



## 2. PLANNING PROCESS

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This chapter describes the planning process applied to update the LHMP, including how it was prepared and who was involved in the process, including participation by the public. The planning approach aimed at achieving the following results:

- Considerations of all natural hazards that pose a risk to the area (as required by 44 CFR 201) and human-caused hazards that pose significant risk
- Development of the LHMP according to FEMA regulations and guidance to ensure that all requirements are met and support plan review and meet criteria for the National Flood Insurance Program (NFIP) Community Rating System (CRS)

The City applied for and was awarded a grant under the FEMA Fiscal Year 2021 Building Resilient Infrastructure and Communities (BRIC) program, which supported the development of this LHMP. Grant administration was the responsibility of the City's DEM.

### 2.1 ORGANIZATION OF THE PLANNING PROCESS

The planning process serves as the foundation for developing an effective LHMP to reduce the City's risk and vulnerability from hazards. The 2025 LHMP update builds upon work achieved and relationships formed during prior LHMP planning efforts. Meeting documentation is in Appendix C.

### 2.2 PLANNING PROCESS PARTICIPANTS

#### 2.2.1 CORE PLANNING TEAM

DEM and CCSR led the 2025 LHMP update. Representatives from both organizations formed the Core Planning Team, serving as an advisory group responsible for making key decisions throughout the planning process. The team's duties included maintaining the project's schedule, identifying other planning team members and subject matter experts to inform the LHMP update, reviewing deliverables and drafts of the LHMP, and informing development of the outreach strategy and content for the LHMP. Table 2-1 identifies members of the Core Planning Team.



Table 2-1. Core Planning Team Representatives

Name	Title	Organization	Sector/Community Lifeline
Sarah Harris	Hazard Mitigation and Long-term Disaster Recovery Program Manager	CCSR	Climate Change/Safety and Security
Madeline Krueger	Coastal and Hazards Sea Grant Grau Fellow	CCSR	Climate Change/Safety and Security
Ian Keogh	Staff Officer—Recovery and Mitigation	DEM	Emergency Management/Safety and Security
Molly Pierce	Public Information Officer	DEM	Emergency Management/Safety and Security
Jennifer Walter	Acting Director	DEM	Emergency Management/Safety and Security

### 2.2.2 EXECUTIVE STEERING COMMITTEE AND HAZARD MITIGATION WORKING GROUP

In September 2023, DEM reviewed the list of participating stakeholders from the 2020 LHMP and identified opportunities to expand representation of stakeholders. DEM conducted a senior leader brief regarding the LHMP update at a Cabinet meeting and described the type of representation City departments should provide to assist with the update process.

The Core Planning Team included City agencies that were not part of the previous plan update. This included newer agencies such as the Department of Housing and Land Management and the Office of Economic Revitalization, as well as departments that could help ensure greater consideration of social vulnerability, such as the Department of Community Services (DCS). DEM reached out to stakeholders during fall 2023 to conduct the first plan update meeting with key stakeholder groups described below.

To ensure that stakeholder input and community priorities were effectively represented and engaged, the Core Planning Team organized key stakeholders into an Executive Steering Committee and a Hazard Mitigation Working Group (HMWG).

- The **Executive Steering Committee** consists of executive-level representatives from City agencies and is responsible for informing the strategic direction of the plan and providing support for its implementation. The Executive Steering Committee members were charged with the following:
  - Providing strategic guidance and executive oversight throughout the planning process.
  - Attending the initial HMWG to give input to the plan strategies and overall planning process.
  - Attending the final HMWG meeting to review and comment on final drafts of key plan elements.
  - Providing senior level support of plan implementation.
- The **HMWG** includes subject matter experts (SMEs) and staff-level representatives from a range of City agencies as well as external partners from other governmental and non-governmental agencies. The HMWG contributes data and insights to inform the risk assessment and mitigation strategy. Additionally,



the HMWG conducts reviews of the draft LHMP to provide expert input and ensure the content aligns with local concerns and priorities. Specific duties of HMWG members include the following:

- Attending and participating in HMWG meetings
- Reviewing and updating hazards of concern
- Assisting with developing and implementing a public and stakeholder outreach program
- Ensuring that data and information used in the LHMP update process are the best available
- Reviewing and updating hazard mitigation goals
- Reporting on progress of integration of prior LHMPs into other planning processes and operations
- Reporting on progress of mitigation actions identified in prior or existing LHMPs, as applicable
- Identifying, developing, and prioritizing appropriate mitigation actions
- Reviewing and commenting on plan documents prior to submission to Hawai'i Emergency Management Agency (HI-EMA) and FEMA
- Implementing and maintaining the LHMP update.

Table 2-2 identifies Executive Steering Committee and HMWG representatives. In addition to receiving guidance and feedback from the Executive Steering Committee and HMWG, the Core Planning Team also consulted with Ad Hoc Members and SMEs. Although these representatives did not attend regular meetings, they were engaged to offer insights on specific hazards and mitigation actions. The Ad Hoc Members and SMEs are identified in Table 2-2.

