Hanalei to Hā`ena
Community Disaster Resilience Plan

2014

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Hanalei to Hā`ena Community Disaster Resilience Plan

EXECUTIVE SUMMARY

Purpose

The rationale for development of this plan was to understand current demographics and dynamics of community and what they mean for local resilience to disasters, including identifying vulnerable and resilient populations and areas, and developing an Action Plan and Community Maps to promote local resilience. This plan represents 4 years of research and planning efforts grounded in identifying gaps in preparedness community risks and vulnerabilities, resources, knowledge and visions for improving resilience for the communities of Hanalei to Hā`ena.

Who

Research and planning was done jointly with project facilitators and the Hanalei to Hā`ena Community Disaster Resilience Planning Committee (Committee), consisting of community members and diverse stakeholders from government, non-governmental organizations, faith-based and community organizations, in order to promote cross-collaboration of disaster resilience planning efforts.

Audience & Users

Community disaster resilience is an ongoing process and requires continued attention and support. This plan is intended to both to guide the current and sustained disaster preparedness, response, relief and recovery activities of the Committee and of the larger communities, and to inform and engage local residents, visitors, government and non-governmental organizations of the local plan through plan distribution, public awareness materials and events. In addition to verbal confirmations of solidarity, Memorandums of Understanding were signed between the Committee and particular organizations, government departments and individuals to acknowledge local planning efforts and ensure access to resources and land needed to support local response and recovery efforts.

Outcomes

Research findings are summarized throughout the plan, however the primary focus is on two of the direct outcomes of this project, including the:

1) ***Action Plan*** for ***Community Disaster Preparedness and Response***, and in the future including Relief, Recovery and considerations for climate change adaptation; and,

2***) Community Resource & Vulnerability Maps***.

Sustainability

Opportunities for addressing gaps in resilience are highlighted in the proposed Action Plan programs, policies and community-building processes, which will serve as a guiding resource to document the planning process so it can be updated and sustained over time, and encourage capacity-building. The long-term sustainability of the plan convening will be led at the grassroots-level by the Hanalei to Hā`ena Community Association, with support by the Hanalei Watershed Hui.

The community maps were developed to identify vulnerable populations and areas, and stage current and new resources, materials and supplies that can be leveraged after a disaster. Both the Action Plan and maps should be continually monitored and evaluated bi-monthly to support the continued Committee meetings and associated activities, and should be updated at least annually by the Committee and shared with the public. Detailed information on the project research and planning process, tools and methods used, and guidance for the Committee on how to update the Action Plan and Maps in the future is listed as Appendix. Confidential information including Resource Mapping Databases (Appendix 11) with names and addresses will be available to Committee members only.

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PART I. INTRODUCTION TO PLACE, RESOURCES AND RISKS

Hazard Risks

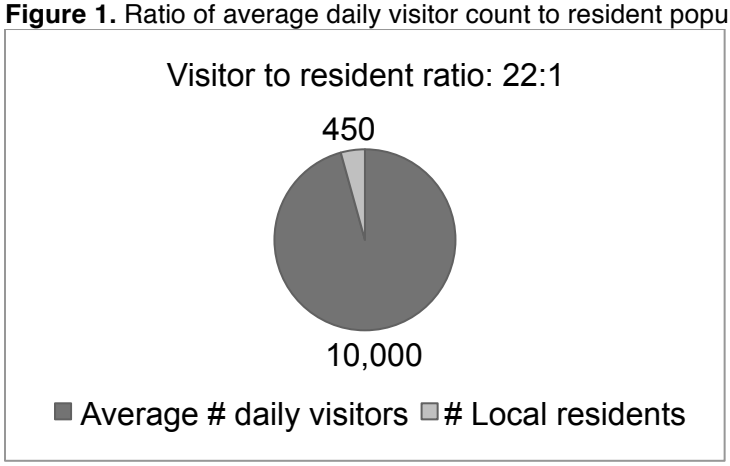
Hanalei to Hā`ena communities are geographically isolated and vulnerable to many natural hazards, including sea level rise associated with climate change. Resting at sea level in valleys surrounded by steep mountains, the only exits from the communities are coastal roads and one-lane bridges; the main road exit, via the Hanalei Bridge, closes in the event of flood, tsunami and hurricane, causing issues with evacuation, search and rescue, and accessing the communities post-disaster. Seasonal flooding is a part of life, however land use changes and shifts in weather events have caused acute damaging floods leading to road closure and community isolation for many days at a time such as in 2012**.** The area is also at risk to landslides and rock fall, particularly during high rainfall and flooding events, as was evidenced in the 2012 floods, creating areas of isolation across the North Shore. The area is at risk to earthquakes and tsunami generated from earthquakes or massive landslides, originating anywhere in the Pacific Ring of Fire or the neighboring Big Island. The last devastating tsunami occurred in 1957 with 47 feet maximum height run-up recorded on the North Shore of Kaua`i leaving 250 homeless but with no deaths due to improved tsunami warnings, and in 1946 from an Aleutian Islands-generated earthquake of 7.8 magnitude with 45 feet maximum height run-up, resulting in 15 deaths and 3 missing but presumed dead, many injuries and over 200 left homeless. Wildfires and drought are possible in the area as well, leading to water resource quality and scarcity issues impacting the environment and farming and fishing livelihoods, among factors. High wave events and coastal inundation are important hazards for coastal areas as well. Dam failure is also important to note for neighboring areas, as on March 14, 2006, extreme storms and rainfall led to the failure of the Koloko Dam, killing seven people (State of Hawaii Hazard Mitigation Plan 2010).

Rationale for the Plan

Hurricane Iniki, a Category 4 storm on the Saffir-Simpson scale that hit Kauaʻi in 1992, was the most recent destructive disaster to impact Hanalei. Discussions with community leaders revealed that although Hanalei to Hā`ena communities had no formalized disaster resilience programs or policies in place at the time, residents report having coped and adapted well. They attributed this to close familial and social support networks, self-organization and self-sufficiency, material preparedness, and experience and knowledge of past disasters. Community members actually turned away much of the external disaster relief aid, showing the importance of local social resilience to ensuring protection of property, lives and livelihoods.

Since Iniki in 1992, Hanalei to Hā`ena have experienced changes that many residents feel have weakened the community's social capacity (Coffman and Noy 2009). Small family homes have been replaced by gated vacation rentals, cost of housing and land taxes has displaced permanent and long-term residents, giving way to short-term visitors (i.e. tourists) or empty second residences. Currently the daily average visitor count is 10,000 for the entire North Shore of Kauaʻi, including the towns from Hanalei to Hāʻena, as compared to the resident count of 450, producing a visitor to resident ratio of 22:1 (HTA 2010; Vaughan and Ardoin 2013) (Fig. 1). The high daily visitor count creates traffic congestion, utility and infrastructural overload while also degrading natural and cultural resources. Visitors are ill prepared for natural hazard events, presenting a burden on local residents and their resources even during common floods. The Plan research was initiated in response to a community-based request for assistance to engage in a process to understand current community demographics, resilience characteristics, risks and opportunities to increase resilience in 2010, with the following findings based in Hanalei.

Figure 1. Ratio of average daily visitor count to resident population.



Community structure and demographic shifts

Of the visitors surveyed (n=20), 90% were from the mainland U.S. and 10% were from other countries. Most (75%) visitors stay over a week and are repeat visitors (63%), raising the concern that if a significant disaster affects the area, arranging logistics for visitor evacuation may prove difficult (Figure 2). As with other U.S. coastal areas (Colburn and Jepson 2012), the increasing influx of visitors and new residents over the past few decades has changed the demographic profile of Hanalei, such that 73% of the resident respondents are not from Hanalei or Kaua'i (Figure 2) and 86% of the population is Anglo, with 43% of residents having lived there less than twenty years (Figure 3), showing a loss of long-term residents and potentially their associated social networks, knowledge and resources. Despite demographic and socio-cultural changes, 64.7% of respondents say they receive fish as a gift from local fisherman or family members, a long-held tradition of sharing natural resources and foods with family and community in this region and in Hawai'i (Vaughan and Vitousek 2013; Kittinger 2013).

Figure 2. Origin of residents.

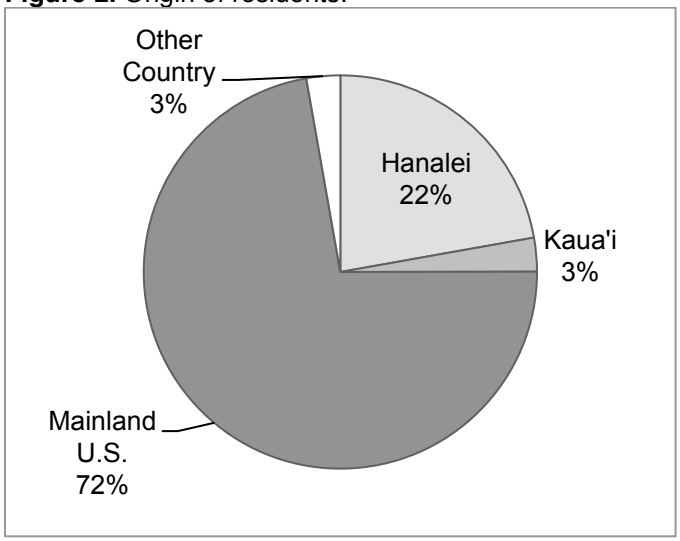
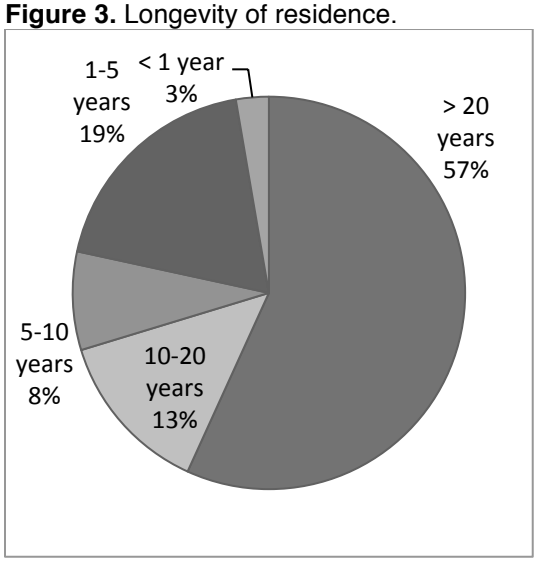


Figure 3. Longevity of residence.



Geographic Coverage & Population

The target population of the Plan includes all long-term and transient residents, employee and businesses (estimated at 1344 from the 2010 Census), and visitors (estimated at 10,000 on any given day) in the communities and areas of Hanalei, Waioli, Waipa, Waikoko, Lumaha`i, Wainiha and Hā`ena (Figure 4).

Figure 4. Hanalei to Hā`ena Community Disaster Resilience Plan Boundary Map

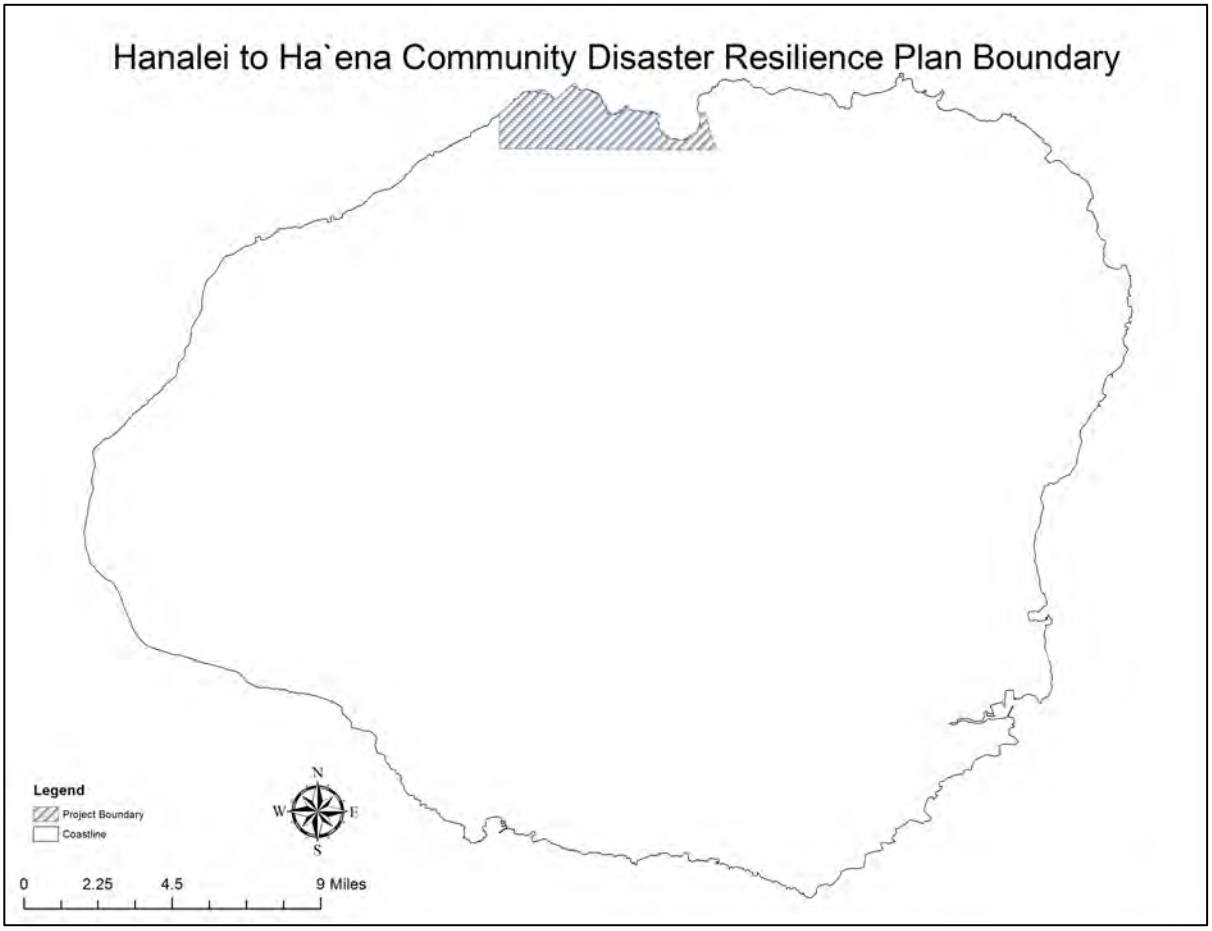


Figure 5. Perceived self and community-wide preparedness.

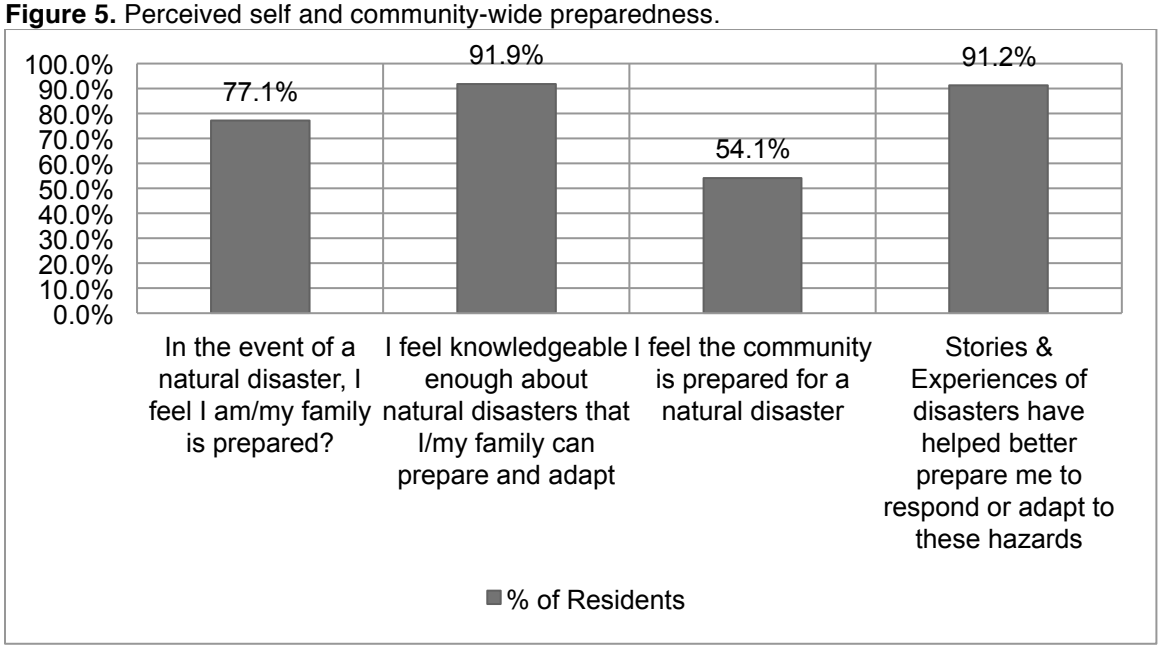


Figure 5 illustrates that many resident respondents (77.1%) feel prepared for a natural disaster, with 92.1% having heard stories or personal experiences in disasters and strong levels of disaster preparedness knowledge (91.9%). However, only 54.1% felt that the community, as a whole, is prepared for a disaster, due in large part to the strain that the unprepared (90%), vulnerable and dependent visitors may place on residents.

Figure 6. Visitor versus resident preparedness, ability and willingness to help others.

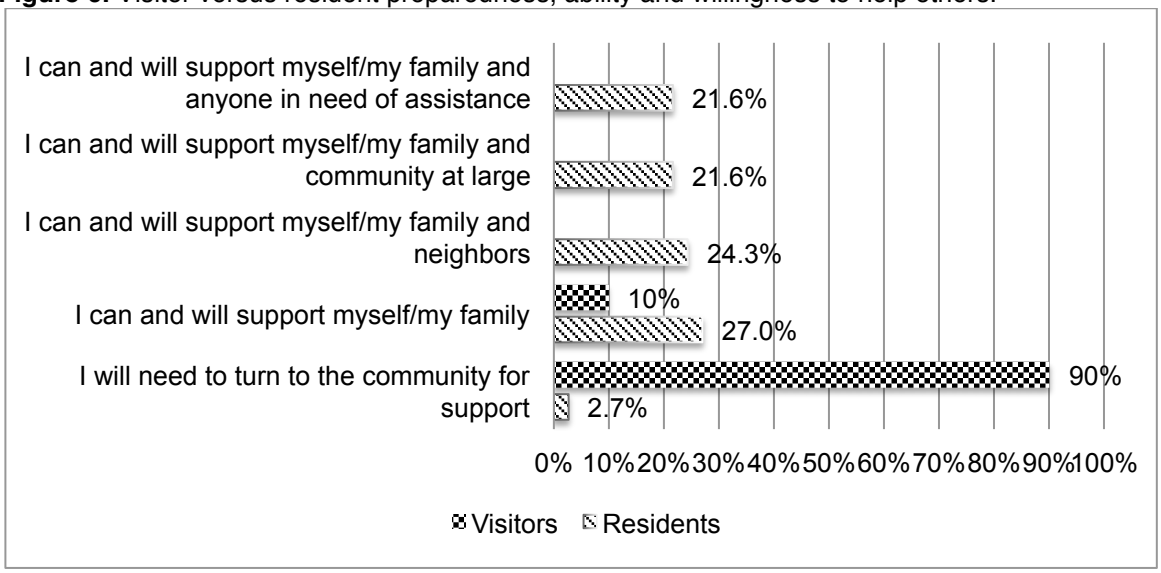


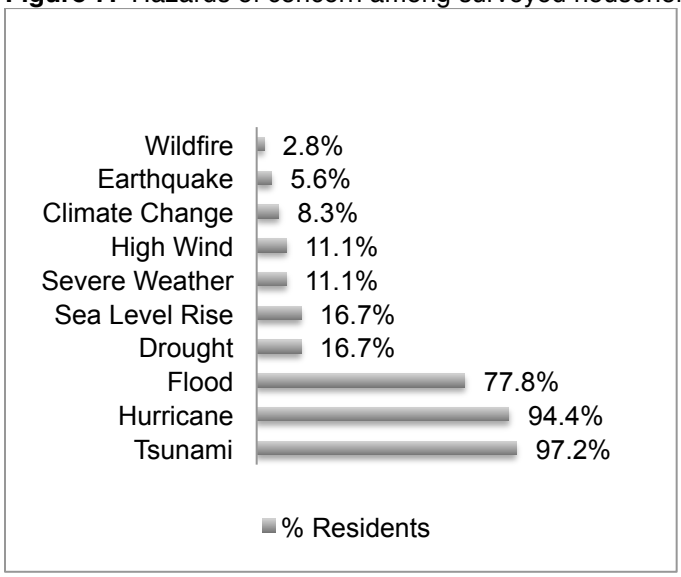
Figure 6 illustrates residents' and visitors' perceptions of their preparedness for disasters, along with their ability and willingness to assist others. Many resident respondents reported an ability and willingness to help neighbors (24.3%), community members (21.6%) and visitors or anyone in need (21.6%), though 21.6% are not willing or able to help tourists (21.6%) and feel they are not a part of community.

Perceptions of risk and vulnerability

The hazards of greatest concern to respondents included tsunami (97.2%) ranked as first by 52.8%, hurricane (94.4%) ranked first by 11% and flood (77.8%) ranked first by 30.6% (Fig. 7). Experience recall

of these hazards ranged from once (18.5%) for new resident respondents, 2 to 3 times (25.9%), 4 to 5 times (14.8%), and more than 7 times (18.5%) with 22.2% unsure.

Figure 7. Hazards of concern among surveyed households in Hanalei, Kaua'i.



We found some evidence of asymmetry of knowledge and awareness of hazards among households. For example, while many residents informally mentioned that floods were not a threat to Hanalei, flooding was still one of the top hazards of concern. Only 16.7% of respondents felt drought was an issue, while at the time of the survey, all counties in the State of Hawai'i had been declared a disaster area by the U.S. Department of Agriculture due to drought from January 2008 to August 2010 (NIDIS 2012; CWRM 2012).

Resident respondents reported the following impacts from natural disasters: agriculture or crop loss (6.9%); cattle health impacts and death (6.9%); water scarcity/water rationing (20.7%); change in rainfall amount/patterns (13.8%); loss of life (41.4%); loss of property (69.0%); loss of jobs/livelihood (69.0%); school/community facilities (62.1%); public health (20.7%); social (13.8%); culture (6.9%); environment (31.0%); well-being (10.3%); food/water insecurity (44.8%); and recreation (3.4%).

While 91.9% of resident respondents knew of community meeting areas or safe refuges to evacuate to, only 87.5% would evacuate in the event of hurricane or tsunami. Many stated that although they perceive this risk, they accept it, rather than evacuating only to not be able to get back to their homes if the road is closed. Participants also indicated a desire to receive more disaster information and education, particularly around plans and protocols to address the needs of the visitor population.

Lessons learned from March 2012 Floods

After the community-wide household survey was conducted in Hanalei in 2010, a major flood occurred over the course of 4 days in March 2012, closing the road to the single-lane bridge and causing multiple points of isolation due to landslides and flooded roads. Initial post-flood interviews determined that residents and business owners were more unprepared than they originally communicated. Local health emergencies occurred and first responders had difficulty identifying and accessing those in need. Evacuation of tourists was inadequate and led to multiple tourists becoming trapped on store porches or in their rental cars for days without food, water, shelter or bathroom facilities. Some residents cared for them, offering shelter or provisions that as a result caused residents to run short.

Figure 8. Hanalei valley pre- and post-March 2012 floods (photo credit: Jane Vogel, 2012).

Changed perceptions in local preparedness and response capacity were expressed in informal post-flood interviews, and prompted continued research and planning efforts to identify and address ongoing vulnerabilities.

Community involvement, governmental roles and expectations

Many (70.3%) resident respondents participate in a range of community or volunteer groups, with 79.2% participating frequently and 12.5% participating often. Many resident respondents (32.4%) expect no assistance from government or relief agencies, while 13.5% expect provision of basic services (evacuation, food, water, shelter) only for those most in need, and 51.4% expect provision of basic services for all residents including visitors. In addition, 21.6% expect job protection and/or financial support, 51.4% expect assistance with cleanup and reconstruction and 40.5% expect provision of emergency health services, with others noting a need to uphold safety, public order and property protection. Many residents emphasized the need for their community members to rebuild connections and collaborate towards self-sufficiency.

Regarding awareness of public disaster communications sources, 73% of resident respondents report exposure to at least one, including governmental and non-governmental agencies, community members, families, radio, newspapers, internet, television and others. All residents were aware of the early warning systems with the majority (66.7%) rating them as “very effective,” however 5.6% rated them “not effective” and 27.8% rated them “somewhat effective” due to insufficient coverage of sirens, slow repair of broken sirens, and lack of warning information for visitors.

Coping and adaptive capacity

As illustrated in Figures 9 and 10, local residents exhibit comparatively medium to high coping capacity, as demonstrated by material preparedness, access to resources as well as social networks and financial assets, and also show strong adaptive capacity due to knowledge, expertise and skills sets in diverse fields.

Figure 9. Household coping capacity characteristics.

