

Work Plan
County of Maui
Hazard Mitigation
Plan Update

December 2, 2019

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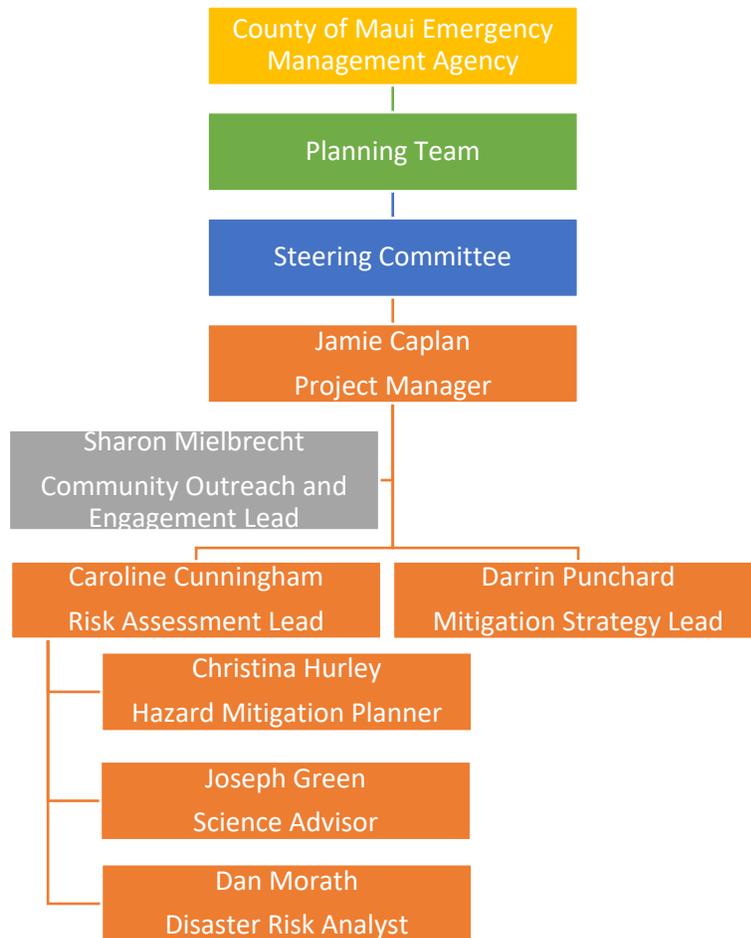
PURPOSE

The purpose of this project is to develop an updated County of Maui Hazard Mitigation Plan for approval by the Hawaii Emergency Management Agency (Hawaii) and the Federal Emergency Management Agency (FEMA). Plan development will include a public outreach and engagement strategy that includes all areas of the County. It will also include an updated risk and vulnerability assessment and an updated hazard mitigation strategy.

Maui County seeks to use the plan update process to maintain its current credit for floodplain management planning under FEMA's Community Rating System (CRS). This will ensure that the hazard mitigation plan will continue to double as a creditable "floodplain management plan" under CRS Activity 510. This approach will be to help Maui County to maintain its current CRS rating of Class 7.

RESPONSIBLE PARTIES

Developing the updated Hazard Mitigation Plan requires a team-based approach led by the County of Maui Emergency Management Agency. The County will work directly with a Planning Team that consists of County Leaders and key members of the Consulting Team. A Steering Committee will be formed that includes county stakeholders to guide the development of the plan. The Steering Committee will be formally recognized by the County's governing board (County Council or the Mayor) to maximize CRS points. This Committee will provide key local knowledge for all aspects of plan development.



PROJECT APPROACH

We recommend building on the work of Maui’s previous mitigation plan with a community-driven approach. This will include meetings with key stakeholders and the public in each of the county’s eight identified communities, including Molokai and Lanai. Our team will review and consider a full range of hazard mitigation measures with each community, including structural and non-structural techniques, to decrease vulnerability on a comprehensive range of physical scales. We will introduce and use custom methods and tools that allow us to capture information and input from the Steering Committee and stakeholders in a way that maximizes their time. Our proven project approach will enhance the County’s capacity for implementing and maintaining the hazard mitigation plan on its own after the consultants are gone. We guarantee plan approval by FEMA, but more importantly, we are confident that our approach will result in a Hazard Mitigation Plan Update that serves as a meaningful blueprint for a more resilient and sustainable future for the County of Maui.