**Table 2-2. Stakeholder Representatives**

Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
Gene Albano	Director and Chief Engineer Designate	Honolulu Department of Facility Maintenance	Infrastructure/Water Systems	Executive Steering Committee
Derrick Ariyoshi	Program Administrator, Elderly Services	Honolulu Department of Community Services	Underserved Community and Socially Vulnerable Populations/Safety and Services	HMWG
Amy Asselbaye	Director	Honolulu Office of Economic Revitalization	Economic Development/Safety and Security	Executive Steering Committee
Kevin Auger	Executive Director	Honolulu Department of Housing and Land Management	Housing/Underserved Community and Socially Vulnerable Populations/Food, Hydration, and Shelter	Both
Roger Babcock, Jr.	Director	Honolulu Department of Environmental Services	Infrastructure/Water Systems	Executive Steering Committee



Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
John Bravender	Warning Coordination Meteorologist	National Weather Service	Emergency Management/Communications	Hazard SME
Terry Chan	Program Coordination Engineer	Honolulu Department of Design and Construction	Economic Development/Safety and Security	HMWG
Craig Chung	Traffic Engineer	Honolulu Department of Transportation Services	Infrastructure/Transportation	HMWG
Stephen Courtney	Deputy Director	Honolulu Department of Information Technology	Infrastructure/Communications	Executive Steering Committee
Ian Crittenden	Assistant Chief Planner	Honolulu Department of Transportation Services	Infrastructure/Transportation	HMWG
Shawn Enos	Maintenance & Operations Superintendent	Honolulu Department of Enterprise Services	Economic Development/Safety and Security	HMWG
Dolan Eversole	Extension Agency	University of Hawai'i	Natural and Cultural/Safety and Security	Hazard SME
Diana Felton	Chief—Communicable Disease & Public Health (Nursing Division)	Hawai'i State Department of Health	Health and Social Services/Health and Medical	Hazard SME
Bryan Gallagher	Deputy Director	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	Executive Steering Committee
Matt Gonser	Executive Director	Office of Climate Change Sustainability and Resiliency	Climate Change/Safety and Security	Executive Steering Committee
Sheldon Hao	Fire1	Honolulu Fire Department	Emergency Management/Safety and Security	Executive Steering Committee
John Hashimoto	Risk Management Officer	Honolulu Department of Budget and Fiscal Services	Economic Development/Communications	HMWG
Jim Hayden	DPP Geographic Information System Analyst V	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	HMWG
Kathleen Higa	Planner VI	Honolulu Emergency Services Department	Emergency Management/Safety and Security	Ad Hoc Member



Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
Jim Ireland	Director	Honolulu Emergency Services Department	Emergency Management/Safety and Security	Ad Hoc Member
Keith Ito	Fire Captain	Honolulu Fire Department	Emergency Management/Safety and Security	HMWG
Krishna Jayaram	Deputy MD	Honolulu Managing Director's Office	Economic Development/Safety and Security	Executive Steering Committee
Michael Kat	Planner	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	HMWG
Andy Kawano	Director	Honolulu Department of Budget and Fiscal Services	Economic Development/Communications	Executive Steering Committee
Erwin Kawata	Deputy Director	Honolulu Board of Water Supply	Infrastructure/Water Systems	HMWG
Judy Kern	Emergency Preparedness and Education Coordinator	Hawai'i State Department of Health	Health and Social Services/Health and Medical	Hazard SME
Dawn Kimura	Chief of Building Safety	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	HMWG
Dennis Kodama	Assistant Chief of Facilities	Honolulu Department of Design and Construction	Economic Development/Safety and Security	HMWG
Kevin Kodama	Senior Service Hydrologist	National Weather Service	Emergency Management/Communications	Hazard SME
Terri Ann Koike	Natural Resources—Trees	Honolulu Department of Parks and Recreation	Natural and Cultural/Safety and Security	HMWG
Tony Koyamatsu	Flood Control & Dam Safety Officer	Hawai'i Department of Land and Natural Resources	Natural and Cultural/Safety and Security	Hazard SME
Franz Kraintz	Chief, Community Planning Branch	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	HMWG
Anton Krucky	Director	Honolulu Department of Community Services	Underserved Community and Socially Vulnerable Populations/Safety and Services	Executive Steering Committee



Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
Sandra Kunioka	DDC Program Coordination Chief	Honolulu Department of Design and Construction	Economic Development/Safety and Security	HMWG
Ernest Lau	Manager & Chief Engineer	Honolulu Board of Water Supply	Infrastructure/Water Systems	Executive Steering Committee
Aedward Los Banos	Deputy Director	Honolulu Department of Community Services	Underserved Community and Socially Vulnerable Populations/Safety and Services	Executive Steering Committee
Edmund Lung	Chief, Wastewater Treatment and Disposal Division	Honolulu Department of Environmental Services	Infrastructure/Water Systems	HMWG
Emily Makini	Equity Program Manager	Office of Climate Change Sustainability and Resiliency	Emergency Management/Climate Change/Safety and Security	Outreach Partner
Warren Mamizuka	Deputy Director	Honolulu Department of Facility Maintenance	Infrastructure/Water Systems	Executive Steering Committee
Edwin Matsuda	Flood Control & Dam Safety Section Head	Hawai'i Land and Natural Resources	Natural and Cultural/Safety and Security	HMWG
Chip McCreery	Director	NOAA Pacific Tsunami Warning Center	Emergency Management/Communications	Hazard SME
Chase McDaniel	Flood and Resilience Specialist	Office of Climate Change Sustainability and Resiliency	Emergency Management/Climate Change/Safety and Security	HMWG
Dominic "Haku" Milles	Director	Honolulu Department of Design and Construction	Economic Development/Safety and Security	Executive Steering Committee
Megan Muramatsu	Budget Program Specialist	Honolulu Board of Water Supply	Infrastructure/Water Systems	HMWG
Casey Nagatoshi	Pandemic Response Expansion Project (PREP) Program Specialist	Hawai'i State Department of Health	Health and Social Services/Health and Medical	Hazard SME
Raelynn Nakabayashi	BWS Executive Assistant	Honolulu Board of Water Supply	Infrastructure/Water Systems	HMWG
Ryan A Nakata	District Engineer	Hawai'i Department of Transportation	Infrastructure/Transportation	Ad Hoc Member



Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
Jon Nouchi	Deputy Director	Honolulu Department of Transportation Services	Infrastructure/Transportation	Executive Steering Committee
Elizabeth Pickett	Co-Executive Director	Hawai'i Wildfire Management Organization	Natural and Cultural/Safety and Security	HMWG
Clifford Ramson	MED/ Captain	Honolulu Police Department	Emergency Management/Safety and Security	Ad Hoc Member
Bradley Romine	Extension Faculty	University of Hawai'i	Health and Social Services/Health and Medical	Hazard SME
Jason Samala	Deputy Fire Chief	Honolulu Fire Department	Emergency Management/Climate Change/Safety and Security	Executive Steering Committee
Ian Santee	Deputy Director	Honolulu Emergency Services Department	Emergency Management/Safety and Security	Ad Hoc Member
Kymberly Sparlin	Executive Assistant	Honolulu Office of Economic Revitalization	Economic Development/Safety and Security	HMWG
Tyler Sugihara	Chief of Road Maintenance	Honolulu Department of Facility Maintenance	Infrastructure/Water Systems	HMWG
Jiro Sumada	Deputy Director	Honolulu Department of Planning and Permitting	Emergency Management/Safety and Security	Executive Steering Committee
Keith Suzuka	Deputy Director	Honolulu Department of Housing and Land Management	Natural and Cultural/Safety and Security	Executive Steering Committee
Julian Tanioka	Sergeant	Honolulu Police Department	Emergency Management/Safety and Security	Ad Hoc Member
Catherine Taschner	Director	Honolulu Department of Housing and Land Management	Natural and Cultural/Safety and Security	HMWG
Laura Thielen	Director	Honolulu Department of Parks and Recreation	Natural and Cultural/Safety and Security	Executive Steering Committee



Name	Title	Organization	Sector/Community Lifeline	Executive Steering Committee or HMWG
Timothy Trang	Civil Division	Honolulu Department of Design and Construction	Economic Development/Transportation/Safety and Security	HMWG
Carol Tyau-Beam	State NFIP Coordinator	Hawai'i Department of Land and Natural Resources	Natural and Cultural/Safety and Security	Hazard SME
Craig Uchimura	Assistant Fire Chief	Honolulu Fire Department	Emergency Management/Safety and Security/Hazardous Materials	HMWG
Tony Velasco	Communications & Tech Division Chief	Honolulu Department of Information Technology	Infrastructure/Communications	HMWG
Randall Wakumoto	Storm Water Quality Program Administrator	Honolulu Department of Facility Maintenance	Infrastructure/Water Systems	HMWG
Mike Walker	State Protection Forester	Hawai'i Department of Land and Natural Resources	Natural and Cultural/Safety and Security	HMWG
Mitchell Wong	DES Trades Unit Supervisor	Honolulu Department of Enterprise Services	Economic Development/Safety and Security	HMWG

### 2.2.3 PLANNING CONSULTANT

Tetra Tech, Inc. was contracted to provide consulting services and was tasked with the following:

- Assisting with sharing and obtaining information from the HMWG
- Assisting with development and implementation of a public and stakeholder outreach program
- Data collection
- Facilitation and attendance at meetings
- Review and update of hazards of concern, and hazard profiling and risk assessment
- Assistance with review and update of mitigation planning goals
- Assistance with screening of mitigation actions and identification of appropriate actions
- Assistance with prioritization of mitigation actions
- Development of the draft and final plan documents.



## 2.3 PLANNING ACTIVITIES

Members of the HMWG (individually and as a whole), as well as key stakeholders, met and communicated as needed to share information. This included meetings to identify hazards, assess risks, update inventories of critical facilities, and assist in updating mitigation goals and strategies. All members of the HMWG had the opportunity to review the draft LHMP, supported interaction with other stakeholders, and assisted with public engagement efforts. These activities provided continuity through the process to ensure incorporation of hazard vulnerability information and appropriate mitigation strategies.