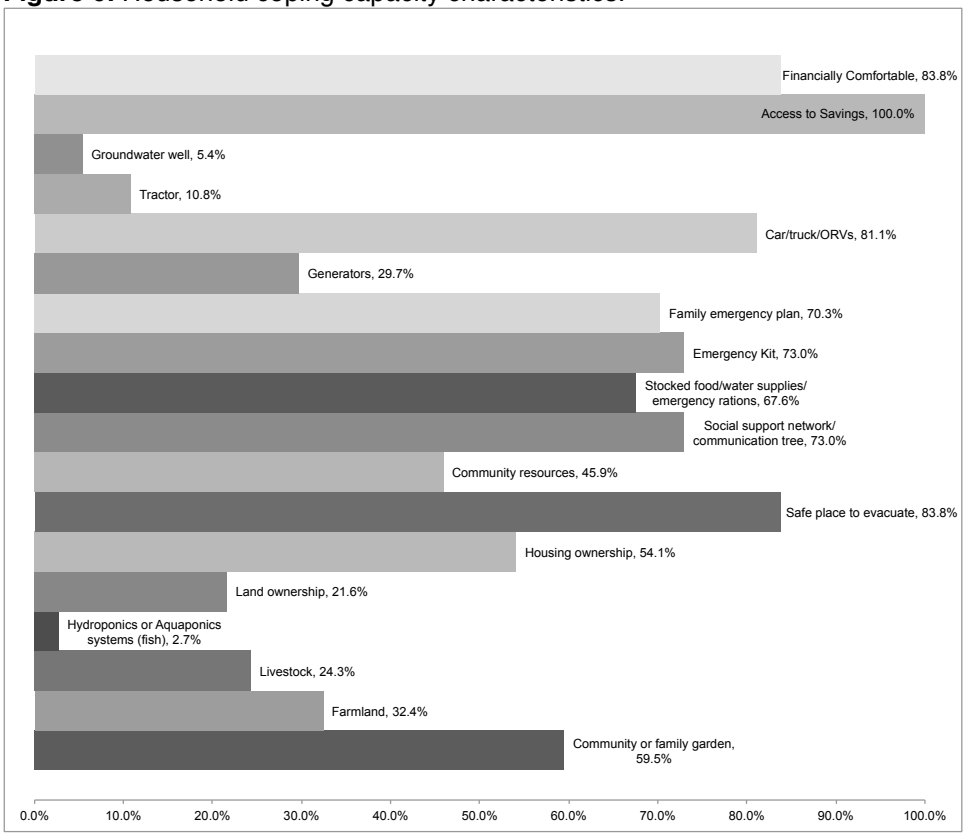
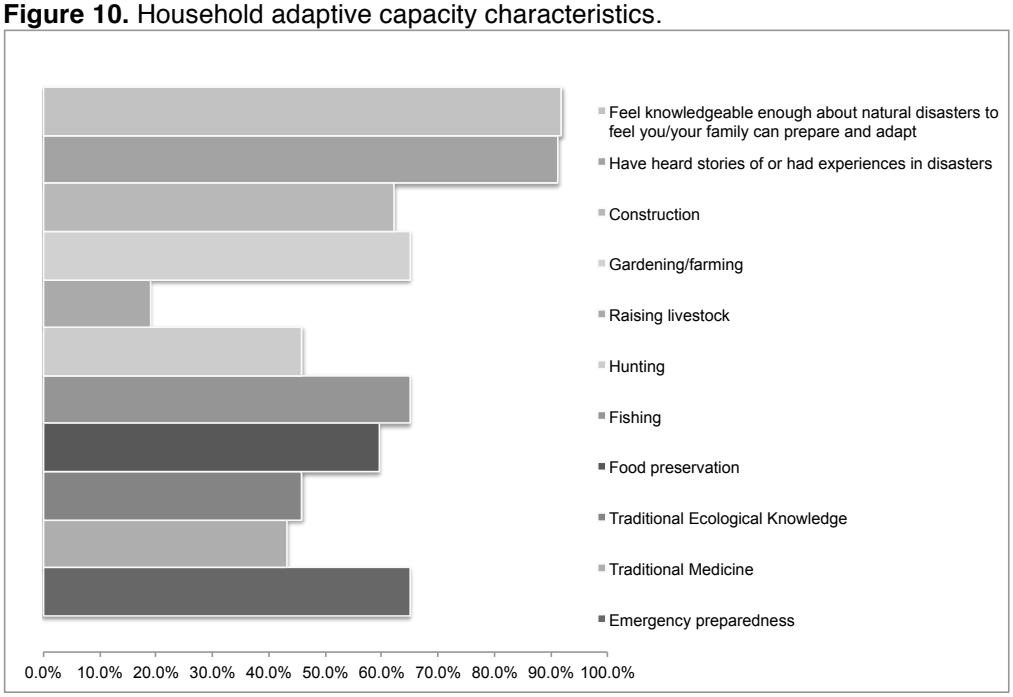


Figure 10. Household adaptive capacity characteristics.



Our research shows how a transition from long-term affordable residential housing to high-cost homes, rentals and transient vacation rentals has changed the demography of Hanalei. These shifts appear to have severed social-ecological linkages at the community level by diminishing the proportion of residents that have detailed knowledge of the community's ecosystems, resources and hazards, as well as the

coping and adaptation mechanisms for dealing with such disturbances. These shifts appear to have fractured the sense of community and social networks that prove critical during disasters. Despite these changes, our results illustrate a high level of social cohesion as seen in significant community involvement and a high ability and willingness of community members to support their neighbors, community at large, and visitors in the time of disaster (Fig. 6).

Coping capacity principally concerns the timeframe of pre-disaster, during and short-term post-disaster, as resources may become depleted or strained until normal services and productivity are restored (Yohe and Tol 2002). Access to resources during and post-disaster help households absorb the shock of the disaster and the resulting impacts of damage (Adrianto and Matsuda 2002; Mayunga 2007) offering targets for households with lower coping capacity due to particular characteristics. Access to savings and other liquid assets enables households to continue to pay for basic needs despite a lag or loss of employment income or inability to access banks (*ibid*). Ownership of, or access to, farms, gardens, livestock, hydroponic systems and stocked food and water supplies will facilitate provision of food and water to enable survival, with many residents having access to such resources (Fig. 10).

Social networks will enable households to shelter or seek other temporary resources or support until they are able to recover on their own, and home ownership and insurance facilitate repayment of losses and the ability to rebuild (Fig. 9 and 10). Resilient populations, defined as households with high adaptive and coping capacities, were found to be local residents. The resident origin results (Fig. 2) support the findings that familiarity with place, establishment of extended family and friend networks and resources due to origin in Hanalei and the State of Hawai‘i, support increased coping and adaptive capacity, with the anomaly that the Kaua‘i resident (n=1) had comparable index scores to that of mainland residents. However, results (Figures 9 and 10) also contradict the notion that with increased longevity in a place, coping and adaptive capacity would also increase (Adger et al. 2004), however bias due to small sample size is possible.

Females exhibit a lower coping and adaptive capacity index that males, which may mean that inequities exist relative to access for resources and networks as well as differential knowledge sets and experiences. Targeting females to improve their coping capacity through increasing access to resources like emergency materials and supplies, improved social networking through recruiting them for engagement in the disaster resilience planning committee work, and improved adaptive capacity through increasing knowledge and training through disaster education, awareness and coursework may address this issue (Anderson 2008; UNISDR 2008). The lack of desire to evacuate may increase loss of lives, injuries, health emergencies, and requires additional considerations discussed in the Gap Analysis (Appendix 6).

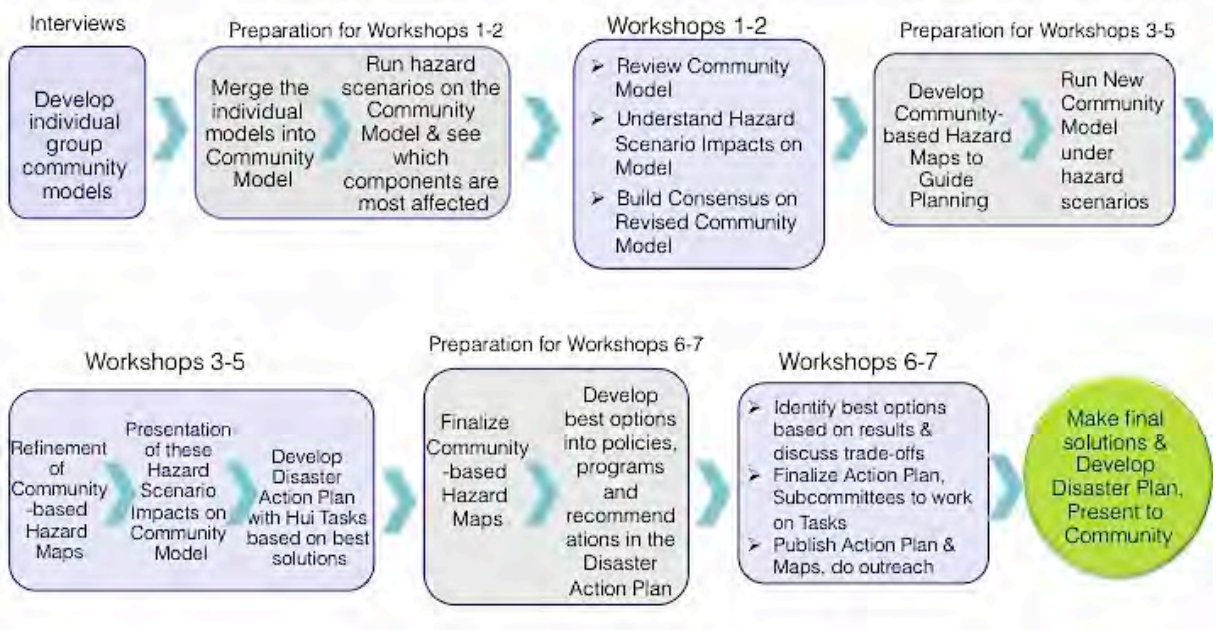
Enhancing natural resource management knowledge and practices also increases coping and adaptive capacity through resource knowledge sharing and environmental stewardship (Tomkins and Adger 2003; Tompkins and Adger 2004; Armitage 2005). Many long-term residents and the few remaining indigenous individuals have maintained various hazard risk mitigation and adaptation techniques. Linking cultural resources and passing down of traditional ecological and other knowledge systems helps build adaptation mechanisms and resilience within communities (Bettencourt et al. 2006; Magis 2010; Tomkins and Adger 2003; Vaughan and Ardoin 2013). Diversity of knowledge, skills and livelihoods supports longer-term adaptive capacity of residents, such that disaster response and recovery will be supported by local preparedness and emergency medical care, debris removal and re-construction, and food and water security through hunting, farming, fishing and water resource management. Reliance on fishing and farming still exists in Hanalei, which both increases social capacity and place-based resource management while also creating vulnerability from overdependence upon these resources which may be impacted by climate change and disasters (Tompkins and Adger 2004; Vaughan and Ardoin 2013; Armitage 2005). Enhanced food security can also be achieved through supporting such initiatives as the farmer’s markets, local food production and consumption, sustainable agriculture and fishing, and local food kitchens.

To foster social-ecological resilience research and planning at the community level, collaborative support should be given to local initiatives and organizations already working to enhance local resilience. Recommendations identified in this research address differential social vulnerabilities, which center primarily on community-based coping and adaptive capacity-building and leadership development to support community-wide awareness, preparedness, response and recovery planning. Interview and survey results show that rebuilding a sense of community is key to enhancing coping capacity. Attention must be paid to underrepresented populations, persons with special needs and populations in high hazard exposure areas.

These efforts will be targeted for collaboration and integration with parallel governmental, non-governmental and community group efforts, in order to address cross-sector gaps through place-based solutions. Disaster preparedness and relief agencies positioned to offer trainings, education and resources should be leveraged to increase coping and adaptive capacity. Staging of resources and training of local residents enhances self-sufficiency and the capacity to respond and recover with less dependence on external aid.

PART II. INTRODUCTION TO THE PLAN

Through a series of participatory workshops with the committee, committee members developed a collaborative setting to establish resilience planning goals and objectives. Within the larger planning committee, smaller working hui were formed to address particular issues based on findings from the Community Vulnerability & Resource Analysis (Outcome 1) and directly informing the Community Hazard & Resource Maps (Outcome 2) and the Action Plan (Outcome 3), as discussed in Part III.



1. Community-based Definitions, Mission, Vision & Principles

Disaster resilience can be understood as the ability of a system, such as a community, to cope and adapt to severe stressors like disasters and severe environmental shifts and degradation such as impacts from climate change, using their own resources, skills, knowledge and networks. It is critical that resilience-building be developed through an integrated bottom-to-top and lateral approach, to engage citizenry and multiple stakeholders, establish cross-boundary relationships and networks, and leverage resources in disaster and climate change adaptation planning. Community-based disaster resilience and climate change adaptation planning facilitates local identification of vulnerabilities to hazards and climate change,

as well as enables establishment of local values, assets, resources, skills and knowledge which will support a community's coping and adaptive capacity.

Defining Resilience
The committee worked to define what resilience meant to them and how to work towards becoming more resilient to disasters:

What is resilience?
- the ability to recover, bounce back or adapt after a disaster or big change

To be Resilient:
- Involves: people, government, place
- Is an ongoing process
- Locally defined
- Planning for the future

Mission
Implement the Hanalei to Hā`ena community-based disaster resilience plan.

Vision
The isolated, rural coastal communities of Hanalei to Hā`ena are safe and resilient to natural hazards, the impacts of climate change and social, cultural, economic, developmental and environmental threats.

2. People: Planning Committee, Partners & Networks

Approach
The approach used was Community-based Participatory Research & Learning, which draws from many disciplines, engages stakeholders from community and government, non-government and community-based organizations, in order to develop sustainable collaborative goals and outcomes.

In addition, the project collaborated with its sister project on North Shore O`ahu, through the project's *Cross-island Local-to-Regional Network*. Committee members on each island were able to communicate and collaborate virtually through social media and other outlets, including Facebook, project websites and email, as well as live video conferences to share ideas, lessons learned in disasters and resilience planning, common challenges and cross-community solutions.

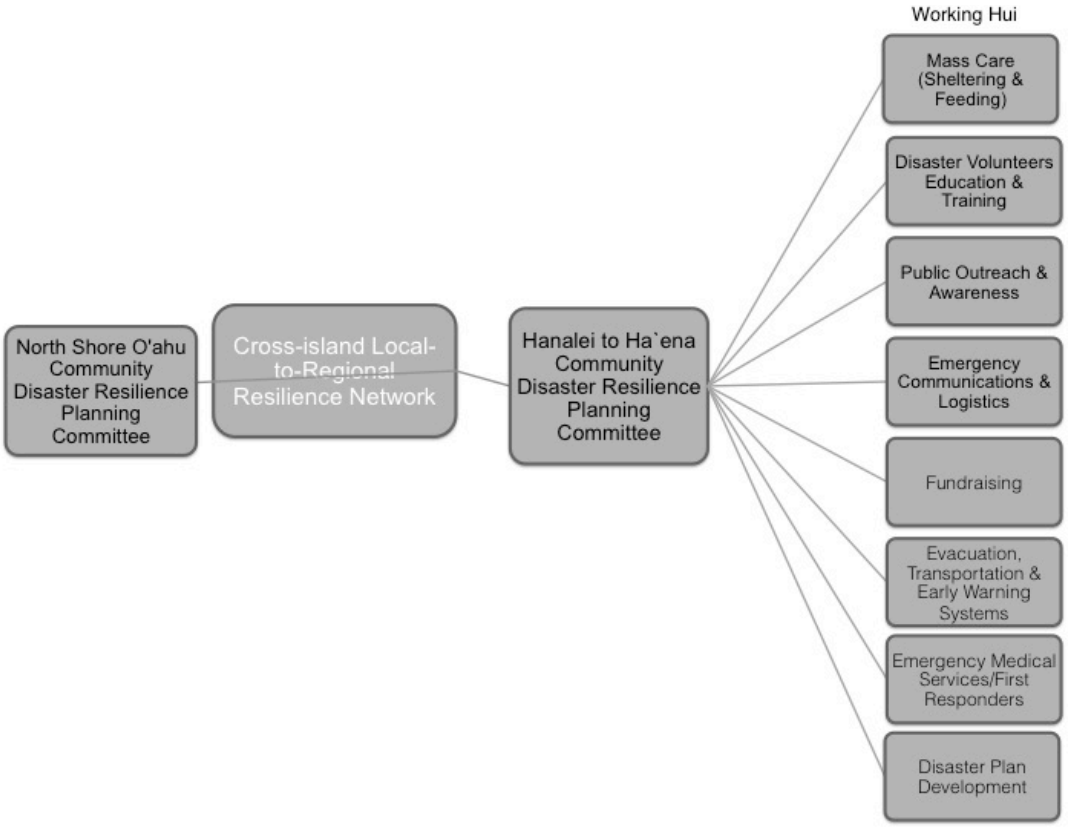


Figure 3. *Cross-island Local-to-Regional Resilience Network*

Planning Committee & Working Hui/Subcommittees

The Planning Committee included the following sectors & populations:

- Community members from Hanalei to Haʻena
- Hanalei Watershed Hui
- Hanalei to Haʻena Community Association
- Governor State of Hawaiʻi
- Representative Kawakami
- State of Hawai'i Department of Land & Natural Resources, State of Hawaiʻi
- State of Hawai'i Department of Transportation
- State of Hawai'i Department of Health
- University of Hawaiʻi @ Mānoa, Department of Natural Resources & Environmental Management, College of Tropical Agriculture & Human Resources
- County of Kauaʻi Police & Fire Department, Civil Defense, Council
- E Alu Pū (Move Forward Together), Kua (kua ʻāina ulu ʻauamo)
- National Oceanic & Atmospheric Administration (NOAA) CRest (Coastal Resilience Networks)
- NOAA Sanctuaries

Within the larger Planning Committee, the working hui or subcommittees within the included the following:

- Sheltering & Feeding (Mass Care)
- Emergency Medical Services/First Responders
- Emergency Communications & Logistics
- Disaster Plan Development
- Evacuation, Transportation & Early Warning Systems (EWS)
- Fundraising

- Disaster Volunteers Education & Training
- Public Outreach & Awareness

3. Target Audience and Users, Public Awareness

This plan is intended to guide the Planning Committee's disaster resilience efforts over time, as well as to inform the public and collaborating stakeholders. It may also offer guidance and best practices for other communities to adapt and utilize for their disaster resilience planning.

Through outreach and public awareness of the developed Plan and associated outcomes (e.g. community hazard and resource maps, action plan policies and programs, etc.), community members and partnering agencies will be engaged in continued disaster planning.

Public outreach will occur through public educational events, disaster training education through partnering agencies, television (i.e. on the visitor information channel "we care about our visitors" info on hazards & safety), public meetings and Mayor's talks, and maintenance of the Plan social media outlets and communications strategies, as well as public meetings and educational materials distribution.

Implementation, Monitoring & Evaluation Strategy & Sustainability

Continued implementation, monitoring and evaluative updating of the Community Hazard & Resource Maps and the Action Plan is supported by the How-To guidance in the Appendix and continued capacity-building, and will be informed by continued bi-monthly Committee meetings and participatory workshops, culminating in an annual Plan update. Recommendations may be policy, programmatic or institutional-level, and will be reflected in the Action Plan and any other outcome documents that are generated. The long-term sustainability of the plan convening will be led at the grassroots-level by the Hanalei to Hā`ena Community Association, with support by the Hanalei Watershed Hui.

PART III. PLAN OUTCOMES

Outcome 1: Community Vulnerability & Resource Analysis

*The **Community Vulnerability And Resource Analysis** was based on two main components: 1) **a Gap Analysis** identifying current gaps in preparedness and response capacity of communities; and, 2) a **Community Modeling** process to model values, assets, resources and risks and inform decision-making.*

1. Gap Analysis

The initial Gap Analysis (see Appendix 6) identified the perceived current gaps in resilience using a qualitative review of open-ended survey and interview questions, summarizing overarching themes by category (e.g. communications, evacuation, and food and water security), and listing the identified problems or gaps followed by potential mitigation and adaptation solutions.

The congruent categories of concern listed by resident respondents included gaps with evacuation, food and water security, energy and continuity of utilities, communication and information systems, special populations, the visitor population, infrastructure, sheltering and mass care, education, leadership and local capacity building, early warning systems and emergency services. The majority of gaps reflect the lack of community-wide awareness and education, asymmetry of information from governmental and community regarding disaster plans, protocols and expectations of assistance, and inadequate physical or infrastructural measures. The gaps and associated solutions proposed do not all represent the opinion of the majority of respondents, however there were many commonalities in both gaps and recommendations.

2. Community Modeling

Risks to coastal socio-ecological systems like coastal communities may be due to deeply rooted social issues, lack of awareness or information, misperceptions, or inadequate infrastructure and planning. In order to adequately identify, understand and address these risks, structured planning opportunities utilizing scenario-based modeling are needed to enable diverse community stakeholders to formulate cross-sector solutions together. Over a series of workshops, stakeholder-driven dynamic socio-ecological modeling was facilitated to inform decision-making around community disaster planning and adaptation across scales and time. Utilizing diverse stakeholder knowledge in the committee, the community model included things of importance in the community (social, physical, cultural, environmental, etc.) and how particular hazards (i.e. tsunami, hurricane, flood) affect these things of importance. The committee shared, explored and actively questioned their perspectives, beliefs and expertise, wherein they identified the root causes of community risks. Through running hazard scenarios on the model, the committee was able to quantify potential direct and indirect effects of hazards, develop and pilot-test mitigation strategies, resulting in the selection of the four most effective strategies. Modeling promoted social learning and facilitation of community disaster planning and improving adaptive capacity. More detailed information on this process is in Appendix 2B.

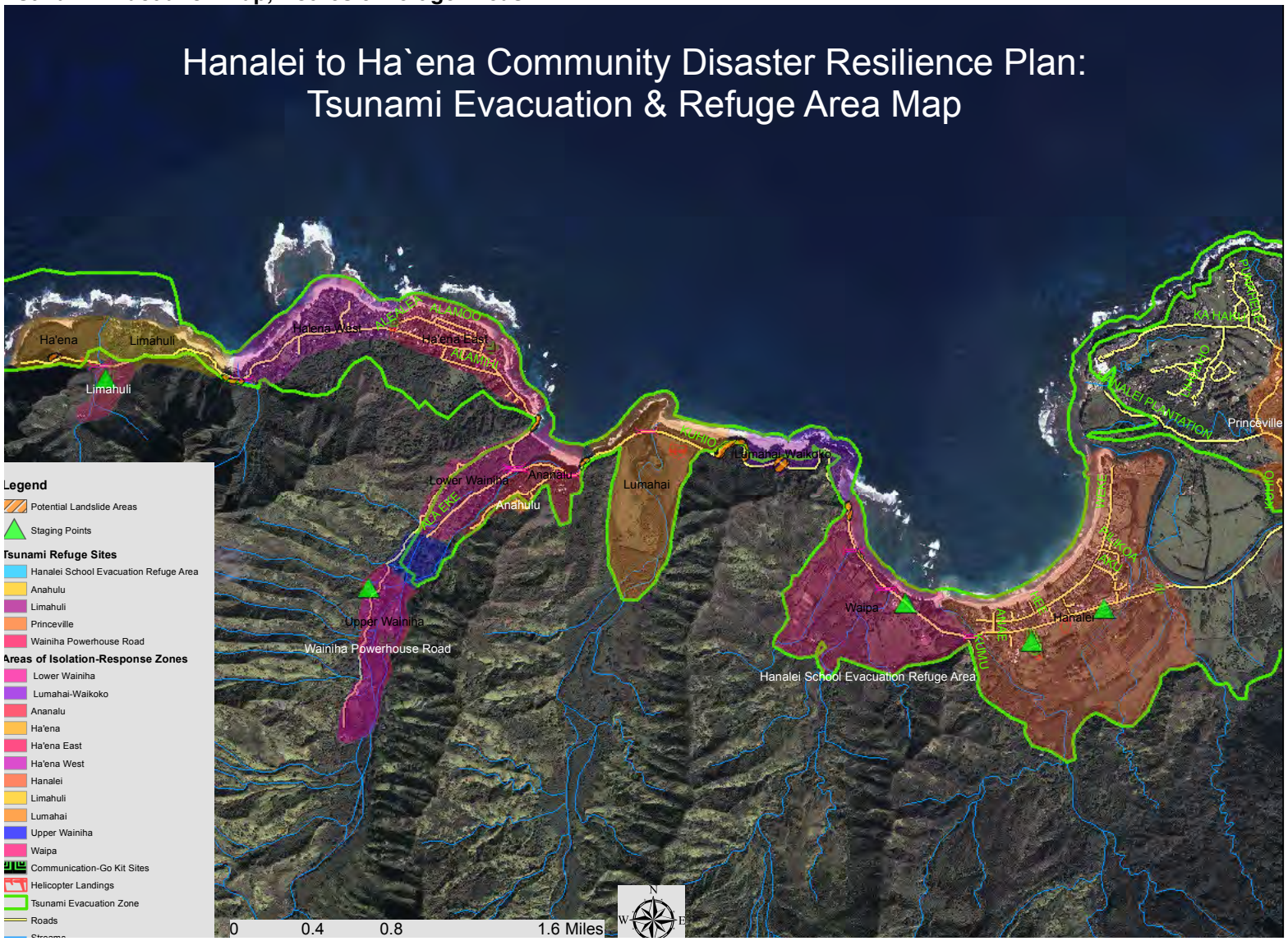
In addition to the household survey (Appendix 3) and post-flood surveys (Appendix 8), the Gap Analysis (Appendix 6) and community modeling informed the development of the Community Resource and Hazard Maps (Outcome 2) and ultimately the Action Plan (Outcome 3) to address the identified gaps through proposed community-based solutions.

Outcome 2: Community Resource and Hazard Maps

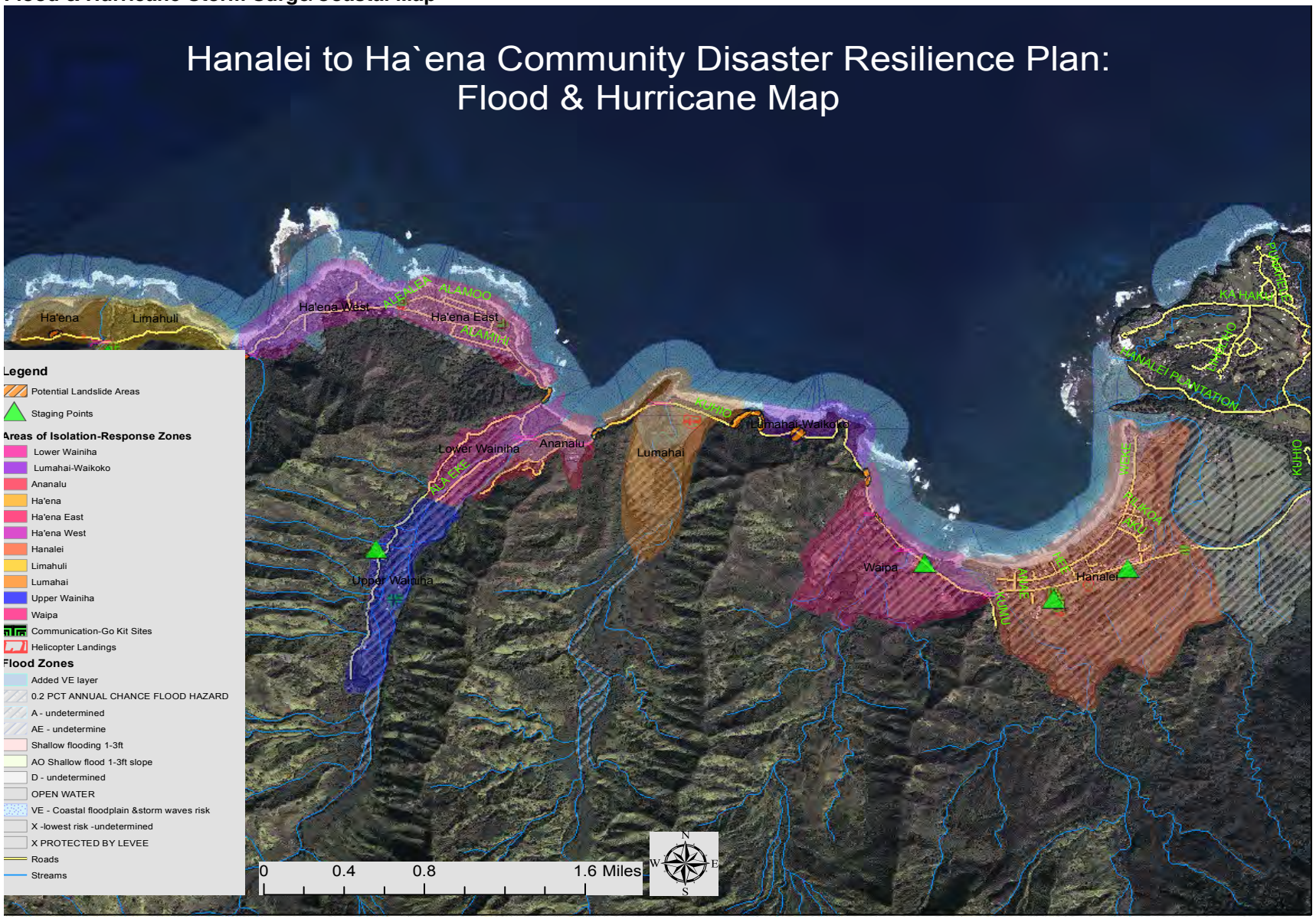
Through committee participatory workshops and individual interviews, Community Hazard and Vulnerability Maps were developed to inform identification of community hazards and potential exposure of people and places to the impacts, along with community assets (i.e. facilities, materials and supplies, land, etc.), environmental resources and persons with knowledge. This facilitated a more comprehensive perspective on a community's strengths, weaknesses and opportunities for reducing risk and enhancing capacity, and informed the Action Plan disaster preparedness, response, and relief and recovery activities.