The eight communities included in the planning process are:

1. Molokai

2. Lanai
3. West Maui
4. Central Maui
5. North Maui
6. South Maui
7. Upcountry Maui
8. East Maui

The following five tasks outline our approach.

TASKS

The following tasks summarize our proposed approach to the project.

Task 1. Planning Process (November 2019-July 2020)

The Planning Process includes developing, implementing, and documenting the plan to develop the Hazard Mitigation Plan Update. It also includes a specific Public Outreach and Engagement Strategy.

1.1 Project Kick-off Meeting (November 13, 2019)

The Jamie Caplan Consulting (JCC) team proposes a kick-off meeting with key County leaders within ten days of project award. Developing the project Work Plan and the Community Outreach and Engagement Strategy will be a priority for the JCC team following a notice to proceed. Using this project approach as a guideline, JCC will develop a Work Plan to complete the County of Maui Hazard Mitigation Plan Update. The Work Plan will include all tasks needed for an approved Plan, as well as associated deliverables, timelines, proposed meeting dates, and roles and responsibilities for each. At this meeting, the JCC Team will assist the County to identify potential Steering Committee members.

1.2 Steering Committee Meetings

The Steering Committee will assist the consulting team with hazard identification, data collection, stakeholder engagement, and development of the mitigation strategy. The Steering Committee will consist of the County stakeholders who represent County departments, as well as key community stakeholders with fifty percent from outside the local government. To maximize CRS credit, the Steering Committee will include representatives from the Planning Department as well as experts in the following activities: preventative measures, property protection, natural resource protection, emergency services, structural flood control principles, and public information. In addition, each meeting will be open to the public and publicly posted. We recommend considering a representative from each of the eight communities in the County, including Molokai and Lanai. They will provide local knowledge such as identifying data resources, developing mitigation actions, and supporting stakeholder engagement. Our team will help develop this Committee.

The Steering Committee will meet four times. In addition, this committee will have the opportunity to review the plan prior to sending it to the Hawaii Emergency Management Agency (Hawaii EMA) and to

the Federal Emergency Management Agency (FEMA). The JCC team will coordinate closely with the Steering Committee to determine an effective meeting schedule and location that works best for all involved.

- Meeting #1 (December 10, 2019): The first Steering Committee meeting will be held about a month into the planning process. The meeting will include an opportunity for the consulting team to describe the mitigation planning process, and for the Steering Committee to learn about their roles and responsibilities in developing the plan. This meeting will also include sessions to:
 - Identify natural hazards and critical facilities
 - Discuss implementation of the Community Outreach and Engagement Strategy
 - Review potential mitigation actions based on wish-list projects
- Meeting #2 (February 3, 2020): The second Steering Committee meeting will be an opportunity for the JCC Team to share the preliminary risk and vulnerability assessment results. In addition, the consulting team will work with the Steering Committee to:
 - Review and potentially revise previous goal statements
 - Identify potential hazard mitigation actions, this will include a systematic review of a wide range of activities
 - Discuss the next steps of community engagement
- Meeting #3 (April 2020): The third meeting serves to further identify mitigation actions and their prioritization. In addition, at this meeting we will:
 - Review preliminary results from the Public Preparedness Survey (if one is used)
 - Discuss final Risk Assessment and Capability Assessment Results
 - Discuss community engagement and the final meetings
- Meeting #4 (June 2020): The final Steering Committee meeting will be a time to:
 - Review the priority order of mitigation actions
 - Review the draft plan and prepare for its public review
 - Discuss processes for implementing the plan and seeking grant funding

1.3 Conduct Community Outreach and Engagement November 2019-June 2020

Community outreach is an essential component of mitigation planning. The more engaged the public is in the planning process, the more likely they are to support future mitigation strategies. In addition, participation in mitigation planning often serves as a foundation for additional emergency preparedness and response planning.

