




Hawaii Hazards Awareness & Resilience Program


Produced by
Hawaii State Civil Defense



HAWAII HAZARDS AWARENESS & RESILIENCE PROGRAM:

GOAL: To enhance community resilience to multiple hazards through a facilitated education and outreach program that promotes hazard understanding and awareness, and offers tools and information resources to guide mitigation, preparedness, response and recovery.

2



ALERT AND WARNING

Module 2: Detection, Warning & Response

3

Contents

- Hazard Monitoring and Forecasting
- Communicating Warning Information
- Tools Supporting Situational Awareness

4



Module 2: Detection, Warning & Response

HAZARD MONITORING AND FORECASTING

5

Hazard Monitoring and Forecasting


- Communicates situational awareness
 - What is happening and where?
- Informs decision-making
- Assists coordination of response
- Varies according to the hazard type
 - Rapid onset (e.g., earthquake)
 - Slow-onset (e.g., tropical cyclone)

6

Forecasting Agencies

- Issue information bulletins (e.g., advisories, watches, warnings) with details about:
 - Date and time of issuance
 - Issuing agency
 - Hazard event type
 - Location or area affected
 - Intensity or severity
 - Immediate effects or impacts
 - Forecast information
 - Actions to be taken

7



Learning Check

1. What is the purpose of hazard monitoring and forecasting?
2. What kind of information do forecasting agencies provide?

8

Module 2: Detection, Warning & Response

COMMUNICATING WARNING INFORMATION

9

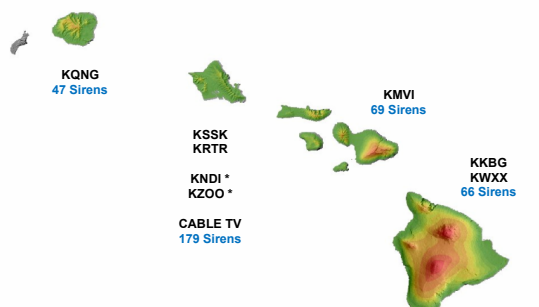
Warning Information

- Warning Information must be:
 - Timely
 - Conveyed to as many people as possible
 - Understandable
 - Actionable

10

Emergency Alert System in Hawaii

361 Active Sirens Statewide

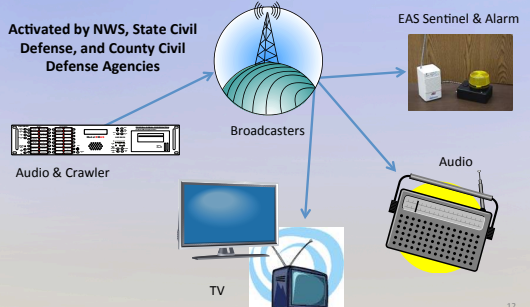


Station	Sirens
KQNG	47
KMVI	69
KSSK	
KRTR	
KNDI *	
KZOO *	
CABLE TV	179
KKBG	
KWXX	66

11

Emergency Alert System in Hawaii

How It Works



Activated by NWS, State Civil Defense, and County Civil Defense Agencies

Broadcasters

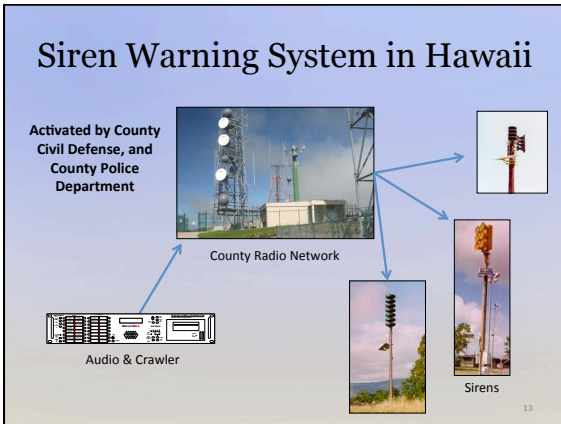
Audio & Crawler

TV

Audio

EAS Sentinel & Alarm

12



Sprint Relay Hawaii

- Offers an Emergency Notification System (ENS) for Hawaii citizens who are deaf or hard-of-hearing.
- Receive emergency alert text messages related to natural disasters on any wireless device.
- The ENS service is FREE.
- To sign up, or for more information:
 - www.relayhawaii.com
 - Or email: relayhawaii@sprint.com

Alert & Monitoring Capabilities

- How does your community *receive* official warning information?
 - Internet web sites
 - Email
 - Text messages
 - NOAA Weather Radio
 - Television
 - Radio
 - Can you think of others?