Detailed instructions on the participatory mapping process are in the Appendix 7a-g. In summary, first a basemap was created for all maps, to include basic features (e.g. roads and bridges, rivers, infrastructure, houses, census tracts, etc.), followed by the addition of hazard layers (i.e. flood, tsunami and hurricane) and identify areas at-risk to isolation due to landslide, rock fall, flooding and closed roads. And finally, utilizing a tool called e-beam, additional layers were created to map staged resources including evacuation routes and staging areas, sheltering and feeding venues, among other resources. Utilizing maps facilitated discussion with land and business owners, organizations and residents in securing agreements for use during and after a disaster.

Tsunami Evacuation Map, Routes & Refuge Areas



Flood & Hurricane Storm Surge/Coastal Map



OUTCOME 3: HANALEI TO HĀ`ENA COMMUNITY DISASTER RESILIENCE ACTION PLAN

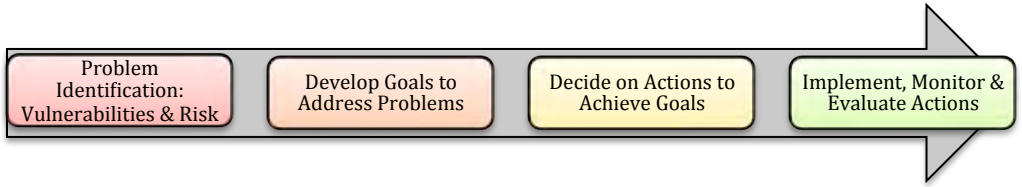
Purpose & Background

This Action Plan forms the basis of the larger Hanalei to Hā'ena Disaster Resilience Plan, in order to guide community-based disaster preparedness, response and relief activities and address identified risks and vulnerabilities, utilizing and building upon stakeholder knowledge and resources through policies, programs and other recommendations. The Action Plan is driven by community-based research and planning processes and with guidance from the Hanalei to Hā'ena Disaster Resilience Committee and its smaller Working Hui, which address particular topical issues. The Action plan should be monitored and evaluated bi-monthly to revisit activities and goals, identify the status of accomplishment of particular action items, retire completed items, and establish new opportunities.

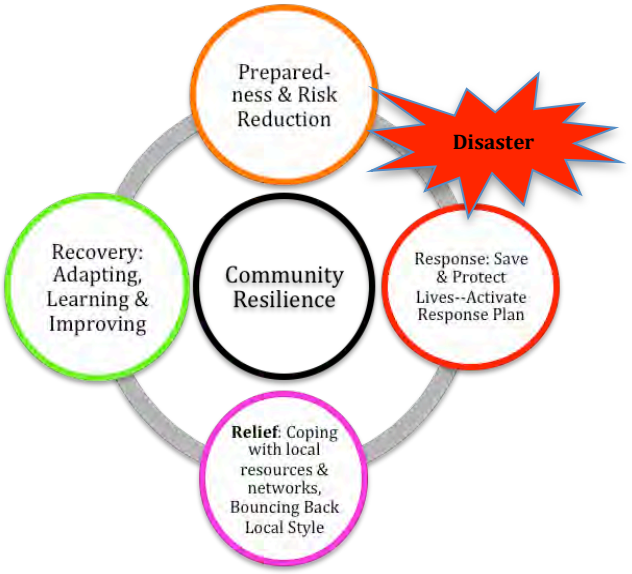
Structure

- Specific problems were identified, focusing on the gaps in preparedness and the underlying root causes of vulnerability.
- Goals to address the root causes of these gaps and problems are developed.
- Actions taken by the Working Hui to achieve the goals include policy or programmatic recommendations, call for funding, and others.
- Many problems are cross-cutting and require participation and cooperation of more than one working subcommittee.
- Priorities (high, medium, low) ~ Timing (Time to Deploy or Respond) and Status (not yet started, ongoing, or complete) indicate progress Working Hui & Lead establish leadership and accountability for each action item, and Action Type (Policy, Program or Funding)

Phase 1: Preparedness
Sharing the Plan with all community members, encouraging them to review and implement the plan; mobilize resources needed; conduct disaster preparedness training and raise awareness; monitor disaster threats, conduct drills and draw lessons to improve plan; network and coordinate with government mgt. and other communities; engage in advocacy and lobby work regarding disaster mgt. and development-related issues; expand membership and involvement in community.
Phase 2: Response/Emergency Management
Depending upon the hazard event or particular emergency, activate the Community-based Disaster Management Structure through the designated communications plan; Issue Warnings; Support Evacuation, sheltering & feeding; support Search and Rescue with FD, CERT and community participation; Provide First Aid & support subsequent medical assistance; conduct damage assessments and report for assistance.
Phase 3: Relief
Coordinate, plan and implement relief delivery operations with aid agencies, donations and spontaneous volunteers.
Phase 4: Recovery
Facilitate social, economic & physical rehabilitation of community (livelihoods, trauma counseling, reconstruction); coordinate receiving assistance; evaluate performance of plan & committee/group and identify areas for improvement



Disaster Cycle & Community Resilience Action Planning



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Sharing the Plan with all community members, encouraging them to review and implement the plan; mobilize resources needed; conduct disaster preparedness training and raise awareness; monitor disaster threats, conduct drills and draw lessons to improve plan; network and coordinate with government mgt. and other communities; engage in advocacy and lobby work regarding disaster mgt. and development-related issues; expand membership and involvement in community.

Problem 1: There is no current disaster plan in place for Hanalei to Hā`ena communities, and a there is a lack of integration of plans at local, county and state level that impact local-level preparedness & response capacity.

	Actions/Steps	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 1.1: **Develop Community Disaster Resilience Plan based on workshop findings, deliverables, the needs assessment and action plans, and maps**	~~1.1A) Identify & coordinate planning with plans that relate to this planning process~~ ~~7.1B) Notify/engage representative community members, agencies, organizations & stakeholders in the process~~ 1.1C) Join county VOAD groups—be Community Committee's Liaison to VOAD—will give us more access to VOAD activities we can leverage & give us visibility 1.1D) Publicize disaster plan to community, organizations and businesses, government officials • Facebook, twitter & committee website (include info on meanings of terms (what do advisory, watch and warning mean?), types of shelters (evacuation vs. congregate care vs. refuge area, etc.), • Community Disaster Fair ~ Community potluck • Ho'ike broadcast (interviewing members) 1.1E) **Transition Disaster Planning to HHCA for long-term sustainability and maintenance build capacity to update plan and maps** (utilizing Appendix)	Priority: High Status: Ongoing Hui: Disaster Plan Development With Public Outreach & Awareness Hui Lead: Action type: Programmatic & Policy

Problem 2: EARLY WARNING is critical for timely and safe evacuation, preparation and response; some people do not receive and/or understand early warnings (visitors, elderly, people without TV/radio/internet) for tsunami, flood or other hazards.

Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 2.1: Develop a diversified local Early Warning System (EWS) to raise public awareness & communicate emergency & disaster messages	2.1A) Need **better coverage for tsunami sirens in remote areas** as some do not hear sirens **2.1B) Identify & Develop Diversified Early Warning Systems:** • **Social Media/Online**: Twitter account, Committee webpage, Facebook page, linked with governmental social media & emergency communications outlets (push notifications): Need to better connect the Watershed Action Plan EWS with the Disaster Resilience Plan EWS; Road closure/emergency information; USGS Hanalei and Wainiha river gauge info; SCD & KCD on emergency alerts—**Wireless Emergency Alerts automatic system;** NOAA & NWS; IPAWS; Pacific Disaster Center; Nixel Alerts; Blackboard CTY (county's internal emergency alert system); Open-source community real-time damage reports, pictures & road closure and other info • Civil Air Patrol flyover announcements	Evacuation, Transportation & EWS Hui Emergency Communications & Logistics Hui with

	• Verbal/in-person door-to-door warnings, phone lines, including for kupuna, Local call trees, TV / Radio, Fire truck/Police drive-by warnings, Calling landlines	Public Outreach & Awareness Hui
Problem 3: VISITORS as a special population are at heightened risk, as they: lack awareness and knowledge of the natural hazards in the area; are disconnected from early warning systems and are unaware of how and where to evacuate to; and, are unprepared and lack local networks and resources, presenting a potential burden on community members and resources.		
Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 3.1: Increase Visitor Awareness & Education on Local Hazards	3.1A) **The following to be mandatory for all TVRs:** • **Advocate for amendments to County of Kauai TVR Ordinance** Required clause in all TVR/VRBO rental contracts notifying renters of risk to multiple hazards (specifics on "Acts of God") • Disaster flyer with hazard, preparedness information and resources, emergency contacts, etc. • Multi-hazard map with evacuation routes & protocols (KCD estimates 3.5hrs to evacuate 4500 people across Hanalei bridge) • Emergency go-kit including basic supplies Check current TVR County Law for required measures 3.1B) Create a **disaster preparedness education video** to show on Channels 54 and 6 (e.g. "Get Ready Hawaii" YouTube video (Kaua`i-wide) 3.1C) Provide emergency & disaster information: evacuation map, on visitor website, county website, other high-traffic venues (Focus on technology (smart phones) and online resources) phone alert and materials in TVR's, hotels, and in visitor shops, bars and restaurants	Priority: High Status: Ongoing Hui: Public Awareness & Outreach Action type: Programmatic & Policy
Goal 3.2: Evacuate visitors from North Shore hazard zones through targeted Early Warning & Evacuation.	**3.2A) Develop a system of accountability for ensuring Early Warning & Evacuation of visitors:** • **Identify & Confirm Evacuation Alert Points:** places to inform visitors to evacuate (e.g. check points at hiking areas and parks, beaches, stores and restaurants/bars, sign at lookout/Princeville advising not to proceed down road as it may close and you may get stuck for hours to days (temporary big traffic lights &/or message board near Hanalei bridge--staged in Puhi storehouse in Lihue?) • **Campers/independent travelers/day trippers**: Work with County Parks & Rec, KVB to identify best strategy • Work with local businesses, restaurants, hotels, etc. to communicate evacuation warnings • **TVRs (legal) & VRBO & TVRs (unregistered)**: 1. Identify TVR's with land line phones &/or cell phone contacts 2. TVR Managers to find out more information on getting all TVR home phones access to	Priority: High Status: Ongoing Hui: Public Awareness & Outreach Work with Communications & Logistics Hui Action type:

	State Civil Defense Emergency Alert System; 3. TVR managers to get a uniform updated list of rental units (includes VRBO? campsites?) (utilize HTA website Visitor Industry Plant Inventory) 4. Create a call-down alert system: TVR owners or property managers? **3.2B) Propose protocols/policies for:** 1. Expedited Evacuation out of Hanalei to Hā'ena areas(i.e. one way traffic only) 2. Restricting re-entry into hazard zones pre and post-disaster (i.e. into Hanalei from bridge during potential road closure and post-disaster to ensure local safety and recovery 3. Establish helicopter evacuation disaster rates per seat (with prioritization for persons not luggage unless essential medical or other supplies) to prohibit/discourage price gouging **(check current gouging law)** a. Need variance for landing on North Shore (need planning commission approval) b. Get visitors to war memorial, KCC or other designated refuge area/hurricane shelter, etc. depending on hazard; eventually evacuate visitors to airport c. Divide island by sections, each has a responsible evacuation plan? 3.2B) Need more accurate counts of visitors (daily/weekly/monthly) over different seasons to estimate # people at risk	Programmatic & Policy
Problem 4: Lack of widespread COMMUNITY KNOWLEDGE AND AWARENESS of disaster preparedness, response and recovery.		
Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 4.1: Increase community awareness, knowledge and capacity for pre & post-disaster preparedness	4.1A) **Develop a *Disaster Information Handout* or *Portfolio*** that is professionally done (small mail-out/clipboard size) including: —Map of evacuation routes (all and backups) color coded; —Updated phone numbers for emergency services; residential emergency phone tree template for residents to fill out; —shelters/feeding/other resources —emergency preparedness pamphlets (short concise directives with large print); should be stuck next to phone/visually obvious place 4.1B) Create a diversified public outreach & awareness campaign: —Facebook page (done)—**need to develop protocols for updating:** —**Create a Committee Website** o 1-3 persons posting/identify other administrators o post/stream official warnings/alerts and other information o post our Disaster Plan and/or Action Plan (need to determine what information is public and	Priority: High Status: Ongoing Hui: Public Awareness & Outreach Action type: Programmatic

	what should be kept within the committee) ~~—Disaster Fair & Educational Events: host partner disaster education and training classes (American Red Cross, CERT, First Aid & CPR)~~ —Television show on how to do CPR/first aid; Have locals with experience in disasters talk story and share their lessons learned 4.1C) Increase education & public awareness on expectations for local preparedness (e.g. minimum of 3-7 days supplies for shelters)	
Goal 4.2: Ensure additional support and considerations for special populations pre-during & post-disaster	4.2A) **Identify special populations** through Mapping & local networks: • Single female-headed households • New residents (< 5 years) particularly those not from Hawaii with no networks/knowledge • Identify vulnerable populations and/or populations possibly needing special evacuation, special medical needs and/or needing to be checked in on, including: • Kupuna, Houseless, Non English-speaking, Low income/lack of resources & supplies, Mobility & differently abled needs, Chronic health condition or other health needs, Mental health needs • Kalalau residents (200 winter, 400 summer) if evacuated where will they go & who will take care of them? 4.2B) **Follow-up with these groups:** • "Partners in Care"—network of care providers for homeless populations (Hawaii State VOS System-Virtual Operations Support team) who monitors emergency management messaging and requests for assistance (non profit used in disasters) • ADA (Linda Newland is focusing on disaster planning for persons with disabilities) • Chronic care companies • Churches	Hui: Public Outreach & Awareness
Problem 5: Hanalei to Hā`ena becomes isolated in the event of many hazards, and thus there is a need to IDENTIFY LOCAL RESOURCES, FACILITIES, KNOWLEDGE AND SKILLS that will enable community to be self-sufficient and coordinate the local disaster response for at least 7 days.		
Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 5.1: Resource Mapping—Identify, inventory (in two database lists) and spatially map (in community hazard and resource maps-	**5.1A) Develop <u>two inventory spreadsheet databases (resource mapping lists):</u>** **1. *<u>Mass Care Resource Mapping Database (Appendix 11) for</u>*, including*:* (1) Medical Emergency Resources (2) Shelters; (3) Feeding venues; (4) Staging/Communications sites; (5) Tsunami Refuge Areas; and,** **2. *Database of Local people with skills, supplies, equipment*–both searchable by location, resource, POC, etc. to aid Committee in disaster staging and deployment of resources • Distribute an initial list of resources • Develop & distribute a **resource mapping survey** (done) (Appendix 11) & via Survey	

-Goal 9.1) community resources for self-sufficiency and to support committee's efforts	Monkey or in-person, collect & organize data for churches, businesses, and other establishments • Geocode the resources from spreadsheet into the **community resource & hazard maps** (depending on privacy agreements of resource owners/providers) **in goal 9.1**	
Problem 6: There are limited first responders and HEALTH EMERGENCY RESOURCES in the area, particularly during coastal hazards, as access of first responders to perform life protection and life saving measures will be prohibited if the road closes, endangering residents who may need rescue or medical emergency assistance.		
Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 6.1: Develop a **Plan For Local Health Emergencies & Medical Emergency Resources list** if the road is closed or is inaccessible	6.1A) Identify a **site for an ambulance/medical station** in Hanalei & Hā'ena (for Floods) like a volunteer fire department • Consider staging **medical triage centers** at: o Hanalei School o Hanalei Colony Resort o Courthouse, West side of bridge, etc. including: ▪ helicopter landing areas for medevac (need to f/u) ▪ boat/jet ski landing areas (need to f/u) 6.1B) Utilize emergency communications to alert first responders of any medical emergencies or rescue needs→ Committee Responders to call-down medically-trained locals utilizing the ***Database of Local people with skills, supplies, equipment, including:*** • **Medical Emergency Resources:** Identify, network and have a call-down for local doctors, firefighters/search and rescue, EMS workers, lifeguards, and those with counseling, first aid, child care or other skills, etc. to have local medical services available and deployable in a disaster (Need to understand legal issues with non-Hawaii certified medical practitioners assisting during a disaster) 6.1C) Increase # people trained in First Aid & CPR & AED use - Need to engage lifeguards as they are first aid/CPR trained and good at extricating folks - AMR representative offered to train committee on First Aid/CPR/AED operation 6.1D) Pre-identify residents with special medical, mobility, other needs	Hui: Emergency Medical Services/ First Responder Hui & Communications & Logistics Disaster Volunteers Education & Training Hui
Problem 7: There are no current SHELTERS (congregate care) or FEEDING venues for residents of Hanalei to Hā'ena, though these services are critical for post-disaster relief and recovery.		
Goal 7.1: **Establish**	7.1A) **Develop a list of potential shelters** collaborating with ARC 7.1B) **Pursue sheltering agreements (informal and formal)** and estimate of # spaces via Red	Hui: Sheltering &

shelters for various hazards.	Cross 7.1C) Identify temporary structures that may be used as shelters 7.1D) Identify large fields and tents for shelter during longer-term tsunami or flood evacuations (coordinate with Civil Defense) ▪ Can we pre-stage tarps & tents? Storage location? How many people will we have to house? Many visitors will go if told to (early evacuation of visitors is critical to conserve limited local resources); What structures will remain in specific scenarios? 7.1E) Raise awareness on locations of shelters under different hazards	Feeding (*Mass Care)* Public Outreach & Awareness Hui
Goal 7.2: **Establish feeding & water resource venues**.	7.2A) **Identify potential feeding venues, potential sources of catering service & food supplies, food storage, food distribution centers & networks:** • Pursue catering surveys/agreements via Red Cross and hui members for (formal and informal) feeding venues • Once identify feeding venues, need estimate of # meals/day for # days • Include local restaurants' resources (generator, ice machine, freezers, gas grills, etc.)—capacity and willingness to feed people?	Hui: Sheltering & Feeding (*Mass Care)* *&* Disaster Plan Development
Problem 8: COMMUNICATIONS & LOGISTICS are critical for effective disaster preparedness and response, often the most challenging due to breakdowns in communications, particularly in isolated areas from Hanalei to Hā'ena.		
Goal	**Actions/Steps**	**Priority~Timing / Status / Hui & Lead / Action Type**
Goal 8.1: Set up *Internal* communications for the committee's disaster planning	8.1A) Identify method of internal planning & communication: —Email & phone c/ Working Hui —Online interface: for internal information storage (sharing and updating documents): Basecamp, Webpage (Wordpress, Square Space, GoogleDocs, Huddle 8.1B) Identify funding (front-end & long-term)	Priority: High Status: Ongoing
Goal 8.2**: Establish Staging & Communications sites & Committee Disaster Go-Kits.**	8.2A) **Identify Staging & Communications SITES (& POC) to stage resources (Go-Kits) & people to coordinate committee disaster response** 8.2B) ~~**Develop a Wish list of Go=Kit materials** for each staging site~~ & **Acquire Communications EQUIPMENT (see Go-Kit Wish list)** to stage at secure sites: • 2-way FRS radios, HAM radios, Satellite Phones: 4 acquired, need to determine minutes cost, persons responsible and where to stage (Check on currently utilized SAT phone models on Kauai for connectivity, Determine cost of SAT phone subscription, need to do training for SAT phone use, protocols needed, etc.) 8.2C) Get quotes; identify donors; write letter including info on our committees & planning process, quotes & maps; request funding direct to HWH for the materials/supplies.	Hui: Public Awareness & Outreach & Fundraising Hui—Lead: HHCA Action type: Program

Goal 8.3: Create multiple strategies and sites for **emergency & disaster communications to coordinate local disaster response**	8.3A) Develop an **Emergency & Disaster Communications PLAN (PROTOCOL & HIERARCHY)** • **Identify committee's disaster response lead/s** who will be **responsible for coordinating committee's disaster response** communications, shelter & feeding (e.g. need to live/work locally if possible, alternating 12hr shifts) have on-call list every two weeks such as using Doodle, have everyone's contact info • Need to understand protocol for communicating information between communities & from community-level to County/State (RACES/ARES) **using ICS as a model** • Idea from Hau`ula: Establish "captains of ten" for every 10 residents to notify and check on residents • Bulletin boards/community meeting sites at various locations **8.3B) Train Committee on Communications Equipment Use & Protocol** • **Connect with local HAM radio operators (**Contact Bob Anderson/Tad for more HAM info); Update HAMM radio list (some folks on it are deceased); Identify CERT & other folks that may have HAM license • Train & stage HAM radio & SatPhone operators, FRS radio operations • Leverage committee's external communications • Run Tabletop Exercise (TTX) testing communications plan	Priority: High Status: Ongoing Hui: Emergency Communications & Logistics Hui (/KFD) Work with Fundraising Hui— Lead: Kayak Hanalei Action type: Funding
Problem 9: EVACUATION in the event of flood, hurricane, wildfire, tsunami and other hazards, is critical to saving lives, yet there is a lack of a sense of urgency to evacuate due to attitudes, beliefs and behaviors, as well as a lack of awareness of where to evacuate to (the routes) when to evacuate and what to bring.		
Goal 9.1 Identify, map and raise awareness on MULTIPLE HAZARDS INCLUDING tsunami evacuation routes, refuge areas, and protocols through **participatory community resource & hazard maps**	~~9.1A) Conduct workshops, interviews and public participation to develop~~ **participatory resource & hazard maps of multiple hazards and community resources to guide disaster planning** • ~~Develop evacuation map and routes~~ and protocols ~~(dependent on County evacuation plan) through workshops:~~ Identify landowners of tsunami refuge areas • Develop flood maps • Develop wildfire risk maps • Develop Hurricane coastal storm surge maps • Link community resource & hazard maps with resource mapping databases (Appendix 11) 9.1B) Identify & **map tsunami evacuation routes & refuge areas** **1. Establish tsunami evacuation routes & refuge areas:** a. Limahuli Gardens b. Mauka of Waipa c. Up Powerhouse Road, Wainiha d. Princeville (all visitors)	Priority: High Status: Ongoing Hui: Public Awareness & Outreach Work with Evacuation & Transportation Hui Action type: Programmatic

	~~2. Coordinate evacuation routes and plans with Hanalei School (4-level procedures) & pre-schools~~ 3. Send Hanalei School tsunami map, land cover & make maps for classrooms@ Hanalei 4. Once routes established, need evacuation signage, more education & public awareness around new evacuation zones, routes, etc. 5. Make planning considerations & do public awareness and outreach to persons with disabilities, special needs, including transportation 6. How to address gridlock at night (temporary big traffic lights? & message board (staged in Puhi storehouse in Lihue)? What about people who want to return—Library as congregate care post-tsunami? Folks will need documentation that they live in area to be able to get back in?	

Phase 2: Response/Emergency Management

Depending upon the hazard event or particular emergency, activate the Community-based Disaster Management Structure through the designated Communications Plan; Issue Warnings; Support Evacuation, Sheltering & Feeding; support Search and Rescue with FD, CERT and community participation; Provide First Aid & support subsequent medical assistance; conduct damage assessments and report for assistance.

Hazard & Timeline	TASKS/DUTIES	Working Hui & Person/s Responsible
Tsunami or Earthquake **Distant (8-22 hrs)**	**Tsunami WATCH/ADVISORY Issued (or bulletin says "Civil Defense is Evaluating the situation"** ☐ Pre-activate *Emergency Communications Plan* ☐ Disaster Coordinator (DC) and all Working Hui Leads **put on-alert** ☐ DC, Working Hui Leads **check radio & official channels** for emergency messages	Disaster Coordinator; Working Hui Leads/Tsunami Responders
Tsunami WARNING	**Tsunami WARNING Issued and/or as soon as Tsunami Sirens Sound (max 3 hrs pre-landfall)** ☐ DC to **call down** to Working Hui Leads to call-down their Working Hui members to be on-alert ☐ Working Hui Leads/tsunami evacuation refuge responders to **grab evacuation go-kits (and personal kits) and deploy to refuge areas** ☐ DC & Emergency Comms. Working Hui Lead and 1-2 member/s **deploy with go-kit** to *Local Communications Center* (Hanalei School) to **stage with Fire/Police and coordinate HAM radio and FRS radio operations** ☐ Coordinate with Landowners/managers to unlock gates, and CERT/Reserve Corps or Committee volunteers to **direct traffic** to evacuation staging areas.	DC & Emergency Communications; Working Hui Leads Evac, Public Awareness and Mass Care Working Huis , Leads

****Nearshore Tsunami (10-20 minutes)** **During Tsunami**	☐ **All Working Hui Leads, Committee members seek refuge out tsunami evacuation zone ☐ Communications Centers/Go-Kit Site Neighborhood Captains, provide emergency communications ☐ Assist with **managing evacuation refuge site,** including **establishment of sanitary areas** if needed**, traffic control**, **communication of official emergency messages**, etc. ☐ Public Outreach & Awareness Lead monitor and update Facebook and Website pages with official DEM/SCD/NWS warnings as feasible.	Working Hui Leads Mass Care, Logistics Disaster Coordinator, Emergency Communications Lead
Post Tsunami (All-Clear Issued)	***If a NO TO MINIMAL DAMAGE, ROADS NOT WASHED OUT:*** ☐ Working Hui Leads/tsunami evacuation refuge responders assist with return traffic control, waste cleanup and exit of property. ***If LOCAL IMPACTS, ROADS WASHED OUT (True-Disaster)*:** ☐ Manage refuge areas ☐ Facilitate evacuation and/or bulk supply distribution of food, water, etc. if needed ☐ Facilitate emergency communications until no longer needed; provide updates (need standardized Refuge Site Report) to IC/Local Communications Center of status of refuge site, needs, etc. (may want to get standardized form for HAMs to report i.e. # cars, people, sanitation issues, food/water issues, health emergency issues, accessibility, if assistance needed); ☐ Utilize emergency communications to open private shelters for congregate care and for community members at various local coordination sites ☐ Post resource and other updates to community bulletins ☐ Manage basic health emergencies with first aid, etc. ☐ Manage spontaneous volunteers & donations (appendix)—coordinate with Hawaii VOAD for coordination of donations requests and distribution ☐ Utilize resource mapping databases to facilitate coordination of food, water, shelter, medical resources, etc. ☐ Conduct debrief within 1-2 weeks post-event or as feasible, incorporate lessons into Action Plan.	