The Community Outreach and Engagement Strategy will include methods to:

- Generate public interest in mitigation planning, resiliency, and climate adaptation
- Solicit public input

- Engage local stakeholders in eight key communities in the County
- Create opportunities for local stakeholders and the public to be actively involved in the mitigation planning process

We recommend that the Community Outreach and Engagement Strategy include stakeholder meetings, a Public Preparedness Survey, a project webpage, two public meetings, and an opportunity for the public to review and comment on the draft Hazard Mitigation Plan Update. Our team will provide many outreach materials including press releases, PowerPoint presentations, meeting handouts and a Project Fact Sheet.

For stakeholder meetings, we propose meeting with key County officials, such as the County Planner and Public Works Administration Director. Participants should also represent private industry, each key community, the University of Hawaii, and public utilities. We like to travel to these meetings as an opportunity to tour the County and meet people in their “home” environment. We like to spend time in the community, to get to know the people, see the areas of risk firsthand, and visualize mitigation actions. The purpose of these meetings is to gather detailed insight into the County’s pre-disaster mitigation capabilities, hazards, and mitigation project interests.

The Public Preparedness Survey, if used, will provide an opportunity for individuals living and working in the County to share their opinions and participate in the mitigation planning process. The information will help the Steering Committee better understand what hazards are of most concern and what mitigation actions are of particular interest. We propose generating a digital survey (by way of SurveyMonkey) as well as distributing hard copies at public meetings.

The project webpage, located on the Maui County Emergency Management website, serves as a place for the consulting team to share information with the Steering Committee and the public. It will be used to publicize meetings, access the Public Preparedness Survey, and review the draft plan.

We intend to hold two public meetings throughout the planning process in three areas of the County—a total of six meetings. The public meetings offer an opportunity for the consulting team and the Steering Committee to learn from the public and key stakeholders, and for us to share information with the public regarding the planning process. We provide an update of the planning process in each meeting, review opportunities for the public to participate, and listen. We take public engagement seriously and have enjoyed tremendous success with it.

- **Public Meeting #1 (week of February 3, 2020):** The first public meeting will be an opportunity for the Steering Committee and the consulting team to gather local knowledge of hazard events and identify natural hazards and critical facilities to include in the plan. In addition, the Steering Committee will gain insight from the County regarding areas of risk that may not be apparent on a risk analysis, and on potential mitigation actions for the community. We will also discuss continued public involvement and introduce the Public Preparedness Survey. We bring maps to public meetings and encourage participants to point out places of high hazard and offer suggestions to mitigate risk.

- **Public Meeting #2 (June 2020):** This will be an opportunity for the consulting team and the Steering Committee to share the draft plan with the public and capture any of their comments. We will review the list of mitigation actions and the final risk and vulnerability assessment. We will also let meeting participants know how to review the draft plan in its entirety.

1.4 Draft Plan and Document Planning Process

Throughout the planning process, the consulting team will document the planning process as required by FEMA. This includes documentation of the overall process used to prepare the plan, including a description of the steps taken and who was involved in the process.

Task 2. Hazard Analysis and Risk Assessment (November 2019-April 2020)

The current risk assessment will be updated to reflect current conditions. Also, in alignment with FEMA regulations and CRS 510 compliance, we will assess the hazards and the problems. Our results include maps and graphics to effectively communicate the issues. We summarize vulnerability for the community with a hazard ranking and potential impacts on safety, public health, equity, and the economy. Our risk assessment is conducted via a four-step process.

2.1: Review the Hazards

The first step in the risk assessment process is understanding how hazards may impact the county's communities. We'll review the existing hazards with you, aligning it with the state plan, county priorities, and previous hazard events. As needed, we'll amend the existing hazard list to meet the goals of the project. We understand that flooding, wildfire, and lava flows are of particular concern, and while hurricanes are rare, impacts and threats are becoming more frequent (e.g., Hurricane Lane, Hurricane Erick and TS Flossie). As part of our approach, we'll integrate climate change into each hazard we profile. All natural hazards that may impact the planning area will be included and assessed; man-made and technological hazards will be considered and assessed at a higher level.

