



OVERVIEW OF HAWAII'S HAZARDS

Hawaii is vulnerable to several hazards, both natural and human-caused. Some hazards, such as hurricanes, are preceded by a warning period prior to impact and allow time for readiness actions and protective measures. These are often referred to as “notice events.” Other hazards, such as earthquakes and tsunamis, are “no notice” events that occur with little or no warning.

The risk associated with a hazard is based on several factors, the primary ones being the probability of occurrence and the magnitude of potential impacts. The

hazards that are most likely to occur with the greatest potential impacts are higher priorities for preparedness and mitigation efforts. For natural hazards, hurricanes and tsunamis have been identified as the top areas of concern. Flooding is the hazard the state experiences most frequently. Cyber incidents and acts of terrorism are deemed the types of manmade incidents that pose the greatest risk for the state.

Hazard Rank	Hazard	Probability			Impact			Category				Relative Risk Factor
		Population	Assets/Economy	Environmental Resources/Cultural Assets	Spatial Extent	Warning Time	Duration	Adaptive Capacity	Changing Future Conditions			
										Assets/Economy	Environmental Resources/Cultural Assets	
High	Climate Change and Sea Level Rise	3	1	3	2	2	0	3	2	3	4.6	
High	Hurricane	2	2	2	1	1	0	3	2	3	4.5	
High	Tsunami	1	2	2	1	1	3	3	2	3	4.3	
High	Earthquake	1	2	2	1	1	3	3	2	1	4.2	
Medium	Volcanic (Lava flow, vog)	2	1	2	3	2	1	3	2	1	4.0	
Medium	Wildfire	2	2	1	1	2	1	2	2	3	3.8	
Medium	Landslide and Rockfall	2	1	1	3	2	3	3	2	3	3.8	
Medium	Health Risks	1	3	0	0	3	3	3	2	0	3.6	
Medium	Event-Based Flood	1	1	2	1	2	1	3	2	3	3.4	
Medium	Chronic Coastal Flood	3	1	1	1	2	0	3	2	3	3.4	
Medium	Drought	2	1	1	1	3	0	3	2	3	3.3	
Medium	High Wind Storm	2	1	1	1	3	0	3	2	2	3.2	
Low	Dam Failure	1	1	1	1	2	2	3	2	2	2.9	
Low	Hazardous Materials	2	1	1	1	1	3	1	2	0	2.6	

Note: Relative Risk Factor Scores - High: > 4.0; Medium: 3.0 to 4.0; Low < 3.0

Risk assessment for natural hazards from the 2018 State Hazard Mitigation Plan

Tsunamis

Tsunamis are described as ‘distant’ or ‘local’ depending on the originating source. Hawai‘i is at risk of experiencing both types.

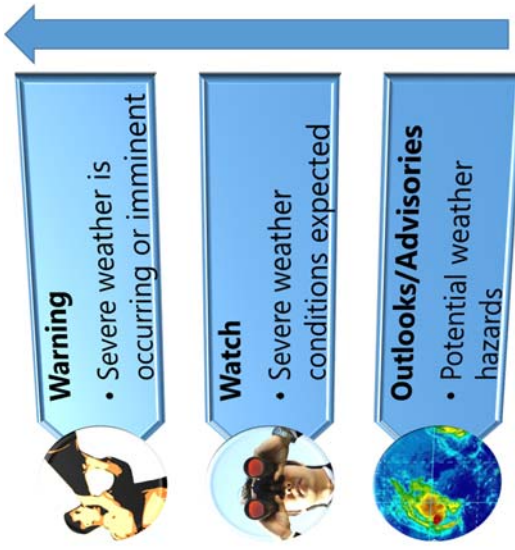
Distant Source Tsunamis originate from a faraway source, usually over 600 miles away, with the first wave arriving more than three (3) hours later.

Tsunamis from Local Sources originate from a nearby source, with waves arriving within minutes or within an hour. While destructive local tsunamis are rare, there is little time to react and local tsunamis generally result in more deaths than distant tsunamis.

Product	Likely Wave Action	Recommended Actions
 INFORMATION STATEMENT	Minor waves at most No destructive tsunami threat	No action suggested at this time
 WATCH	Danger level not yet known	Stay alert for more info Be prepared to act
 ADVISORY	Strong currents likely Runup ≥ .3 meters but ≤ 1 meter	Stay out of water, away from beaches and waterways
 WARNING	Inundating wave possible Runup ≥ 1 meter	Full evacuation suggested. Move to high ground or inland.

Event Location	Travel Time to Hawai‘i	Hawai‘i Island
Alaska	5 hours	Imminent
U.S. West Coast	5 hours	Maui County ~15 minutes
Japan	7 hours	O‘ahu ~27 minutes
South Pacific	7 hours	Kaua‘i ~45 minutes
Chile	14 hours	Local Tsunami

Weather Advisories



For weather events, the National Weather Service issues outlooks and advisories to provide a heads-up that severe weather is possible. When a watch is issued, it means severe weather is expected. A warning means severe weather is occurring or imminent.

Hurricanes and Tropical Storms

When a hurricane or tropical storm passes the 140° longitude line, which is approximately 5 days prior to potential impacts to the state, increased monitoring and readiness actions are initiated. State Emergency

Response Team (SERT) representatives are invited to daily calls with the National Weather Service and the counties to maintain situational awareness and coordinate activities.