15

Methods of Disseminating Warning

- How is warning information *disseminated* within your community (to family, friends, neighbors, work, school)?
 - Person to person
 - Outdoor sirens
 - Public announcements or broadcasts
 - Cell phone
 - Telephone tree
 - Can you think of others?

16

Learning Check

1. Why is warning information important?
2. How does your community receive warning messages?

17

Module 2: Detection, Warning & Response

TOOLS SUPPORTING SITUATIONAL AWARENESS

18

National Weather Service Forecast Office Honolulu, Hawaii

- Interactive map and forecast information
- Watches, warnings and advisories

<http://www.prh.noaa.gov/pr/hnl/>

Stream gauge information

<http://water.weather.gov/ahps/region.php?state=hi>

- NWS website reporting USGS stream gauge information in Hawaii.

NWS Enhanced Radar Mosaic

http://radar.weather.gov/Conus/hawaii_loop.php

- Near real-time Doppler radar images show areas of precipitation in the Hawaiian Islands.

USGS PAGER

- PAGER: Prompt Assessment of Global Earthquakes for Response
 - An automated system that rapidly assesses earthquake impacts (fatalities and economic losses) following significant earthquakes world wide.
 - Reports are available online: <http://earthquake.usgs.gov/earthquakes/pager/>

USGS PAGER

<http://earthquake.usgs.gov/earthquakes/pager/>

USGS PAGER

<http://earthquake.usgs.gov/earthquakes/pager/>

PAGER - M 4.4 - HAWAII REGION, HAWAII

Earthquake Shaking Alert Level: **GREEN**

Location: 20.7 N, 155.7 W, Depth: 10km

Event ID: US800005FD

Alert Version: 1

Created: 25 minutes, 22 seconds after earthquake

Alert Information

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Fatalities

Estimated Economic Losses

Detailed Information

Estimated Population Exposed to Earthquake Shaking	1	2	3	4	5	6	7	8	9	10
Estimated Population	100	100	100	100	100	100	100	100	100	100
Estimated Deaths	0	0	0	0	0	0	0	0	0	0
Estimated Economic Losses	0	0	0	0	0	0	0	0	0	0

USGS Earthquake Notification Service

<https://sslearnquake.usgs.gov/ens/>

- A free service that sends you automated notification emails when earthquakes happen in your area.
- Default notifications are sent for earthquakes of magnitude 6.0 or greater.
- Users can customize for magnitude, location, time of day, and multiple email addresses or text to cell phone.

USGS Earthquake Notification Service

Nixle Community Wire

<http://www.nixle.com/>

- Nixle provides a platform for the delivery of SMS Alerts, Advisories, Community type messages, and local Traffic information from your local police department and community agencies.
- Nixle does not provide the content, but provides the ability for local agencies to disseminate important local information.
- Text your Zip Code to receive SMS notifications for that area.

Nixle for Honolulu, Hawaii

<http://local.nixle.com/city/hi/honolulu/>

Pacific Tsunami Warning Center Honolulu, Hawaii

- Issues Advisory, Watch and Warning information by region for tsunami events.
- Interactive maps and information.
- <http://ptwc.weather.gov/index.php>

NOAA's Tsunami Evacuation Zone Mapping Tool

NOAA's Tsunami Evacuation Zone Mapping Tool is hosted on many sites, including: www.scd.hawaii.gov

Go to homepage and enter your address or search by island area.