The planning process occurred over 18 months, beginning in September 2023 and concluding in March 2025. The schedule was developed to allow flexibility to account for possible unexpected delays throughout the process. Table 2-3 summarizes meetings and other planning activities during development of the LHMP. It also identifies which 44 CFR 201 requirements each activity satisfies. Documentation of meetings (agendas, sign-in sheets, minutes, etc.) is included in Appendix C. Table 2-3 identifies only formal meetings and milestone events in the LHMP update process. In addition to these meetings, a great deal of communication occurred among HMWG members, stakeholders, and the consultant via individual local meetings, phone, and email.

**Table 2-3. Summary of Mitigation Planning Activities / Efforts**

Date	44 CFR 201 Requirement	Description of Activity	Participants
Fall 2023	-	Requested updates from stakeholders regarding the progress of the implementation of mitigation actions identified in the 2020 LHMP	DEM, CCSR, and stakeholders identified as lead and supporting agencies
January 31, 2024	1b, 2	Site visit to Waiʻanae Coast Comprehensive Health Center (WCCHC) to discuss potential for resilience hub and additional mitigation action opportunities for WCCHC	DEM, CCSR, FEMA, WCCHC
February 1, 2024	1b, 2, 3b	Site visit to Hauʻula to hear community concerns regarding disaster impacts and risks	DEM, CCSR, FEMA, NOAA, National Disaster Preparedness Training Center, University of Hawaiʻi at Mānoa, Kahuku Community Association, Laie Community Association, Koʻolauloa Neighborhood Board, Hauʻula Community Association, and Hui O Hauʻula



Date	44 CFR 201 Requirement	Description of Activity	Participants
February 2, 2024	1b, 2	Site visit to Hau'ula to provide overview of potential mitigation actions and federal funding	DEM, CCSR, FEMA, NOAA, National Disaster Preparedness Training Center, University of Hawai'i at Mānoa, Kahuku Community Association, Laie Community Association, Ko'olauloa Neighborhood Board, Hau'ula Community Association, and Hui O Hau'ula
March 18, 2024	1b, 2, 3a, 3b, 3c, 4a, 5c	HMWG kickoff meeting and confirmation of hazards of concern	HMWG and general public
March 20, 2024	1b, 2, 3b	Public webinar focusing on climate change effects on O'ahu's natural hazards. Public Survey distributed to public via DEM website.	General public
April 17, 2024	1b, 2	Public webinar focusing on tsunami preparedness and risk	General public
August 23, 2024	1b, 2, 3c	HMWG meeting to review and confirm goals and the risk ranking methodology	HMWG and general public
	2	Capabilities Assessment survey deployed to stakeholders	
September 17, 2024	2	Meeting with Local Emergency Planning Committee (LEPC) to provide a status update on the LHMP	LEPC
September 19, 2024	3	Geographic Information System (GIS) data collection meeting to support risk assessment	DEM and City GIS staff
November 1, 2024	1b, 2	Public webinar focusing on hurricane risk awareness	General public
November 15, 2024	1b, 2	Public webinar focusing on hurricane preparedness	General public
November 22, 2024	1b, 2	Public webinar focusing on wildfire risk awareness	General public
November 22, 2024	1b, 2, 3, 4	HMWG to update the mitigation strategy	HMWG and general public
December 6, 2024	1b, 2	Public webinar focusing on wildfire preparedness	General public



Date	44 CFR 201 Requirement	Description of Activity	Participants
January 22, 2025	1b, 2, 3	HMWG meeting review the results of the risk assessment and preliminary risk ranking	HMWG and general public
March 28, 2025	1b, 2, 3, 4, 5	HMWG meeting to review draft LHMP	HMWG and general public
April 2025	1b, 2	Draft LHMP posted to public project website	General Public and Stakeholders
June 30, 2025	All requirements	Final LHMP submitted to HI-EMA and FEMA Region 9	HI-EMA and FEMA Region 9
Upon LHMP approval by FEMA	1a	LHMP adoption by resolution by Mayor	Local officials

Note: Numbers in column 2 identify specific federal requirements, as follows:

- 1a. Prerequisite—Adoption by the Local Governing Body
- 1b. Public Participation

2. Planning Process—Documentation of the Planning Process

3. Risk Assessment

3a. Risk Assessment—Identifying Hazards

3b. Risk Assessment—Profiling Hazard Events

3c. Risk Assessment—Assessing Vulnerability: Identifying Assets

3d. Risk Assessment—Assessing Vulnerability: Estimating Potential Losses

3e. Risk Assessment—Assessing Vulnerability: Analyzing Development Trends

4. Mitigation Strategy

4a. Mitigation Strategy—Local Hazard Mitigation Goals

4b. Mitigation Strategy—Identification and Analysis of Mitigation Measures

4c. Mitigation Strategy—Implementation of Mitigation Measures

5. Plan Maintenance Procedures

5a. Plan Maintenance Procedures—Monitoring, Evaluating, and Updating the Plan

5b. Plan Maintenance Procedures—Implementation through Existing Programs

5c. Plan Maintenance Procedures—Continued Public Involvement

## 2.4 STAKEHOLDER OUTREACH AND INVOLVEMENT

Preparation of the LHMP update involved use of the best-available information obtained from a wide variety of sources. Throughout the LHMP update process, planners exerted considerable effort to gather information from local, state, and federal agencies as well as the public. The Core Planning Team solicited information from local agencies and individuals with specific knowledge of certain natural hazards and past historical events. In addition, the Core Planning Team and HMWG considered planning and zoning codes, ordinances, and recent decisions regarding land use planning.