The final list of hazards will be reviewed and approved by the Steering Committee at their initial meeting on December 10, 2019.

2.2: Update the Hazard Profiles

Stantec will update profiles, using existing information as a foundation and integrating the latest hazard data. We'll coordinate with local entities, such as community officials and stakeholders, the PDC, and universities to gather and include existing hazard data, natural hazard studies, related hazard plans such as climate studies, and spatial building data. We'll update the existing information for each profile, including:

- Hazard description
- Previous events
- Hazard location
- Frequency/Probability
- Severity
- Warning Time
- Public health considerations
- Climate change considerations

As part of the profile update, we will:

- Update maps and graphics where necessary (i.e., new information supersedes the existing maps or graphics)
- Update the NFIP metrics to meet FEMA-identified “not met” requirements in coordination with ISO/CRS Specialists, local floodplain management coordinator and state floodplain management coordinator
- Rank hazards via a Hazard Priority Risk Index (PRI) based on several factors including impact, spatial reach, frequency of occurrence, and warning time.

2.3: Assess Vulnerability and Impacts

Building on the hazard profiles, we’ll include an assessment of vulnerability. As datasets permit, we’ll use GIS to analyze the population, number of structures, type of land ownership, type of structures (including critical facilities), and infrastructure exposed to hazard impacts for each community throughout the county. We’ll also include qualitative considerations to the economy and population trends as they relate to impacts for each hazard.

Once areas of vulnerability are determined, these will be further analyzed by PDC to determine which communities face greatest vulnerability based on socio-economic factors. PDC will use Census demographic information to understand household composition (including age and ownership status), income, and access to information (e.g., internet access). Information will ideally be relayed based on the eight communities identified for study. If possible, Census block or tract data will be used. This information will be provided in tabular and mapped/graphical format as data permits and presented at public meetings.

2.4: Develop an Overall Summary of Vulnerability

With an understanding of vulnerability, we will summarize the key issues identified throughout the county via an executive summary. Each area will be considered separately. This information will include the results of the socio-economic analysis described above.

Task 3. Mitigation Strategy (November 2019-June 2020)

The Mitigation Strategy is the most crucial piece of the Hazard Mitigation Plan Update and will reflect the unique needs of each identified community. It represents the County’s system for lessening the impact to the hazards identified in the risk assessment. The JCC Team will work closely with the Steering Committee to develop a robust assessment of the current local capabilities and resources for mitigating risk. This assessment spurs the development of mitigation actions by indicating strengths and weaknesses. It also illustrates growth in the County since the previous plan was developed.

3.1 Update Capability Assessment

The Steering Committee meetings, stakeholder meetings, and capability assessment questionnaires provide necessary information toward the capability assessment. This task also includes gathering and reviewing existing studies, plans, reports, such as the Coastal Zone Management Plan, Community Plans regional land use, and resiliency studies. The JCC team will also incorporate relevant capability information into the plan to address the County’s current participation in the National Flood Insurance

Program (NFIP) and the Community Rating System (CRS), including but not limited to existing floodplain management activities, mapping updates, higher regulatory standards, and current policy statistics.

3.2 Update Mitigation Plan Goals

The JCC Team will work closely with the Steering Committee to review the goals listed in the previous plan and determine if they are feasible and/or require updating. At first glance, we recommend adding a goal specific to climate resilience. The development of these “guiding principles” for the plan will also take into account a review of the Hawaii State Hazard Mitigation Plan and best practices from around the United States that have resulted in effective and meaningful local hazard mitigation plans.

3.3 Analyze and Update Previous Mitigation Actions

A required element of this planning process is a review of the mitigation actions from the County’s previous plan. For this, the JCC team will work with the County to identify the current status of each previously identified mitigation action. We will then determine if actions undone, should be carried forward to this Plan, or if they are no longer a priority.

