



CITY & COUNTY OF HONOLULU

Dr. Randal A. Collins, CEM

**Director of Emergency
Management**

Opening Remarks





CITY & COUNTY OF HONOLULU

Ian Keogh

2025 Local Hazard Mitigation Plan - Public Briefing



Purpose & Objectives



Purpose

- ✓ Today's presentation will provide an overview of the 2025 Local Hazard Mitigation Plan (LHMP) for the City and County of Honolulu (City)

Objectives

- ✓ Define Hazard Mitigation
- ✓ Identify components of the Hazard Mitigation Plan and how to use the plan to understand risks
- ✓ Identify the improvements to the 2025 LHMP versus the 2020 LHMP
- ✓ Identify the benefits of mitigation actions and summarize proposed mitigation measures included in the 2025 LHMP

URL: 2025 Local Hazard Mitigation Plan



CITY AND COUNTY OF
HONOLULU

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[HNL Alert](#)

[Hazards ▾](#)

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[Get Involved ▾](#)

[Resources ▾](#)

[About Us ▾](#)

Local Hazard Mitigation Plan

[+ What is hazard mitigation?](#)

[+ What is the Local Hazard Mitigation Plan?](#)

[+ How can I contribute to the Local Hazard Mitigation Plan?](#)

A virtual public meeting will be held to provide an overview of the LHMP on **Thursday, August 7 at 6:30pm.**

[REGISTER HERE](#)

Read the 2025 Local Hazard Mitigation Plan

**Table of
Contents**

**Executive
Summary**



Chapter 1:

Introduction



Chapter 2:

Planning Process



Chapter 3:

County Profile

Hazard Mitigation Overview



What is Hazard Mitigation?

Any sustained action taken to reduce or eliminate long-term risks to people and property from future disasters

Hazard Mitigation Overview



**Why is it
important?**

PURPOSE OF THE LHMP

Assessing the City's risk from natural disasters to develop strategies helps reduce the loss of life or property resulting from the hazard event.

The LHMP must be updated every five years to stay within FEMA regulations & guidelines. This helps navigate new hazards and evolving community priorities.



Plan Requirements



Planning Process

Ensure active participation from community leaders, stakeholders and the public.



Risk Assessment

Identify and analyze hazards that may impact the City.



Mitigation Strategy

Develop goals and prioritized actions to create a long-term blueprint for reducing risk.



Plan Update

Revise the existing plan to reflect changes in conditions or priorities since the last plan



Plan Maintenance

Establish a process for how the plan will be regularly updated



Plan Adoption

Formally adopt the updated plan to show City commitment to goals and actions in the plan.



**LOCAL HAZARD
MITIGATION PLAN
REQUIREMENTS**

LHMP 2020 vs. 2025



 City and County of Honolulu									
2025 Local Hazard Mitigation Plan									
Executive Summary	Chapter 1: Introduction	Chapter 2: Planning Process	Chapter 3: County Profile	Chapter 4: Risk Assessment Methodology & Tools	Chapter 5: Hazard Identification	Chapter 6: Climate Change & Sea Level Rise	Chapter 7: Deliberate Hazards	Chapter 8: Drought	
Chapter 9: Earthquake	Chapter 10: Flood	Chapter 11: Hazardous Materials	Chapter 12: Health Risk	Chapter 13: Hurricane	Chapter 14: Infrastructure Failure	Chapter 15: Invasive Species	Chapter 16: Landslide	Chapter 17: Tsunami	
Chapter 18: Volcanic Gas (VOG)	Chapter 19: Wildland Fire	Chapter 20: Windstorm	Chapter 21: Hazard Ranking	Chapter 22: Capability Assessment	Chapter 23: Mitigation Strategy	Chapter 24: Plan Maintenance	Appendix A: References	Appendix B: Acronyms Glossary	
Appendix C: Meeting Documentation	Appendix D: Public and Stakeholder Outreach	Appendix E: Revision of Plan Adoption Letter	Appendix F: (Incoming)	Appendix G: Stakeholder Engagement	Appendix H: Comprehensive Flood Area Map				
May 2025									
 									

- **Expanded Scope of Hazards:** The updated plan includes human and technological hazards.
- **Incorporation of New Data and Studies:** The updated plan incorporates new studies, data, and modeling from the past five years, providing a more informed understanding of hazard impacts on O‘ahu.
- **Reflection of Progress on Mitigation Actions:** The plan also reflects progress made on mitigation actions identified in the 2020 LMHP.