This section details the outreach to and involvement of the many agencies, departments, organizations, non-profits, authorities, and other entities with stakes in managing hazard risk and mitigation—commonly referred to as “stakeholders.”

Diligent efforts occurred to ensure broad representation in this planning process. A comprehensive list of stakeholders was developed with the support of the HMWG. Stakeholder outreach began early and continued throughout the planning process, including notifications via mass media. Identified stakeholders were invited to



attend the HMWG risk assessment and mitigation strategy workshop, and key stakeholders were requested to participate on the HMWG. Information and input provided by these stakeholders is evident throughout this LHMP.

The following sections list stakeholders invited to participate in the development of this LHMP and describe how they contributed to the LHMP. This summary information demonstrates the scope and breadth of stakeholder outreach efforts during the planning process. Beyond those described here, many stakeholders were aware of and/or contributed to this LHMP through formal and informal outreach efforts by the Core Planning Team.

### 2.4.1 FOCUS GROUPS

A priority for the LHMP update was to engage advocates and service providers for socially vulnerable populations and underserved communities. In collaboration with the HMWG, the following populations and communities were identified for targeted engagement during the planning process:

- Private sector and local businesses
- Representatives of the Pacific Islander community of Melanesian, Micronesian, or Polynesian descent
- Federally Qualified Health Centers (FQHCs)
- Older adults (kūpuna)
- Historic and cultural resources SMEs

To effectively engage these communities, the project team conducted meetings with members of the HMWG to obtain further insights regarding historical effects of disasters on these communities, identify necessary resources, and determine optimal engagement strategies. The HMWG stakeholders assisted in facilitating outreach and meetings with these communities.

The project team met with the City's Office of Economic Revitalization (OER) to analyze opportunities for engagement with local businesses and the Pacific Islander community. OER underscored the necessity of building trust between governmental representatives and the community as well as the critical need for language accessibility in all communications. OER organized a meeting between the project team and the Micronesian Ministers and Leaders Uut to explore potential support mechanisms from the City aimed at enhancing the resilience of the Pacific Islander community.

Acknowledging the significance of historical and cultural resources on O'ahu, the project team met with the Honolulu Department of Planning and Permitting to evaluate the potential effects of hazards on these resources. These meetings highlighted that hazards such as flooding and high winds could severely impact these resources. It was also recognized that the lack of prior identification of many resources worsens these effects. Additionally, it was noted that older structures on the island may have been built with materials that are more vulnerable to such hazards.



The Hawai'i Primary Care Association organized a meeting between the project team and representatives from FQHCs operating on O'ahu. FQHCs are nonprofit health clinics that deliver health care services to underserved populations. The primary concern expressed by these representatives was the possibility of public safety power shutoffs and the resulting implications for their capacity to provide care to patients, particularly those reliant on electrically powered medical devices. Concerns regarding loss of power were also expressed for high wind events, specifically in Waimānalo. Participants also noted concerns regarding funding required to maintain the ability to provide services and highlighted challenges experienced during the COVID-19 pandemic when funding was limited. The representatives expressed challenges related to the socially vulnerable populations they serve, which included communities (e.g., Waimānalo, West Side, and North Shore) losing access due to road damage during disasters and challenges with emergency notifications and alerts for non-English speakers and socially isolated communities.

The Committee on Aging of the City's Elderly Affairs Division highlighted the intensification of pre-existing social vulnerabilities during emergencies and disasters. Participants expressed concerns regarding the significant proportion of older adults living in high-rise condominiums who may have difficulty evacuating under evacuation scenarios if condominium elevators lose electrical power.

Common themes identified during the focus group meetings included language accessibility, transportation limitations, social isolation, power disruptions, and access to information. Participants offered additional insights regarding the underlying causes of specific vulnerabilities and proposed mitigation strategies aimed at addressing and reducing the associated risks. Throughout the planning process, DEM emphasized the necessity of ongoing engagement with these targeted stakeholders to enhance resilience in communities that disproportionately experience the effects of disasters. Recommendations for sustained public involvement are in Section 24.2.5 and Appendix F.

## 2.4.2 STAKEHOLDERS BY COMMUNITY LIFELINE CATEGORY

FEMA defines community lifelines as fundamental services in a community that, when stabilized, enable all other aspects of society. Following a disaster event, intervention is required to stabilize community lifelines. This section describes outreach to and participation by stakeholders in the planning process associated with FEMA's eight designated community lifeline categories. More detailed information about community lifelines in the planning area is provided in Chapter 33.9. The community lifeline represented by each HMWG member is listed in Table 2-2.