Hurricane (Coastal Flooding, High Surf) **Pre-landfall Preparedness (Hurricane Watch)**	**Hurricane WATCH/ADVISORY Issued** • Activate *Emergency Communications Plan* • Disaster Coordinator and all Working Group Leads **put on-alert**, **check radio, news and online** for official emergency messages • Public Outreach & Awareness Lead monitor and update Facebook and Website pages with official DEM/SCD/NWS warnings as is feasible • DC to **call down** to Working Group Leads to call-down their Working Group members to be on-alert; Working Group Leads/to check their **go-kits, shelter volunteers to check their shelter kits**	Disaster Coordinator, Emergency Communications Lead Working Group Leads Disaster Coordinator
Hurricane Warning	**Convene a Briefing to Review Hurricane Response Plan** **When Hurricane WARNING Issued:** • 36hrs pre-landfall (when hurricane shelter is opened): DC & Emergency Comms. Working Group Lead and 1-2 member/s **deploy with go-kit** to *Local Communications Center* (Hanalei School) to **stage with Fire/Police and coordinate HAM radio and FRS radio operations**	
During Hurricane	• All Working Group Leads, members seek refuge in hurricane shelter (Kilauea Gym) or other hurricane-proof structure.	DC, Emergency Comms Lead Mass Care
Post-landfall Response/ Emergency Management	**If a Non-Event (Non-Disaster, minimal damages):** • Call down Committee emergency responders and notify of updated downgraded status; stand down emergency communications • assist Red Cross with breakdown of hurricane shelter • Update Committee website/Facebook pages with final weather updates, damages • Conduct Committee debrief within 1 week post-event as feasible, incorporate lessons learned into Action Plan for improvement	Committee DC, Emergency Comms Lead
	***If an Event (True-Disaster)*:** • Facilitate transition of hurricane shelter to other congregate care shelters • **facilitate evacuation and/or bulk supply distribution** of food, water, etc. via other non-coastal roads if needed (i.e. drum road); • **utilize emergency communications to open private shelters for congregate care** • **post resource and other updates to community bulletins** • **offer emergency communications resources for community members at various local coordination sites** • **manage basic health emergencies with first aid, etc.** • **facilitate emergency communications** until no longer needed; provide updates to IC/Local Communications Center of status of shelter site/s utilizing **ARC Shelter Report,** needs. (standardized form for HAMs to report i.e. # cars, people, sanitation issues, food/water issues, health emergency issues, accessibility, if assistance is needed, etc.) • Manage spontaneous volunteers & donations (Appendix 9)—coordinate with Hawaii VOAD for coordination of donations requests and distribution • **Utilize resource mapping (Appendix 11) databases to facilitate coordination of food, water, shelter, medical resources, etc.** • Conduct Committee debrief within 1 week post-event as feasible, incorporate lessons	-Mass Care -Public Outreach -Disaster Coordinator

Flood, Wildfire, Landslide, Rockfall, Earthquake, Dam Failure and High Wave Events **Preparation (if possible)**	**WATCH Issued (i.e. for flood, wildfire, high wave event, dam failure):** • Activate *Emergency Communications Plan* • Disaster Coordinator and all Working Group Leads **put on-alert**, **check radio, news and online** for official emergency messages • Public Outreach & Awareness Lead monitor and update Facebook and Website pages with official DEM/SCD/NWS warnings as is feasible • DC to **call down** to Working Group Leads to call-down their Working Group members to be on-alert; Working Group Leads/to check their **go-kits, shelter volunteers to check their shelter kits** • Convene a Committee Briefing to Review Hurricane Response Plan	Disaster Coordinator, Emergency Communications Lead Working Group Leads Disaster Coordinator
	WARNING Issued: • 3-12hrs flood WARNING: DC & Emergency Comms. DC & Emergency Comms. Working Group Lead and 1-2 member/s **deploy with go-kit** to *Local Communications Center* (Hanalei School) to **stage with Fire/Police and coordinate HAM radio and FRS radio operations** • All Working Group Leads, members seek emergency shelters utilizing maps and shelter updates via media • For those in emergency shelters, assist Red Cross shelter volunteers with managing shelter	DC, Emergency Comms Lead Mass Care
Post-event	**If a Non-Event (Non-Disaster, minimal damages):** • Call down Committee emergency responders and notify of updated downgraded status; stand down emergency communications • Assist Red Cross with breakdown of shelters • Update Committee website/Facebook pages with final weather updates, damages • Conduct Committee debrief within 1 week post-event or when feasible, incorporate lessons learned into Action Plan for improvement	Committee DC, Emergency Comms Lead
	***If an Event (True-Disaster)*:** • Facilitate transition of emergency shelters to congregate care shelters • **facilitate evacuation and/or bulk supply distribution** of food, water, etc. via other non-coastal roads if needed (i.e. drum road); • **utilize emergency communications to open private shelters for congregate care** • **post resource and other updates to community bulletins** • **offer emergency communications for community at various coordination sites** • **manage basic health emergencies with first aid, etc.** • **facilitate emergency communications** until no longer needed; provide updates to IC/Local Communications Center of status of refuge site, needs, etc. (may want to get standardized form for HAMs to report i.e. # cars, people, sanitation issues, food/water issues, health emergency issues, accessibility, if assistance is needed, etc.) • Manage spontaneous volunteers & donations (Appendix 9)—coordinate with Hawaii VOAD for coordination of donations requests and distribution • **Utilize resource mapping database (Appendix 11) to facilitate coordination of food, water, shelter, medical resources, etc.** • **Conduct debrief** within 1 week of post-downgraded event or when feasible, incorporate	-Mass Care -Public Outreach -Disaster Coordinator

OTHERS (Hazmat—Shelter in Place; Public Health Emergency; Blackout)	**Talk c/ Bob Harter DEM re. DEM HAZMAT plan** **Talk c/ DOH MRC & Toby Clairmont HAH about considerations**	

Phase 3: Relief

Coordinate, plan and implement relief operations with aid agencies, donations, and spontaneous volunteers utilizing the Action Plan, the Disaster Communications Plan, Go-Kits, Committee volunteers, Community Resource & Hazard Maps and Resource Mapping Databases.

Problem 10: Communities post-disaster can often become overwhelmed with external relief, inappropriate donations and relief, which can alter community-based relief and recovery goals.		
Goal 10.1: Enable community relief coordination	Management of donation & resources in coordination with community groups, businesses, American Red Cross, FEMA, others	TBD
Hazard & Timeline	**TASKS/DUTIES**	**Working Group & Person/s Responsible**

Phase 4: Recovery

Facilitate social, economic & physical rehabilitation of community (livelihoods, trauma counseling, reconstruction); coordinate receiving assistance; evaluate performance of plan & committee/group and identify areas for improvement—utilizing the Action Plan, the Disaster Communications Plan, Go-Kits, Committee volunteers, Community Resource & Hazard Maps and Resource Mapping Databases.

Problem 11: Need to increase long-term adaptive capacity of community (knowledge, skills and livelihood security)		
Goal 11.1: Increase long-term adaptive capacity of community (knowledge, skills and livelihood security)	• Better understand how to share and utilize community knowledge of fishing, gardening, farming, emergency preparedness, etc. with those who lack this knowledge • Create a process or opportunities for knowledge and skills sharing and building such as community gardens, home gardens, aquaponics, water catchment, emergency preparedness, etc. • Development of a community-based water catchment system for water security	Hui: Disaster Plan Development Public Outreach & Awareness
Hazard & Timeline	**TASKS/DUTIES**	**Working Group & Person/s Responsible**

PART IV. APPENDIX & GUIDANCE ON HOW TO USE & UPDATE THE PLAN

APPENDIX 1. Glossary of Terms

APPENDIX 2. Research Framework, Methods & Tools

APPENDIX 3. Household Survey

APPENDIX 4. Social Resilience Indicators of Household Survey

APPENDIX 5. Key Informant Interview

APPENDIX 6. Gap Analysis (Needs Assessment)

APPENDIX 7a-g. Participatory Mapping, Data Plan & Use of Mapping Tools

APPENDIX 8. Post-Flood Survey

APPENDIX 9. SPONTANEOUS Volunteer-Donations Management NHCH 2014

APPENDIX 10. Communications Plan

APPENDIX 11. Hanalei to Ha'ena Disaster Resilience Resource Mapping Database

APPENDIX 12. References

APPENDIX 1. Glossary of Terms

The Word Conference on Disaster Reduction “Hyogo Framework for Action 2005—2015” **Building the Resilience of Nations and Communities to Disasters—International platform for disaster risk reduction**

Vulnerability is defined as: "The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards". United Nations International strategy for Disaster Reduction UN/ISDR. Geneva 2004.

Hazard is defined as: "A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydro-meteorological and biological) or induced by human processes (environmental degradation and technological hazards)" UN/ISDR. Geneva 2004.

Defines disaster resilience in the following declaration: “the starting point for reducing disaster risk and promoting a culture of disaster resilience lies in the **knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters** that most societies face.”

Resilience: "The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure This is determined by the degree to which the social system is capable of organising itself to increase this capacity for learning from past disasters for better future protection and to improve risk reduction measures." UN/ISDR. Geneva 2004.

Adaptation: The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Coping capacity: The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

Mitigation: The lessening or limitation of the adverse impacts of hazards and related disasters.

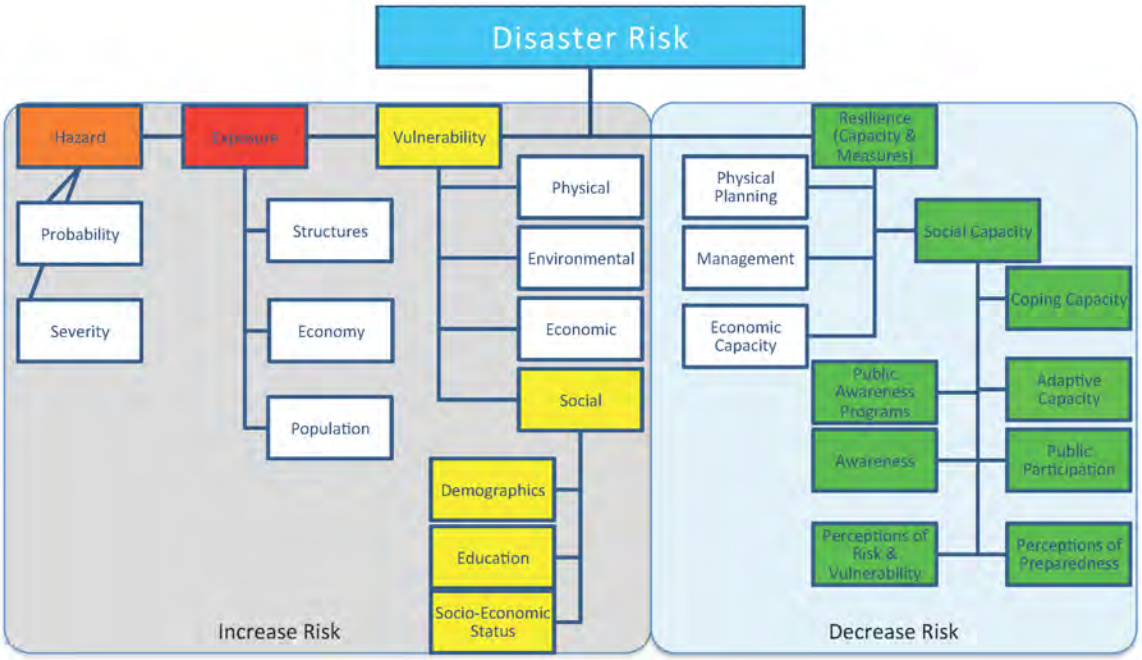
Definition sources: http://www.un-documents.net/hfa.htm & **UNISDR Terminology on Disaster Risk Reduction (2009)** http://www.unisdr.org/eng/library/lib-terminology-eng.htm

APPENDIX 2. Research Framework, Methods & Tools

A. Conceptual Framework for Household Survey

Planning approaches that carefully consider the social, economic and cultural dimensions of affected communities are more likely to be successful and are critical to fostering sustainable development and disaster resilience (Berkes et al. 1998, Crane 2010). The research team collaborated with community leaders engaged in a disaster resilience planning effort, in order to identify the elements for (and culturally-appropriate delivery of) the household survey that reflect "What resilience looks like for us," through Key Informant Interviews (Appendix 5) as indicators are most successful when they are developed with those who make decisions and will implement the action plans (Chambers 1994, TRIAMS 2006).

We developed a conceptual framework adapted from Bollin and Hidajat's (2006) *Conceptual framework to identify disaster risk* to create a place-based conceptual framework for quantifying resilience (Fig. 5) utilizing a household survey (Appendix 3) (Birkmann 2006, Bollin and Hidajat 2006, Wood et al. 2007, Rev. 2008). Through community collaboration, we designed the survey and discussion questions based on the conceptual framework's social vulnerability and social capacity components, consisting of qualitative and quantitative indicators (Appendix 4). The objectives were to: 1) identify populations with varying levels of social resilience in the community; 2) conduct a gap analysis (Appendix 6)between resources and needs, to inform a community-based long-term resilience and recovery plan to increase social, economic and ecological resilience to hazards and climate change; and, 3) understand what social vulnerability or social capacity components are determinants of a household's perceived preparedness, adaptive capacity and coping capacity.



Conceptual framework of community-based household disaster risk. Adapted from Bollin et al. (2006).

Data collection and analysis

Surveys & Interviews

Initial key informant interviews along with talk-story sessions, provided the cultural and social context to develop the household survey. The conceptual framework indicators measured through the household survey facilitate a broad and multi-disciplinary perspective of current community vulnerabilities as indicators of critical gaps in household and community-level hazard resilience. We implemented a door-to-door household survey (Appendix 3) of long-term and part-time Hanalei residents and visitors from

August to October 2010, to examine perceived household preparedness, coping and adaptive capacity. The survey enabled quantitative and qualitative data collection for particular components of the conceptual framework (Fig. 5). Within the vulnerability component, indicators (Appendix 4) were captured as categorical variables measured through questions regarding demographics, education and socio-economic status. The resilience component was measured through categorical variables and composite indices for various social capacity indicators, including public awareness programs, coping and adaptive capacity, public participation, awareness, and perceptions of preparedness, risk and vulnerability (Appendix 4).

All 279 households in the community were visited twice, and leaflets were left to offer an opportunity to take the survey online or be contacted for an in-person survey. The majority of houses (70.6%) visited were not surveyed, due to 28.3% (79/279) being inaccessible due to locked gates, guard dogs or no trespassing signs, and 42.3% (118/279) with no one home. The decline rate was relatively low, with nearly 62% (37/60) of long-term residents and 91% (20/22) of visitors completing the survey. An informal post-flood interview was conducted in March 2012 to gauge social memory of the flood, changes in perceived preparedness and open-ended feedback to inform resilience-planning efforts.

Community Modeling Workshops

It is critical to engage diverse stakeholders from community, alongside collaborative partnering agencies, organizations and groups. Community-based resilience planning will have a higher probability of success if stakeholder-driven descriptions of the their communities, inherent resources systems and the issues of concern (Abarquez and Murshed, 2004; Adger, 2003; TRIAMS, 2006; USAID, 2007) can be formalized into a set of scenarios that capture the major uncertainties in the system's future dynamics (Walker et al., 2002). To adapt to change, communities must be able to anticipate a problem, collect and share knowledge about it, reflect, and together to develop a shared vision for action (Tschakert and Dietrich, 2010). Tools and processes that promote such interaction in an organized and participatory manner are limited (Gray et al., 2013a; Walker et al., 2002).

Anticipatory learning that addresses adaptation is expected to increase community understanding and the ability to respond to system crises and shocks (Tschakert and Dietrich 2010). Community disaster planning should provide opportunities for stakeholders to communicate iteratively (Osbahr, 2007), evaluate risks and mitigation options (Leary et al 2008), learn from mistakes (Adger, 2003) and innovate (Armitage, 2005) amidst uncertainty, emerging events, past, present and future conditions (Nelson et al., 2007) and new information (McGray et al., 2007).

Building on data gathered from key informant interviews and household surveys, community-based workshops were held with the planning committee using mental modeling under various hazard scenarios. The community modeling addresses the micro (short-term), meso (short to midterm) and macro (long-term) scales of social learning, to achieve single-, double- and triple-loop learning utilizing a type of 'mental modeling' (Gray et al., 2013a) in order to construct measurable targets and benchmarks for resilience planning. A novel computer-based software tool called Mental Modeler (Gray et al., 2013a) was used during the planning process to: (1) iteratively construct and revise visual representations of stakeholders' mental models to ultimately develop a consensus community model; (2) use these models to understand how communities anticipate being impacted by hazards; (3) define preferred targets for components of their community; and, (4) test potential mitigation strategies. This approach facilitates the exploration of the dynamics and learning features of mental model representations by collecting and standardizing individual and collective community knowledge using simple modeling tasks (Gray et al., 2012; Ozesmi and Ozesmi, 2004) in a real-time and participatory modeling environment (Gray et al., 2013a).

To facilitate disaster planning through social learning, we used a FCM-based software called Mental Modeler (Gray et al., 2013a) in every workshop, which allowed the committee to represent and revise their collective understanding over time. Using a FCM approach in a three-phase process, project

facilitators standardized, aggregated and revised the committee's understanding of the structure and dynamics of the community in relation to tsunami hazard, their top concern. Each phase was designed to guide the committee through progressively higher order learning loops, and increase expected adaptive capacity through social learning (Fig. 2). Phase I focused on project organization and a workshop targeting short-term single-loop learning of the committee, through the development of two small group shared models of their community. Phase II included merging the small group mental model representations, building consensus on the structure and dynamics of their community, and understanding the potential impacts of tsunami in order to target double-loop learning. Phase III focused on eliciting triple-loop longer-term learning by iteratively modeling the expected impacts of a tsunami and the proposed mitigation strategies. The four most effective strategies for achieving disaster planning targets were examined more closely by the committee and developed into the implementable Action Plan including benchmarks for evaluation.

APPENDIX 2. Community Modeling Workshops & Social Learning for Resilience

PART I. MENTAL MODELING PROCESS

Planning approaches that carefully consider the social, economic and cultural dimensions of affected communities are more likely to be successful and are critical to fostering sustainable development and disaster resilience (Berkes et al. 1998, Crane 2010). The research team collaborated with community leaders engaged in a disaster resilience planning effort, in order to identify the elements for (and culturally-appropriate delivery of) the household survey that reflect "What resilience looks like for us," through community modeling, as indicators are most successful when they are developed with those who make decisions and will implement the action plans (Chambers 1994, TRIAMS 2006).
of community-based household disaster risk. Adapted from Bollin et al. (2006).

It is critical to engage diverse stakeholders from community, alongside collaborative partnering agencies, organizations and groups. Community-based resilience planning will have a higher probability of success if stakeholder-driven descriptions of the their communities, inherent resources systems and the issues of concern (Abarquez and Murshed, 2004; Adger, 2003; TRIAMS, 2006; USAID, 2007) can be formalized into a set of scenarios that capture the major uncertainties in the system's future dynamics (Walker et al., 2002). To adapt to change, communities must be able to anticipate a problem, collect and share knowledge about it, reflect, and together to develop a shared vision for action (Tschakert and Dietrich, 2010). Tools and processes that promote such interaction in an organized and participatory manner are limited (Gray et al., 2013a; Walker et al., 2002).

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Building on data gathered from key informant interviews and household surveys, community-based workshops were held with the planning committee using mental modeling under various hazard scenarios. The community modeling addresses the micro (short-term), meso (short to midterm) and macro (long-term) scales of social learning, to achieve single-, double- and triple-loop learning utilizing a type of 'mental modeling' (Gray et al., 2013a) in order to construct measurable targets and benchmarks for resilience planning. A novel computer-based software tool called Mental Modeler (Gray et al., 2013a) was used during the planning process to: (1) iteratively construct and revise visual representations of stakeholders' mental models to ultimately develop a consensus community model; (2) use these models to understand how communities anticipate being impacted by hazards; (3) define preferred targets for components of their community; and, (4) test potential mitigation strategies. This approach facilitates the exploration of the dynamics and learning features of mental model representations by collecting and standardizing individual and collective community knowledge using simple modeling tasks (Gray et al., 2012; Ozesmi and Ozesmi, 2004) in a real-time and participatory modeling environment (Gray et al., 2013a).

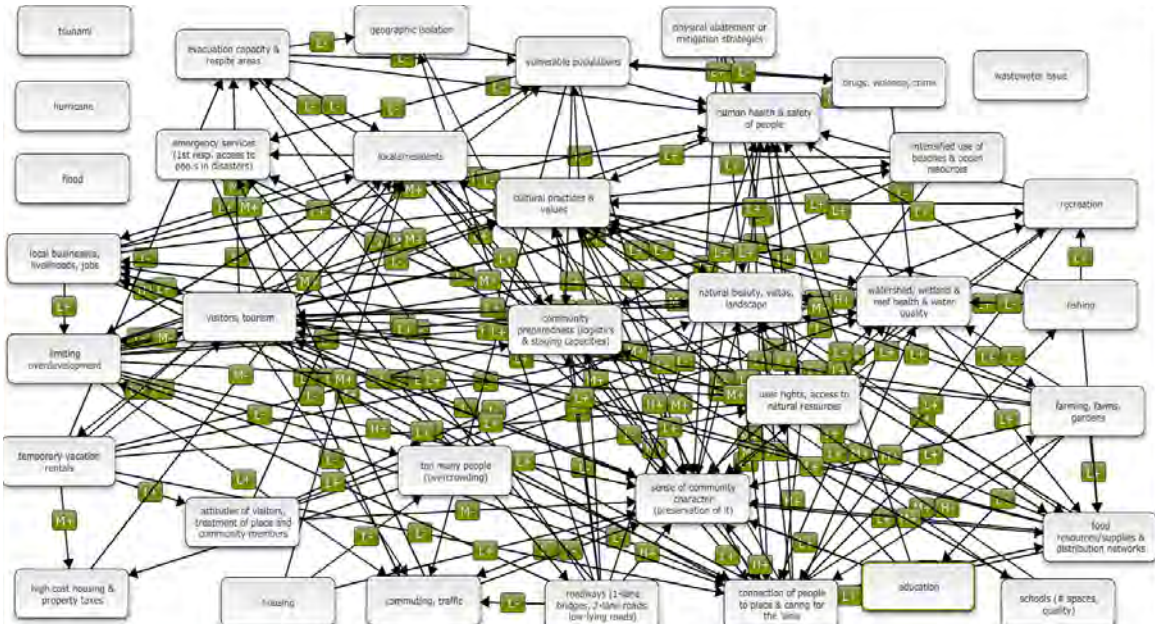
To facilitate disaster planning through social learning, we used a FCM-based software called Mental Modeler (Gray et al., 2013a) in every workshop, which allowed the committee to represent and revise their collective understanding over time. The download for Mental Modeler software is:

http://www.mentalmodeler.com/resources/mentalmodeler.exe

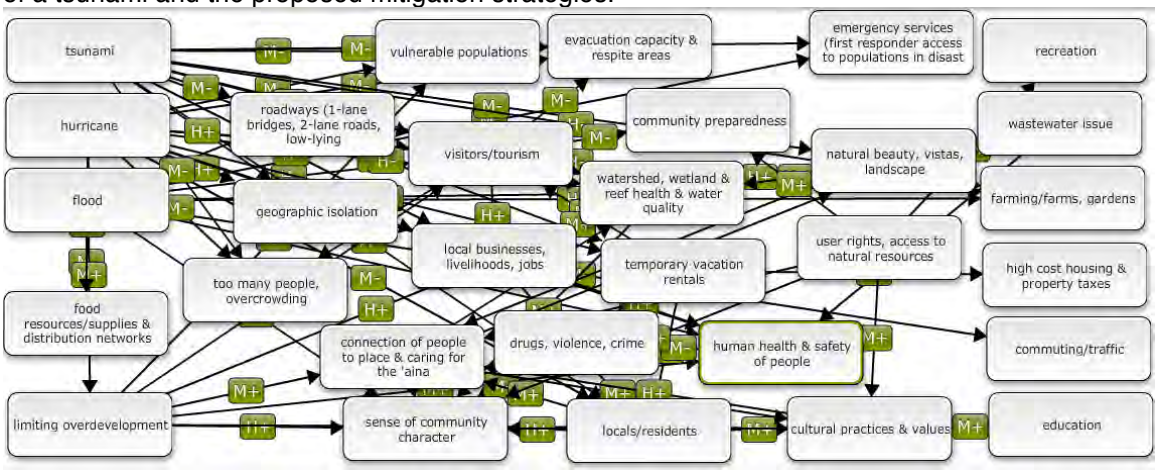
Username: mentalmodeler
Password: mentalmodeler

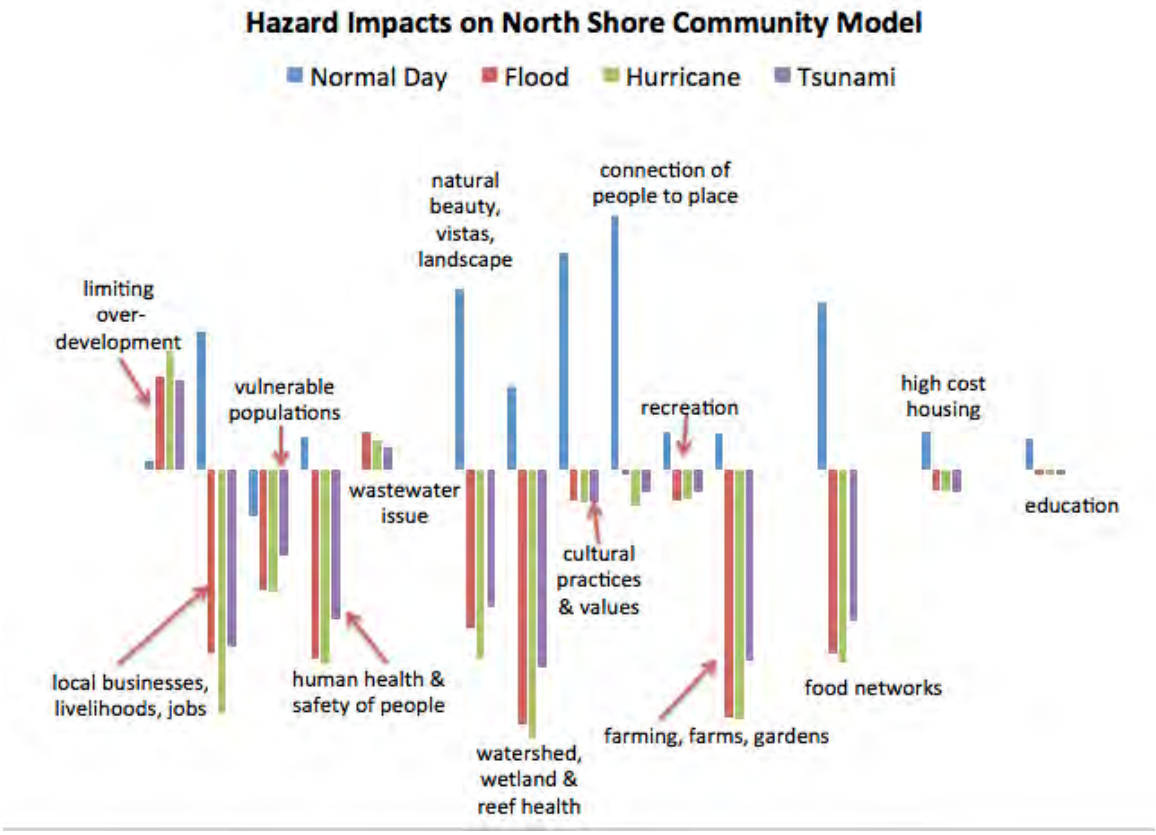
Using a FCM approach in a three-phase process, project facilitators standardized, aggregated and revised the committee's understanding of the structure and dynamics of the community in relation to tsunami hazard, their top concern. Each phase was designed to guide the committee through progressively higher order learning loops, and increase expected adaptive capacity through social learning (Fig. 2). Phase I focused on project organization and a workshop targeting short-term single-loop learning of the committee, through the development of two small group shared models of their community.

