the beach higher than expected	Sneaker waves can surge high up the beach without warning, catching an inattentive individual off guard.  Always keep an eye on the waves and be especially watchful of children and pets.	
High Surf Warning	The energy of the waves has hit a threshold that poses a serious risk to those on the beach and structures near the surf zone.	People can be swept off rocks and jetties and drown while observing high surf.  Everyone should remain out of the water. Stay off jetties, piers, and other waterside infrastructure.  Waves may unexpectedly pull you into the turbulent and frigid waters.	
Coastal Flood Advisory for Tidal Overflow	Minor flooding in low-lying areas near bays, sloughs, and the lower reaches of coastal rivers is expected due to high tide.  High coastal river runoff will increase flooding potential during the hours of high tide.	Be alert for rising water and take appropriate action to protect life and property.	
Coastal Flood Warning	Storm surge coupled with high tide is expected to cause major flooding in low lying areas along the coast.  High coastal river runoff will increase flooding potential.	Be alert for rising water and take appropriate action to protect life and property.	
High Wind Warning	High winds are expected that may blow down trees and powerlines. Beaches and headlands frequently observe higher winds.	Fasten loose objects or shelter objects in a safe location prior to the onset of winds.	
Dense Fog Advisory	Widespread or localized fog reducing visibility to 1/4 mile or less	If driving, slow down, use your headlights, and leave plenty of distance ahead of you.	