- **Safety and Security**—The Honolulu Police Department, Honolulu Fire Department, and Honolulu Emergency Services Department participated in the HMWG—notably in the capability assessment survey and identification of mitigation actions. Information and data regarding dams were provided by the City and the Flood Control and Dam Safety Division of the Hawai'i Department of Land and Natural Resources. The Honolulu Board of Water Supply offered recommendations for mitigation actions that would reduce dam risk. Honolulu Department of Budget and Fiscal Services' Risk Management Program participated to provide expertise on insurance and self-insurance for the City.



- Food, Hydration, and Shelter—The Honolulu DCS participated in the HMWG and provided expertise in community development, elderly affairs, and socially vulnerable populations. The Honolulu Department of Housing and Land Management (DHLM) provided expertise on housing. DEM’s Mass Care Planner assisted with informing plan content.
- Health and Medical—The Hawai’i Department of Health participated in the HMWG. Hawai’i Healthcare Emergency Management, a statewide emergency management healthcare coalition, also provided support with data collection.
- Energy: CCSR provided expertise on energy and sustainability. The Core Planning Team contacted the Hawai’i State Energy Office and Hawaiian Electric, the island’s power utility, to participate in the planning process. Partners from the fuel sector were also consulted on portions of the plan related to critical industry facilities.
- Communications—The DEM Communications Officer and Honolulu Department of Information Technology participated in the HMWG. The National Weather Service and National Oceanic and Atmospheric Administration (NOAA) Pacific Tsunami Warning Center contributed their expertise on hazard-related subjects.
- Transportation—The Hawai’i Department of Transportation (HDOT) and the City’s Department of Transportation Services (DTS) provided expertise on transportation and infrastructure.
- Hazardous Materials—The Local Emergency Planning Committee (LEPC) provided insight on hazardous materials.
- Water Systems—The Board of Water Supply provided information on water utilities. The Honolulu Department of Environmental Services provided expertise on wastewater management.

In addition to the community lifelines categories identified above, FEMA emphasizes the importance of including representatives with expertise in climate change and advocacy for socially vulnerable populations in the planning process. Representatives from the University of Hawai’i at Mānoa and CCSR provided climate change expertise. Focus groups that represented socially vulnerable populations are identified in Section 2.2.

### 2.4.3 ADJACENT JURISDICTIONS

Because of the City’s geographical isolation as an island, it does not share a boundary with any other jurisdictions. However, during the planning process, stakeholders recognized the potential effects on adjacent islands. Notably, effects on Honolulu Harbor could compromise the supply chain for the entire State of Hawai’i.



## 2.5 PUBLIC OUTREACH

To facilitate the development of the LHMP in order to achieve equitable outcomes, the Core Planning Team prioritized increased outreach and education for both stakeholders and the general public. The City benefited from technical assistance via FEMA’s BRIC Direct Technical Assistance (DTA) grant, which enabled the initiation of outreach activities that informed the LHMP update. Public engagement efforts expanded once the planning consultant joined the project.

The Core Planning Team devised an engagement strategy that included dedicated interactions with the general public via webinars, social media platforms, in-person events, and additional outreach methods. DEM produced an informational hazard mitigation brochure (Figure 2-1) for distribution at community events to enhance awareness of the hazard mitigation planning process.

Through the FEMA BRIC DTA grant, the City conducted site visits and workshops in Hau’ula and Wai’anae. These efforts were supported by FEMA, DEM, CCSR, East West Center, FEMA, Hui o Hau’ula, Hawai’i Food Bank, Hawai’i Health & Harm Reduction Center, Hawai’i Land Trust, and many other community-based organizations, academic representatives, and stakeholders. Community members provided insights about understanding local hazards, vulnerabilities, and mitigation needs. Additional information is provided in Appendix G.

Figure 2-1. LHMP Informational Brochure





**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.

**WHY IS IT BEING updated?**  
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 current plan expires in February 2025.

**HOW IS THE PLAN CHANGING?**  
The updated plan will address changes over the last five years, including progress towards mitigation actions and new studies, data or modeling that help inform our understanding of hazard impacts on O'ahu.

The updated plan will be expanded to include:

- Human and technological hazards
- Hazard impacts on vulnerable populations, and cultural and natural resources
- Climate change impacts across all hazard types

**GET INVOLVED IN THE PLAN UPDATE PROCESS**  
Community involvement is an essential part of the plan update process and there will be a number of opportunities for the public to get informed and involved.

**oahuPREPARED**  
Hazard subject matter experts will join local emergency management staff to discuss the major hazards that can impact O'ahu, provide information on the plan update, and get feedback from the community. Join the conversation each month at [facebook.com/oahuDEM!](https://facebook.com/oahuDEM)

**Submit an Online Survey.**  
Provide feedback on the hazards you are most concerned about and where you think more work needs to be done to inform the public.

**Provide Feedback on Draft Plan.**  
The draft of the updated plan is anticipated to be ready for public review in late 2024.

**Join DEM at a Community Event.**  
DEM regularly attends community events to share hazard information. Stop by for more info on the plan update.

In addition to these dedicated opportunities, all HMWG meetings were open to the general public and advertised in compliance with the CRS Activity 510 requirements for developing a Floodplain Management Plan. Meetings were advertised on the DEM website. Copies of public outreach documentation are in Appendix D. Figure 2-2 is an HMWG public notice.

