



## SECTION 5. CAPABILITY ASSESSMENT

### 2018 HMP UPDATE CHANGES

- ❖ Discussion of the administration of hazard mitigation programs in the state has been revised and updated to reflect significant changes in the structure of emergency management since the 2013 HMP.
- ❖ State and local capabilities have been comprehensively reviewed, updated and reformatted.
- ❖ Discussion of the processes utilized by the State to support and promote mitigation planning at the county level and processes to help counties obtain funding and technical assistance for mitigation planning have been reviewed and updated to reflect current procedures.
- ❖ The following plan elements have been consolidated into a single section: State Capability Assessment, Effectiveness of Local Mitigation Capabilities, and Coordination of Local Mitigation Planning.

This section provides a comprehensive review and evaluation of state and local capabilities used to support and facilitate mitigation activities and describes the process utilized by the State of Hawai‘i to support, promote and coordinate mitigation planning at the county level.

#### 5.1 Administration of Hazard Mitigation Programs in the State

The Governor of the State of Hawai‘i has the overall responsibility for emergency management activities in the state. Emergency management functions at the State level are coordinated by the HI-EMA and its five branches: Preparedness, Operations, Telecommunications, Logistics, and Finance Administration. The HI-EMA is located within the Department of Defense and the Adjunct General serves as its Director. A civilian Administrator is appointed by the Director and maintains the day-to-day operations of the agency. HRS §127-A (Emergency Management) was revised in June 2014 updating the State’s emergency management statutes, moving from an outdated civil defense framework to the current emergency management structure. The revisions led to a number of changes intended to ensure coordination of the State and its counties to the maximum extent possible with the comparable functions of the federal government.

At the time of the 2018 HMP Update, counties are in the process of transitioning their agencies to correspond with the HI-EMA. Some counties have made the transition, while others are still in process. The HI-EMA serves as the coordinating agency for the four county emergency management agencies and as State Warning Point. The HI-EMA administers the State’s hazard mitigation program with the State Hazard Mitigation Officer (SHMO) serving as the official point of contact.

#### 5.2 Identification and Evaluation of State Pre- and Post-Disaster Capabilities

**44 CFR §201.4(c)(3)(ii):** [The State Plan must include]...a discussion of the State’s pre- and post-disaster hazard management policies, programs, and capabilities to mitigate the hazards in the areas, including: an evaluation of State laws, regulations, policies, and programs related to hazard mitigation as well as to development in hazard-prone areas; a discussion of State funding capabilities for hazard mitigation projects



This section identifies and evaluates the State pre- and post-disaster capabilities including legal, regulatory and programmatic capabilities, participation in national programs, and funding capabilities. County capabilities are discussed in Section 5.3 (Summary of Effectiveness of Local Mitigation Capabilities).

### 5.2.1 Legal, Regulatory, Planning, and Programmatic Capabilities

State departments and agencies, in coordination with the HI-EMA, conducted a thorough review of laws, rules, plans and programs to identify and evaluate their hazard mitigation related capabilities, including those related to development in hazard-prone areas. Each identified capability was described, significant changes that occurred during the performance period of the 2013 HMP were noted, and opportunities or challenges in enhancing capability effectiveness or minimizing conflicts with mitigation goals were discussed. In addition, the hazard(s) of concern that the capability helps to mitigate, the type of hazard management capability (pre- and/or post-disaster), and the effect on loss reduction were identified. While some funding capabilities were identified in this discussion, funding is discussed in more detail in Section 5.2.3. Table 5.2-1. summarizes the full range of identified capabilities and the hazards which they mitigate. The detailed information upon which this summary table is based is in Appendix X (Capability Assessment).

#### Key Term

**Mitigation Capabilities** provide the means to accomplish desired mitigation outcomes. Capabilities include laws, regulations, policies, programs, administrative and technical staffing and resources, funding, and people-powered capabilities, such as volunteer groups.

In order to support program and plan integration, each capability was also assessed to determine the mitigation mission area core capability(ies) that each supports. Core capabilities are identified in the National Preparedness Goal and are used in other emergency management programs including the THIRA and State Preparedness Report. The mitigation mission includes seven core capabilities including, (1) Threat and Hazard Identification, (2) Risk and Disaster Resilient Assessment, (3) Planning, (4) Community Resilience, (5) Public Information and Warning, (6) Long-term Vulnerability Reduction, and (7) Operational Coordination. These core capabilities and the results of the assessment are available in Appendix X (Capability Assessment).

### 5.2.2 Participation in National Mitigation-Related Programs

There are several national programs that incentivize or support mitigation activities including the National Flood Insurance Program (NFIP), Community Rating System (CRS), and Risk MAP. These programs are a key component of state hazard mitigation capabilities. The following sections discuss the administration and application of these programs in the State of Hawai‘i.

#### NATIONAL FLOOD INSURANCE PROGRAM AND COMMUNITY RATING SYSTEM

The NFIP is a federal program, which was established to allow property owners in participating communities to purchase insurance protections against losses from flooding. Participation in the NFIP is based on an agreement between local communities and the federal government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction and substantial improvements



in Special Flood Hazard Areas (SFHAs), the federal government will make flood insurance available within the community (DLNR, 2018).

The NFIP is administered by the Federal Insurance and Mitigation Administration (FIMA) and the Mitigation Directorate, components of the FEMA. The Department of Land and Natural Resources (DLNR) has been designated as the State Coordinating Agency responsible for assisting the coordination of the program between the federal and county agencies in the State of Hawai‘i. All four of the counties are participating communities in the NFIP and each community has a representative county floodplain manager (see Table 5.3-2 in Section 5.3.2 for information on county floodplain management programs; DLNR, 2018). As of January 1, 2018, there are 60,439 flood insurance policies in force within the state totaling more than \$13.8 billion in insurance and more than \$40 million in annual premiums (FEMA, 2018).

The CRS is a voluntary program within the NFIP that encourages floodplain management activities that exceed the minimum NFIP requirements. For participating communities, flood insurance premium rates are discounted in increments of 5%. For example, a Class 1 community would receive a 45% premium discount, and a Class 9 community would receive a 5% discount. (Class 10 communities are those that do not participate in the CRS; they receive no discount.) CRS activities can help to save lives and reduce property damage. Communities participating in the CRS represent a significant portion of the nation’s flood risk; over 66% of the NFIP’s policy base is located in these communities. Two of Hawaii’s counties, the Counties of Maui (Class 8) and Hawai‘i (Class 8), participate in the CRS. More information on their participation is available in Section 5.3.2.

### NFIP Staffing, Resources and General Administration of Program

The State NFIP Coordinator sits in the Engineering Division of DLNR. There are five employees that generally administer the program including two full time staff and three staff who spend approximately half of their time on floodplain related issues. There are three Certified Floodplain Managers (CFMs) on staff. The staffing level for administration of the program is effective; however, the program previously had another staff person to support floodplain management efforts. Although resources are adequate, staff resources would be improved by the addition of staff with a focus on grant management and information technology skills, such as GIS and website development.

The State of Hawai‘i participates in the Community Assistance Program State Support Services Element, which provides funding to the state to provide technical assistance to communities in the NFIP and to evaluate community performance in implementing NFIP floodplain management activities. An array of activities are conducted by the DLNR to support the mission of the program including:

- **Monitoring Compliance**—The State NFIP Coordinator regularly conducts Community Assistance Visits (CAVs). A goal has been set to meet with each county to conduct a CAV once per year. CAVs focus on activities conducted by the counties to maintain compliance including, requiring FEMA Elevation Certificates (pre- and post-construction submittals); reviewing applications for subdivisions and related construction plans, building permits and grading/grubbing permits for compliance; responding to complaints, and taking appropriate actions to correct noncompliance. This includes reviewing, approving, preparing and submitting to FEMA and maintaining a Letter of Map Changes, which are used to update



FEMA’s FIRMs. In addition, state floodplain management staff assist county floodplain management programs with compliance efforts by conducting V zone (coastal high hazard area) property audits.