How to Utilize the Plan

2025 Local Hazard Mitigation Plan (LHMP)
5-Year Update



Hazard Profiles



Climate Change & Sea Level Rise

Drought

Earthquakes

Flood

Hazardous Materials

Health Risks

Hurricanes

Infrastructure failure

Invasive species

Landslide

Tsunami

Volcanic Gas (VOG)

Wildland Fire

Windstorm

Deliberate Hazards

The plan contains profiles of hazards considered most likely to affect our community.

Natural Hazards are hazards that are sources of harm or difficulty created by a meteorological, environmental, or geological event.

Human-caused Hazards are hazards that result from human intent, error, or failed systems.

Risk & Vulnerability Assessment



Profile Each Hazard:

Location

Describes the geographical location where the hazard may occur. If the hazard has a physical location a map is included.

Extent

Describes the strength of the hazard, including the minimum and maximum levels of severity.

Previous Occurrences

A compilation of historical impacts from the hazard.

Probability of Future Occurrence

Likelihood of the hazard occurring in terms of frequency.

Assess Risk:

Cascading Impacts on Other Hazards

Describes how the hazard of concern may exacerbate other hazards in the community.

Vulnerability Assessment

Includes loss estimates and potential effects on people, property, infrastructure, the economy, and the environment.

Future Changes that May Affect Risk

Assess how projected changes in development, population, and climate change may affect the hazard.

Risk & Vulnerability Assessment



Community Lifelines & Facilities

- Fundamental services that enable other aspects of society to function
- Often integrated networks of assets, services, and capabilities
- Contain components and subcomponents



Hazard Risk Ranking



- Hazards are ranked as high, medium, or low risk
- The Citywide hazard ranking includes the entire planning area and may not reflect the highest risk for individual regions on O'ahu

Hazard Ranking	Hazard	Categories					
		Probability	Consequence			Adaptive Capacity	Climate Change
			Population	Property	Structure Loss/ Economy		
High	Climate Change & Sea Level Rise	High	High	Medium	High	Medium	High
Medium	Cyber Threats	High	Medium	Low	Medium	High	Low
Medium	Drought	Medium	Low	Low	Low	High	High
Low	Earthquake	Medium	Low	Low	Low	Medium	Low
High	Floods	High	High	Medium	Medium	Medium	High
Low	Hazardous Materials	High	Low	Low	Low	High	Medium
High	Health Risks	High	High	Low	High	Low	High
High	Hurricane	Low	High	Medium	High	Medium	High
Low	Infrastructure Failure	Low	Low	Low	Low	Medium	Medium
Medium	Invasive Species	High	Low	Low	High	Low	High
Low	Landslides	High	Medium	Low	Low	Medium	Low
Low	Terrorism	Low	Low	Low	Medium	High	Low
High	Tsunami	Low	High	High	High	Medium	Medium
Low	Volcanic Gas (Vog)	Low	Low	Low	Low	Medium	Low
High	Wildland Fire	High	High	High	High	Medium	High
Low	Windstorm	High	Low	Low	Low	Medium	Medium

Mitigation Actions

2025 Local Hazard Mitigation Plan (LHMP)
5-Year Update



Mitigation Action Plan: Goals



1

Encourage resilient infrastructure citywide.

3

Promote an internal and external collaborative and integrated mitigation program.

2

Protect the people, property, natural, and cultural resources of O'ahu.

Updated Hazard Mitigation Actions



The **2020 LHMP** included a total of **57 mitigation** actions which have been consolidated and updated.

The **2025 LMPH** contains **45 mitigation** actions as result of reviewing the 2020 LHMP and adding new actions.