3.4 Develop and Prioritize Mitigation Action Plan

Following the identification of goal statements, the Steering Committee and the consulting team will identify and analyze potential mitigation actions. The mitigation actions or projects identified will represent a mix of structural and non-structural mitigation measures, including an emphasis on integrating hazard mitigation and climate change adaptation policies into other local planning mechanisms.

All included mitigation actions will be ranked and include the required elements of the responsible department, a timeline, estimated cost, and funding sources. In addition, a cost-benefit review is necessary to determine the cost effectiveness of each strategy. The JCC team will use best information available to determine the costs and benefits available. Benefits may include dollars saved from future hazard events, environmental benefits, social benefits, and others. Costs include the dollar amount needed to complete the project. As part of the mitigation strategy, the JCC team will rely on the County of Maui to work with county departments and the areas of east Maui, upcountry Maui, west Maui, Molokai, and Lanai to determine reliable benefits and cost estimates.

We will develop a web-based **Mitigation Action Tracker**. This tool functions as Google Sheet or similar spreadsheet with rows for each action and columns for each action criteria. This includes all relevant data for each mitigation action, such as responsible department, implementation timing, and potential funding source. The Mitigation Action Tracker is expanded to track plan implementation. We include separate tabs with pre-sorted reports so the County can quickly identify priority projects, community-specific projects, and hazards addressed.

Task 4. Plan Review, Evaluation, and Implementation (July 2020)

Jamie Caplan Consulting will prepare a draft Plan based on the work completed in the previous tasks. The final section of the Plan details how the County will maintain, update and implement the Plan. We will also draft a section of the Plan required by FEMA regarding how this Plan relates to the original plan.

4.1 Develop Plan Maintenance Procedures

Plan maintenance procedures include a timeline with specific tasks the County will employ to implement and maintain the plan. This step will include ways to integrate the Plan with other County plans, such as the General Plan, Maui Island Plan, coastal studies, and zoning bylaws or capital improvement plans. Finally, this section includes methods and a schedule for the County to effectively monitor, evaluate, and update the Plan. We will use best practices from FEMA, and the field to develop these procedures with the Steering Committee.

4.2 Develop Procedures for Continued Public Involvement

Continued public involvement is a required element of the Plan maintenance process. The consulting team will develop a Community Outreach Strategy (similar to the one developed in Task 1) for maintaining public involvement throughout the five-year life of the Plan. Engaging targeted stakeholders in the mitigation strategy after the Plan receives FEMA approval will assist with garnering local support for mitigation project funding and implementation. The Community Outreach Strategy developed will undoubtedly include continued use of the County's project website and public meetings. Lessons learned through the Community Outreach and Engagement process and development of the Hazard Mitigation Plan Update will be linked to the method and scheduled for continued public involvement.

4.3 Document Plan Update Changes

A significant piece of the Plan we develop for the County will indicate to FEMA how this new Plan relates to the previous Plan from 2015. FEMA requires that we indicate how the plan has been revised to reflect changes in development or changes in priorities. They also require an update on the previously identified mitigation actions. In our experience, FEMA appreciates this update in a concise section at the front of the Plan. We will gather data for this section throughout the planning process and then develop the section when the plan is nearly complete.

Task 5. Plan Approval and Adoption (July 2020-October 2020)

We guarantee that both Hawaii EMA and FEMA will approve the Plan, and we will work with you and with them until that happens. In our experience, we anticipate one round of minor changes with each agency, although we have had many plans approved upon initial review. We cannot predict the speed with which Hawaii EMA or FEMA will review the plan. We will make any required changes to the plan within two-weeks of receiving feedback from either agency.

5.1 Public Review of Draft Plan (July 2020-August 2020)

When the draft plan is complete, the JCC team will deliver a digital editable copy of the plan to the Steering Committee for their review. After incorporating any requested changes, the Plan will be ready for public review. For the public review, we recommend making a digital copy and comment form available on the County's webpage and having at least one hard copy available in a centrally located County office. We will provide the County with a press release and flyer to use toward advertising the plan's availability.