- **Conducting Training Workshops and Public Outreach**—A variety of training and outreach is conducted including outreach that was completed over the performance period of the 2013 HMP and other ongoing programs:
  - Conducted outreach on the Islands of O‘ahu and Maui for participation in the State of Hawai‘i Hazards Awareness and Resilience Program;
  - Conduct annual public outreach at the Building Industry Association (BIA) home building and remodeling show;
  - Coordinate with FEMA Region IX on an annual technical training, which usually has an attendance of approximately 100 people. Training topics are typically selected by FEMA;
  - Conduct realtor training on floodplain management related topics;
  - Conduct trainings on the Flood Hazard Assessment tool are when there are updates. Typically, there are 5 to 15 trainings with approximately 10 people at each event;
  - Conduct trainings and information sessions on Digital Flood Insurance Rate Maps (DFIRMs) when they are updated;
  - Publish a quarterly newsletter (Wai Halana);
  - Maintain an internet website dedicated to NFIP awareness (<http://dlnreng.hawaii.gov/nfip/>)
- **Attending National and Regional NFIP Related Conferences**—State floodplain management staff host an annual conference for floodplain managers and staff can travel to Flood Mitigation Association (FMA) or Association of State Floodplain Manager (ASFPM) conferences.
- **Providing Technical Assistance to Community Officials and the Public**—Technical assistance is provided by reviewing CRS standing/feasibility with counties; attending CRS/NFIP audit and compliance meetings with FEMA or contractor staff, meeting with the Building Code Council, and providing other technical assistance as requested.

## NFIP and CRS Implementation Challenges and Opportunities

Each county has island-specific challenges in administering their floodplain management regulations. Coordination between the counties and state agencies is challenging, especially regarding data availability and sharing. Better imagery data would allow state and county floodplain managers to produce more useable and practical data. As of the 2018 HMP Update, a LiDAR imaging flight is scheduled to be conducted on the Island of Hawai‘i to address this issue in the short-term.

Funding and resource availability is a challenge at the county level, especially regarding CRS participation. If funding was available to support the administrative requirements of CRS, additional counties may choose to participate or those that currently participate may work to improve their CRS classification. The State is interested in ways to increase collaboration on CRS thus reducing the burden of reporting requirements for individual counties and on opportunities to provide a financial incentive for counties participation in the program given that the cost savings are passed on to policy holders.

Funding to support flood control and drainage maintenance is also a challenge and is complicated by the fact that drainage and other flood control facilities are frequently located on privately-owned lands.



The State NFIP coordination staff and county floodplain managers discuss these and other implementation challenges and opportunities at the annual flood mitigation conference held in the state in August of each year and attended by FEMA Region IX. Efforts to address these and other issues are ongoing.

### **RISK MAPPING, ASSESSMENT AND PLANNING PROGRAM**

FEMA works with federal, state, tribal and local partners across the nation to identify flood risk and promote informed planning and development practices to help reduce that risk through the Risk Mapping Assessment and Planning (Risk MAP) program. Risk MAP provides high quality flood maps and information, tools to better assess the risk from flooding and planning and outreach support to communities to help them take action to reduce (or mitigate) flood risk. Each Risk MAP flood risk project is tailored to the needs of each community and may involve different products and services.

According to the Risk MAP Progress interactive map available online, at the time of this plan update there is one active project in the preliminary phase in the County of Kaua‘i. FEMA coordinates and works directly with county floodplain mangers during the Risk MAP project process. The State NFIP Coordinator is kept apprised of project activities and consults as needed.



**Table 5.2-1. Summary of the State of Hawaii's Hazard Mitigation Capabilities by Hazard of Concern**

Capability <sup>a</sup>	Hazards of Concern												
	Climate Change and Sea Level Rise	Chronic Coastal Flood	Dam Failure	Drought	Earthquake	Event-Based Flood	Hazardous Materials	Health Risks	High Wind Storm	Hurricane	Landslide and Rockfall	Tsunami	Volcanic Hazards
Aircraft Alert System (HI-EMA)												◆	
Building Code Committee (SEAOH)					◆	◆			◆	◆	◆	◆	◆
Building Code Council (DAGS)					◆	◆			◆	◆	◆	◆	◆
Capital Improvements Budget (DBF)	◆	◆	◆	◆	◆	◆	◆		◆	◆	◆	◆	◆
Clean Water Act Section 401 Water Quality Certifications (DOH EHA)						◆	◆	◆					
Climate 21C (OCCL)	◆	◆	◆										
Coastal Lands Program (OCCL)		◆								◆			
Coastal Zone Management Program (OP)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Commission on Water Resources Management (CWRM)				◆									
Community Development District Program (HCDA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Critical Systems Vulnerability Assessment (HI-EMA)					◆					◆		◆	
Dam Safety Program (Engineering)			◆										
Damage Assessments (DAGS)					◆			◆					
Department Emergency Operations Plan Template (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Department of Hawaiian Home Lands Land Trust (DHHL)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Department of Health All-Hazards Training and Exercise Program (DOH HRA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆



Capability <sup>a</sup>	Hazards of Concern												
	Climate Change and Sea Level Rise	Chronic Coastal Flood	Dam Failure	Drought	Earthquake	Event-Based Flood	Hazardous Materials	Health Risks	High Wind Storm	Hurricane	Landslide and Rockfall	Tsunami	Volcanic Hazards
Department Operations Center (HI-EMA)	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Planning Guidance and Resources (HI-EMA)		◆											
Disaster Response Committee (SEAOH)			◆		◆	◆				◆	◆	◆	◆
Energy Assurance Program (HSEO)	◆		◆		◆	◆			◆	◆	◆	◆	◆
Epidemiological Surveillance (DOH HRA)								◆					
Fire Program (DOFAW)				◆						◆			
Forestry Program (DOFAW)	◆			◆		◆			◆	◆	◆	◆	
Geography Department (UH)						◆							
Get Ready Website (HI-EMA)					◆	◆				◆		◆	◆
GoHawai‘i Mobile App (HTA)		◆			◆	◆		◆		◆	◆	◆	
Hawai‘i Environmental Policy Act (DOH OEQC)		◆			◆	◆					◆	◆	◆
Hawai‘i Hurricane Relief Fund (DCCA)										◆			
Hawai‘i Emergency Planning and Community Right to Know Act (DOH EHA)							◆						
Hawai‘i Advisory Council on Emergency Management (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hawai‘i Catastrophic Hurricane Plan (HI-EMA)										◆			
Hawai‘i Earthquake & Tsunami Advisory Committee (HI-EMA)					◆							◆	
Hawai‘i Hazards Awareness and Resilience Program (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hawai‘i Institute of Geophysics and Planetology (UH)	◆	◆	◆	◆	◆	◆		◆	◆	◆	◆	◆	◆



Capability <sup>a</sup>	Hazards of Concern												
	Climate Change and Sea Level Rise	Chronic Coastal Flood	Dam Failure	Drought	Earthquake	Event-Based Flood	Hazardous Materials	Health Risks	High Wind Storm	Hurricane	Landslide and Rockfall	Tsunami	Volcanic Hazards
Hawai‘i State Legislature Grant-in-Aid Program (HSL)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hawai‘i State Planning Act (OP)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hawai‘i Statewide Geographic Information System Program (OP)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hazardous Materials Risk Management Program (DOT)													
Hazardous Waste Section Regulations (DOH EHA)							◆						
Hospital Preparedness Program (DOH HRA)								◆					
Immunization Programs (DOH HRA)								◆					
Laboratory Preparedness and Response Program (DOH HRA)							◆	◆					
Land Acquisition Program (DAGS)	◆			◆		◆							
Mandatory Seller Disclosures in Real Estate Transactions (DCCA)						◆						◆	
Mass Feeding Operations (DOH EHA)								◆					
Medical Countermeasure Points of Distribution (DOH HRA)								◆					
National Disaster Preparedness Training Center (UH)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
National Flood Insurance Program (Engineering)	◆	◆	◆	◆		◆			◆	◆		◆	
Native Ecosystems and Management (DOFAW)	◆			◆		◆			◆				



Capability <sup>a</sup>	Hazards of Concern												
	Climate Change and Sea Level Rise	Chronic Coastal Flood	Dam Failure	Drought	Earthquake	Event-Based Flood	Hazardous Materials	Health Risks	High Wind Storm	Hurricane	Landslide and Rockfall	Tsunami	Volcanic Hazards
Natural Disaster Economic Recovery Strategy (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
NPDES Wastewater Discharge Permits (DOH EHA)					◆	◆	◆	◆					
Pacific Disaster Center Technical Capabilities (PDC)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Pacific RISA (Pacific RISA)	◆			◆									
Polluted Runoff Control Program (DOH EHA)				◆	◆								
PRiMO (PRiMO)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Radiation Section- Radiation Assessment Team (DOH EHA)						◆	◆	◆					
Risk MAP (Engineering)		◆								◆		◆	
Roadside Fuel Reduction Program (DOT)													
Safe Drinking Water Emergency FAQs (DOH EHA)								◆					
School of Ocean and Earth Science Technology (UH)	◆	◆		◆		◆		◆	◆	◆			◆
Shelter Upgrade Program (DAGS)								◆					
Shoreline Certification (Land Division)	◆	◆											
Silver Jackets (Engineering)	◆	◆	◆			◆			◆	◆		◆	
State Board of Land and Natural Resources (BLNR)	◆	◆		◆		◆							
State Fire Council (SFC)													
State Land Use Law (OP)	◆	◆	◆	◆	◆	◆		◆	◆	◆	◆	◆	◆
State Mitigation Forum (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆



Capability <sup>a</sup>	Hazards of Concern												
	Climate Change and Sea Level Rise	Chronic Coastal Flood	Dam Failure	Drought	Earthquake	Event-Based Flood	Hazardous Materials	Health Risks	High Wind Storm	Hurricane	Landslide and Rockfall	Tsunami	Volcanic Hazards
State of Hawai‘i Emergency Operations Plan (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
State-owned Building Insurance (DAGS)		◆	◆		◆	◆			◆	◆	◆	◆	◆
The Center for the Study of Active Volcanoes (UH)					◆	◆				◆		◆	◆
Threat Hazard Identification and Risk Assessment (HI-EMA)					◆	◆		◆		◆		◆	◆
Training & Exercise Plan (HI-EMA)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Transportation Asset Climate Change Risk Assessment Project (O‘ahuMPO)	◆												
Underground Storage Tank Section Regulations (DOH EHA)				◆		◆							
Vector Control Program (DOH EHA)								◆					
Weatherization Assistance Program (OCS)				◆									
Western States Seismic Policy Council (HI-EMA)					◆							◆	

Acronym in parenthesis refers to the state department detail table under which the capability is discussed (see Appendix X [Capability Assessment]). Listing under a particular department or agency should not be construed to imply that the department is the sole administrator of the capability. Additionally, in some instances the capability is associated with the duties of the department but the department does not have administrative authority over the capability.



### 5.2.3 State Pre- and Post-Disaster Funding Capabilities

**44 CFR 201.4(c)(3)(iv):** [The State Plan must include an] ...Identification of current and potential sources of Federal, State, local, or private funding to implement mitigation activities.

This section discusses and evaluates the State’s funding capabilities including, a summary of funding resources that the State has access to or is eligible to use; a description of how the State has used its own funding for hazard mitigation, and how FEMA funds have been used.

#### USE OF STATE FUNDING FOR MITIGATION ACTIVITIES

The State uses its own funding for a variety of mitigation activities. This use of funds includes earmarking resources for mitigation projects, providing grant monies to the counties and non-governmental organizations, supporting ongoing programs that further mitigation goals, and using state monies or in-kind contributions as matching funds for federal grants. The programmatic and regulatory programs summarized in Table 5.2-1. and outlined in detail in Appendix X (Capability Assessment) are supported, at least in part, by state general funds and the operating budgets of the various state departments and agencies. The progress update on the actions identified in the 2013 HMP included in Appendix X (Mitigation Strategy) includes a list of activities that the State undertook during the performance period of the plan and indicates those actions that were accomplished using state funds. In total, 9 of the 14 actions (64%) identified as completed during the performance period of the 2013 HMP used state funds (exclusively or in part) to support the completion of the action.

#### USE OF FEMA FUNDING FOR MITIGATION ACTIVITIES

There are four main FEMA grant funding opportunities that support state mitigation activities. Two of these are available pre-disaster (Pre-Disaster Mitigation [PDM] and Flood Mitigation Assistance [FMA]) and two are available post-disaster (Hazard Mitigation Grant Program [HMGP] and Section 406 funds). Of these four programs, the State has historically utilized HMGP and PDM to the greatest degree. HMGP funds are typically used for project implementation, while PDM funding is typically used to support mitigation planning activities at the state and county level.

It is important to note that HMGP funding is determined as a percentage of the funds spent on public and individual assistance for a Presidentially declared disaster. The State of Hawai‘i has historically received less than \$1 million in HMGP funds following declared disasters. The PDM monies are determined by congressional allocation and fluctuate from year-to-year. The FMA and Section 406 funding has historically been underutilized by the state. No FMA or Section 406 funds were used for mitigation activities during the performance period of the 2013 HMP. Table 5.2-2 summarizes key information on the location and the types of FEMA-funded mitigation projects during the performance period of the 2013 HMP. In total, 29 projects were identified, 11 are closed, 4 are ongoing, 2 were withdrawn, and 12 have been submitted for grant funding consideration.

These funds were used to reduce risk and increase resilience across the State in a variety of way:



- **Critical Facility Hardening**—Several critical facilities were hardened including the Waiakea High Gym in the County of Hawaii, the Community Clinic of Maui in the County of Maui, and HI-EMA Warehouse in the City and County of Honolulu.
- **Capability Building**—State and county capabilities were expanded by increasing understanding of tsunami risk through a tsunami hazard mapping project, development of local wind amendments for adoption, upgrading warning systems through a siren upgrade project, and updating the State Building Code administrative rules to implement updated standards for hurricane mitigation.
- **Focus on Planning**—Three planning efforts were supported by FEMA grant funds including two local HMP updates and the 2018 HMP Update.

The State has been very effective in maximizing the use of the 5% initiative under HMGP funding, which targets projects that are not typically eligible under the program or that are difficult to measure cost-effectiveness. Three projects used 5% initiative funding over the performance period of the 2013 HMP including, the siren upgrade project, development of local wind amendments, and update of the State Building Code administrative rules.

**Table 5.2-2. FEMA Funded Mitigation Projects During Performance Period of 2013 HMP**

Criterion	Project Costs	
Project Costs by FEMA Grant Program	HMGP	\$1,549,570
	PDM	\$564,600
	FMA	\$0
	PA Category C-G (Section 406 funds)	\$0
Project Costs by Location	Statewide	\$591,341
	County of Kaua‘i	\$36,000
	City & County of Honolulu	\$930,000
	County of Maui	\$45,306
	County of Hawai‘i	\$511,523
Project Costs by Activity Type	Hardening/Retrofit	\$1,205,829
	Management Costs	\$114,361
	Local Mitigation Planning (Including 5% Initiative)	\$317,000
	State Mitigation Planning (Including 5% Initiative)	\$417,000
	Warning (Including 5% Initiative)	\$59,980

Note: Excludes projects that were withdrawn and those that were submitted, but not awarded as of 11/2017; Information in this table was based on data provided by HI-EMA in November 2017

FMA = Flood Mitigation Assistance

HMGP = Hazard Mitigation Grant Program

PA = Public Assistance

PDM = Pre-Disaster Mitigation



## OTHER FUNDING FOR MITIGATION ACTIVITIES

A wide array of funding is available to support mitigation activities within the State of Hawai'i. Non-state and non-FEMA funding resources that state departments and agencies have indicated that are actively being used or pursued to support mitigation activities include the following:

- Clean Water Act Section 319 Funding, U.S. EPA
- Coastal and Estuarine Land Program, NOAA
- Coastal Resiliency Grant Funding, NOAA
- Coastal Zone Enhancement Program (Section 309) Funding, NOAA
- Conservation Reserve Enhancement Program, Farm Service Agency
- Forest Legacy Program, U.S. Forest Service
- Forest Stewardship Program, U.S. Forest Service
- Hospital Preparedness Program, U.S. Department of Health & Human Services
- National Earthquake Hazards Reduction Program
- Silver Jackets Interagency Program, U.S. Army Corps of Engineers
- State and Private Forestry Branch, U.S. Forest Service
- Weatherization Assistance Program, U.S. Department of Energy
- Wildland Urban Interface Grant Program, U.S. Forest Service

More detailed information on how these funds are being used is available in Appendix X (Capability Assessment) and Appendix X (Mitigation Strategy). State and FEMA funding are discussed in Sections 0 and 0.

### 5.2.4 Summary of Changes in State Capabilities and Progress on Integration

The State of Hawai'i has strengthened and enhanced its capabilities over the performance period of the 2013 HMP and has continued to make progress on integration. The following sections provide a summary of the detailed information available in Appendix X (Capability Assessment).

#### SUMMARY OF CHANGES IN STATE CAPABILITIES

The following are a selection of notable changes that have influenced or impacted State capabilities over the performance period of the 2013 HMP:

- **Public Education and Information**
  - The GoHawai'i Mobile App was developed by the Hawai'i Tourism Authority
  - The Ocean Resources Management Plan (ORMP) dashboard was launched, which provides information on the progress of implementing the ORMP.
  - The annual, unified multi-agency Wildfire LOOKOUT! Campaign was launched.
  - The Hawai'i Hazards Awareness and Resilience Program (HHARP) was established in 2014 and, as of December 2016, six communities have reached recognition level in the program.
- **Staffing and Technical Resources**
  - Thirty (30) staff positions statewide were added to support the State's Vector Control Program.