Figure 2-2. HMWG Public Notice

Hazard Mitigation Plan Update Meeting AUG 2024	
Meeting Information	
Meeting Name	Hazard Mitigation Plan Update Meeting
Status	Past Meeting
Date and Time	2024-08-23 09:00 - 10:30 <i>See Agenda for meeting location or link.</i>
Meeting Documents	<a href="#">Public Agenda.Hazard Mitigation Workgrop Meeting #2.08-23-24.pdf</a> <a href="#">HMWG Meeting 2.08-23-24.pdf</a>
Link to Meeting Recording	N/A



Due to the limited timeframe available to update the LHMP, the City faced constraints in conducting extensive public engagement during the planning process. The City acknowledges that these limitations restricted the depth and breadth of community outreach, which in turn limited opportunities to fully capture evolving community priorities and concerns. Despite these challenges DEM implemented alternative outreach strategies such as hosting a public webinar series in lieu of traditional in-person meetings.

### 2.5.1 TO FURTHER SUPPORT ONGOING COMMUNITY PARTICIPATION, DEM CONTINUES TO COLLECT INPUT THROUGH AN ONLINE PUBLIC SURVEY FOCUSED ON THE LHMP. THIS SURVEY REMAINS OPEN BEYOND THE PLAN'S ADOPTION AND APPROVAL, ALLOWING COMMUNITY MEMBERS TO SHARE FEEDBACK ON EMERGING CONCERNS, SHIFTING PRIORITIES, AND LOCAL HAZARD EXPERIENCES. RESPONSES GATHERED THROUGH THIS MECHANISM WILL BE REVIEWED AND CONSIDERED DURING THE PLAN'S ANNUAL MAINTENANCE CYCLE, ENSURING THAT PUBLIC INPUT REMAINS A CENTRAL COMPONENT OF THE CITY'S HAZARD MITIGATION STRATEGY AND THAT THE PLAN EVOLVES IN ALIGNMENT WITH COMMUNITY PRIORITIES. O'AHU-PREPARED WEBINAR SERIES

DEM, in collaboration with CCSR, the Pacific Tsunami Warning Center, the Honolulu Fire Department (HFD), the Hawai'i Wildfire Management Organization (HWMO), the Pacific Tsunami Warning Center (PTWC), and the National Weather Service (NWS), conducted a series of webinars to enhance public awareness of community risks and the LHMP update process. Starting in March 2024, these webinars were live-streamed via DEM's Facebook page to reach a broader audience. Participants could provide feedback and ask questions through interactive components. Each webinar was recorded and made available for public viewing.

The first webinar concentrated on the effects of climate change on O'ahu in relation to natural hazards, with information presented by CCSR. The second webinar addressed scientific aspects, safety protocols, and preparedness strategies associated with tsunamis, facilitated in conjunction with the PTWC. The third and fourth webinars were dedicated to hurricanes, emphasizing the risks they pose and potential mitigative measures, such as advancements in building codes and retrofitting of structures. NWS presented information on the formation of hurricanes and an outlook for the rainy season for O'ahu. The fifth and sixth webinars, conducted in partnership with the HFD and the HWMO, focused on wildfire risks and highlighted the benefits of the Firewise Communities program.

### 2.5.2 PUBLIC SURVEY SUMMARY

An online community survey was developed to gauge concerns and priorities of the community as well as personal readiness and risk awareness. The survey asks quantifiable questions about perception of risk,



knowledge of mitigation, and support of community programs. The questionnaire also asks several demographic questions to help analyze trends.

The survey was posted on the DEM's website on March 2024 and was available through April 2025 for public input. Approximately 44 responses were received. A summary of survey results appears later in this section, with full results provided in Appendix C to this LHMP.

Seventy-five percent of respondents have lived in the City for 10 years or more. The remaining 25 percent of respondents have lived in the City from 1 to 9 years.

Respondents identified hurricanes and wildland fires as the most significant hazards, ranking hurricanes as the primary concern, followed by flooding as the second concern, and wildland fires as the third. Additionally, one respondent cited nuclear attacks as a concern.

Approximately 60 percent of respondents indicated personal experience with a disaster within the past 5 years or knowledge of someone who had experienced one. Four respondents did not provide an answer, while 32 percent stated they had not encountered any disasters within the past 5 years. The types of disasters cited by respondents included health risks (pandemic), wildland fires, climate change and sea level rise, earthquakes, floods, landslides, hurricanes, infrastructure failures, droughts, and hazardous materials incidents.

To help inform hazard mitigation actions, respondents were asked to identify their top three priorities for responding to disasters. The following were the top three priorities:

- Protecting critical facilities (hospitals, transportation networks, fire stations) (28.0 percent)
- Protecting and reducing damage to utilities (21.2 percent)
- Promoting cooperation among public agencies, citizens, and businesses (17.4 percent)

Respondents identified multiple sources upon which they rely for emergency and disaster-related information, including government agencies, employers, the American Red Cross, news media, academic institutions, and various nonprofit organizations. Despite availability of sources of information, only one respondent reported feeling "most prepared," while the majority (47.7 percent) expressed their feeling as only somewhat prepared. Respondents were additionally queried about actions they had previously undertaken to prepare themselves and their families for disasters, as well as their perspectives on how the City can effectively support communities in the future. Detailed responses are in Appendix D.