Phase II included merging the small group mental model representations, building consensus on the structure and dynamics of their community, and understanding the potential impacts of tsunami in order to target double-loop learning.

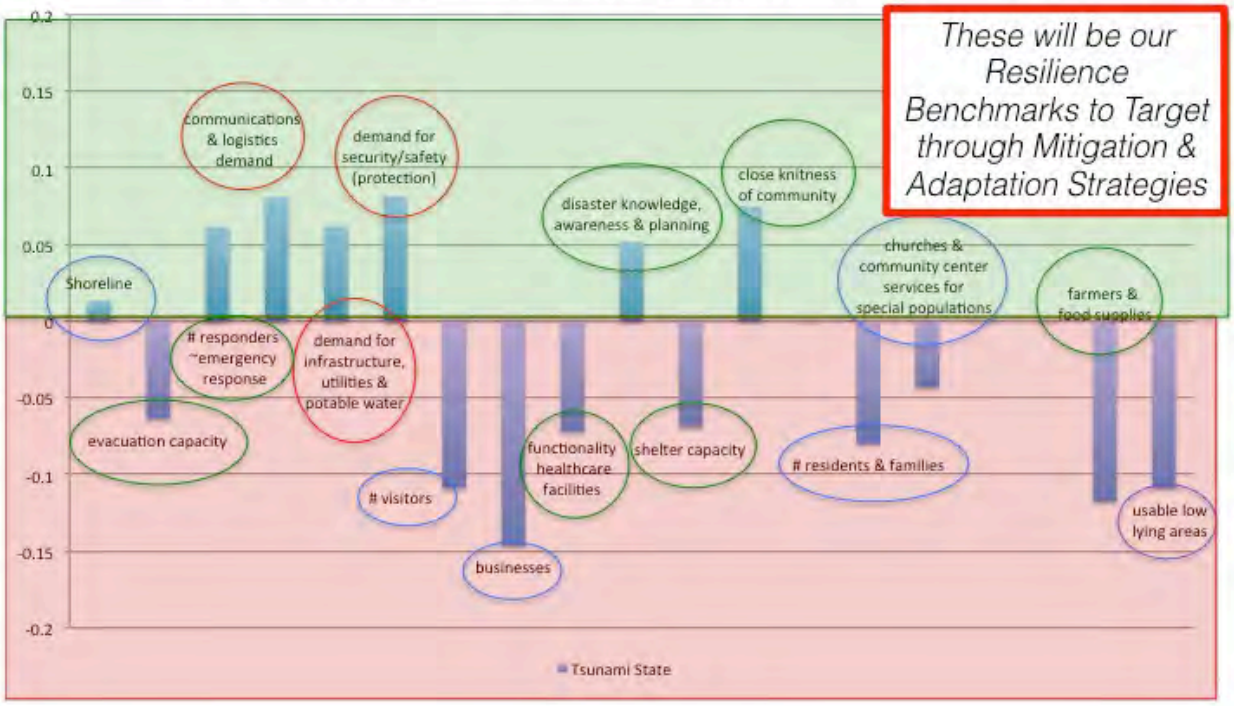


Phase III focused on eliciting triple-loop longer-term learning by iteratively modeling the expected impacts of a tsunami and the proposed mitigation strategies.




Hazard Impacts on North Shore Community Model
Normal Day
Flood
Hurricane
Tsunami
limiting over-development
vulnerable populations
wastewater issue
natural beauty, vistas, landscape
connection of people to place
recreation
high cost housing
education
cultural practices & values
local businesses, livelihoods, jobs
human health & safety of people
watershed, wetland & reef health
farming, farms, gardens
food networks

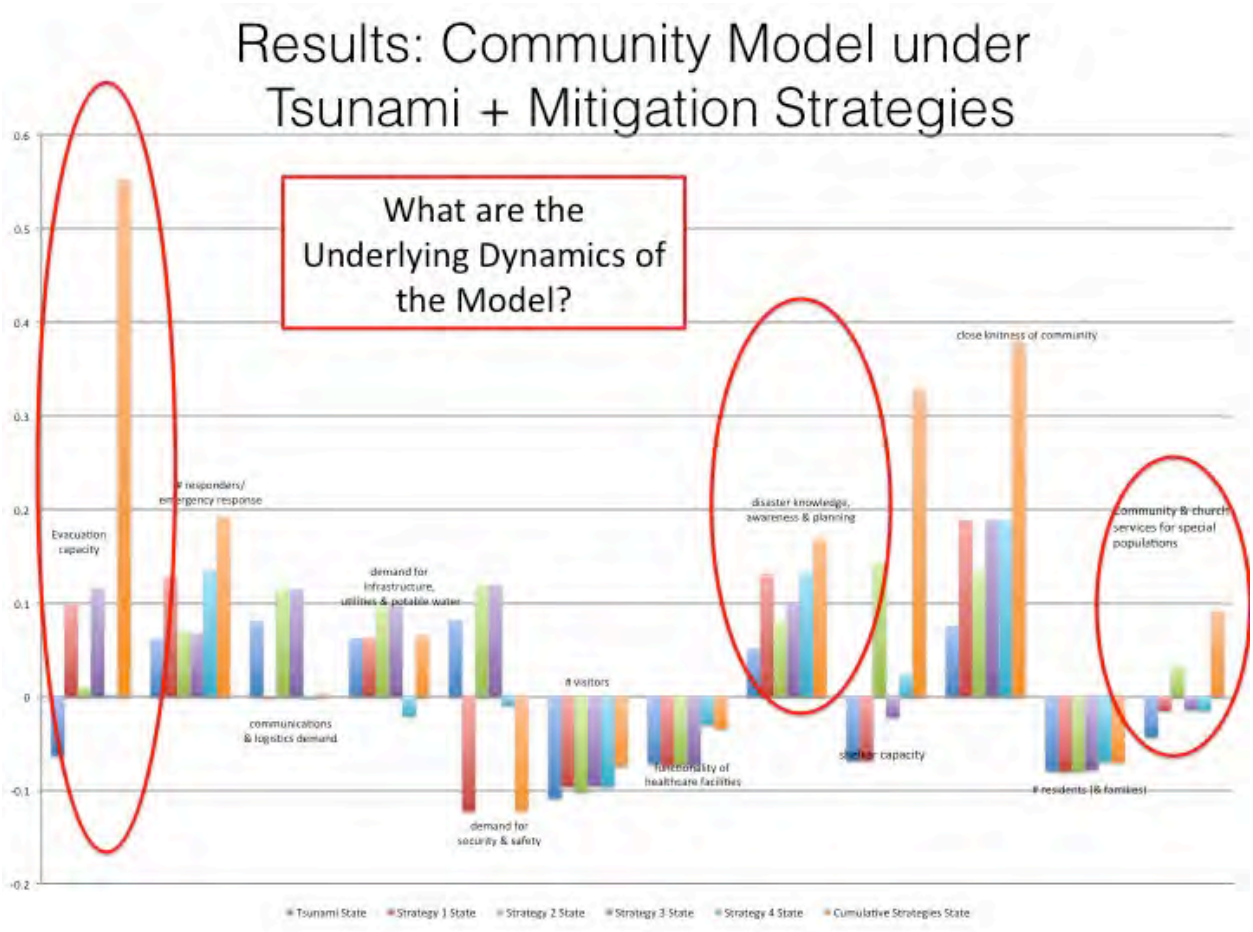
What Community Components are "Desirable," "Undesirable" or Neutral?



Identify Mitigation & Resilience Strategies

- Add Mitigation Strategies as New Components on Community Model

The four most effective strategies for achieving disaster planning targets were examined more closely by the committee and developed into the implementable Action Plan including benchmarks for evaluation.



Appendix 3. Hanalei Household Resilience Survey.

Informed Consent:

[TO BE READ ALOUD] Aloha/Hello. My name is _____, and I am representing the Hazards, Climate & Environment Program at the Social Science Research Institute at the University of Hawaii Manoa. The purpose of this survey is to learn about the social and economic impacts of hazards, drought, and climate-affected communities of Hawaii. Your household has been selected to participate and we would like to ask some questions. If you decide to participate your name will not be recorded and participation is completely voluntary. We expect that the interview will take approximately 30-40 minutes. You can decline to answer any question or stop the interview at any time. You will not receive anything for participating in this survey, but it may benefit the disaster-affected populations and businesses by providing information that will guide the community to better prepare for and respond to local issues of disaster, drought, and climate impacts, and to build resilience to these impacts. If you do not want to participate, you are free to decline the interview. If you have any questions you can contact Cheryl Anderson at 808-956-3908.

Are you 18 years of age or older? [ ] Yes [ ] No

If No, is there anyone in the household that is 18years of age or older that can be interviewed?

If Yes, proceed. If No, end interview.

Do you wish to be interviewed? [ ] Yes [ ] No

Interviewee Signature: _____ Date: _____

Interviewer Name_____

Location

County _____
City _____
Community_____
Household Survey Number_____
GPS coordinates _____

Section 1: Background Information

1. Respondent Sex: [ ] Male [ ] Female

2. Respondent Age:

a. [ ] 18-24
b. [ ] 25-34
c. [ ] 34-49
d. [ ] 50-64
e. [ ] Over 65

3. Where do you live?
   a. Community Name_____
   b. Neighborhood Name_____

   A household member is someone who shares a dwelling and at least one meal per day. The head of household is the person who makes the majority of decisions.

4. Are you the head of household?
   a. [ ] Yes
   b. [ ] No
   c. [ ] Don't know

5. If no, is the current head of your household male or female?
   a. [ ] Male b. [ ] Female

6. What is the age (category) of the head of household?
   a. [ ] 18-24
   b. [ ] 25-34
   c. [ ] 34-49
   d. [ ] 50-64
   e. [ ] Over 65

7. How many people live at this location?
   a. _____ Total #
   b. _____ # of male adults
   c. _____ # of female adults
   d. _____ # of male children (<18yrs)
   e. _____ # of female children (<18yrs)

8. Of those living at this location, how many are:
   a. Children or Spouses
   b. Other relatives

9. Which of the following best describes the residence?
   a. [ ] Owned
   b. [ ] Rental
   c. [ ] Vacation

d. [ ] Other _____

If residence is owned, rental or other, skip to Section 3
If a vacation rental, please ONLY answer the following questions in Section 2

Section 2: Vacationers Breakout Survey

10. Where are you/your family originally from?
    a. [ ] This community
    b. [ ] This region
    c. [ ] This Island
    d. [ ] This State
    e. [ ] Mainland U.S.
    f. [ ] Another Country
11. How long do you live at this location during the year?

    a. [ ] < 1 week/yr
    b. [ ] 1 –2wk /yr
    c. [ ] 3 – 4wk/yr
    d. [ ] >4wk/yr

12. How many years have you lived in this vacation rental?
    a. [ ] <1yr
    b. [ ] 1 -2 yrs
    c. [ ] 2-5 yrs
    d. [ ] > 5yrs
13. Would you consider the community where you live to be:
    a. [ ] Suburb
    b. [ ] Rural
    c. [ ] Tourist Area
    d. [ ] Traditional/Ahupua'a
    e. [ ] Urban
    f. [ ] Don't know
    g. [ ] Other_____

14. Do you consider yourself a part of this community?
    a. [ ] Yes If yes, why? _____
    b. [ ] No If no, why not?_____

15. In the event of a natural disaster, do you feel you are prepared?
    a. [ ] Yes
    b. [ ] No

16. In the event of a natural disaster, which of the following describes you/your family?
   a. [ ] I will need to turn to the community for support
   b. [ ] I can and will support myself/my family
   c. [ ] I can and will support myself/my family and neighbors
   d. [ ] I can and will support myself/my family and community at large
   e. [ ] I can and will support myself/my family and anyone in need of assistance

<END OF SURVEY FOR VACATION RENTERS>

If residence is owned, rental or other, continue the survey

Section 3: Perceptions of Community & Preparedness

The purpose of this section is to understand communities' perceptions of "community," their expectations & willingness to help themselves each other, and to understand communities' awareness & perceptions of planning and preparedness for climate-related hazards (household, community & government/institutional)

17. What does community mean to you and your family?

18. Do you consider yourself a part of this community?
   a. [ ] Yes If yes, why? _____
   b. [ ] No If no, why not?_____
   c. [ ] Don't know

19. In your opinion, who is (and isn't) part of your community and why?

20. In the event of a natural disaster, do you feel you/your family are/is prepared?
   a. [ ] Yes
   b. [ ] No
   c. [ ] Don't know

21. Do you feel knowledgeable enough about natural disasters to feel you/your family can prepare and adapt?
   a. [ ] Yes
   b. [ ] No
   c. [ ] Don't know

22. In the event of a natural disaster, which of the following describes you/your family?
   a. [ ] I will need to turn to the community for support
   b. [ ] I can and will support myself/my family
   c. [ ] I can and will support myself/my family and neighbors
   d. [ ] I can and will support myself/my family and community at large
   e. [ ] I can and will support myself/my family and anyone in need of assistance

f. [ ] Don't know
g. [ ] Other_____

23. Do you feel your community is prepared for a natural disaster?
a. [ ] Yes If yes, why?_____
b. [ ] No If no, why not? _____
c. [ ] Don't know

24. Do you know of community meeting areas or safe places to evacuate to in the event of a disaster?
a. [ ] No
b. [ ] Yes If yes, would you use these places?
[ ] No i. If no, why not? _____
[ ] Yes

25. Do you know of community resources, groups or organizations that can assist in the event of a disaster?
a. [ ] No
b. [ ] Yes If yes, who? _____
If yes, would you use these resources?
a. [ ] No If no, why not? _____
b. [ ] Yes

26. Do you know of a community or neighborhood representative that speaks for you/your family and your interests? e.g. government, elders, community representatives, grassroots groups
a. [ ] Yes
b. [ ] No

Perceptions of Risk & Vulnerability
This purpose of this section is to understand communities' perceptions of and experience with risk/vulnerability to climate-related hazards.

27. Do you think your community is affected by natural hazards?
a. [ ] No
b. [ ] Yes
If yes, **please indicate which hazards, and the top three that concern you most** (1=highest concern, 2=second highest concern, 3=3rd highest concern):

Of Concern? [X]	**Ranking (1-3)**
a. [ ] Climate change	_____
b. [ ] Sea level rise	_____
c. [ ] Earthquake	_____

d. [ ] Tsunami _____
e. [ ] Flooding _____
f. [ ] Severe weather _____
g. [ ] High wind events/tornados _____
h. [ ] Hurricanes/Typhoons _____
i. [ ] Drought _____
j. [ ] Wildfires _____
k. [ ] Volcanic eruptions/VOG _____
l. [ ] Other _____ _____

28. If drought is listed as a hazard, how has it affected you/your community?
a. [ ] Agriculture (crop loss)
b. [ ] Cattle (cattle death)
c. [ ] Wildfires
d. [ ] Water scarcity/water rationing
e. [ ] Change in rainfall amount/patterns
f. [ ] Change in temperature
g. [ ] Loss of life
h. [ ] Loss of property
i. [ ] Jobs/livelihood
j. [ ] School/community facilities
k. [ ] Public health
l. [ ] Social
m. [ ] Culture
n. [ ] Environment
o. [ ] Well-being
p. [ ] Food/water insecurity
q. [ ] Recreation
r. [ ] Other _____

29. How many times do you recall experiencing drought?
a. [ ] 0-1
b. [ ] 1-2
c. [ ] 3-4
d. [ ] 5-6
e. [ ] > 6
f. [ ] Don't know

30. Do you remember hearing stories of drought and if so, what did they do to adapt?
a. [ ] Yes
b. [ ] No
c. [ ] Don't know

31. Have these stories/experiences better prepared you to respond or adapt to drought?
   a. [ ] Yes, & how so? _____
   b. [ ] No
   c. [ ] Don't know

32. If other hazards are listed, what aspects of the family or community were affected?
   a. [ ] Agriculture (crop loss)
   b. [ ] Cattle (cattle death)
   c. [ ] Wildfires
   d. [ ] Water scarcity/water rationing
   e. [ ] Change in rainfall amount/patterns
   f. [ ] Change in temperature
   g. [ ] Loss of life
   h. [ ] Loss of property
   i. [ ] Jobs/livelihood
   j. [ ] School/community facilities
   k. [ ] Public health
   l. [ ] Social
   m. [ ] Culture
   n. [ ] Environment
   o. [ ] Well-being
   p. [ ] Food/water insecurity
   q. [ ] Recreation
   r. [ ] Other _____

33. How many times do you recall experiencing these hazards?

34. Do you remember hearing stories of these hazards and if so, what did they do to adapt?

35. Have these stories/experiences better prepared you to respond or adapt to these hazards?
   a. [ ] Yes
   b. [ ] No
   c. [ ] Don't know

Coping & Adaptive Capacity
This section is to understand community coping & recovery capacity to climate-related impacts including traditional knowledge systems.

36. Please select which of the following you and/or your family has access to:
   a. [ ] Community or family garden
   b. [ ] Farmland
   c. [ ] Livestock
   d. [ ] Hydroponics or Aquaponics systems (fish)

e. [ ] Land ownership
f. [ ] Housing ownership
g. [ ] Safe place to evacuate
h. [ ] Community resources
i. [ ] Social support network/communication tree
j. [ ] Stocked food/water supplies/emergency rations
k. [ ] Emergency Kit
l. [ ] Family emergency plan
m. [ ] Generators
n. [ ] Car/truck/ORVs
o. [ ] Tractor
p. [ ] Groundwater well

37. Please select which of the following you and/or your family has knowledge of:
a. [ ] Emergency preparedness
b. [ ] Traditional Medicine
c. [ ] Traditional Ecological Knowledge
d. [ ] Food preservation (e.g. salting or smoking fish, drying fruits/vegetables, preserves, etc.)
e. [ ] Fishing
f. [ ] Hunting
g. [ ] Raising livestock
h. [ ] Gardening/farming
i. [ ] Construction
j. [ ] Other _____

38. Are there any other adaptive practices, experiences or knowledge that you feel make you better prepared for drought or other disasters?

39. Would you like to find out more information regarding emergency preparedness and disaster adaptation?

Section 4: Demographics
This section is to understand basic demographic information about your household and community, like origin, location, ethnicity, livelihood & economics information, etc.

40. Where are you/your family originally from?
a. [ ] This community
b. [ ] This region
c. [ ] This Island
d. [ ] This State
e. [ ] Mainland U.S.

f. [ ] Another Country

41. If not originally from this community, why did you move to this location (please check all that apply)?
a. [ ] Employment
b. [ ] School
c. [ ] Family
d. [ ] Cultural
e. [ ] Environmental
f. [ ] Other_____

42. Would you consider the community where you live to be (please check all that apply):

a. [ ] Suburb
b. [ ] Rural
c. [ ] Tourist Area
d. [ ] Traditional/Ahupua‘a
e. [ ] Urban
f. [ ] Don't know
g. [ ] Other_____

43. How long have you lived at this location?
a. [ ] < 1 yr
b. [ ] 1—5yrs
c. [ ] 5—10yrs
d. [ ] 10—20yrs
e. [ ] >20yrs

44. If you have moved in the last 5 yrs, please check all reasons that apply
a. [ ] Property taxes too high
b. [ ] Rental cost too high
c. [ ] Other economic reasons
d. [ ] Safety concerns
e. [ ] To be closer to school/work
f. [ ] Family
g. [ ] Other_____

Education

45. What is the highest level of education you have completed?
a. [ ] Some Primary school
b. [ ] Primary school
c. [ ] Some Middle school
d. [ ] Middle school
e. [ ] Some high school

f. [ ] High school or GED
g. [ ] Some college
h. [ ] Associate's degree
i. [ ] Bachelor's degree
j. [ ] Master's degree
k. [ ] Doctoral Degree
l. [ ] Other Professional Degree (JD, DDS, MD)
m. [ ] Technical/Vocational Degree
n. [ ] Certificate

46. What is the highest level of education the head of household has completed (if not you)?
a. [ ] Some Primary school
b. [ ] Primary school
c. [ ] Some Middle school
d. [ ] Middle school
e. [ ] Some high school
f. [ ] High school or GED
g. [ ] Some college
h. [ ] Associate's degree
i. [ ] Bachelor's degree
j. [ ] Master's degree
k. [ ] Doctoral Degree
l. [ ] Other Professional Degree (JD, DDS, MD)
m. [ ] Technical/Vocational Degree
n. [ ] Certificate

47. What **race/ethnicity** do you consider yourself/your family to be?
a. [ ] Asian
b. [ ] Black/African American
c. [ ] Hispanic/Latino
d. [ ] Native American
e. [ ] Native Hawaiian
f. [ ] Other Indigenous
g. [ ] White/Anglo
h. [ ] Mixed Race
i. [ ] Don't know

Livelihoods & Economics

48. What is your (or Head of Household) type of occupation? (put a 1 for primary occupation, 2 for secondary, etc.)
a. [ ] Faith-based
b. [ ] Farmer

c. [ ] Fisher
d. [ ] Government
e. [ ] Homemaker
f. [ ] Industrial/Factory
g. [ ] Non-governmental organization
h. [ ] Personal Business/Self-Employed
i. [ ] Rancher
j. [ ] Student
k. [ ] Teacher
l. [ ] Tourism/Service Industry
m. [ ] Traditional Practices
n. [ ] Carpenter/Construction

48. Do you ever get fish from Hanalei or surrounding areas?
a. [ ] purchased from local fish market
b. [ ] purchased from local fisherman
c. [ ] received seafood as a gift from a local fisherman or family
d. [ ] traded other materials or services for seafood
e. [ ] Other; List:_____
f. [ ] Film/Entertainment Industry

49. Do you fish in Hanalei Bay or the surrounding areas?
a. [ ] Yes (proceed to Section 5, below)
b. [ ] No (skip to Section 7)

If Farmer or Rancher, Skip to Section 6
If Fisher, Proceed to Section 5

Section 5: Fisher Breakout Survey

50. If you answered Yes to question X above, please complete the following questions:

When you or other household members go fishing, what equipment is involved?

Gear	Check if gear is used	# Trips per week (Average)	# People you fish with on a trip	Gear Description (net length, net mesh size, etc.)
Hand line Shallow/deep				
Trolling line (trolling from boat)				
Gill/Lay net				

Throw Net				
Spear gun				
Fish or Crab trap				
Shore fishing w/ Pole				
Others:				

Note: If more than one fisher in household, circle main gear of respondent above

51. What is your daily catch using your main gear (in lbs)?

	Bad day	Average day	Good day	10 years ago
Catch (lbs):				
Daily effort (hrs per trip):				

52. What typically happens to the fish/seafood that are caught/gathered (check all that apply)?
a. [ ] consumed by immediate family
b. [ ] given away to extended ‘ohana
c. [ ] sold
d. [ ] traded
e. [ ] other; List:_____

53. For an average day, how much of your catch is consumed, how much is sold, how much is given away? a. %Consumed:_____ b. %Given Away:_____ c. %Sold:_____
d. % Other:_____

54. If you sell your catch, where do you sell to most often?
a. [ ] Local restaurants and markets in the N. Shore region of Kaua‘i
b. [ ] Local families or residents in the N. Shore region of Kaua‘i
c. [ ] Markets and restaurants elsewhere on Kaua‘i
d. [ ] Businesses, markets or people in Hawai‘i but not on Kaua‘i
e. [ ] Businesses, markets or people not in Hawai‘i

55. On a really good day, if you sell fish, what is the total value of a typical daily catch using your main gear? Value in US$ per average catch:_____

56. For seafood that is not consumed or sold, who do you most often give seafood to?
   a. [ ] immediate family in household (family in your own home)
   b. [ ] immediate family in the community (family in other houses in the community)
   c. [ ] extended ʻohana (kinship network) in the community (Hanalei)
   d. [ ] extended ʻohana in the region (Haleleʻa)
   e. [ ] extended ʻohana on the island (Kauaʻi)
   f. [ ] other; List:

57. Where does the seafood go? (Check all that apply?)
   a. [ ] stays in the community (Hanalei)
   b. [ ] stays in the region (Haleleʻa)
   c. [ ] stays on the island (Kauaʻi)
   d. [ ] goes off-island

If farmer or rancher, please answer the following additional questions:

Section 6: Agriculture Breakout Survey

58. How long have you worked in farming or ranching?
   a. [ ] < 1 yr
   b. [ ] 1—5yrs
   c. [ ] 5—10yrs
   d. [ ] 10—20yrs
   e. [ ] >20yrs

59. How do you think the agriculture or ranching industry has changed since you have worked in it?

60. Have drought or other natural hazards affected your work?
   a. [ ] No
   b. [ ] Yes
   c. If yes, select how (all that apply):
   d. [ ] Loss of livestock
   e. [ ] Crop loss/crop death
   f. [ ] Loss of productive farmland/rangeland
   g. [ ] Increased operations/production cost
   h. [ ] Less availability of rainwater
   i. [ ] Compaction of soil
   j. [ ] Changed water table
   k. [ ] Dust storms
   l. [ ] Wildfires
   m. [ ] Other

61. What is the biggest challenge you are facing as a farmer/rancher?

(Continued from previous section)

Section 7: Employment & Financial Section

This section asks about employment financial information which helps us understand economic preparedness and ability to respond and adapt in the event of a disaster and economic hardship. You may decline to answer any of these questions at any time.

62. Where do you work?
    a. City _____
    b. Community _____

63. Would you consider the area where you work to be:
    a. [ ] Suburb
    b. [ ] Rural
    c. [ ] Tourist Area
    d. [ ] Industrial
    e. [ ] Traditional/Ahupua'a
    f. [ ] Urban
    g. [ ] Don't know
    h. [ ] Other_____

64. How long have you worked at this location?

    a. [ ] < 2 yrs
    b. [ ] 2 -3 yrs
    c. [ ] 4-5 yrs
    d. [ ] > 5yrs

65. How many household members (including yourself if applicable) are currently employed outside the home and earning income? _____

66. How many adult household members (including yourself if applicable) desire outside employment but are not currently working outside the home? _____

67. What is the average monthly household employment income?
    a. [ ] $0-$500
    b. [ ] $500-$1000
    c. [ ] $1000-$1500
    d. [ ] $1500-2000
    e. [ ] >$2000

68. How much money does your household currently have in savings?
    a. [ ] $0-$500

b. [ ] $500-$1000
c. [ ] $1000-$1500
d. [ ] $1500-2000
e. [ ] >$2000

69. Has your household spent savings on any of the following in the last 6 months? Check all that apply.

a. [ ] Food
b. [ ] Gas/Transportation
c. [ ] Rent/ mortgage payments/ housing
d. [ ] Medical care / medications
e. [ ] Basic household necessities/expenses (education, clothes, etc.)
f. [ ] Rebuilding / construction
g. [ ] Replacement of assets lost in a disaster
h. [ ] Repayment of debts/loans
i. [ ] Other _____

70. In the last 6 months, has your household borrowed money?

a. [ ] No
b. [ ] Yes if yes, how much? _____

71. In the last 6 months, has your household sold any assets?

a. [ ] No
b. [ ] Yes c. if yes, why? _____
d. What was the total income from asset sales?_____

72. Which of the following statements best describes the financial situation of your household in the past 6 months?

a. [ ] We are financially comfortable, there is always money for basic necessities such as a good diet, or the cost of health care or attending school and additional money to spend as we please
b. [ ] We are financially okay, there is always money for basic necessities but not a lot of extra money to spend as we please
c. [ ] We have some financial difficulties, usually we have enough money for basic necessities but sometimes we borrow or go without
d. [ ] We are in a difficult financial situation, we live with relatives/others because we cannot afford to live independently and/or have difficulty providing for basic necessities

Organizations & Community Involvement

In this section, we want to identify community-led efforts/groups (volunteer, NGOs, not-for-profits, etc.) to understand household planning and preparedness for climate-related hazards.