- A number of federally-funded positions were added to support Epidemiological Surveillance at the HDOH Disease Investigation Branch.
  - A new position was created to alleviate the backlog of potential projects, engage landowners, and increase participation in the Forest Stewardship Program.
  - A number of wave buoys were installed around the islands, bringing the current total maintained by the Pacific Islands Ocean Observing System (PacIOOS) to ten.
  - The HI-EMA Mitigation Section, who lead the state mitigation program, experience significant challenges to adequately staff all the responsibilities for which they are charged during regular operations. This challenge is exacerbated when staff is deployed for special occurrences, such as disaster events.
- **Program Scale-Back**
    - The annual Stop Flu at School program has been scaled back. It is no longer offered to all schools statewide. Selected schools have been chosen based on students with the greatest need for assistance, which allowed for the maximization of the benefit to the public while utilizing the limited funds and resources available.
  - **New and Updated Planning Resources**
    - Twelve (12) *Community Wildfire Protection Plans* were developed or updated.
    - The *State General Flood Control Plan* is being updated and will utilize digital database and website technologies to provide educational information and public awareness tools on flood risks, flood histories, hydrologic data, mitigation initiatives, a library for flood studies and post-flood reports, and other related information.
    - The *Hawai‘i Catastrophic Hurricane Plan* was developed in 2015
    - The *HI-EMA Strategic Plan* was Updated in May 2017.
    - The *Statewide Highway Shoreline Protection Study* was completed in 2018.
    - *Makani Pahili 2017 Emergency Power Prioritization Workshop Series Report* was completed in 2017.
    - The *Hawaii Drought Plan* was updated in 2017.
  - **New Collaborative Approaches**
    - A Silver Jackets Team for Hawai‘i was established.
    - The Hawai‘i Climate Change Mitigation & Adaptation Commission was formed and has adopted the *Hawai‘i Sea Level Rise Vulnerability and Adaptation Report*.

## PROGRESS ON INTEGRATION INTO STATE PROGRAMS

The State has used the update of the plan as an opportunity to further promote integration:

- **Resource for County Local HMPs**—The HI-EMA envisions the 2018 HMP Update as a reference for local HMPs to integrate risk assessment results to reduce work and focus on strengthening other areas of plans
- **Goal Development**—Goals identified in local HMPs were used to inform the development of goals for the 2018 HMP Update. County leaders worked with the State in goal development and all aspects of plan development through their involvement on the State Hazard Mitigation Forum.



- **THIRA**—The HI-EMA intends to leverage the 2018 HMP Update for the next THIRA update – the full update is in 2018. The 2018 HMP Update risk and capability assessments will be integrated into the updated document.
- **State Preparedness Report**—The HI-EMA will more fully integrate the updated mitigation goals into the 2018 State Preparedness Report.
- **Hawai‘i Mitigation Program Consultation**—The results of the mitigation program consultation conducted with FEMA Region IX mitigation staff and HI-EMA was used to identify challenges and opportunities to mitigation within the state and will be used in the future to help monitor progress on addressing challenges and identifying emerging issues.

Additional components of program integration are discussed in Section 2 (Planning Process – Program Integration). Opportunities for additional integration have been identified and are included in the Action Plan in Section 6 (Mitigation Strategy).

## 5.3 Summary of Effectiveness of Local Mitigation Capabilities

**44 CFR §201.4(c)(3)(ii):** [The State Plan must include]...a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.

Disasters are inherently local events; therefore, the assessment of state capabilities would not be complete without an examination of local (County) capabilities. This review and examination was used to inform and influence the State’s mitigation priorities as discussed in Section 6 (Mitigation Strategy). The review was conducted by examining the local hazard mitigation plans (local HMPs) of the four counties. This review focused on the following aspects of the local HMPs:

- **Foundational Capabilities**—A list of foundational capabilities relevant for hazard mitigation in the state was developed and local HMPs were reviewed to determine if these capabilities were identified and discussed. It should be noted that this list is not intended to be a comprehensive assessment of all capabilities identified in local HMPs.
- **Floodplain Management Capabilities**—The local HMPs were reviewed for discussion of county floodplain management capabilities including, adoption of higher standards; general information on effectiveness and process; and efforts to address repetitive loss and severe repetitive loss properties.
- **Land Use Planning**—The local HMPs were reviewed for discussion on General Plans and Community Plans and for information on integrating hazard mitigation into land use planning (i.e. plan integration).
- **Evaluation and Effectiveness**—The local HMPs were reviewed to determine challenges and opportunities, unique sources of funding, mitigation successes, and determinations on effectiveness of mitigation actions.

The local HMPs, like state HMPs, are required by FEMA to be updated every five years. The counties’ local HMPs are midway through their performance periods; therefore, the 2018 HMP Update includes discussion on emerging capabilities that have arisen in the counties during their performance period that



are not reflected in those plans. The following sections summarize the results of the review of the local HMPs and emerging capabilities identified during the 2018 HMP Update.

### 5.3.1 Local Foundational Capabilities for Hazard Mitigation

County policies, programs, funding, and other capabilities are used to support and accomplish hazard mitigation goals and objectives. The county local HMPs identify and evaluate county capabilities for implementing hazard mitigation. In order to summarize these capabilities for the 2018 HMP Update, a list of foundational capabilities for accomplishing hazard mitigation was developed based on FEMA local mitigation planning guidance, professional judgement, and suggestions from the State Hazard Mitigation Forum. This list was not intended to be inclusive of every capability discussed in the local HMPs or every capability that may be used to support hazard mitigation at the county level.

Table 5.3-1 includes a summary of foundational capabilities relevant for hazard mitigation in the state and if these capabilities were identified and discussed in the county local HMPs. It is important to note that the absence of a capability does not mean that the capability does not exist in the county. It simply means that no discussion was found describing or identifying the capability in the local HMP. This suggests that the capability may not be being used to its full potential to support mitigation within the county or it may suggest that the department or agency responsible for implementing the capability may not have been fully involved in the local HMP planning process. In addition, it is important to note that codes, regulations, and/or plans may have been updated or developed since the time of the local HMP publication (see Table 5.4-1). A table with more detailed information on the foundational capabilities summarized below can be found in Appendix X (Capability Assessment). In addition, many aspects of these foundational capabilities and changes that may have occurred over the last several years are discussed in the detailed tables supporting the State Capability Assessment described above (see Appendix X [Capability Assessment]).



**Table 5.3-1. Foundational Capabilities as Identified and Reflected in County Local Hazard Mitigation Plans**

Foundational Capabilities	County of Kaua‘i	City and County of Honolulu <sup>a</sup>	County of Maui	County of Hawai‘i
Building Code <sup>b</sup>	◆	◆	◆	◆
Capital Improvement Program	◆	◆	◆	◆
Climate Action/Resilience Plan	◆			
Community Development Plans	◆	◆	◆	◆
Community Wildfire Protection Plan <sup>c</sup>	◆	◆	◆	◆
Emergency Operations Plan	◆	◆	◆	◆
Continuity of Operations Plan	◆			
County Owned Building Insurance				
Economic Development Plan	◆		◆	
Firewise USA™ <sup>d</sup>			◆	◆
Flood Damage Prevention Ordinance	◆	◆	◆	◆
General Plan	◆	◆	◆	◆
Get Ready Website				
Hawai‘i Hazards Awareness and Resilience Program			◆	
Hawai‘i State Legislature Grant-in-Aid Program			◆	
Legacy Lands Conservation Program				
Land Acquisition Plan / Willing Seller Program		◆	◆	
Post-Disaster Recovery	◆		◆	◆
Public Health Preparedness Plan <sup>e</sup>	◆			◆
Real Estate Disclosure <sup>f</sup>	◆	◆	◆	
Risk MAP Program				
Sea Level Rise Study/Plan	◆		◆	
Shoreline Setbacks	◆	◆	◆	◆
Site Plan Review		◆	◆	
Special Management Area Permits <sup>g</sup>	◆	◆		◆
State Hazard Mitigation Forum	◆	◆	◆	
Storm Ready/ Tsunami Ready <sup>h</sup>			◆	
Stormwater Management / Low Impact Development		◆	◆	◆
Subdivision Requirements <sup>i</sup>	◆	◆	◆	◆
Threat & Hazard Identification & Risk Assessment <sup>j</sup>			◆	
Water Management Plan	◆	◆		◆
Zoning Code or Land Use Ordinance <sup>k</sup>	◆	◆	◆	◆

Note: ◆ = Capability discussed in hazard mitigation plan; Information presented in this table reflects information as it is presented in the County hazard mitigation plans unless otherwise noted. Codes, regulations, and/or plans may have been updated since the time of their publication.

a. An interim City and County of Honolulu HMP was developed and approved in 2017; however, this update included only limited information. Volume 1 of the 2012 local HMP was reviewed for this assessment.