Hazards	Final Actions Mitigation Total
Windstorm	14
Wildland Fire	25
Volcanic Gas (VOG) Hazard	2
Tsunami	14
Terrorism	3
Landslide/Rock Fall	9
Invasive Species	5
Infrastructure Failure	10

Hazards	Final Actions Mitigation Total
Hurricanes	33
Health Risks	5
HAZMAT	4
Flood	33
Earthquake	11
Drought	9
Cyber Threat	5
Climate Change and Sea Level Rise	25

Mitigation Actions: Examples



Short Term Action

(1-2 years)

Small Business Hazard Education and Outreach

Hazards Mitigated: Climate Change and Sea Level Rise, Cyber Threat, Flood, Hurricane, Tsunami, Wildland Fire

Medium Term Action

(2-5 years)

Planning for Resilient Post-Disaster Reconstruction

Hazards Mitigated: Earthquake, Flood, Hurricane, Infrastructure Failure, Tsunami, Wildland Fire

Long Term Action

(5+ years)

Promote Nature- Based Solutions in Mitigation Actions

Hazards Mitigated: Climate Change and Sea Level Rise, Drought, Flood, Hurricane, Tsunami, Wildland Fire, Windstorm

LHMP Maintenance



Evaluate

- Assess whether the plan for processes and actions have been effective in hazard risk reduction.

Update

- Mitigation plans are required to be reviewed so that the City remains eligible for certain federal funding.
- Plans may be updated following major impacts or the availability of new information.

Integrate

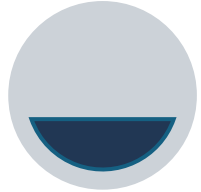
- The integration of hazard mitigation planning into decision-making processes is essential to lessen risk from natural disasters.

Community Actions

2025 Local Hazard Mitigation Plan (LHMP)
5-Year Update



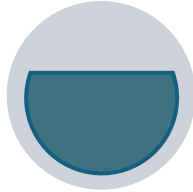
What You Can Do at Home



Gather emergency supplies *early*

Provisions could include:

- Bottled water
- Non-perishables
- Batteries
- Flashlights / candles
- First aid kit



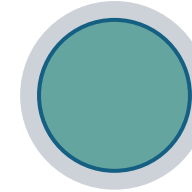
Determine flood risk for your property & home

FEMA Flood Map:

[FEMA Flood Map Service Center | Welcome!](#)

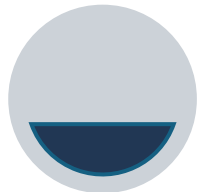
NOAA Storm Surge

<https://www.nhc.noaa.gov/nationalsurge>



Strengthen and retrofit your home

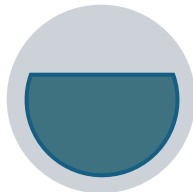
- Install storm shutters
- Check for roof leaks
- Harden exterior doors
- Prepare for flooding
- Remove yard debris
- Make sure your home is up to date with building codes for hurricanes



Have an evacuation plan

Discuss with family or trusted individuals:

- Share location of where you would evacuate (family members house, hurricane shelters, etc.)
- Know what point evacuation becomes mandatory for your household
- Prepare meeting points once hazard conditions have cleared / check-in times when services are available



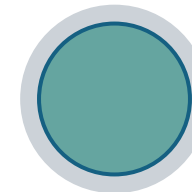
Obtain Insurance

If you **do not own** your residence:

- Speak with your landlord about preparation and damage reporting

If you **do own** your residence:

- Know how to file a claim and be prepared to do so



Be proactive

- Take photos of property and assets prior to storm landfall
- Be aware of expected storm condition timelines (Hurricane Watch / Hurricane Warning)
- Know that once hurricane conditions arrive, emergency services may be unable to reach you.

URL: Public Survey and Comments



— What is the Local Hazard Mitigation Plan?

The City and County of Honolulu's Local Hazard Mitigation Plan ("LHMP") documents the City's hazard risks and sets priorities, strategies, and actions for reducing those risks.

Local Governments must revise their LHMP and resubmit it for FEMA approval at least every five (5) years to remain eligible for federal grant programs that can support hazard mitigation.

The City's LHMP has been updated based on regulations found in FEMA's [Local Mitigation Planning Policy Guide](#). The **current plan (2025)** expires on July 1, 2030.

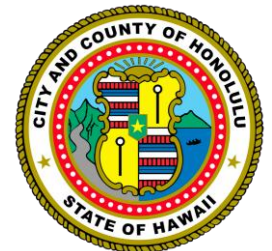
The plan is reviewed annually. If you have comments and feedback that will assist with the plan's annual review, please submit below.