73. Are you a member of or participate in a community or volunteer group?

a. [ ] No
b. [ ] Yes
c. If yes, what kind of group? _____
d. If yes, how often do you participate?
   i. [ ] Rarely (once per yr)
   ii. [ ] Somewhat (2-3 times/yr)
   iii. [ ] Often (4-6times/yr)
   iv. [ ] Frequently (>6 times/yr)

In this section, we want to identify County/State/Federal government-based efforts with defined roles & responsibilities of planning & preparedness climate-related risk reduction

74. Do you have contact with government institutions in your community?

a. [ ] No
b. [ ] Yes
   i. If yes, which institution/s or department/s?

_____

c. If yes, how often do you have contact with these government institutions/departments in your community?
   i. [ ] Never
   ii. [ ] Rarely (once per yr)
   iii. [ ] Somewhat (2-3 times/yr)
   iv. [ ] Often (4-6times/yr)
   v. [ ] Frequently (>6 times/yr)

75. What are your expectations of government or other agencies in the time of drought or other climate hazards/disasters? (check all that apply)

a. [ ] No expectations
b. [ ] They should provide basic services (evacuation, food, water, shelter) for those most in need
c. [ ] They should provide basic services (evacuation, food, water, shelter) for local community members (not vacationers)
d. [ ] They should provide basic services (evacuation, food, water, shelter) for all residents (including vacationers)
e. [ ] They should provide job protection and/or financial support
f. [ ] They should provide cleanup & reconstruction
g. [ ] They should provide emergency health services
h. [ ] Other _____

76. Have you heard of any public awareness programs such as community emergency plans, disaster/risk information, etc. from any governmental or non-governmental agencies, community members, families, radio, newspapers, internet, television or other sources?
    a. [ ] No
    b. [ ] Yes
    c. If yes, what kind of program or information?
       _____
    d. From what kind of source? _____

77. How effective do you think the early warning systems are in your community?
    a. [ ] Don't know of any early warning systems
    b. [ ] Not effective
    c. [ ] Somewhat effective
    d. [ ] Very effective
    e. Please explain your answer: _____

78. How would you like to see this survey information used in your community or state?

79. That completes the survey, do you have any questions?

Thank you for your time and participation, we greatly appreciate it.

<END OF SURVEY>

Appendix 4. Hanalei Household Resilience Survey Indicators

Key: V=Visitor only relevant questions, **R=Resident** only relevant questions, otherwise if not indicated, applies to R populations only
*Fisher & Ag specific questions in household survey not included yet in this list

Component	Indicator Name	Indicator	Question in Survey Pertains to
VULNERABILITY			
Social	**Education**	Highest level of education	45,46
	Demographics	Ethnicity	47
		Place of Origin	V10, R40
		Residency Status	V11,12,R43
		Sense of belonging	V14, R18
		Age (respondent)	2
		Sex (respondent)	1
	Socio-Economic Status	Single-headed households	4 & 7
		Household Size	7
		Type of Residence	9
		Migration	44
		Head of Household Occupation	78
		Employment/Unemployment	65,66
		Income	67
CAPACITY & MEASURES			
Social	**Public Awareness Programs**	Awareness of programs	76

	Perceived efficacy of early warning systems	77
Public Participation	Have representation @ community-level	26
	Community involvement	73
	Contact with government institutions	74
Perceptions of Preparedness	Perceived Household Preparedness	V15, R20
	Preparedness & Willingness to Help	V16, R22
	Perceived Community Preparedness	23
	Expectations of Government/Relief Agencies in Disaster	75
Awareness	Know of Safe Places	24
	Know of relief groups/resources	25
Perceptions of Risk & Vulnerability		
	Perceived risk to hazards	27
	Experience in hazards	28-34
	Adaptive learning from experiences or stories	31,35
Coping & Adaptive Capacity		
	Material resource access	36
	Knowledge & skills, adaptive practices	37,38
	Savings	68
	Recent use of Savings	69
	Borrowing	70
	Selling assets	71
	Financial security status	72

Appendix 5. Key Informant Interview Questions **Date of interview:**

Project: *Integrating Socioeconomic Assessments to Build Community Resilience in Mitigating Drought*

Key Informant Name:

Location: **Position:**

Sense of Community and Home

1. What does a 'community' mean to you?
2. Who belongs to your community? What make them community members?
3. How would you describe the ideal "community" as your home?
4. How has this place changed in your lifetime?
5. What are issues you think the community should be most concerned with?

Hazards

1. Is natural hazard risk reduction a topic that community leaders are concerned with?
2. How would you define resilience to natural hazards?
3. What types of natural hazards would you prioritize for this community? Why?
4. What are factors that would help support/strengthen resilience to the prioritized natural hazards?
5. What inhibits such resilience?
6. Traditionally how has this community prepared for natural hazards? Describe how they respond? How do they recover?
7. Compared to the past, to what extent do you think this community now is capable of coping with the hazards you have just prioritized?
8. Identify community-led efforts/groups (volunteer, NGOs, not-for-profits, etc) with defined roles & responsibilities of planning and preparedness for climate-related hazards

Livelihood

1. What is the occupational structure in this community?
2. What are possible & supplemental/alternative livelihoods of this community (those based on local resources and those that are not)?

Other Questions (on back)

Appendix 6. Gap Analysis.

Category	Gaps	Potential Actions
Evacuation	Hanalei is isolated and evacuation routes are quickly clogged or closed	Identify and secure alternate/better evacuation routes on state or private lands are needed
	Some residents do not know how or where to evacuate	Install evacuation signage, increase education and public awareness on procedures
	Tourists unsure of evacuation routes and procedures	Identify and secure alternate/better evacuation routes on state or private lands are needed Need tourist evacuation plan (especially for those without cars)
	Residents are unsure of evacuation routes for students in school	Clarify routes with maps and instructions and increase public awareness
	Some residents and most visitors do not know where safe zones/tsunami refuge areas are	Increase education and public awareness around new inundation zones, evacuation routes and evacuation centers or safe places
Food/Water Security	Community is unsure of availability and location of water/food resources	Increase education and public awareness on realities of such resources as well as expectations for local preparedness (e.g. bringing own food/water supplies for 3-5 days in evacuation shelters)
Energy/Utilities	Need for electricity for basic services (fear a repeat of Hurricane Iniki's “generator wars”)	Potential resource mapping or staging of community generators for sharing between neighbors and community aid centers
Communication / Information	Communication is quickly lost in disasters yet is critical to recovery	Develop a diversified communication system in place (if telephone cell towers are out) including a designated "information" place to go to in the community that people know ahead of time and can use to post and share information
		Training for local HAM radio operators

Special Populations	Persons with disabilities will have evacuation challenges and special needs	Public awareness and outreach to these populations and improved planning considerations including transportation, evacuation, medical care, shelter and feeding
	Lower socio-economic populations may not have access to as many resources	Additional support, public awareness and considerations for these populations are needed
Tourist Population	Tourists in Hanalei have special needs that need to be addressed	Require well-displayed and well-communicated disaster education materials for tourists in hotels and vacation rentals
	Tourists are unaware of natural hazards in area; have lack of resources and preparedness	Provide (and require provision of) emergency preparedness information in hotels, vacation rentals, rental cars
	Tourists create social issues	Info about vacation rentals must be monitored better
		Too many vacationers and empty houses push up prices so there's not enough affordable housing so long time residents can't afford to stay, leading to loss of knowledge; need affordable housing to restore the residential community
Infrastructure	One-lane bridges and low-laying roads are vulnerable to hazards and are quickly cut off in flood, tsunami, hurricane and landslide/rock fall	Upgrade bridges, raise roads; educate public on contingency plan if bridges are lost or compromised
		Emergency access only road should be on higher ground to prohibit isolation
Shelter	There is no local shelter that is out of the flood or tsunami inundation zones	Identify potential alternative shelters and evacuation safe places in Hanalei on private/state lands
	People don’t know where the shelters are	Increase education and public awareness
Education	Lack of general disaster preparedness knowledge	Create a disaster preparedness education video to show on channel 6 or create a disaster handbook that is part of house

		Increase education on preparedness (for homeowners, as they have a responsibility to manage their own property)
		Increase continuing education on emergency preparedness to keep short-term memory, as community assumes government will help especially with food/water supplies
		Increase disaster volunteer education and trainings and teach emergency preparedness skills
Leadership/ Local Capacity Building	Need stronger coping pre- and post-disaster skills at household and community levels	Increase awareness on the “do's and don'ts” of water treatment
		Solve problems collectively with community
		Want advanced training on community-led disaster preparedness
		Cross train lifeguards up as EMTs/First Responders (have vehicles but need more training)
		Increase community participation in disaster preparedness and planning
		People forget preparedness information so need to keep reminding them (like a once per month television show on how to do CPR; need CPR and disaster classes in Hanalei)
		Develop a community disaster plan to send to community members and post locally in businesses including responsible contacts and leads
		Make people aware of problems and risks/vulnerabilities (physical, psychological, etc.) to hopefully spur people to act on these problems (should motivate people to take action to resolve their problems)
		Need local backup plans for food/water delivery

		Need a portfolio that is professionally done (small mail-out/clipboard size) including: map of evacuation routes (all and backups) color coded; updated phone numbers for emergency services; residential emergency phone tree template for residents to fill out; shelter list; pamphlets (short concise directives with large print); should be stuck next to phone/visually obvious place
	Certain long-time residents don't step up and lead, just keep to themselves and take care of themselves first based on their history	Need to access these populations for information and feedback into community-wide preparedness planning
Early Warning Systems	Some people do not get early warnings	Increase alternative alerts like on the computer (email) phone voice and texting, warning neighbors, fire truck drive-by warnings, social media, etc.
	Some remote areas do not hear sirens	Need better coverage for tsunami sirens in rural/remote areas
Emergency Services	No EMS station	Need an ambulance/medical station in Hanalei like a volunteer fire department like at the new neighborhood community center Identify and recruit local health workers (doctors, nurses, first responders, first aid and CPR certified individuals) who can help respond to health emergencies in a disaster

STEPS FOR PGIS USING ArcGIS & Ebeam:

Setup:

1. Put e-beam on wall & plug in wireless
2. Turn Projector on
3. Turn Computer on
4. Connect computer to projector
5. Open map in ArcGIS
6. Open E-beam tool pallet from Mac side App
7. Explain basemap and how to use pen

Mapping live:

1. Decide on dummy layer to edit
2. "CATALOG" of files→select the dummy file like "boats" or "evac routes"
3. "EDITOR" → Start Editing, Okay, Continue
4. Select the Layer in "CREATE FEATURES" → Freehand
5. Use Pen, draw layer
6. "EDITOR"→ Save Edits, continue to edit this layer or select a new one
7. When pau, Save Edits & Stop Editing, Save Map

STEPS FOR EDITING MAPS:

for PGIS MS, under map cite sources of data (e.g. NOAA, CCH, etc.)

see layer, ArcCatalog, right click on data file to get metadata and citation source

to add new data points, go to ArcCatalog, add new shapefile, point. select and start editing. go create features, select it, construction tools-->point

add labels to new features: out of editing mode, right lick on layer, attribute table, add new field, start editing mode, type in new features, save edits, stop editing; right click layer, properties, labels, select label want to display

customize, toolbars, customize-->commands, select which features want to use, drag them to editor to have always

to add database of cesspools: Add TMK layer (once get it); right click TMK layer, join based on table attributes, Join data box: 1. Choose field--Tax map key, 2. choose Sheet 1 of database, 3. choose field tax map key, then keep all records

find & add TMK layer online join by attributes or join by Append (join by a certain column title, and will merge data)

email de los santos state gis contact (and ask Kauai Planning guys again) for TMK maps, otherwise cannot add

for data analysis/relationships: ArcToolbox, Analysis tools--union shows overlap of two or more layers, whereas join

selection--> select by attributes & play around with it

Attributes	Data Status (Added, Needed, Add New Layer)	Data Layer Name
Demographic, Environmental, Infrastructural		
Population	Added	Census Block Count
Hospitals/Medical Centers	Added	Hospitals/Medical Centers
Roads	Added	Kauai Streets
Bridges	Created	Bridges
Schools	Added	DOE Schools
	Needed	Private Schools
DOE Land	Needed	DOE Land
Daycare	Needed	Daycare
Preschool	Added	Preschools
Assisted Living Centers	Added	Assisted Living Centers
Satellite Imagery	Added	Kauai Satellite Imagery
Elevations	Available @ 100ft--But Need 10-20ft contours	Elevation 100ft Contours
Streams	Added	Streams
Watersheds	Added	State Watersheds
Land use/Land Cover (beach,	Added	Land Use Land Cover
farming—especially	Added	
Traffic Count	Needed	
TMK: information on different types of residences (primary, secondary/rental or owned)	Added	
Hazards		
Flood Zones	Added	Kauai Flood Zones
Tsunami Evacuation Zones	Added--Need updated maps Jan. 2014	Kauai Tsunami Evac Zone
Fire Risk	Available	Fire Risk
Hurricane surge map	Needed	
Hurricane High Wind Profile Zones	Needed	
Resource Mapping-Disaster Planning		
Feeding centers	Add New Layer	Feeding Centers
Grocery Stores	Added	Kauai Grocery Stores & Super Markets

	Needed: types of Agriculture/crops	Agricultural Lands
Food sources: Farms/Gardens	Added	Farmer's Markets
Local Knowledge Validation of Hazard Zones (flood zones, high wind?? need this layer still, tsunami evac zones) maps	Add New Layers--**May be Different for All Hazards	Validation Hazard Zones
Fire Station	Needed	Kauai Fire Station
Police Station	Needed	Kauai Police Station
EMS Station	Needed	Kauai EMS Station
KFD Response Zone	Needed	Fire Response Zones
KPD Response Zone	Add New Layers--**May be Different for All Hazards	Police Response Zones
EMS Response Zone	Add New Layers--**May be Different for All Hazards	EMS Response Zones
Potential points of isolation and/or gridlock that get cutoff to identify where to stage resources like sat phones and HAMM radios—and then identify who will be responsible for them	Created	Potential Isolation Areas
Potential landslide areas	Created	Potential landslide areas
Hurricane Evacuation Shelters —Only Public Shelters can go on maps (DOE for hurricane evacuation shelters and Parks & Rec for Congregate Care Shelters)	Available	Emergency Shelters
Congregate care Shelters (current and proposed/needed)	Add New Layer	Congregate Care Shelters
Local Gathering Point	Add New Layer	Local Gathering Point
Local Staging Point ("EOC")	Add New Layer	Local Staging Point
Locations for satellite phones/HAMM radios and other resources	Added	SatPhone/HAMM Radio

Identify our own Evacuation routes for different origin locations of tsunamis, safe places, potentially set up MOA's with landowners for evacuation areas—must coordinate with County Evacuation Plan & Atkins Group (Alternative routes drawn on (Our contingency plans for Community Evacuation Routes/plans for 1) offshore 2) < 10hrs & 3) >10hrs)	Add New Layer	Evacuation Routes
Evacuation signs need to correspond with our evacuation route planning (Mark Marshall)	Add New Layer	Evacuation Signs
Evacuation/staging respite areas	Add New Layer	Evacuation Respite Areas
Large Landowners (to contact for Respite Area Access)	Available	Large Landowners
Other areas of cultural/other importance	Add New Layer	Cultural Areas
Access areas (surfing, paddling, fishing, horse & livestock areas that need evacuation consideration, etc.)—that Overlap with Hazard Zones (so that we can do outreach to harbors, canoe & hula halaus, etc. for raising awareness of their risks and potential evacuation routes, etc.)	Available	Ocean Recreation
Livestock (with evacuation needs)	Add New Layer	Livestock
Locked Gates	Add New Layer	Locked Gates
Mile Markers	Add New Layer	Mile Markers
Place Names	Added	Place Names
Churches	Add New Layer	Churches
Vulnerable populations: special needs (mobility, medical, etc)	Add New Layer	Vulnerable Populations
Community centers	Add New Layer	Community Centers
Generator/power locations	Add New Layer	Generator/Power Locations
Potential fuel sources (100gal +, diesel/gas)	Add New Layer	Potential fuel sources (100gal +, diesel/gas)

Helicopter landing locations	Added	Helicopter landing locations
Bathymetry	Needed	
Boat Access/Anchor points/Safe Haven	Needed	Boats

Coastal Use Mapping Project

INSTRUCTIONS for GIS Specialists

GIS Specialist Role Definition

The primary purpose of the GIS specialist will be to manage the technical aspects of information exchange in the data gathering phase of the workshop. By communicating with the group participants and the facilitator, the GIS specialist's main responsibility will be to ensure that the participants can provide the necessary information through use of the digital technology and software applications and that the data are properly secured and managed.

GIS Specialist Tasks

Packing - GIS staff will be responsible for ensuring that all GIS equipment, maps and software are securely shipped and arrive at the workshop venue.

Prep - Before the workshop, the GIS specialist will be responsible for preparing the mapping station. Be sure that the mapping area is safely constructed, floor cords are taped, excess cables are wrapped and extraneous materials are stowed away.

Set Up: Set up computer, projector, e-beam and sympodium and orient displays
Organize: Ensure all documents and wall maps are available and there are enough copies
Test: Launch ArcMap, test editing functions, test pens, undo buttons, scales, etc.
Prepare: Prepare the file saving infrastructure and the back-up drive
Demo: Do a demo of the GIS workflow
Facilitator Synch – work with your facilitator to develop common approach and signals

Intro - When the mapping group first convenes, the GIS specialist will be expected to:
Present Tools: Give a hands-on refresher on the tools, explain tools handout, offer tips
Explain Method: Briefly review approach and methods
Answer Questions: Answer questions regarding the tools or the technology

Mapping - The GIS specialist will be the main POC for technical issues, questions or methodology steps throughout the mapping session, while the facilitator will be expected to maintain the flow, resolve document road blocks, and communicate with "runner" regarding any major hurdles or problems encountered. Throughout the mapping exercises, the GIS specialist will be expected to:

Draw: Spatially document areas where data corrections will be needed on map sheets
Record: Record participant instructions for post-processing on notes sheet (clip out MPAs)
Guide: Provide guidance on use of the digital tools, pen and software, stay at designated scales
Correct: Fix any mistakes or errors by helping participants erase and redraw
Pan: Keep the mapping environment active, by panning through the region to ensure coverage
Save: Routinely export the active sketch polygon to a shapefile for back-up
Communicate: Discuss problems or issues with facilitator who can pass on to runner
Promote: Promote efficient use of time and effective use of tools and technology

Data Management - After completion of the mapping exercise, the GIS specialist will be expected to show the results to the group, securely save the data to thumb drive and copy to back-up computer.

Coastal Use Mapping Project

INSTRUCTIONS FOR WORKSHOP FACILITATORS

Process Facilitator Role Definition

The primary purpose of the process facilitator is to ensure that information exchange goes smoothly and facilitate mapping and discussion during the data gathering phase of the workshop. Through communicating with the group participants and the GIS specialist, the facilitator's main responsibility will be keeping the mapping effort on track by engaging all workshop participants in the process, reminding them of the 'rules' and tips, helping them work through controversial issues, refocusing the group on achieving the project goals and communicating to other teams via the project organizers.

In this workshop, we will plan to have 2 process facilitators in each group. The lead facilitator will play the primary role in leading the workshop process. The secondary facilitator will take ***detailed*** notes and serve as a runner to contact the project organizers if there are questions or if something is needed for the group. The two facilitators may switch roles as needed, if they are comfortable with this.

Facilitator Tasks

Intro – When the mapping group first convenes, the primary facilitator will initiate the following steps:

Intros: Facilitator, GIS specialist and participants will introduce themselves

Goals: Session goals will be reviewed and use-specific concepts presented

Docs: Relevant workshop documents and maps will be presented and explained, as needed

Tools: GIS specialist will be prompted to explain the mapping tools and tips for use, and will run through a quick mock mapping demonstration using the facilitator as the 'participant'.

Rules of Thumb: Remind participants of the key rules and tips to keep in mind throughout the process

Questions: Answer outstanding questions regarding the goals or the technology

Mapping – Once these initial steps have been completed, the group can move into the technical mapping component of the session. The GIS specialist will be the main POC for technical issues, questions, or methodology steps, but the facilitator will be expected to maintain the flow, **TAKE NOTES**, record any information from the participants that will help interpret the mapped polygons, and communicate with project organizers regarding any questions, major hurdles, or problems encountered. Throughout the mapping exercises, the facilitator will be expected to:

Inform: Post use descriptions and mapping steps (general, dominant, other) on white board. Explain what each use *includes* and *does not include*. Guide participants through the different stages of mapping.

RECORD: Note any non-spatial or controversial aspects of each use on the NOTES sheet. Record significant roadblocks or disagreements.

Engage: Recognize the dominant personalities and engage participants who are less talkative.

Encourage: Encourage group interaction and brief, productive discussions. Ask participants to record supplemental information on participant notes sheets.

Discourage: Discourage lengthy debates, arguments, extended private discussions.

Promote: Promote efficient use of time and effective group dynamics. Encourage breaks when needed to keep participant attention levels high.

Keep Time: Be the time keeper of the session and record start and end times on NOTES sheet.

Review – Review map results and notes for completion. Make sure there is time for questions after each map is completed, and that notes are complete and filed appropriately

Collect – Collect participant notes, evaluations, and any additional supplemental information that may have been gathered at the end of the workshop. Label and provide to project organizers.

Facilitation Advice

- **Maintain clear objectives and effective time management**
- **Encourage participation but recognize different expertise levels**
- **Avoid stalling in controversial areas; skip to other regions and return later if time allows**
- **Make notes on big issues, both social and technical**
- **Let everyone have a voice, be respectful, but manage the discussions to not waste time**
- **Keep messaging clear and consistent with the agreed goals and aims of the project**
- **If a unsurpassable roadblock is reached, have the secondary facilitator contact the project organizer (Arielle) to intervene**

Training notes for Crest Group

The Project

- Go over project goals & explicitly outline what they want to achieve, and what information they want to capture from the workshop.

The Project Team

- Go over the recommended roles (coordinator, facilitator, GIS driver, notetaker)
- Work to define who will be responsible for what in this specific team
- Outline what each role needs to do before, during and after the workshop

The Logistics

- The venue – What sort of space is it? Clear wall to project? Adequate outlets.
- The equipment – Create an inventory (laptop, ebeam,batteries, stickies, projector, cables). Get property passes. Who is responsible for transportation/set-up.
- The travel plans – flight times, meet up times, contact numbers etc
- Printed materials – one-pager emailed before workshop, map handouts during workshop, poster

The Laptop

- Ensure ArcGIS running properly, wont expire
- Hook-up Ebeam hardware to activate the installed software
- Ensure that members of the team will be able to login to the laptop

The Basemap

- Explain why the basemap is so important
- Explain the importance of the little shortcuts – set scale ranges/extents, bookmarks, ctrl key for zooming, layout of windows on the screen.
- Ensure that layers are labeled and legible.

The Layers to be Mapped

- Are they already identified? Does the list make sense? Can some be split out or lumped together to create a consistent structure that makes sense to the participants? Have they been appropriately symbolized ahead of time? Set them to be the only selectable features in the map (explain why for editing on the fly).

The Demo

- Explain each part of the equipment and what it does.
- Act out your actual 'demo at the workshop'
- Do a little 'best practice' rundown on how to use the stylus and coordinate with the GIS driver.

Note-taking

- Demo note taking in attributes table in editing mode
- Go over importance/advantages of taking notes on paper (spatial & qualitative)

Wrap Up

- Save every shapefile after mapping
- Back up data to at least 2 locations (laptop, usb)
- Inventory equipment before leaving

Ben to work with Sarah on:

- Use Sarah's laptop for the demo
- Show her how to set up default construction tool (freehand) under template properties for each of the layers to be mapped.
- Make sure Doug has property pass for the Ebeam before it leaves office. Need to know from Crest group how long the Ebeam will be checked for.

North Shore Community Resilience Research & Planning Project
Community Feedback Survey, 2012
Hazards, Climate & Environment Program, SSRI, University of Hawai'i @ Manoa

Survey #_____ Date _____ Community of Residence_____

Post event survey to record experiences of the recent flooding in Hanalei and Ha'ena

What was your experience in the flood?

Top concerns?

A. traffic, evacuation
B. food & water supplies for basic needs
C. health emergencies?
D. cleanup
E. early warning--did you you get enough or timely warning?
F. power
G. gawking by tourists, did you have to help a tourist
H. communications
I. relief workers? did you see a red cross person
J. workers for your business, ability to get to work
K. transportation

1. In the event of the floods, did you feel you/your family were/is prepared?

a. [ ] Yes
b. [ ] No
c. [ ] Don't know

2. Did you feel Hanalei/North Shore was prepared?

a. [ ] Yes If yes, why?_____
b. [ ] No If no, why not? _____
c. [ ] Don't know

3. **What were your expectations of government or other agencies in the floods?** (check all that apply)

a. [ ] No expectations
b. [ ] They should provide basic services (evacuation, food, water, shelter) for those most in need
c. [ ] They should provide basic services (evacuation, food, water, shelter) for local community members (not vacationers)
d. [ ] They should provide basic services (evacuation, food, water, shelter) for all residents (including vacationers)
e. [ ] They should provide job protection and/or financial support
f. [ ] They should provide cleanup & reconstruction
g. [ ] They should provide emergency health services
h. [ ] Other _____

4. **What were your expectations of community members in the event climate hazards/disasters?** (check all that apply)

a. [ ] No expectations (we are self-sufficient and will not need assistance)

b. [ ] We will need government or military disaster relief & recovery assistance
c. [ ] We will need NGO and community organization disaster relief & recovery assistance
d. [ ] We will need disaster relief & recovery assistance from Other Organization_____
e. [ ] Other
f. [ ] Don't Know

5. In the event of floods, what populations and areas do you believe were at heightened risk and needed additional support consideration?

6. What were your main sources of early warning?

7. How effective were the early warning systems are in your community?

a. [ ] Don't know of any early warning systems
b. [ ] Not effective
c. [ ] Somewhat effective
d. [ ] Very effective
e. Please explain your answer: _____

8. How would you like to see this research project information used in your community or state?

9. Do you think North Shore could benefit from a Resilience Plan?

a. [ ] No
b. [ ] Yes
c. If no, why not?
    d.
    e.
d. If yes, what kind of information would you like to see in this plan?