- b. The State Building Code is included in HAR §3-180 State Building Code; Counties may make local amendments; At the time of the 2018 HMP Update, not all counties have adopted the current version of the State Building Code, which includes provisions related to the special wind hazard in the State (See Section 4.9 [High Wind Storms] for additional discussion on wind hazards in the state. It should also be noted that the County of Kaua‘i implemented a HMGP 5% initiative project to develop and adopt local wind amendments.
- c. Progress on the development of Community Wildfire Protection Plans has occurred since the last updates of the County hazard mitigation plans. One new plan (Western Maui) was completed in 2015 (1 in Maui County), 6 new plans (Kauai, Western Oahu, Molokai, South Maui, Upcountry Maui, and North Kona) were completed in 2016 (1 covering Kauai County, 1 in the City and County of Honolulu, 3 in Maui County, and 1 in Hawaii County), 5 plans (Northwest Hawaii Island, South Kona, Ocean View, Kau, and Volcano) were updated in 2016 (5 in Hawaii County), and 1 plan (Kahikinui) was slated to be updated during 2017/2018 (1 in Maui County).
- d. As of March 2018 there are 11 Firewise USA recognized sites in County of Hawai‘i (8) and County of Maui (3).
- e. There are no county equivalent public health agencies within the state; however, plans have been developed for all counties either directly by the Department of Health (for Oahu) or via the District Health Offices of the Neighbor Islands (County of Kaua‘i, County of Maui, and County of Hawai‘i). In addition, the State of Hawai‘i Health Risk and Vulnerability Assessment (2014) pertains to the entire state.
- f. Disclosure of hazard risk is required in some real estate transactions by the State Uniform Land Sales Practices Act.
- g. Special Management Area Permits are part of the State Coastal Zone Management Program and are administered at the County level
- h. All four counties are Storm Ready and Tsunami Ready.
- i. Required as part of the Uniform Land Sales Practices Act
- j. County representatives have participated in the development of the State THIRA.
- k. County government have regulatory authority over Urban District lands and shared authority over Agricultural and Rural District Lands. Conservation District lands are reserved for the State.

### 5.3.2 County Floodplain Management

Table 5.3-2 includes a summary of the county’s floodplain management programs. All counties are in good standing in the NFIP program at the time of this plan update.

### 5.3.3 County Land Use Planning

As indicated in Table 5.3-1 all Hawai‘i counties have general plans, community plans, and zoning ordinances (referred to as the land use ordinance in some counties) and all three of these capabilities are discussed in the four county local HMPs. All of the counties have recognized the importance of land use planning and have identified actions to integrate the local HMPs into these plans. An example of actions included in the local HMPs addressing this integration are as follows:

- **County of Kaua‘i**— Ensure hazard mitigation is incorporated into the Kaua‘i County General Plan (ten-year plan, 2015-2025).
- **City and County of Honolulu**—Incorporate all-hazard assessments in land development application process.
- **County of Maui**—Continue to include hazard mitigation initiatives in future capital improvements planning and include hazard mitigation goals and objectives into the general and community plans. Consider all hazard mitigation initiatives when developing the county 6-year budget and 20-Year Plan.
- **County of Hawai‘i**— Incorporate elements of this Hazard Mitigation Plan into the county general plan and future community development plans, to make all-natural hazards explicit factors for planning considerations that include community resilience.



Current and future development trends are discussed in more detail in Section 3 (State Profile) and in Section 4 (Risk Assessment).

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***Table 5.3-2. County NFIP and CRS Participation***

Criterion	County of Kaua‘i	City & County of Honolulu	County of Maui	County of Hawai‘i
<b>County Department That Is Responsible for Floodplain Management</b>	Department of Public Works, Engineering Division	Department of Planning and Permitting	Department of Planning	Department of Public Works, Engineering Division
<b>Floodplain Administrator</b>	Floodplain Manager	Floodplain Manager	Floodplain Manager	Floodplain Manager
<b>Date of Entry into the NFIP Program <sup>a</sup></b>	11/04/81	09/03/80	06/01/81	05/03/82
<b>Current Effective FIRM Date</b>	11/26/10	11/05/14	11/04/15	09/29/17
<b>Date That Flood Damage Prevention Ordinance Was Last Modified <sup>b</sup></b>	2005	2016	2017	2017
<b>Floodplain Management Program Higher Regulatory Standards <sup>c</sup></b>	Definition and development standards added for repetitive loss structures disallowing grandfathered unsubstantial improvement  10-year cumulative substantial improvement	Not discussed in local HMP	Not discussed in local HMP	3-year cumulative substantial improvements
<b>Most Recent Community Assistance Visit or Community Assistance Contact <sup>c</sup></b>	2012	2007	2015	2007
<b>Known Outstanding NFIP Compliance Violations That Need to be Addressed <sup>c</sup></b>	No; Issues identified during 2012 CAV were addressed in 2015	Various issues with administrative and enforcement procedures including improperly completed elevation certificates	No	No
<b>Community Rating System (CRS) Participant</b>	No; but expressed interest in participating in local HMP	No; but expressed interest in participation in 2017 Interim local HMP	Yes	Yes
<b>Date of Entry into the CRS Program</b>	N/A	N/A	10/1/95	05/1/11
<b>Current CRS Classification</b>	N/A	N/A	8	8
<b>Flood Insurance Policies in Force in the County <sup>d</sup></b>	5,327	38,367	12,422	4,514



Criterion	County of Kaua‘i	City & County of Honolulu	County of Maui	County of Hawai‘i
Insurance in Force <sup>d</sup>	\$1,119,654,600	\$8,956,450,900	\$2,724,319,900	\$1,085,890,600
Premium in Force <sup>d</sup>	\$4,428,642	\$24,467,992	\$7,623,822	\$3,656,679
Total Loss Claims Filed in the County <sup>d</sup>	1,174	2,324	536	732
Claims That Are Still Open/Were Closed Without Payment <sup>d</sup>	0/520	6/814	7/225	1/230
Total Payments for Losses <sup>d</sup>	\$37,127,247	\$29,949,924	\$6,411,534	\$18,240,426
Total Number of Repetitive Loss Properties <sup>e</sup>	19	107	35	45
Severe Repetitive Loss Properties <sup>f</sup>	Unknown; Local HMP states that there are 0 SRLPs; 2013 HMP states there is 1 pending SRL property	Unknown; Local HMP states there are 8 SRL properties; 2013 HMP states there are 3 SRL properties	Unknown; 2013 HMP states there is 1 SRL property	Unknown; Local HMP states there are 3 SRLPs; 2013 HMP states there are 5 SRL properties and 1 pending SRL property
Repetitive Loss Properties That Have Been Mitigated <sup>f</sup>	Unknown; Local HMP states there is one remaining RL property	Unknown; Local HMP states that no properties have been mitigated	Unknown	Unknown

a. Date indicates entry into the Regular Program

b. There is no state-level model flood damage prevention ordinance.

c. As discussed and described in the County's Local Hazard Mitigation Plan.

d. According to FEMA statistics as of December 31, 2018

e. Provided by FEMA Region IX, NFIP Regulations and Compliance, 2/19/2018; See Section 4.7 (Event-Based Flood) for more information

f. Information provided by FEMA on 2/19/2018 did not provide enough information in order to determine the number of severe repetitive loss properties; See Section 4.7 (Event-Based Flood) for more information

LHMP = Local hazard mitigation plans

RL = Repetitive loss

SRL = Severe repetitive loss



### 5.3.4 Evaluation of Local Hazard Mitigation Plans

All counties in the state have identified, leveraged, and developed capabilities that are effective in mitigating risk from natural hazards. These capabilities are discussed in their local HMPs and serve the basis for the implementation of many successful actions. A review of the county local HMPs was conducted to:

- Determine how the counties are evaluating the effectiveness of their plans;
- Determine challenges, barriers and unmet needs the counties had identified in reaching their mitigation goals;
- Identify opportunities to address challenges and leverage existing capabilities.