[GIVE FEEDBACK AND COMMENTS](#)

CITY AND COUNTY OF HONOLULU
Department of Emergency Management

Mā'ili Fire
July 6, 2025 – July 9, 2025

August 19, 2025



Incident Overview and Summary

Bias for Action
Initiative
Teamwork



Incident Overview and Summary

Time	Action
2:33 pm	911 call received/HFD/HPD Dispatched
2:40 pm	HPD identified risk to life/commenced evacuations
2:42 pm	HFD arrives on scene
2:50 pm	HPD expand evacuation area
2:56 pm	Fire Communications contacts DEM
3:07 pm	EOC activation initiated
3:12 pm	DEM requested to issue evacuation alert
3:23 pm	EOC activation notification to EOC partners
3:32 pm	Emergency Alert System and Wireless Emergency Alert issued
3:39 pm	Initial HNL alert issued to all HNL Alert users
4:27 pm	Critical patient transported to hospital



Incident Overview and Summary

Improvement Area	Recommended Action	Agency
Alert & Warning	Established a staffed 24/7 Watch Office at the JTMC	DEM
Alert & Warning	Train all field incident commanders in alert & warning protocols	HFD & HPD (Supported by DEM)
Incident Management	Initiate Honolulu Incident Management Team proactively	DEM (Supported by all departments)
Incident Management	Ensure protocols for a unified command post	HFD & HPD
Situational Awareness	Integrate AI and modern technologies to support situational awareness and a common operating picture	DEM (Supported by all departments)
Communications	Improve protocols and tools for real-time transfer of information and resource requests from Field to EOC	DEM
Disaster Recovery	Establish a program that evaluates victim needs and aid in recovery	DEM



Emergency Operations Center

Department/Organization

Office of the Mayor/Managing Director

Department of Emergency Management

Honolulu Police Department

Honolulu Fire Department

Honolulu Emergency Services Department

Department of Transportation Services

Department of Parks and Recreation

Board of Water Supply

Hawaii Food Bank

American Red Cross

Salvation Army



PUBLIC ALERT AND WARNING TIMELINE

3:12 PM

HFD Notifies DEM

Evacuations Required

3:32 PM

Emergency Alert to all Oahu

Radio and TV Stations

Wireless Emergency Alert Sent to
All Cell Phones within Alert Area

3:39 PM

Text and Email Alert Sent to All
Subscribers of City's Mass
Notification System – HNL Alert

3:54 PM

Corrected HNL Alert Sent with
Correct Link to Evacuation Map

Message Content

WEA Text Message WILDLAND FIRE EMERGENCY in MAILI. EVACUATE NOW -C&C HNL

WEA Long Text Message From Honolulu Department of Emergency Management: WILDLAND FIRE EMERGENCY in MAILI. LEAVE NOW if you are receiving this message. The fire poses immediate threat to lives/property. Monitor local TV or radio for updates

Headline Immediate evacuation ordered due to a wildland fire emergency

Description This is Honolulu Department of Emergency Management with a mandatory evacuation order due to a WILDLAND FIRE EMERGENCY located in MAILI and moving mauka (toward the mountain). Evacuate NOW from areas of Maili mauka of Kulaaupuni St. Wildland fires can cause injury/death, burn homes and structures. Take the following protective actions and LEAVE NOW. 1. Gather all family members. Drive a neighbor who has no transportation if you can. 2. Bring pets if you can locate and secure them quickly. 3. Do not delay packing belongings. Take only essential items and medications you have ready to go. Monitor local radio and television stations for updates.



Alert & Warning

Non-Emergency Alerts

Opt-in systems



HNL ALERTS

Sent to anyone who signs up at hnlalert.gov via text, email, or app.

Used in both routine and emergency situations.

HNL Alerts about emergency situations are sent to all subscribers.

Uses a system provided by a City vendor.



OFFICIAL SOCIAL MEDIA

Alerts are posted on official social media accounts including City, State, and trusted partners.