Tsunami Evacuation Zone Mapping Tool

The Tsunami Map Viewer returns a map of areas with Tsunami Evacuation Zones based on information that you enter.

Search By Address

Address: 410 Atkinson Drive

City: Honolulu

Zip: 96814

Search Address

Or Search By Island Area

Search Island Area

Example: Address for Ala Moana Hotel

Recommendations for Disaster Preparedness Kit

Emergency preparedness kits should contain the essentials your family needs to survive during a disaster: fresh water, food, cleaning materials, clothing, and blankets. Visit this site for a comprehensive list to help in assembling a kit of your own.

Social Needs Information

For the millions of Americans who have physical, medical, sensory or cognitive disabilities, emergencies such as fires, floods and acts of terrorism present a real challenge. The same challenge also applies to the elderly and other special...

31

SUNAMI HAZARD MAP

Address: 410 Atkinson Drive, Honolulu, Hawaii

Map Satellite Hybrid Foot

Important Map Notes

When evacuation boundaries are drawn along streets and roadways, they are considered to be safe from wave action. Steel and/or concrete buildings of six or more stories in height should provide adequate protection if people move to the third floor or above. Hawaii County residents and visitors click here. Due to the probability of people incorrectly interpreting the map, it should not be used to determine evacuation routes.

The shaded area indicates the Tsunami Evacuation Zone. If you live or work in an evacuation zone, you should have an Evacuation Plan in case of a tsunami.

LEGEND

Tsunami Evacuation Zones (Shaded)

32

Tsunami Evacuation Zones

Data: The Oahu tsunami evacuation zone maps* were updated in 2010. Visit The City and County of Honolulu Department of Emergency Management site for more information.

Map 1: Waikiki

Map 2: Waikiki - Waialae

Map 3: Waialae - Hauana B

Map 4: Hauana Bay - Waiwai

Map 5: Waiwai - Waimanalo

Map 6: Waimanalo - Kalia

Map 7: Kalia - Kaneohe Bay

Map 8: Kaneohe Bay - Kahala

Map 9: Kahala Bay - Huala

Map 10: Huala - Makenah

Maps available via your local Civil Defense Agency or Department of Emergency Management website.

33

Tsunami Evacuation Zones

View online at: <http://www.pdc.org/atlas>

PACIFIC DISASTER CENTER

Map interface showing Oahu with evacuation zones highlighted in red.

34

Tsunami Evacuation Zones

View online at: <http://www.pdc.org/atlas>

PACIFIC DISASTER CENTER

Map interface showing the entire Hawaiian Islands with evacuation zones highlighted in red.

35

Tsunami Evacuation Zones

View online at: <http://www.pdc.org/atlas>

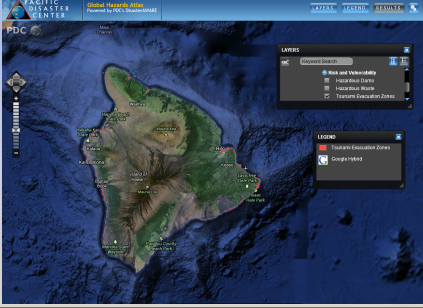
PACIFIC DISASTER CENTER

Map interface showing the Hawaiian Islands with evacuation zones highlighted in red.

36

Tsunami Evacuation Zones

View online at: <http://www.pdc.org/atlas>




37

PDC Global Hazards Atlas

<http://www.pdc.org/atlas>

- Real-time reporting for multiple hazards
- Publicly accessible application
- Base data
- Observational data
- Historical hazard information



38

PDC Disaster Alert App

- **Disaster Alert** provides a listing and an interactive map of Hazards occurring around the world.
- Available for **Android** and **iPhone** via the Android Market and iTunes on-line stores.



Interactive map




Hazards list



Details of an event

39

Questions?




40

MAHALO

The Hawaii Hazards Awareness & Resilience Program (HHARP) is the result of a collaborative partnership between Hawaii State Civil Defense and the Pacific Disaster Center.

Point of Contact: Hawaii State Civil Defense
Phone: (808) 733-4300





41