A review of the county local HMPs reveals that there is limited discussion of the effectiveness of mitigation actions and overall plan effectiveness. A summary of the results of the review are provided in the sections that follow. The results of this assessment were used by the State to develop its mitigation strategy for the 2018 HMP Update.

### CHALLENGES AND BARRIERS TO EFFECTIVE LOCAL HAZARD MITIGATION

A number of challenges and barriers to implementing effective mitigation actions were identified in local HMPs. A summary of these challenges and barriers follows; however, it should be noted that the following section (Emerging Local Capabilities) discusses progress on how some of these challenges are currently being addressed:

- **Sources of Funding Impact Implementation**—Activities and actions that required outside sources of funding for implementation were less likely to be implemented over the performance period of plans due to economic fluctuations and budget delays.
- **Social Factors Influence Mitigation Strategy Effectiveness**—Effective disaster mitigation goes beyond scientific and technical data. Social factors, such as poverty, social justice and high costs of living, must be considered in the development and implementation of effective mitigation actions and strategies.
- **Coordination and Collaboration is Needed**—Additional coordination and collaboration among and between agencies is needed to successfully implement many mitigation activities. An example of this is provided by the need for strong coordination and collaboration as well as clear policies for coordinating information and responses to landslides and rockfalls on critical highway areas and the trifurcation of jurisdiction in coastal areas of the state.
- **Floodplain Management Presents Challenges for Counties**—A few counties have experienced challenges with effectively administering floodplain management regulations. In addition, updated FIRMAs have resulted in more properties falling within SFHA boundaries and properties that do not conform to current flood damage prevention standards. Older levees are subject to failure or do not meet current building practices for flood protection. Issues with levee accreditation have emerged in the past few years.
- **Data Sharing and Information Management could be Improved**—Data sharing and information management for hazard mitigation has been a challenge and is a priority concern. Information



regarding satellite imagery was noted as example issues. A sustained effort to gather historical damage data, such as high-water marks on structures and damage reports, would be useful in measuring the cost-effectiveness of future mitigation projects.

- **Funding for Critical Facility and Infrastructure Mitigation is Needed**—Funding is needed to upgrade and retrofit public facilities and shelters as well as communication infrastructure. In addition, detailed assessments on some critical facilities, such as major health care centers, need to be conducted to determine appropriate mitigation measures.
- **Public Awareness of Risk could be Improved**—Increased awareness and better understanding of risks and impacts is needed across stakeholder groups including the general public and decision makers.
- **Visitors Present Special Challenges**—Visitors present a special challenge for disaster planning activities, especially education and awareness campaigns, warning, and planning for accommodations post-event.
- **Capabilities could be Enhanced/Updated**—Some county and state plans, such as community plans and drainage plans, have not been updated regularly. Development codes could be improved to better account for hazard risk, such as requiring defensible space in new subdivisions and increasing the design capacity of stormwater systems. Coastal AE zones may be subject to wave action that would cause damage to structures. Current flood damage prevention ordinances in the counties do not include standards that account for this risk. Present building codes and guidelines do not adequately address the impacts of tsunamis on structures, and current tsunami hazard mapping is not appropriate for code enforcement. It should be noted; however, that the State Coastal Zone Management program has identified tsunami mapping in its five-year coastal hazards strategy and initial mapping is underway.
- **Conditions are Changing**—Guidance on effective approaches and time horizons for planning for sea level rise are needed. Increases in impervious surfaces due to growth and development are altering historical drainage patterns and amounts. Coastal erosion and beach loss are significant causes of concern and are expected to be exacerbated by sea level rise.
- **Pre-Event Planning could be Improved**—There are a number of planning and administrative activities that can be conducted before a hazard event to reduce post-event recovery times. For example, post-storm debris management is a significant issue on the islands and many counties have not conducted appropriate planning efforts. In addition, redundancy of power supply, especially for critical facilities is a significant issue of concern.
- **Structures are Vulnerable**—Many structures across the state were constructed before modern building codes were widely adopted and enforced. Mechanisms for bringing these structures into compliance are limited and may be cost prohibitive to owners.
- **Development Pressures Can Increase Risk**—There is continued pressure to convert floodplain compatible uses, such as agricultural lands, to more intensive uses during periods of growth. This pressure may intensify as sea level rise.

## OPPORTUNITIES TO ADDRESS LOCAL CHALLENGES AND LEVERAGE CAPABILITIES



The following are some of the opportunities identified in local hazard mitigation plans to address challenges and leverage capabilities. It should be noted that the following section (Emerging Local Capabilities) discusses the status of some efforts to capture these opportunities:

- **Resiliency Efforts Have Gained Momentum**—Community interest and political support for resiliency planning provides an opportunity to engage stakeholders and integrate hazard mitigation into a number of policies and programs.
- **Opportunities for Partnerships are Available**—Forming partnerships with community and non-profit organizations can maximize limited financial resources. Several working groups have formed to determine protocols for data sharing, transfer, and use.
- **Counties are Poised to Capture Funding**—Local planning efforts have resulted in risk assessment and modeling efforts that; provide enough detail for submission to FEMA grant programs. In addition, the counties have sought and received funding for mitigation activities such as beach warning and tsunami evacuation signage (NOAA, FEMA, and NIST funding).
- **Natural Resources can be Harnessed for Mitigation Goals**—Maintenance and management programs can be developed for natural mitigation features, such as wetlands, beaches and dunes.
- **State Resources and Assistance Support County Efforts**—The State provides a number of technical resources and programs that support the counties in their hazard mitigation activities.

### 5.3.5 Emerging Local Capabilities

In the years since the counties' local hazard mitigation plans have been developed, there have been advances in the understanding and development of strategies to address community resilience and climate change. A few emerging capabilities in these areas include:

- **Post-Disaster Reconstruction Guidelines**—In May 2015 the County of Maui finalized a report entitled *Post-Disaster Reconstruction Guidelines and Protocols for the Conservation of Coastal Resources and Protection of Coastal Communities. Maui County, Hawai‘i*. The stated goal of the project, funded by a NOAA Coastal Resilience Grant, was to develop post-disaster reconstruction guidelines and protocols that will conserve sensitive coastal ecosystems while also streamlining the repair and reconstruction of homes, businesses, structures and private property. At the time of the 2018 HMP Update, this work is being leveraged in an additional NOAA Regional Coastal Resilience Grant focused on building resilience to coastal hazards and climate change in the State of Hawai‘i.
- **Resiliency Work in the City and County of Honolulu**—In May 2016 the City and County of Honolulu was selected as a member of the 100 Resilient Cities Network. Also in 2016, the City and County of Honolulu's Office of Climate Change, Sustainability, and Resiliency was established by approval from O‘ahu voters.
- **Sea Level Rise Proclamation in the County of Maui**—In March 2018 Maui Mayor Alan Arakawa signed a proclamation that directs “County departments to use the [Sea Level Rise Vulnerability and Adaptation] in their plans, program and capital improvement decisions” (MauiNow, 2018).

These capabilities and others identified during the course of the 2018 HMP Update performance period will be monitored to determine their effectiveness at achieving hazard mitigation goals.



## 5.4 State Process for Developing Local Plans, Projects and Continued Planning

**44 CFR 201.3(c)(5):** [The key responsibilities of the State are to...] ...provide technical assistance and training to local governments to assist them in applying for HMGP planning grants, and in developing local mitigation plans.

**44 CFR 201.4(c)(4)(i):** [The State Plan must include]...a description of the State process to support, through funding and technical assistance, the development of local mitigation plans.

The State of Hawai‘i recognizes that reducing the impact of hazards occurs at many different levels in many different categories, and therefore, needs to involve multiple sectors, organizations, government agencies, and communities in mitigation. The HI-EMA is the state agency responsible for mitigation throughout the state. The HI-EMA works closely with the State Hazard Mitigation Forum, which includes participants from state and county agencies with mitigation responsibilities and public and private interests and serves an important role in local mitigation plan monitoring. This section:

- Indicates the current status of county local Hazard Mitigation Plans (local HMPs)
- Evaluates the prior plan's approach to local assistance and coordination
- Describes the State's process for supporting the update of local plans
- Describes the process by which the State reviews, coordinates and links with local mitigation plans.

### 5.4.1 County Local Hazard Mitigation Plan Status

The four counties in Hawai‘i are participating in the hazard mitigation planning program through the development and update of local hazard mitigation plans. Table 5.4-1 lists the status of the local mitigation plans and plan adoption dates.