@oahudem



@oahu_dem

Emergency Alerts

Notifies everyone in affected area



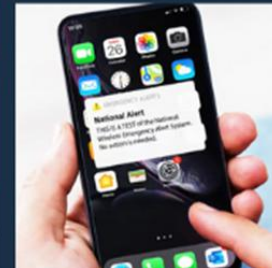
EMERGENCY ALERT SYSTEM (EAS)

Alerts that interrupt programming to deliver urgent emergency info on:

- Broadcast TV
- Cable
- Radio
- Satellite radio

Tested the first business day of the month.

Uses a system provided by FEMA.

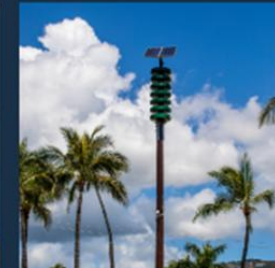


WIRELESS EMERGENCY ALERTS (WEA)

Alerts that deliver urgent emergency info to all cellphones in affected geographic areas - no sign up required.

Short, text-like messages.

Uses a system provided by FEMA.



OUTDOOR WARNING SIRENS

Warning sirens are located primarily along coastal areas for use in tsunami warnings. Can be used for other events.

Loud "Steady Tone".

Tested the first business day of the month at 11:45 a.m.

Sirens are installed/maintained by the state.



Briefing Conclusion

This fire was a major incident. It was fast. It was dangerous. It was chaotic, as all major incidents are, but the public safety agencies did not hesitate. They acted with initiative and purpose. Operations remained aggressive and adaptive. Communications stayed open. Resources were moved fast and used well. Leadership at all levels pushed decisions down and supported the frontlines. No one waited for orders they didn't need. They acted because lives were at risk. This was a successful outcome because we work together. This is how you manage crisis. This is how we serve O'ahu.

What are your questions?

Mahalo



**HNL
ALERT**
O'AHU DEPARTMENT OF EMERGENCY MANAGEMENT

**TSUNAMI
WARNING**
honolulu.gov/tsunamievac

**Destructive tsunami expected.**
Evacuate **RED** areas of
evacuation map or go to 4th
floor or above in a building at
least 10 stories.

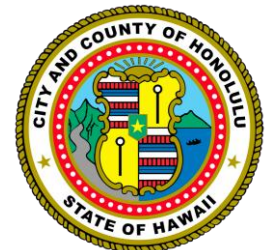
Take Action. Tsunami.gov
weather.HNLAlert.gov
Honolulu.gov/DEM

CITY AND COUNTY OF HONOLULU
Department of Emergency Management

Tsunami Warning

July 29, 2025

September 10, 2025



Incident Overview and Summary



Fast & Frequent Communication
Effective Leadership
Teamwork



Incident Overview and Summary

Time	Action
1:25 pm	Earthquake off east coast of Kamchatka, Russia.
1:31 pm	Tsunami Watch issued for Hawaii (est first impacts 7:17pm).
1:32 pm	EOC Activated.
1:37 pm	First HNL Alert Tsunami Watch.
2:43 pm	Tsunami Warning issued.
2:47 pm	HNL Alert Tsunami Warning begins evacuation.
3:22 pm	EAS/WEA Issued.
4:10 pm	Sirens activated.
10:39 pm	Tsunami Warning canceled. Tsunami Advisory.
10:51 pm	HNL Alert Tsunami cancellation.
12:00 am	EOC deactivated.

Times are approximate



Incident Overview and Summary

Improvement Area	Recommended Action	Agency
Alert & Warning	WEAs to be issued by DEM not HI-EMA with local information.	DEM
Public Information	Improved coordination with State on press briefings.	DEM/MAYCOMM
Public Information	ASL interpreter should be used.	DEM/MAYCOMM
Public Information	Social media platforms to reach younger populations.	DEM/MAYCOMM
Incident Management	Traffic flow/gridlock study.	DTS/HPD/DEM
Public Education	Tsunami Zone and Extreme Tsunami Zone.	DEM
Public Education	Vertical Evacuation.	DEM



Briefing Conclusion

The response worked. Many felt discomfort and inconvenience, yet we met every objective. We moved all who needed to move, and all who chose to move, into safe locations. Traffic was clear from tsunami zones. We isolated vulnerable areas. No one was injured. We stood together, acted with purpose, and proved our readiness.

What are your questions?

Mahalo





Questions and Closing Remarks