10. That completes the survey, do you have any questions, comments or concerns? (Feel free to use back side of paper for additional comments)

TAB A to Annex H – Volunteer Staff Registration Form

HICS 253 - Volunteer Staff Registration

1. FROM DATE/TIME	2. TO DATE/TIME	3. SECTION	4. TEAM LEADER

5. REGISTRATION

Name *(Last Name, First Name)*	Address *City, Sate, Zip*	Social Security Number	Telephone Number	Certification/Licensure and Number	Time IN	Time OUT	Signature

6. CERTIFYING OFFICER	7. Date/Time Submitted:

8. Facility Name

DISASTER (EMERGENCY) CLINICAL PRIVILEGES FORM
AT
NAVAL HEALTH CLINIC HAWAII, PEARL HARBOR

I, _____, certify that I am licensed/certified as a _____ in the State of _____, license/certificate #_____. I certify that I have the education/training, current competency, ability to perform, and experience to practice in the specialty of _____.

I hereby volunteer my medical services to Naval Health Clinic (NHCL) Hawai`i and its branch health clinics and annexes during this disaster/emergency and agree to practice, as directed, and under the supervision/observation of a member of the medical staff of NHCL Hawai`i.
I acknowledge my privileges at this Command shall **immediately terminate** once the disaster/emergency has ended, as notified by the Command.

Practitioner Printed Name: _____

Practitioner Signature: _____

Hospital Affiliation: _____

Telephone Number: _____

Date: _____

THE INFORMATION PROVIDED BY THE PRACTITIONER WAS REVIEWED AND VERIFIED TO THE EXTENT POSSIBLE UNDER THE CURRENT DISASTER/EMERGENCY CONDITIONS. ON THIS BASIS, THIS PRACTITIONER IS HEREBY GRANTED DISASTER (EMERGENCY) PRIVILEGES TO TREAT PATIENTS PRESENTING TO NAVAL HEALTH CLINIC HAWAII, DURING THIS DISASTER/EMERGENCY.

ENDORSEMENT SECTION (AUTHORIZED BY THE COMMANDING OFFICER)	
Sign here ☛	
Disaster (Emergency) Incident Officer (aka Executive Officer)	Date
Sign here ☛	
Disaster (Emergency) Operations Center Officer	Date
Sign here ☛	
Operations Section Chief	Date

Annex H: Volunteer and Donations Management

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Reviewed by MEM _____ *Date* _____

Approved by XO _____ *Date* _____

References

(a) 5 CFR 950, Solicitation of Federal Civilian and Uniformed Services Personnel for Contributions to Private Voluntary Charitable Organizations

(b) Public Law 105-19, Volunteer Protection Act of 1997

(c) NAVHLTHCLHIINST 6320.66A

(d) Joint Commission Ambulatory Health Care Standards Manual, current edition

Overview

Naval Health Clinic Hawaii (NHCH) Emergency Management (EM) Program shall identify procedures to perform volunteer and donations management during the response and recovery phases. During an emergency, volunteer and donations support may occur regardless of requests or whether the volunteer support or donations meet an identified need. Volunteer and donations management onboard installations are managed by the Fleet and Family Readiness function with assistance from the religious programs functions, spouses clubs, and auxiliary organizations.

Every effort should be made to use a local Volunteer Organization Active in Disaster (VOAD) group, Navy Marine Corps Relief Society (NMCRS) or NHCH Chaplain to receive and distribute donations rather than establishing an internal process.

The Volunteer and Donations Management System (VDMs) covers only undesignated offers of materials, equipment, and financial assistance and/or unaffiliated volunteers who indicate they wish to assist during an emergency. The donations management effort does not address material, equipment, or financial assistance offers tendered for specific organizations. The VDMS effort does not address those volunteers who are already affiliated with established disaster relief organizations, such as the American Red Cross (ARC) or NMCRS. Management of designated funds, equipment, material, and support for affiliated volunteers is solely the responsibility of the unit to whom the resource was offered. Full use of existing local voluntary donations management resources through organization like NMCRS will occur before regional or installation assets are sought.

Volunteer and Donations Management System (VDMS)

The VDMS provides a system for managing and coordinating unsolicited and undesignated offers of goods, funds, and unaffiliated volunteer labor to assist victims of emergencies. Goods, services, and funds donated to a specific organization are directed to that organization, which then assumes complete responsibility for support of the donated asset.

The VDMS will work under the direction of the Regional Fleet and Family Readiness Director (or designated representative). The VDMS will match and coordinate offers of goods, services, and funds coming in to the Volunteer and Donations Management Center (VDMC) with validated needs from the affected area. The VDMC will begin operations in one of the Fleet and Family Service Center classrooms should additional spaces be required that issue will be addressed through the Regional Operations Center (ROC) or Emergency Operations Center (EOC) to the Regional Commander or Installation Commanding Officer. The VDMS will coordinate its efforts with the ROC or EOC dependent upon the nature of the event, specifically the Incident Support Branch of the Resource Management Section to ensure efficient use of goods, services, and funds accepted by the VDMS.

The VDMC will serve as the central location for coordination and operation of the donations management system.

Volunteer Medical Personnel

During emergencies medical facilities may be overwhelmed and volunteer medical personnel may be needed to supplement staff. Volunteers may be available through the Hawaii Medical Reserve Corps: (http://hawaii.gov/health/emergencyprep/mrc/). Others may approach NHCH independently offering assistance.

Definitions

- Professional Volunteers include emergency personnel from jurisdictions outside of the response agency. They are certified or licensed to perform their duties and include physicians, nurses, firefighters, law enforcement personnel, emergency medical technicians, and licensed mental health professionals.
- Affiliated Volunteers are attached to a recognized voluntary or nonprofit sponsoring organization and are trained for a specific response activity. Their relationship with the organization precedes the immediate

disaster, and they are invited by that organization to become involved in a particular aspect of EM. The sponsoring organization is responsible for making travel, feeding, lodging, and other necessary support arrangements for volunteer members/organization staff that they recruit. They are also responsible for the safety and welfare of their members.

- Unaffiliated Volunteers are not part of a recognized voluntary agency and often have no formal training in emergency response. They are not officially invited to become involved but are motivated by a sudden desire to help others in times of trouble. They come with a variety of skills and may come from within the affected area or from outside the area.
- Spontaneous (emergent) volunteers (from within affected area) are previously unaffiliated volunteers who live in or near the affected area. These volunteers may be friends or relatives of disaster victims in the area.
- Spontaneous volunteers (from outside of affected area) are previously unaffiliated volunteers who are coming to help from outside of the stricken area.

NHCH's process will allow for the emergency privileging of additional providers, in the event of activation of the hospital Emergency Operations Plan.

- Providers who request disaster credentialing must be currently licensed practitioners who maintain equivalent privileges at another facility. Privileges requested should be consistent with those currently in place in the appropriate department and specialty at the provider's "home" hospital.
- Providers presenting to NHCH to assist during a disaster who are not currently credentialed at this facility will be sent to the Medical Staff Services Professional (MSSP) for completion of the disaster privileging process. In the absence of the MSSP the alternate will be the Executive Committee of Medical Services (ECOMS) Chair or the Operations Section Chief.
- The privileges will be effective immediately and continue through the completion of the patient care needs or until the orderly transfer of the patient's care to another properly credentialed provider can be accomplished.

- Disaster Privileging Kits will be located in the MSSP's office (Bldg. 1750 Rm# 218) to be used in the manpower pools and will include the following:
  - Disaster Privileging Process
  - Emergency Privileges Form
  - Demographic Spreadsheet

  Sample Demographic Sheet: (3x5 index card)

  Today's Date:

  LIP full Name **Contact #:**

  Employer: **Employer#:**

  Specialty: **State of License & #:**

  Where assigned during disaster:

- Identification requirements for providers requesting disaster privileging include a valid government issued photo identification and at least one of the following methods of identification:
  - A current picture identification card from a healthcare organization that clearly identifies professional designation.
  - A current license to practice (original, not a copy).
  - Primary source verification of licensure.
  - Identification indicating that the individual is a member of a Disaster Medical Assistance Team (DMAT), the Medical Reserve Corps (MRC), the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP), or other recognized state or federal response organization or group.
  - Identification indicating that the individual has been granted authority by a government entity to provide patient care, treatment, or services in disaster circumstances.
  - Confirmation by a licensed independent practitioner currently privileged by the hospital or by a staff member with personal knowledge of the volunteer practitioner's ability to act as a licensed independent practitioner during a disaster. (Note:

Although not the best choice to use in an emergency, it is accepted by the Joint Commission.)

Planning Factors and Considerations

Public Awareness

The NHCH EM Program shall ensure the issues of volunteer services during an emergency are addressed within the Public Awareness efforts. Public awareness should include the following steps:

- Affiliate before showing up. Instead of arriving unexpectedly in a disaster-affected area, volunteers should register with a recognized voluntary agency active in disaster. Most of these organizations are members of VOAD (discussed above). If a VOAD partner is not possible, volunteers should register with a local volunteer center active in the area.
- Prepare for self-sufficiency. Commonly, there are inadequate facilities for feeding, housing, personal hygiene, and health / medical needs for unaffiliated volunteers. Therefore, it is best for volunteers to be attached with a recognized agency as the first step in involvement.
- Be patient, flexible, and prepared to step into a variety of roles, depending on current or sudden needs. Volunteers expecting to enter a relief effort in a certain capacity will often be disappointed. Sometimes a volunteer's unique talents are not immediately needed.
- Know the liability situation. A volunteer working in the response effort that is not registered with a voluntary agency should assume that all liability is with the volunteer as an individual. Those officially registered / affiliated with voluntary agencies or local government may be covered under their organizations' (or jurisdictions') insurance or worker's compensation program.
- Remember that the use of volunteers is a coordinated process by which people with abilities, skills, and/or training are assigned to special tasks. Volunteers are most useful when they are able to do the right thing at the right time. That is, they are used as part of a plan.
- Be committed to the response effort. Response and recovery work is often dirty, monotonous, mundane, and unglamorous. There is little individual recognition, yet, volunteering in any disaster can be an overall rewarding experience. Volunteers should be committed to work under such

conditions and fit within plans that are coordinated by the volunteer agencies.

Other Considerations:

- There is an established and verified need for volunteers, who are supplemental resources for facilitating successful recovery efforts in a community impacted by a disaster.
- Because VOAD groups must be collaborative and depend on one another for resources and referrals, a strategic and coordinated distribution of volunteers is preferred.
- All volunteers must be screened as part of an ongoing process; screening is done by individual agencies to various degrees, using a range of methods.
- All offers of volunteer services not accepted by the original recipient of the offer should be referred to a central point for wider consideration. Volunteers may come from within the affected area. They may also come from the region, state, other parts of the country, or from other countries.
- Volunteers deserve to be treated with dignity and respect because of the competence and spirit they bring to the response and recovery effort.
- Volunteers who are not initially necessary when they arrive early in a response may provide valuable assistance later in the response or during the recovery phase of an incident as the needs evolve.
- A volunteer assistance POC may be available even if volunteers are not required, to engage volunteers and convey the situation and direct potential volunteers to other organizations like ARC and NMCRS.
- Emergency managers and voluntary agencies must practice collaboration and interdependency during all phases of the disaster relief cycle.
- Representatives from local, state, federal governments and from VOADs play an instrumental part in the development, maintenance, and implementation of the Volunteer and Donations Management System.

While others in the organization may have primary responsibility for the items below, the Volunteer Disaster Management Team Leader should be cognizant of them, understand their importance, and be prepared to assist others with collecting information or maintaining records relating to them.

Liability: Reference (b) discusses immunity from personal liability for those who volunteer for nonprofit organizations.

Volunteers may not be liable for harm if they were acting within the scope of the volunteer activity; they were properly licensed (if necessary); the harm was not caused by willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the claimant; and the harm was not caused by a volunteer operating a vehicle, vessel, or aircraft.

General Guidance

All licensed independent practitioner (LIP) volunteers are required to complete the Disaster (Emergency) Clinical Privileges Form prior to rendering care and treatment to patients. In the event the Commanding Officer is unavailable to grant Disaster (Emergency) Clinical Privileges, should a disaster/emergency situation occur, he/she may delegate authorization to endorse clinical privileges to certain "designees." The following order of designees is authorized to endorse the Disaster (Emergency) Clinical Privileges Form:

- Executive Officer
- Advisor, Credentials Review Board
- Director for Health Services
- The attending medical officer (if the above designees are unavailable).

The designee is responsible to view the LIP volunteer's assigned volunteer badge, picture identification, and a current unrestricted dental/medical/nursing license containing a current expiration date. When the disaster/emergency event has ended, the privileges will terminate immediately. The designee is also responsible to complete an evaluation, to document the LIP volunteer's patient care and clinical skills. Credentialing guidance and paperwork can be found on the NHCH SharePoint site:

NHCH SharePoint > Command Suite > ECOMS > Credentials > All Site Content-Everything

NHCH SharePoint > Command Suite > ECOMS > Credentials > Practitioners & Providers Staff Listing (Location & Status) If you need to know where they're located and if you click on their name it'll show what procedures they're approved/not approved to do.

NHCH SharePoint > Command Suite > ECOMS > Credentials > Dental (Privileged Practitioners) Credentials Forms-Dental PAR is located on this page, along with privilege sheets, forms, etc.

NHCH SharePoint > Command Suite > ECOMS > Credentials > Medical (Privileged Practitioners) Credentials Forms-Medical PAR is located on this page, along with privilege sheets, forms, etc.

All Emergency paperwork (originals) will be forwarded to the Medical Staff Services Professional Affairs Division (Code 0H2) for disposition.

APPENDIX 10: Hanalei to Ha`ena Community Disaster Resilience Committee's Communications Plan

Finalization steps:

- Update Appendix pertinent to NS Kaua`i (Tad to add NS Kaua`i Frequencies)
- Streamline language and terminology (EOC vs. LCC, IMT, etc.)
- Reduce repetitive text, carve out appendix as user guides/references
- FInalize Communications Framework & Hierarchy
- Test Plan in TTX

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1. Introduction

Scope & Purpose

Coordination of efforts before, during and after a disaster are dependent upon effective communications; this plan attempts to develop the communications disaster plan portion of the Hanalei to Ha`ena Community Disaster Resilience Plan. To do this, this plan aims to identify communication gaps and offer solutions to these through an inventory of local equipment, infrastructure and management resources and networks, promoting local capacity and collaboration with relief agencies.

Thus, the goal of this Emergency Communications Plan is to provide amateur and alternative radio communications from the communities of Hanalei to Ha`ena, before, during or after an

emergency or disaster, to supplement existing communications or when normal communications have failed or are about to fail.

The overarching objectives of this plan include:

1. To provide written guidelines for conducting HAM radio emergency communications on behalf of public safety, public service and disaster relief agencies in coordination with RACES and the Committee; and,
2. To provide written guidance for Committee disaster volunteer communications to support localized disaster response and relief coordination.

Plan Overview

Emergency Communications is a function area within the Hanalei to Ha`ena Community Disaster Resilience Plan via the Working Hui—Emergency Communications & Logistics. Communications in support of a natural or man-made disaster is derived from the following sources:

- Commercial communications (land line, cellular, internet, email)
- Dedicated radio networks, as identified through the Committee
- Available satellite communications (SATPHONE) systems
- Warning sirens
- HAM/Amateur radio

The Communications Plan provides written guidance for provisioning emergency communications equipment, coordinates procedures for efficient use of communication systems, and establishes communications priorities during emergencies.

Assumptions & Limitations

This plan applies to emergencies requiring the activation of the Disaster Plan. Communications during a disaster are generally limited due to disruptions to the supporting communications infrastructure. Though priorities are established within this annex, it is understood that some of the priority systems may be unavailable, and that without adequate redundancy in existing communications systems various departments and response organizations may lose connectivity.

Emergency management and emergency response organizations (to include first responders) will utilize “plain language” when communicating with other agencies during a disaster to ensure clear communications with all entities.

2. Roles & Responsibilities

The Emergency Communications & Logistics Subcommittee will:

1. Be prepared with needed materials & supplies (see supporting documentation for these lists) and list availability for deployment or standing by in the event of an emergency/disaster.
2. Follow the pre-determined communications hierarchy in support of the ’s overarching disaster response and relief efforts (see following section for guidance).

3. Maintain situational awareness through pre-identified emergency alert, early warning and communications systems.
4. Stand up, run and stand down 's local emergency operations center.
5. Receive messages (e.g. situation reports (SITREPs) damage reports, severe weather reports, requests for assistance, etc.) from agencies if normal communications failed and pass these reports to the addressed agency/person.
6. Maintain communications between shelters and the county emergency operations center (EOC) and State EOC.
7. Move messages forward to addressed individual or agency.
8. Provide a trained response team of licensed amateur radio operators to operate amateur radios in activated shelters, police stations, fire stations, EMS stations, and with other agencies when requested, especially when normal communications have failed or may fail.
9. Coordinate the development of Emergency Communications procedures with all partners.
10. Ensure all Hazard Specific Appendices address Emergency Communications.
11. Ensure Emergency Communications are exercised in all EM related exercises and training events.
12. When necessary, initiate the activation of Emergency Communications.
13. Responsible for effective communications when dealing with incidents within jurisdiction at the onset of any disaster.
14. Be familiar with and utilize all communication assets required to ensure timely and efficient reporting of such incidents.
15. Include a communications annex in the Emergency Command Center (ECC) Standard Operating Procedures (SOP) covering the following issues:
    a. Updated listing of emergency contact numbers for designated critical staff,
    b. Coordinate with the Honolulu Department of Emergency management (DEM) to identify and maintain a current list of frequencies, call signs and talk groups
    c. Share information with emergency agencies and critical partners
    d. Schedule of communication equipment checks
16. Ensure all communications equipment remains operational.

Concept of Operations

Phase 1: Preparedness
IMT shall ensure that emergency communication capabilities are compatible and that they are exercised in the environment consistent with in the Hanalei to Ha`ena Community Disaster Resilience Plan. Emergency and First Responders will exercise various communication methods to the maximum extent possible when exercising response and recovery capabilities.
Phase 2: Response/Mobilization & Shelter Activation
Phase 3: Relief transition/Demobilization

Reporting Requirements (TBD)

- Acquire pre-made disaster situation reports, ICS forms, shelter reports, etc. for use with and RACES HAM operators
- Establish protocol for the timing of communication for each type of information in various situations? As needed? Every 15 minutes? Daily situation reports?

3. Communications Framework, Hierarchy, Policies, Protocols

Types of Communication Mechanisms:

- Land line phones
- Cell phones (calls, texts, email)
- Nixel emergency texting
- PDC EMOPS
- Social Media
- HAM radios
- Radio
- News/Television
- Email
- Communications Boards (post paper announcements)
- Verbal communications/announcements
- NWS weather radio
- Other?
- several weather apps, Disaster Alert from PDC, the Tsunami Evac free app from C&C of Honolulu, several of the American Red Cross apps, i.e., First Aid, Shelter View, Hurricane, also the iTriage and Disaster Survival Guide. They should also subscripe to the Hawann News Now and KHON2 free apps for notifications.

Table 1. Communications Framework

Type of Information & Purpose of Communications	Level of Urgency	Communications Mechanisms (Primary, Secondary, Tertiary); Incoming vs. Pushed-out Information
Vertical communication between volunteers to coordinate disaster response & relief activities	Low (on-alert pre-disaster coordination activities) Medium High	FB, yahoo group, email listserv, text group, etc. Cell, FRS Radio, HAM radio Cell, FRS Radio, HAM radio
From COMMITTEE to DEM/SCD EOCs (e.g. of on-the-ground damage assessment and needs information such as through Red Cross disaster assessments, photos, verbal reports to emergency personnel)	Low (non-emergency status updates/reports/RFI) i.e. health and welfare, shelter comms, DA, or requests for assistance Medium (urgent but non-emergency status updates/reports/RFI) High (emergency/life threatening info)	Cell, Email HAM radio HAM radio
Between residents of local		family and neighborhood

resources, shelters, lost family members		emergency phone trees, emergency and communications plans; Red Cross family reunification
Agency-to-local communication of **resources being deployed & status of services** (e.g. electricity and water, whether water is safe to drink, when shelters will open or close and where, etc)		
Communications between committee and communities		FRS Radio, in-person meeting places

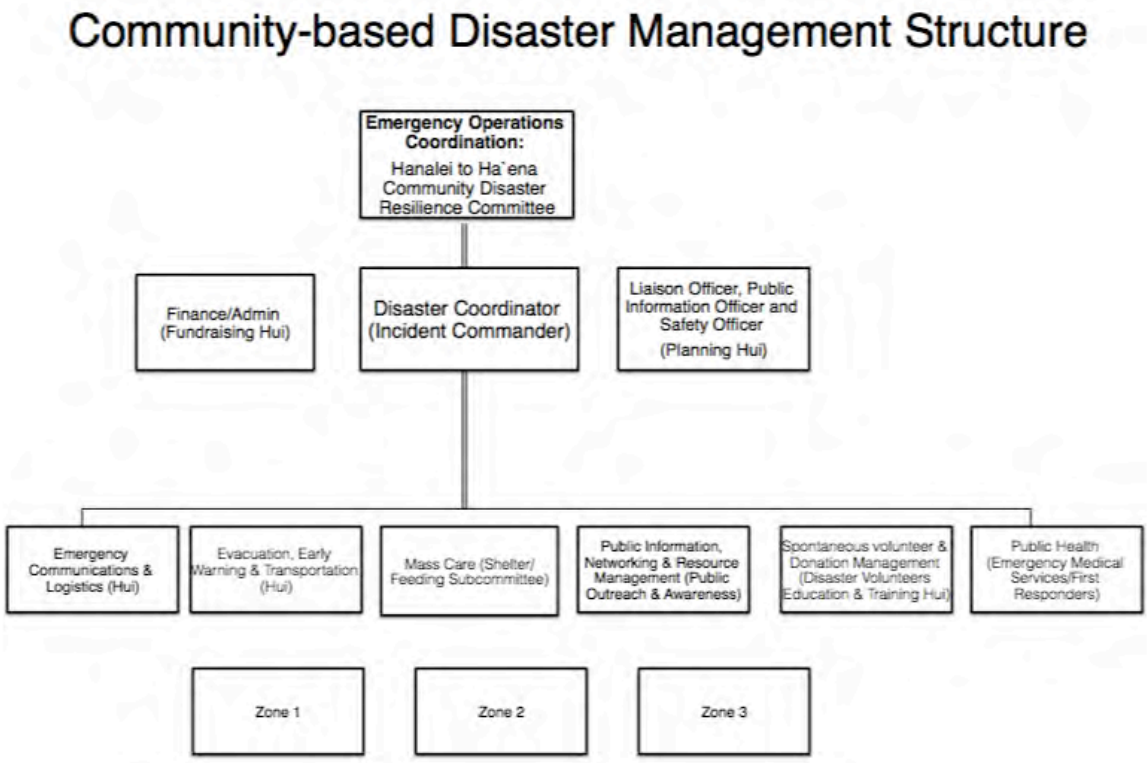
Committee Local EOC/ Local Communications Center
Located at Hanalei School outside under a tent or inside (room TBD post-disaster/emergency); staged near DEM's alternate EOC where 1-2 COMMITTEE HAM radio operators and RACES members will be staged to coordinate Committee and DEM/SCD activities. This location may change to the following alternate sites: 1) TBD and 2) TBD depending on damages to the High School or accessibility issues. During the disaster, central communications will be housed with the ***Community Disaster Commander***.

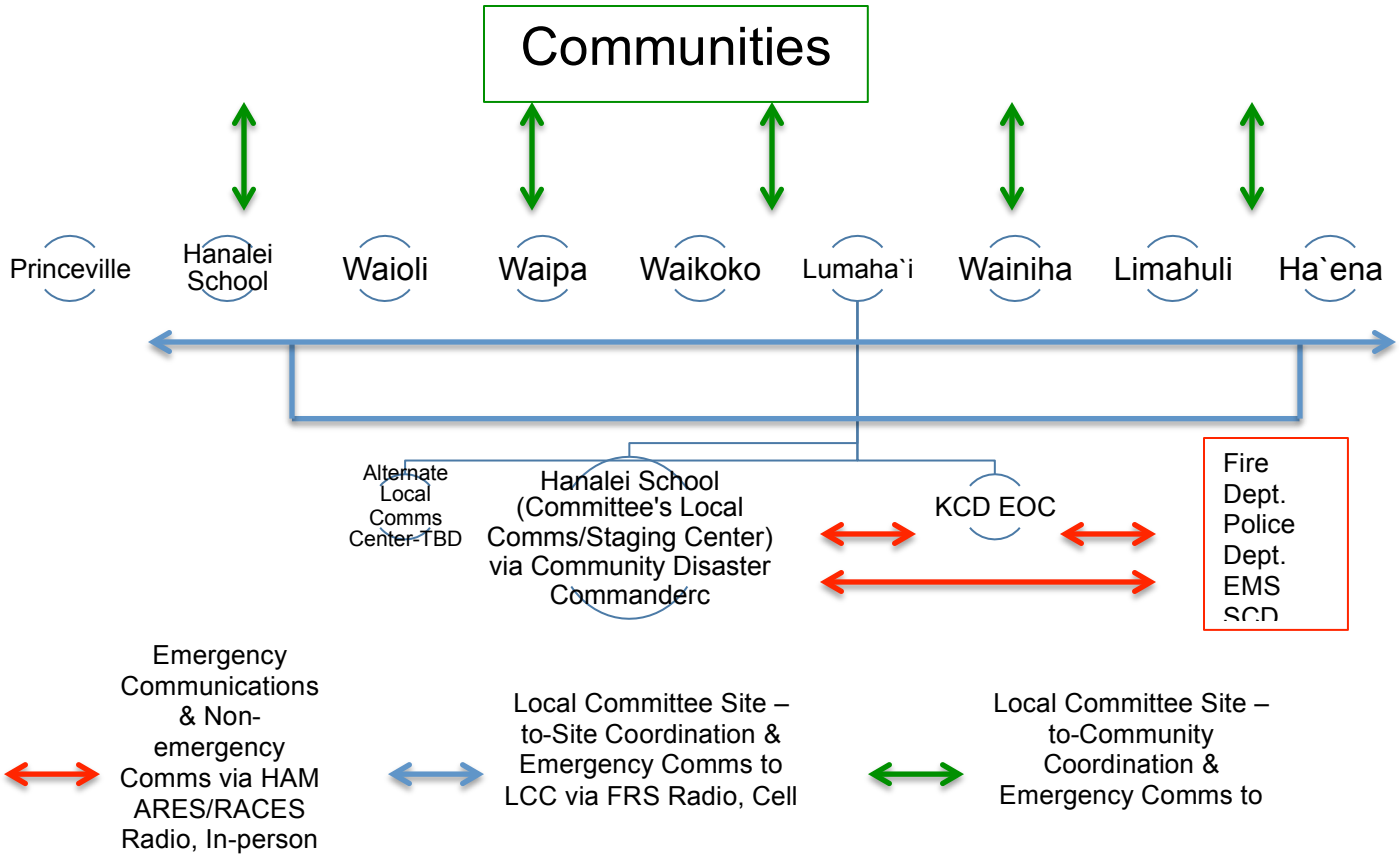
Staging of HAM radio equipment and operators (TBD)
Staging of local communications boards like at community centers, grocery stores, etc.