**Table 5.4-1. Status of the State of Hawai‘i Local Hazard Mitigation Plans**

County	Approval Date	Expiration Date	Comments
County of Kaua‘i	8/26/2015	8/26/2020	Funded by County Resources
City and County of Honolulu	2012; Interim 7/31/2017	7/31/2022	Funded by PDM FY08 & County Resources
County of Maui	9/2/2015	9/2/2020	Funded by County Resources
County of Hawai‘i	8/26/2015	8/26/2020	Funded by PDM FY14 & County Resources

*Note: Status as of January 1, 2018; PDM = Pre-Disaster Mitigation Grant, FY = Fiscal Year*



## 5.4.2 Evaluation of Prior Approach to Local Assistance and Coordination

The 2013 HMP did not include a formalized, established approach to prioritizing local assistance, nor did it provide guidance on steps to take to encourage affected communities to update their plans to reflect changes in vulnerability or in State priorities following a major disaster declaration. However, local assistance was still effective during the performance period of the plan. An example of this effectiveness is exemplified by the City and County of Honolulu interim plan that was developed in 2017. The City and County, the HI-EMA, and FEMA Region IX all worked together to update the expiring plan, with the FEMA region staff instrumental to the successful effort. Although the update was quick work to maintain funding eligibility, the City and County of Honolulu are fully committed to conducting a comprehensive review and update in the short-term and, as of the 2018 HMP Update, the planning process for the update to the local HMP is underway. Additionally, over the performance period of the 2013 HMP, the HI-EMA notified counties of grant funding availability prior to plan expiration and provided local HMP assistance upon request.

The HI-EMA has identified and prioritized the need for the development of a formalized approach to local assistance. The HI-EMA structured the 2018 HMP Update process so that the plan could be the foundation or resource for the next round of local HMPs. In addition, a new mitigation goal was identified to ensure effective assistance and coordination moving forward (See Section 6 [Mitigation Strategy]). The HI-EMA, in coordination with the State Hazard Mitigation Forum, intends to develop and document standard operating procedures regarding local assistance for supporting the update of local hazard mitigation plans and their implementation including documentation of the grants management process, application packets for grants management, and procedures for encouraging counties to update local HMPs following major disasters. The HI-EMA notes that the State of Hawai‘i Homeland Security Office has been successful in documenting and standardizing procedures for the similar programs that it administers. The HI-EMA will work to adapt the information for use in the mitigation program over the performance period of the 2018 HMP Update.

## 5.4.3 State Support for the Update of Local Hazard Mitigation Plans

The HI-EMA is committed to a comprehensive mitigation program that actively supports local mitigation planning by providing technical assistance such as workshops and training for both planning and post-disaster activities. The following sections describe how the State of Hawai‘i supports the development and update of FEMA-approvable local mitigation plans through planning support, funding opportunity education and outreach, training programs, and technical assistance.



## PLANNING SUPPORT AND TECHNICAL ASSISTANCE

The HI-EMA provides guidance and technical assistance to counties upon request to support the update of their local HMP through the assistance of state planners, as needed and as resources are available. Generally, the HI-EMA notifies each county of their upcoming plan expiration and works with them to identify a funding source for the plan update. The HI-EMA is committed to the continued funding of local HMPs through its state allocation of Pre-Disaster Mitigation (PDM) monies. Local plan status is also regularly discussed at State Hazard Mitigation Forum meetings held quarterly. Each of the four county mayors, or their designated official representatives, are members of the State Hazard Mitigation Forum, which allows county officials to stay informed about mitigation planning. The type of technical assistance is flexible in that it is based on the particular needs and resources available to the county requesting the assistance.

The HI-EMA is committed to this close level of support for county plan development and intends to continue to participate in county plan development over the performance period of the 2018 HMP Update. The HI-EMA also intends to coordinate with FEMA Region IX mitigation staff to encourage their participation in plan development whenever possible.

## FUNDING OPPORTUNITY OUTREACH AND TECHNICAL ASSISTANCE

The HI-EMA is committed to educating its counties on grant availability, grant applications, and managing mitigation funds. When funding opportunities become available the HI-EMA places notifications in local newspapers, notifies appropriate state and county agencies via email and other means, and communicates opportunities through networks via word of mouth. In addition, the HI-EMA has provided training in groups and/or one-on-one on benefit-cost analysis (BCA), the E-Grants system, the environmental and historic preservation (EHP) review process, the Hazard Mitigation Assistance (HMA) program, and applicant briefings and trainings for the Hazard Mitigation Grant Program (HMGP) after DR-4201, DR-4062, DR-1967, and DR-1976. Over the performance period of the 2013 HMP, education related to funding has been focused on the FEMA mitigation grant programs. Over the performance period of the 2018 HMP Update, the HI-EMA will work to expand discussion and outreach for other programs that provide funds for mitigation activities. This expanded discussion was started during the 2018 HMP Update process with the Hazard Mitigation Workshop held in February 2018, which discusses FEMA grant funding as well as the U.S. Housing and Urban Development’s Community Development Block Grant Disaster Resilience (CDBG-DR) funding program (see Section 2 [Planning Process] for more information on this workshop. Additional information on trainings is provided in the Training Program and Offerings section below.

## TRAINING PROGRAM AND OFFERINGS

The HI-EMA administers a standard training and exercise program similar to other states, which includes full-scale and table top exercises that follow a National Incident Management System (NIMS) protocol. The Training and Exercise Plan (TEP) establishes training, exercise, and planning priorities for the State of Hawai‘i. The TEP is updated annually by the HI-EMA and is informed by the Training and Exercise Planning Workshop (TEPW), hosted by the HI-EMA and attended by stakeholders from all levels of government, the non-profit, and private sectors. The TEPW is generally held in the latter half of each year. In general, the



exercise program tends to focus on the predominant hazards of concern for the state (e.g. hurricane, tsunami, event-based flooding, and volcanic hazards). Given the risk posed to the state by hurricanes, an annual, statewide hurricane exercise (Makani Pahili) is conducted. After action reports are developed after each exercise allowing the state and other stakeholders to capture lessons learned on how best to build capabilities.

Table 5.4-2 outlines the hazard mitigation-related trainings offered over the performance period of the 2013 HMP. Counties may direct ad hoc requests for trainings not addressed in the TEP to the SHMO and they will be conducted as time and resources allow. During the performance period of the 2013 HMP there have not been any issues with providing trainings that have been requested. Mitigation-related trainings overlap to some extent with trainings offered by the State of Hawai‘i Homeland Security Office and between the two agencies all mitigation-related requested trainings have been addressed. The HI-EMA is committed to continue to offer regular trainings to improve county capabilities for hazard mitigation and will coordinate with the counties through their participation in the State Hazard Mitigation Forum over the performance period of the 2018 HMP Update to ensure responsiveness to ongoing county training needs and emerging training issues.

In addition to the trainings provided by the HI-EMA, several other agencies have reported mitigation-related trainings:

- All-Hazards Training and Exercise Program, Department of Health
- Crisis Response Training Program, Department of Geology and Geophysics, UH
- Dam Safety Program Training Events and Materials, Engineering Division, DLNR
- FEMA Certified Training Courses, NDPTC
- NFIP Community Assistance Program, Engineering Division, DLNR
- Ready Set Go! Wildfire Training, HWMO
- Special Management Area Training, CZM Program OP
- Teacher Training Workshops, CSAV, UH
- Training and Exercise Support, PDC.

Additional information on these trainings can be found in the detailed tables in Appendix X (Capability Assessment).

**Table 5.4-2. The HI-EMA Offered Mitigation-Related Trainings during the 2013 HMP Performance Period**

Training	Comment
Benefit Cost Analysis	Offered though State Hazard Mitigation Forum
Environmental and Historic Preservation	Offered though State Hazard Mitigation Forum
Extreme Tsunami Evacuation Zone	None provided.
FEMA E-74 Reducing the Risks for Nonstructural Earthquake Damage	Offered in various counties
FEMA L-320 Hurricane Preparedness for Decision Makers	None provided.
FEMA L-705 Fundamentals of Grants Management	None provided.
FEMA P-767 Earthquake Mitigation for Hospitals	Offered in various counties



Training	Comment
HMA Grants	<ul style="list-style-type: none"> <li>▪ City and County of Honolulu Board of Water Supply and Honolulu Fire Department</li> <li>▪ Department of Hawaiian Homelands</li> <li>▪ County of Hawai‘i Civil Defense Agency and Department of Water Supply</li> <li>▪ Kaua‘i Emergency Management Agency</li> <li>▪ Maui Emergency Management Agency</li> </ul>
HURREVAC Training	Offered with FEMA, multiple years
Mitigation Grants Training and Workshop	Offered in various counties
NOAA Storm Surge Modeling (SLOSH)	None provided.
Storm Surge Modeling/NOAA National Hurricane Center	None provided.
Wind Design Provisions of the Hawai‘i State Building Code	Offered in various counties

Source: HI-EMA

#### 5.4.4 State Review, Coordination and Linkage with Local Plans

**44 CFR 201.4(c)(4)(ii):** [The State Plan must include a] ...description of the State process and timeframe by which the local plans will be reviewed, coordinated, and linked to the State Mitigation Plan.