5.2 Review by Hawaii EMA (September 2020)

Following public review, with the County's blessing, we will send the Plan to the Hawaii Emergency Management Agency (Hawaii EMA) for review. The Plan is submitted to Hawaii EMA with the Local Mitigation Plan Review Tool (Appendix A of FEMA's "Local Mitigation Plan Review Guide") completed to ensure all requirements are fulfilled prior to submission to FEMA. Should the state request revisions to the plan, all required revisions would be addressed by JCC. Revisions are handled in a timely manner to expedite the review process.

5.3 Review and Approval by FEMA (October 2020)

Following state approval of the Plan, Hawaii EMA will forward the Plan to FEMA Region 9 for a compliance review. Should FEMA request revisions, the JCC team would address all required revisions. Revisions will be handled in a timely manner to expedite the review process. JCC will work with the County of Maui, Hawaii EMA, and FEMA throughout the review process to ensure that all requirements are met for a federally approved plan. We remain available to you, Hawaii EMA, and FEMA throughout the revision process. In our experience, we receive only minor revisions or none at all.

5.4 Assist County with Adoption (October 2020)

Once your Plan receives "Approved Pending Adoption" certification from FEMA, the County of Maui has one year to formally adopt the Plan. We will assist you and provide guidance throughout this process. This assistance includes a formal adoption resolution with language required by FEMA. It may also include a PowerPoint presentation and/or talking points to assist the County in getting the Plan adopted.

DELIVERABLES

Our proposed schedule will result in a FEMA-approved Hazard Mitigation Plan Update. The final project deliverables include:

1. Monthly progress reports.
2. Draft Plan for Review by the Steering Committee and the public.
3. Final Hazard Mitigation Plan Update delivered to Hawaii EMA, FEMA and the County.
4. Digital copies of all tabular data, maps, mapping data, GIS data, or other geospatial information used in the development of the mitigation plan.
5. Digital Mitigation Action Tracker.
6. Digital copies of the Draft and Final versions of the Hazard Mitigation Plan Update.

7. Electronic copies of all meeting schedules, agendas, notes, sign-in sheets and presentations.

PROJECT SCHEDULE

It is our habit to keep our projects on time and on-budget. Work on the project will commence immediately upon execution of an agreement. It will be completed by **June 30, 2020**. This deadline allows ample time for the Steering Committee and the public to review the plan by July 31, 2020, and for Hawaii Emergency Management Agency to review the plan by August 14, 2020. Hawaii EMA will send the plan to FEMA when they are comfortable it will pass FEMA review. Jamie Caplan Consulting will work with the County throughout the review and approval process.

PROJECT TASKS	2019			2020									
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Task 1. Planning Process													
1.1 Project Initiation (Kickoff Meeting)		11/13/19											
1.2 HMP Committee Meetings (4)			Mtg 1 12/10/19		Mtg 2 2/3/20		Mtg 3		Mtg 4				
1.3 Conduct Public/Stakeholder Engagement					Public Meeting #1 Identify Issues				Public Meeting #2 Present Draft Plan				
1.4 Draft Plan and Document Planning Process													
Task 2. Hazard Analysis and Risk Assessment													
2.1 Update Hazard Profiles													
2.2 Update Critical Facility Inventory													
2.3 Update Hazard Vulnerability													
Task 3. Mitigation Strategy													
3.1 Update Capability Assessment													
3.2 Update Mitigation Plan Goals													
3.3 Analyze and Update Previous Mitigation Actions													

PROJECT TASKS	2019			2020									
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
3.4 Develop and Prioritize Mitigation Action Plan													
Task 4. Plan Review, Evaluation, and Implementation													
4.1 Develop Plan Maintenance Procedures													
4.2 Develop Procedures for Continued Public Involvement													
4.3 Document Plan Update Changes													
Task 5. Plan Approval and Adoption													
5.1 Committee and Public Review of Draft													
5.2 Review by Hawaii EMA													
5.3 Review and Approval by FEMA													
5.4 Assist County with Adoption													