### 2.5.3 PUBLIC REVIEW AND COMMENT ON DRAFT LHMP

The draft LHMP update was published on the DEM website in April 2025 for public review and comment. Availability of the LHMP and the public review period were advertised to the public via social media. Community members were able to provide comments through a survey hosted on the DEM website. The public comment period lasted approximately one month and will continue over the next five years for the public to provide additional comments while the plan is being implemented.



Public comments raised concerns regarding the heightened vulnerability of older adults residing in condominium settings. The comments noted that the Hawai'i Council of Community Associations actively supports emergency planning and preparedness through advocacy, public education, and outreach efforts to address the unique challenges associated with condominium living and enhance the resilience of this population.

The revised LHMP was submitted to HI-EMA and FEMA for review and approval.

## 2.6 INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS, AND TECHNICAL INFORMATION

To support the implementation of a comprehensive mitigation strategy and ensure the integration of the LHMP into broader planning efforts throughout the City, the City regularly publishes sustainability plans focused on the coastal regions of O'ahu. These planning documents are developed in accordance with various guiding frameworks, including the LHMP, which has traditionally served as a key reference. The LHMP assists with guiding the development and ongoing enhancement of coastal strategies, particularly those addressing flooding, sea level rise, and hurricane impacts. By incorporating hazard-specific data and risk assessments from the LHMP, the City ensures that its coastal sustainability initiatives are evidence-based and aligned with overall resilience goals. Additionally, disaster resilience is a dedicated component of the City's Annual Sustainability Report, which includes island wide information on mitigation funding, outreach and education efforts related to mitigation and disaster preparedness, and floodplain management activities such as the administration of the NFIP (CCSR 2025).

The LHMP conveys the best-available information to support hazard profiling, risk assessment, review and evaluation of mitigation capabilities, and development and prioritization of City mitigation strategies. Plans, reports, and other technical information were identified and accessed online through independent research by the planning consultant or provided directly by the City and stakeholders involved in the planning effort. Detailed sources of technical data and information used are listed in the References section.

Chapter 3 presents asset inventory data used for the risk assessment. Details of sources of these data, along with technical information on how the data were used to develop the risk assessment, appear in Chapter 4 as well as throughout the hazard profiles in this LHMP. The City provided relevant planning and regulatory documents, which were reviewed to identify:

- Existing capabilities
- Needs and opportunities to develop or enhance capabilities that may be identified in the mitigation strategies
- Mitigation-related goals or objectives, considered in the review and update of overall Goals and Objectives
- Proposed, in-progress, or potential mitigation actions to be incorporated into the updated mitigation strategies



The following regulations, codes, ordinances, and plans were reviewed to develop mitigation planning goals and objectives and mitigation strategies consistent across local and regional planning and regulatory mechanisms:

- Comprehensive/master plans
- Building codes
- Zoning and subdivision ordinances
- Flood insurance studies
- Flood insurance rate maps
- NFIP flood damage prevention ordinances
- 2021 Repetitive Loss Area Analysis
- City and County of Honolulu Climate Change Commission’s 2024 Urban Heat Guidance Document
- Long-Term Disaster Recovery Plan
- Community Needs Assessment (supported through FEMA BRIC DTA efforts)
- Hawai’i Coastal Resilience Assessment
- Community Wildfire Protection Plans
- O’ahu Flood Analysis Report
- Stormwater management plans
- Emergency management and response plans
- Land use and open space plans
- Capital plans
- CRS
- 2023 State of Hawai’i HMP

The City and its stakeholders were tasked with updating the assessment of their planning and regulatory capabilities. They reviewed relevant plans contributing to the capabilities of the City to integrate effective mitigation efforts into its daily activities. This review is reflected in the capability assessment chapter, which lists plan types, names, and dates and summarizes how each plan supports mitigation and resilience.



## 2.7 PLAN ADOPTION

Adoption of the plan by City's Mayor demonstrates the commitment of the City to achieving the mitigation goals and implement strategies outlined in this LHMP.

FEMA will transmit acknowledgment of verification of formal plan adoption and official approval of the plan to the City's LHMP Coordinator. The plan approval date begins the 5-year approval period and sets the expiration date for the plan. The date indicated on FEMA's approval letter is the official approval date. The City's adoption resolution of this LHMP is in Appendix E.

In addition to being required by the Disaster Mitigation Act of 2000, formal adoption of the LHMP is necessary because:

- It lends authority to the plan to serve as a guiding document for all local government officials.
- It gives legal status to the plan in the event it is challenged in court.
- It certifies to program and grant administrators that the plan's recommendations have been properly considered and approved by the jurisdictions' governing authority and citizens.
- It helps to ensure the continuity of mitigation programs and policies over time because elected officials, staff, and other community decision-makers can refer to the official document when making decisions about the community's future.

*Source: FEMA. 2003. How to Series: Bringing the Plan to Life (FEMA 386-4).*