The HI-EMA is committed to building its hazard mitigation program to support a coordinated approach to mitigation within the State of Hawai‘i. This will occur through coordinated and linked state and county local hazard mitigation plans. The following sections describe the process for county local HMP review and the process to coordinate and link state and county plans, identifies barriers for county local HMP development and suggested solutions, describes the criteria for prioritizing mitigation planning and project grants, and outlines the strategy for continued planning.

#### PROCESS FOR COUNTY LOCAL HMP PLAN REVIEW AND SUBMISSION TO FEMA

As discussed in Section 5.4.3, the HI-EMA works closely with the counties to develop and update the county local hazard mitigation plans and is committed to continuing this close working relationship. This commitment includes early and on-going technical assistance before and during the plan development process. The State is positioned to provide informal reviews as well as a formal review prior to submittal to FEMA. This level of involvement reduces the uncertainty in the plan review process when local plans are submitted to the State for review and ultimately reduces the number of plan revisions required to achieve approval pending adoption notification from FEMA.

The State has not developed any additional planning requirements for local HMPS, so the FEMA Region IX Plan Review Tool provides the complete set of plan requirements. Typically, plan reviews are conducted by the state in less than 45 days and the HI-EMA will continue to strive for a shorter review period whenever staffing and resources allow. On more than one occasion during the performance period of the 2013 HMP, the state and FEMA reviews were conducted concurrently. It is the preference of the HI-EMA that concurrent reviews occur whenever feasible to reduce the amount of time that county plans are undergoing review.



There is currently no defined, formalized process for a plan that does not meet all requirements after State review. This process will be documented as part of the operating procedure documentation discussed in Section 5.4.2. At the time of the 2018 HMP Update, the HI-EMA is committed to developing, documenting and implementing an established protocol, including a local HMP update schedule, to work together with the counties in a coordinated manner. The HI-EMA envisions that this protocol will involve:

- A memorandum of understanding with defined roles and responsibilities signed at the beginning of a plan update process.
- Formal transmission of the plan to the State for review.
- In the event that there are any requirements determined to have not been met, the HI-EMA will formally transmit the plans back to the county with required changes noted.
- When all requirements are met to the satisfaction of the HI-EMA, the HI-EMA will transmit the local HMP to FEMA Region IX.

The SHMO serves as the lead plan reviewer at the time of this plan update. It is anticipated that another HI-EMA staff person will assist with plan reviews at some point during the performance period of the 2018 HMP Update. The counties and FEMA Region IX will be notified via writing if the lead plan reviewer changes.

### **PROCESS TO COORDINATE AND LINK STATE AND LOCAL PLANS**

There was no formal effort to coordinate and link the 2013 HMP and county local HMPs during the performance period of the 2013 State HMP; however, some coordination and linkage occurred as a result of the HI-EMA’s participation in local plan updates, the State Hazard Mitigation Forum, and the 2013 HMP serving as a resource for local plan development. Linkage occurred during the 2013 HMP development process through the risk assessment. Because the State worked with the four counties in developing their risk and vulnerability assessments for their local HMPs, the counties included the state’s critical facilities and lifeline infrastructure in their risk and vulnerability assessments. The county assessments formed the initial basis of the state’s risk and vulnerability assessment in the 2013 HMP (State of Hawai‘i HMP 2013).

The State recognizes the benefits of developing the 2018 HMP Update and local mitigation plans in a more integrated manner, which ultimately can result in building a more resilient state. The 2018 HMP Update strives to develop a framework, including a risk assessment methodology, upon which local HMPs can build upon their update. The HI-EMA has developed the 2018 HMP Update to be a resource for the development of local HMPs to improve their overall effectiveness. Specifically, the 2018 HMP Update coordinates risk assessment and mitigation strategy information as follows:

- Includes an enhanced risk assessment that:
  - Conducted extensive hazard SME outreach to ensure best-available data, methodologies and science were utilized
  - Assessed local vulnerability and conducted local hazard ranking utilizing a holistic approach to prioritize the updated mitigation strategy
- Included enhanced coordination among sectors as part of the planning process to maximize planning efforts and to inspire continued collaboration and implementation beyond the 2018 HMP Update



- Includes high priority mitigation actions identified at the county level in the state mitigation strategy (see Section 6 [Mitigation Strategy])

The 2018 HMP Update will serve as a catalyst for all county local HMPs to be updated. The HI-EMA envisions that this will allow for wise use of resources and better coordination of risk assessment and mitigation strategies among the counties and with the state. In addition, it is the intention of HI-EMA to implement an annual review coordinated with and through the annual mitigation program consultation with FEMA Region IX. During this consultation methods and progress on linking the 2018 HMP Update and local HMPs will be discussed and evaluated.

### **BARRIERS FOR LOCAL PLAN DEVELOPMENT AND SUGGESTED SOLUTIONS**

At the time of this plan update, all four counties have adopted and approved local hazard mitigation plans; therefore, no insurmountable barriers to local plan development have been identified. As mentioned previously, the City and County of Honolulu worked with FEMA Region IX and the HI-EMA to develop an interim plan so that they would not lose eligibility for FEMA’s Hazard Mitigation Assistance grant program. The situation that precipitated the need for this interim solution was, in part, due to the delay in the release of the 2016 PDM funding from FEMA. PDM funding had been awarded to the City and County of Honolulu to complete an update of the local HMP; however, funds were not released until March 2017. By the time funds were released, the City and County’s local funding match for the grant was no longer available.

If funding resources currently being used for plan updates are no longer available or are significantly delayed, this may be a barrier for local plan development in the future. The HI-EMA is committed to supporting local plan updates via PDM grant support as long as these funds remain available. It is the HI-EMA’s goal to align all four county plans on the same planning cycle as described previously.

### **CRITERIA FOR PRIORITIZING PLANNING AND PROJECT GRANTS**

**44 CFR 201.4(c)(4)(iii):** [The section on the Coordination of Local Mitigation Planning must include] criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs which should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. Further, that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.

The HI-EMA administers the State’s hazard mitigation program; however, hazard mitigation is a shared responsibility between state agencies; county governments; private companies; and non-governmental groups and organizations within the State of Hawai‘i, including local residents. Recognizing this, the State of Hawai‘i has formed the State Hazard Mitigation Forum (Forum) with representatives from a broad spectrum of state and county agencies and the non-governmental sector, which serves as an advisory body to HI-EMA on mitigation matters. Two of the most important roles of the Forum are to assist in the development of the State HMP and to make mitigation project recommendations to the HI-EMA Director.



The HI-EMA Director makes the ultimate determination on what projects will be submitted for grant funding consideration.

The Hawai‘i State Hazard Mitigation Forum reviews, ranks, and prioritizes project proposals submitted by the State and its counties for FEMA grant funding programs. The ranking criteria has evolved over the performance period of the 2013 HMP as the capabilities of the mitigation forum and of the HI-EMA staff have increased. The ranking criteria used for project prioritization at the time of the 2018 HMP Update is available in Appendix X (Capability Assessment). It should be noted; however that the ranking procedures and criteria are being revised to be more consistent with the change in ideology resulting from the adoption and implementation of HRS 127A. The HI-EMA looks forward to working with the Forum to refine the criteria and to formalize the process to best meet the needs of the state over the performance period of the 2018 HMP Update. Developing these criteria and a formalized process is identified as an action in this plan and has been given a high priority. The criteria referenced above will continue to be used for ranking project proposals until the updated procedures have been developed. Any changes to the criteria will be widely publicized and the HI-EMA will ensure that the counties are aware of changes so that project proposals can be formulated appropriately.

### **STRATEGY FOR CONTINUED PLANNING**

The HI-EMA has reviewed and conducted a comprehensive evaluation of the State’s hazard mitigation program and has identified opportunities for a number of enhancements, which have been included as actions in the mitigation strategy (see Section 6 [Mitigation Strategy]) and included in the plan implementation and maintenance strategy (see Section 7 [Plan Maintenance]). The HI-EMA, with the help of the Forum, will continue to refine and enhance the program to best meet the needs of the State of Hawai‘i over the performance period of the 2018 HMP Update.