The Committee EOC/LCC will provide clear, concise, accurate and timely communication of information is essential to maintain operational Command and Control (C2) within the ECC. Information not passed properly may result in mission failure. Management of the means of communication and the use of standard phraseology and procedures is critical. The following communications capabilities are maintained in the ECC:

- Voice, landline, telephone is the primary means of communication.
    - The primary number for the ECC is:
    - (808) XXX-XXXX. This number is reserved for official use only and shall not be used for personal phone calls.
- The phone shall be answered, "North Shore Emergency Command Center, [your title and name], this is an open line, how may I help you?"
- FAX: A fax machine is provided for the transfer of documents. The main fax number is: (808) XXX-XXXX. This fax shall only be used to process official information.
- VTC: The ECC does not have VTC capability.

Communications Hierarchy





Notes:

Communications Design for Neighborhood Communications Network/s
Connectors can be two-way channels of communication; Next Steps are to identify for every connector between each stakeholder group the Methods (how), Timing (when), and Who is responsible for communication of What information (and in what order? Is information fluid at all times between various stakeholders, or is there a hierarchy of communication?)

4. Supplies & Considerations

The first consideration to take into account is **where** the neighborhood communications will **be directed**; i.e. directly to a volunteer radio operator participating with one of emergency communications networks such as ARES/RACES, or to an intermediary operator that will relay the communications. Obviously, the best and fastest communications will come from having an emergency communications network associated radio operator in your own neighborhood. Unfortunately, the perpetuation of the inclusion of covenants and deed restrictions against outdoor antennas in recent years has caused many neighborhoods not to have this invaluable emergency resource available to them, since the operators cannot have the antennas needed to assure competent communications. Emergency communications personnel that do live in such neighborhoods are often the first to leave then neighborhood in advance of, or directly after an emergency to man a station with a local hospital, or other public or private agency so that their training and resources can be used effectively. Planners will have to determine where the closest emergency radio network is in relation to their neighborhood, and make the proper choice of equipment and communications arrangements.

The next consideration will be the radio equipment to be used within the neighborhood itself. Emergency radios should be chosen based upon the function they are to perform. Radios should be chosen that provide clear communications, but, if used for intra/inter neighborhood communications, should be of limited range so that they do not interfere with the communications of other, nearby communities. Useful features should be universally available, and persons that are in a neighborhood other than their own at the time of an emergency (i.e., at work, visiting, shopping, etc.) will have the best chance for compatibility of organized emergency communications in that area. Equally important is the ability for neighborhood radios to share charging facilities and interchange rechargeable battery packs when needed in an emergency. Normally different brands and even different models use different charger and/or battery pack configurations. For the same reasons that emergency agencies insist on single-source compatibility for their systems, we advise neighborhoods to do likewise.

Key features we feel to be important considerations:
· Full 14 channels for FRS Radios, 15 for GMRS (1-7 shared with FRS)
· Water Resistant/Weatherproof Design (for adverse weather conditions)
· 38 CTCSS Codes
· Key Lock
· Selectable call tones
· Programmable Channel Scan so that multiple channels can be monitored
· Hands-Free (VOX) operation with selectable sensitivity
· NOAA Weather Alert Radio
· Rechargeable NiMH Battery operation

Communication Equipment:

- Current frequency assignments and talk groups for radios used within radios are maintained within the ECC SOP and will posted in the ECC.
- Software. Computer systems, monitors, printers, and ancillary equipment provide access to Disaster Management software, Common Operational Picture (COP) and Situational Awareness, real-time chat, E-mail, and the World-wide web (Internet), allowing maximum communications capability. Although these systems are extremely capable and versatile, they are inherently prone to failure during emergency situations.

Commercial Telecommunication devices:

Affordable wireless technology has made many types of commercial and government issued devices irreplaceable in the communications spectrum in recent years. Devices such as cellular phones, handheld electronic devices, and portable computers are inexpensive and effective as communications mediums. Although these devices are sometimes seen as primary means of communications, they are particularly prone to disruptions in services during and immediately following significant events and emergency situations.

Communication System Priorities - Prior to the IMT developing the communication plan for the incident response, the initial communication system priorities until updated by the ECC are:

- Land Line / Cellular Phone
- Hand Held / HAM radio
- FAX
- SATPHONE

- IMT - Upon activation of the ECC, the IMT will utilize the communication priorities set forth in this Annex to initiate communications. The priorities established in this Annex will remain as the Communication System Priorities until the Communications Plan is drafted. (ICS Form 205)
- The IMT will establish the Communications Plan. Within one hour of ECC activation, the Communication Plan shall be implemented and distributed to all partners involved in the response and recovery. If at any time communications are completely or partially lost with response and recovery partners, the Communications Plan will be updated and redistributed.
- First and Emergency Responders - During a disaster in which the Command Net has been activated plain language will be utilized by all responders. The ECC will maintain the communication link and coordination during routine first responder actions.

Family-Family/Neighborhood Communications—FRS Family Radio Service Channel Plan:
Establishment of a frequency or channel plan for the neighborhood, which must not interfere with the communications of adjacent affected neighborhoods, but must take into account the various kinds of communications that will be taking place during an emergency.

This includes frequencies / channels used to/for:
· Communicating to neighborhood emergency coordinator
· Communications within/between families
· Communications relating to Search/Rescue efforts
· Communications relating to Evacuation/Relief & health/welfare efforts

Description
This system recommends Family Service Radio (FRS) walkie-talkies for each family in the neighborhood. These radios are relatively inexpensive, provide clear, crisp, static free communications, and are limited in range (typically in an urban area) to 1/2 to 3/4 of a mile in range, and offer up to 14 channels upon which to communicate. This will serve to lessen the congestion that serves to cripple communications. Additionally, these types of radios are already in wide usage for camping trips, boating, skiing, etc. for families to communicate between themselves.

Channel Plan
A "channel plan" is developed to limit the amount of communications for each purpose, based on using 3-4 channels, thus leaving (or coordinating) channels for use by adjacent neighborhoods for their own communications.

· Channel 2 - Emergency messages to be relayed to the neighborhood coordinator, or designated communications coordinators (there should always be a backup communicator designated in case the primary assignee is incapacitated.
· Channel 8 - Intra/Inter Family Communications
· Channel 9 - Neighborhood light search and rescue efforts
· Channel 10 - Evacuation/Relief/Health/Welfare efforts
· Channel 5 - Secondary Emergency Message Channel - Assigned to one side of the neighborhood that is close to another neighborhood using Channel 5 as their primary Emergency channel. This should only be used when one cannot reach their primary neighborhood coordinator(s).
· Channel 6 - Secondary Emergency Message Channel - Assigned to the other side of the neighborhood that is close to another neighborhood using Channel 6 as their primary Emergency channel. This should only be used when one cannot reach their primary neighborhood coordinator(s).

Note that whenever possible, channels 1-7 should be used for Emergency communications that are to be relayed. These channels are universally accessible by General Mobile Radio Service, so can be accessed by each. Channel 1 (FRS) should be further reserved as a 'General' emergency channel common to all areas such that coordinators and/or other emergency services, agencies or organizations entering a defined neighborhood area can receive information including the main frequency (channel) assignments for that area. Other internal neighborhood communications can
be assigned channels 8-14.

Neighborhood Coordinators/ Committee Responders—GMRS Radios Plan:

Neighborhood coordinators should be equipped with General Mobile Radio Service (GMRS) radios when possible. As indicated, these radios can communicate on the first 7 channels of FRS radio, plus 8 additional frequencies. These radios have a farther effective range (typically reliable to 2 miles in urban areas, and farther using repeater systems). Use of these should be limited so as not to cause undue frequency congestion. Neighborhood coordinators will receive emergency messages on channel 2 of their radio, and communicate it to their assigned participating amateur radio operator. In this case it is assumed that the operator is an ARES/RACES operator with direct radio contact with law enforcement, fire/rescue, medical personnel, etc., and has agreed to monitor Channel 8 of GMRS radio as a primary channel, and

Channel 2 (both FRS and GMRS) as a secondary frequency. Since the ham operator is already involved in emergency message relaying, he/she is most likely monitoring several other radios/frequencies, and will potentially be receiving messages from multiple neighborhood coordinators via the GMRS/FRS link. To insure quick, concise communications, a communications protocol has been established to standardize (and thus simplify) the message handling process. This protocol includes contacting the operator by using the appropriate call signs, and the channel and service being used for transmission, so that the ham operator will know which radio to use. (It can be confusing with several frequencies being monitored.)

The above assumes a fairly typical scenario. Obviously it would be better to have an amateur radio operator in the neighborhood acting as the communications coordinator to provide faster, more direct access to emergency responders. A viable alternative which we fully support, is for the neighborhood emergency preparedness coordinator or communications coordinator themselves become 'ham' operators. Licensing is now easier than ever, and no longer requires knowledge of morse code to get a "technician" class license, which has the privileges of voice communications on the frequencies, used by emergency communications. These personnel could then utilize more powerful handi-talkies to communicate directly into the network. (They should also join, participate and train with the ARES/RACES organization.) While they would not have the range and versatility of base station ham radio equipment, using a handheld and/or mobile radio would not violate neighborhood restrictions on antennas.

One final area in the realm of communications to be discussed is communicating with emergency responders once the arrive in the area. It is critical that they waste as little time as possible. Rather than having to implement a full house-to-house search for victims, they should be apprised of the current head-count by the neighborhood emergency coordinator. Additionally, a simple, yet very effective means of communication is for every family to have a sign, imprinted on one side as a red sign with the word HELP, and the other side green with the word 'OK'. This appropriate side should be displayed immediately after an emergency in an area easily visible from the street. Emergency personnel can then quickly assess where available resources need to be allocated without wasting critical time.

APPENDIX

APPENDIX A. Planning Considerations (NEEDS UPDATING WITH NORTH SHORE KAUA`I INFO)

1. The information contained in this plan is to be used as a guide. It is not the intent of this plan to limit the formulation of county level plans by an EC who is more familiar with the local requirements and conditions.
2. The Windward Oahu ARES® will interoperate with City & County of Honolulu Department of Emergency Management (DEM) RACES and Hawaii State Civil Defense (SCD) RACES in exercises and in emergencies/disasters. ARES® members are encouraged to also be RACES members.
3. The authenticity of all messages is the sole responsibility of the originating authority.
4. Although a radio operator may report conditions as he observes them, unless otherwise qualified, such observations are to be considered those of a lay person and evaluated in that context.
5. This plan is available to any licensed radio amateur who has a sincere desire to serve their community in times of disaster or emergency.
6. The Windward Oahu EC should maintain close working liaison with emergency/disaster agencies that could require emergency communications.
7. The Windward Oahu EC and AEC should maintain a list of amateur radio operators who live in Windward Oahu who are willing to participate in communications practices and exercises and are also willing to provide amateur radio communications in case of a disaster or pending disaster when requested.

III. EXECUTION.

A. Activation of the Plan. The Windward Oahu Emergency and Shelter Communications Plan, also called the Windward Communications Plan, is self-alerting and may be partially or fully alerted as necessary to meet any contingency. County, Windward Oahu and State RACES VHF and UHF repeaters are commonly used for county or State emergency nets. Little special alerting is required except in unusual situations. Any amateur may use a repeater at any time to summon help. County or district ARES®/RACES officials may put county or State frequencies on emergency status at any time. Upon awareness or notification that a communication emergency exists, the EC should activate the Windward Oahu net and prepared to activate this Windward Communications Plan. The Net Control Station (NCS) can be any amateur radio operator who initially activates the net until a designated person or the EC or AEC takes over.

Windward Oahu HF nets may be used at any time by ARES® members or officials, consistent with other emergency communications that may be then in progress on the net.

Widespread emergencies may involve several counties. In such a case the SEC or DEC may invoke any Amateur Radio Emergency Service® /Radio Amateur Civil Emergency Service (ARES®/RACES) alert as may be appropriate. See Appendix A - Oahu ARES® Contacts.

B. Concept of Operations.

1. Phase 1 – Operational Preparedness. Windward Oahu amateur radio operators should have their amateur radio and personal go kits up to date and ready to be deployed when notified. See Appendix B - Go Kit. Radio operators should already have an updated

personal or family disaster plan as well as their person emergency kits. If you or your family is not prepared, you are not prepared to do your job as a radio operator during an emergency or disaster.

2. Phase 2 – General Mobilization.

All licensed amateurs, whether or not members of American Radio Relay League (ARRL), ARES®, or RACES can respond to this mobilization plan.

If a local or wide scale emergency/disaster is known to exist or is imminent, the immediate reaction of every licensed amateur member and official in Windward Oahu will be to monitor the appropriate county or State nets. Amateurs outside the affected areas will begin monitoring frequencies used by the emergency nets in the affected area.

The EC or AEC will activate only those parts of the Windward Communication Plan as needed.

The EC or AEC will notify the District Emergency Coordinator (DEC) and the SEC by the fastest and best means available. The report will include a description of the situation, cause of the emergency (if known), estimate of communication loss, and the destination(s) of important radio traffic that will be handled.

The EC or AEC determines the communication needs of the emergency at hand. If the EC or AEC determines the need for additional communications assistance, he/she will contact the DEC or, if the DEC is unavailable, contact the SEC.

The primary Windward Oahu repeater to be used in an activation will be the 147.000 (+) PL 103.5, the Puu Papaa repeater. The alternate VHF repeater will be the 146.660 (-), the Olomana repeater. The primary simplex frequency will be 146.505. The 444.375 (+) PL 114.8 will be the alternate command and control repeater. Other Windward Oahu repeaters both VHF and UHF and simplex frequencies may be activated to coordinate tactical messages in selected areas if necessary. The 444.325 (+) PL 103.5 repeater which is linked with several on Oahu via the Allstar system will be used to communicate with State RACES and DEM RACES at the State and DEM EOCs (see Appendix C – Windward Oahu Frequencies) when there is an activation. In case the VHF and UHF repeaters are not functional due to lack of power or infrastructure damages, the respective VHF and UHF frequencies can be utilized using the output frequency of the repeaters.

If HF is utilized, the primary frequencies will be 7.090 USB for MT63-1KL digital messages, 7.098 LSB (primary frequency for 40M), 7.280 LSB (alternate), 3.888 LSB (especially during the evenings if 40M is not operational), and 5.357.0 USB Channel 3 (for 60M). Use Near Vertical Incident Skywave (NVIS) antenna for 40M and 75M for better propagation for emergency HF used (dipole located 8 – 10 feet above ground provides a very high radiation angle that is good for approximately 250 mile radius). Please note that if you need to contact an agency or group, you need to get to their primary frequencies whether it is VHF, UHF, or HF. For HF use outside of Windward Oahu see Appendix C - Windward Oahu Frequencies.

The first amateur radio operator will call on the 147.000 (+) repeater and will be the Net Control Station (NCS) until he is relieved by the Windward Oahu EC, AEC or another designated radio operator.

If the emergency operation dictates very rapid communications, it is permissible to operate in a "tactical" format which would allow for informal message format and station identifiers. However, these station identifiers are not substitutes for station call signs. If tactical callsigns are used, amateur radio operators should end their transmission with their FCC callsigns. Amateurs must always meet the identification requirements of Part 97.

In other operations, formal traffic should be written using ICS Form 213 (see Appendix F - ICS Form 213). If possible, all formal messages should be authorized and signed by the person who assumes responsibility for their contents (e.g., Shelter Manager or designee, Incident Commander (IC), Logistics Chief, etc.). When possible, digital ICS Form 213 will be used under MT63-2KL or -1KL. It is quicker, faster and accurate, especially, if the message is long and contains a lot of detail information which will make it difficult to send a formal voice message. Digital messages (Fldigi MT63-2KL or 1KL, using the ICS-213 in flmsg format) will be sent on simplex frequencies or on a dedicated repeater. Digital messages can be sent on linked repeaters. However, the digital tones may affect the linking of the linked repeaters.

All nets will operate as a "directed net." Stations will direct their transmissions to the NCS and not converse directly with other stations unless permission is given by the NCS. The NCS may direct stations to go on a certain repeater or a simplex frequency to communicate with each other and when communications are completed, return to the directed net. The directed net will be used for command and control, to pass information on the incident/disaster, give situation reports, issue field assignments, request status reports of hams on the net, etc.

The EC, or if he is not available, the AEC will be in charge of the overall operation of the communications emergency at hand. If neither the EC nor the AEC are available, the SEC will temporarily appoint an amateur radio operator to the position.

Phase 2 - Shelter Activation.

If shelters are activated and amateur radio shelter operators are requested, amateur radio operators assigned to hub shelters will be activated by the Windward Oahu EC or AEC, see Appendix E – Hub Shelters and Assigned Satellite Shelters.

Once shelter radio operators are notified, they will report to their assigned shelter and report to the general population shelter manager or site supervisor (generally the American Red Cross [ARC] shelter manager). For hub shelters, they will also need to introduce themselves to the health needs shelter and pet shelter managers. Introduce yourselves as shelter radio operators, using the letter of introduction, see Appendix F - Shelter Radio Operator Letter of Introduction. Health needs and pet shelter managers may also need to get messages out to DEM on their status reports as well.

Work with the shelter manager or site supervisor on a radio room/site that is away and separated from the shelter population. Setup radio equipment and report into the primary repeater or the primary simplex frequency as required. Request volunteers to help with message handling (a minimum of two teenagers, females are usually most helpful). They can help log, listen to messages, be runners, or if Family Radio Service (FRS) radios are available by the radio operator, issue both FRS radios to the runners. Have one runner stay with the radio operator and the other runner should be assigned to the shelter manager or site manager. This will help with communications between the radio operator and the shelter manager / site

manager. This will also help if a satellite shelter does not have an amateur radio operator assigned and a FRS radio is available at the satellite shelter. See Appendix C - Frequencies.

Also the shelter radio operator may be working with couriers who may be members of a motorcycle club (Blue Knights) or bicycle club who have a signed Memorandum of Understanding or Agreement with the Kailua Disaster Preparedness Subcommittee to run messages between the hub shelters and surrounding satellite shelters when no other means of communications are available. These couriers will first report to hub shelters for further instructions by the hub shelter radio operator. These messages may need to be forwarded via amateur radio to their destination and visa versa.

There will not be sufficient number of amateur radio operators to be assigned to all shelters and to other sites. Hub shelters will be assigned radio operators first. Any additional radio operators will then the assigned to satellite shelters. Satellite shelter radio operators will report in to the closest hub shelter. If radio operators are not available, FRS radios or couriers (motorcyclists or bicyclists may be utilized) between hub and various satellite shelters.

Work with the shelter manager or site manager, as well as the health needs and pet shelter managers to setup a time schedule to report the number of clients in the general population shelter, number of clients in the health needs shelter and the number of dogs, cats, and others pets (if any) in the pet shelters. Normally the shelter reports need to be sent to DEM EOC via amateur radio at approximately 10:00 a.m. and at 10:00 p.m. (reporting time may change). If DEM EOC can not be contacted have it relayed or contact the State EOC via amateur radio operators to relay the report to DEM EOC.

If there are requests from served agencies, e.g., HPD, HFD, EMS, etc. `for amateur radio operators, the Windward Oahu EC or AEC will attempt to assign radio operators to the requesting agency. The protocol for radio operators for a requesting agency will normally come from DEM to the DEM RACES coordinator.

3. Phase 3 – Demobilization.

It is important to secure an emergency operation as promptly as possible. The decision to secure rests with the EC or the AEC based on requirements of the served agencies.

All demobilized amateur radio operator are suggested to submit an after action report on what worked and what can be improved as soon as possible to the Windward Oahu EC.

All demobilized amateur radio operator should also get their go kits ready as soon as possible for the next activation.

After termination of operations, the EC will send the SEC a written after action report.

1. Served Agencies

a. City & County of Honolulu Department of Emergency Management. The county DEM is located on Oahu. DEM RACES provides emergency amateur radio communications when activated by DEM.

b. American Red Cross. The ARC assists with shelter manning with their trained shelter volunteers. Under this Windward Communications plan, Windward Oahu radio operators will provide shelter communications at hub shelters and if there are additional available radio

operators, at satellite shelters (shelters near a hub shelter). Shelter radio operators will report to the Shelter Manager or site supervisor and will communicate messages from the shelter manager or site supervisor, or other designated shelter official(s) as authorized by the shelter manager or site supervisor.

c. Department of Health, Medical Reserve Corps. The Medical Reserve Corps (MRC) is the volunteer group under the guidance of the Hawaii State Department of Health (DOH). These trained volunteers, with and without medical training, will assist DOH public health nurses with the health needs clients in special health needs shelters.

d. Hawaiian Humane Society. This organization will provide trained volunteers who will man pet shelters. Pet owners will need to provide a pet carrier and food and water for each of their dogs and cats.

e. Honolulu Police Department. HPD may request amateur radio operators at the Kaneohe, Kailua or Kahuku Police substations if their radio communications system is no longer effective.

f. Honolulu Fire Department. HFD may also request amateur radio operators at the various fire stations located in Waimanalo, Kailua, and Kaneohe areas if their radio communications system is no longer effective.

g. Emergency Medical Service. EMS has ambulances co-located with selected HFD fire stations in Windward Oahu. They may request amateur radio operators at their various sites if their radio communications system is no longer effective.

h. Hawaii State Civil Defense. SCD also has State RACES volunteers who will staff the amateur radio station in the State EOC in Diamond Head Crater.

i. National Weather Service, SKYWARN®. Trained Hams and non-Hams who are trained as SKYWARN® spotters are given a SKYWARN® ID number and phone number to report unusual weather situations to the National Weather Service (NWS). Under this Plan, all amateur radio operators are highly recommended to sign up for SKYWARN® training with the NWS and be registered as a SKYWARN® Spotter.

IV. ADMINISTRATION, RESOURCES, NIMS AND CERTIFICATION

A. Administration. This plan and any updates will be made by the Windward Oahu EC with the help of the Windward Oahu AEC.

B. Resources. All amateur radio communications resources belong to the respective radio operators. All repeaters belong to their owners and have given their verbal approval to use their repeaters for exercises and for emergencies.

C. NIMS and Certification. Windward Oahu ARES members will adopt the National Incident Management System (NIMS) and utilize Incident Command System (ICS) concepts. Certification will be through their primary served agencies (see Appendix H – NIMS Compliancy for additional information).

V. OVERSIGHT, COORDINATING INSTRUCTIONS, AND COMMUNICATIONS.

A. Oversight. Oversight of this plan is the responsibility of the Windward Oahu EC and will be reviewed by the SEC on an annual basis.

B. Coordinating Instructions. This plan is effective for planning and execution upon receipt. It will be distributed to all amateur radio operators involved. A copy of this plan should be kept with the radio operator's go kit.

B. Communications. Land line and cell phones may be the initial use for notification and activation of this plan. However, if a sudden emergency arises, all amateur radio operators should be prepared to turn on their amateur radio and listen for any emergency notification and reports on the primary repeater or primary simplex frequency.

TAB A of FAA _ Sample ECC Communication Plan

COMMUNICATIONS PLAN					Page 1 of
INCIDENT NAME TSUNAMI STRIKE 2014		TIME PREPARED 1200	PREPARED BY (Name and Position)		
OPERATIONAL PERIOD (Time & Date) Through COB Wed 04/16/2014		DATE PREPARED 04/14/2017	APPROVED BY (Name and Position)		
BASIC RADIO CHANNEL UTILIZATION					
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY		ASSIGNEMNT
EMAIL	N/A	Primary	PRI: SEC:		
TELEPHONE (landline or cell)	N/A	Secondary	PRI: SEC:		
HANDHELD RADIO		Tertiary	PRI: SEC:		
HAM RADIO		Tertiary	PRI: SEC:		
COURIER	N/A	AS NEEDED	PRI: SEC:		
FAX	N/A	AS NEEDED	PRI: SEC:		
WEB CONFERENCING	WEB LINK	AS NEEDED	PRI: SEC:		
			PRI: SEC:		
			PRI: SEC:		
			PRI: SEC:		
COMMENTS / NOTES					

ICS Form 205

Hand Held Channel Assignment
&
Distribution List

Chan	Common Name
A1	Local ECC
A2	SITE 1
A3	SITE 2
A4	SITE 3
A5	ROVING

Only use the "XX" channel(s)

Distribution has a total of XX radios

ECC/ROVING	XX
Site 1	XX
Site 4	XX
Site 3	XX
Total	XX

Committee Communications Tree/Call Down List for each Subcommittee

Sub-committee & Position	Name*	Home/Cell telephone	Address & Community	Email	Facebook/ WhatsApp?	Skills/ Resources	Availa-bility

Date initially completed: _____ Responsible Person: _____
Date reviewed: _____ Action: ___ no change ___ amended
Date reviewed: _____ Action: ___ no change ___ amended

*** = Those persons having an * next to their names will serve as the Group Call Down Communication Leaders. They will contact all persons on their group call down list.**

C. Emergency Contact Information Sheet for Key Agencies, Organizations, Groups

Emergency Contact Information Sheet

Instructions: ***This form must be completed upon initial employment in the (School/College/Office) or as directed and reviewed and where necessary updated each fall, spring and summer semester.***

Name: ____________________________ Title: ______________________________

Current mailing address: ____

____

Phone numbers: Home:____
Cell: ____
Pager: ____
Other emergency #:____

Email addresses: UH: _________________________________ @hawaii.edu
Other: ____

****

Personal contact information: in the case of emergency, primary contact:

Name: ____________________________ Relationship to you: _________________
mailing address: ____
____

Phone number: ____

in the case of emergency, secondary contact:

Name: ____________________________ Relationship to you: _________________
mailing address: ____
____

Phone number: ____
Date initially completed: __________________

D. **Family/Neighborhood Emergency Communications Tree**

Homeland Security Family Communications Plan

Your family may not be together when disaster strikes, so plan how you will contact one another and review what you will do in different situations.

Out-of-State Contact Name: Telephone Number:
Email: Telephone Number:

Fill out the following information for each family member and keep it up to date.

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
Date of Birth: Important Medical Information:

Name: Social Security Number:
Date of Birth: Important Medical Information:

Where to go in an emergency. Write down where your family spends the most time: work, school and other places you frequent. Schools, daycare providers, workplaces and apartment buildings should all have site-specific emergency plans.

Home
Address:
Phone Number:
Neighborhood Meeting Place:
Regional Meeting Place:

Work
Address:
Phone Number:
Evacuation Location:

School
Address:
Phone Number:
Evacuation Location:

Work
Address:
Phone Number:
Evacuation Location:

School
Address:
Phone Number:
Evacuation Location:

Other place you frequent:
Address:
Phone Number:
Evacuation Location:

School
Address:
Phone Number:
Evacuation Location:

Other place you frequent:
Address:
Phone Number:
Evacuation Location:

Important Information	Name	Telephone #	Policy #
Doctor(s):			
Other:			
Pharmacist:			
Medical Insurance:			
Homeowners/Rental Insurance:			
Veterinarian/Kennel (for pets):			

Other useful phone numbers: **9–1–1 for emergencies.** Police Non-Emergency Phone #:

Every family member should carry a copy of this important information:

Other Important Phone Numbers & Information:

Family Communications Plan

Contact Name:

Telephone:

Out-of-State Contact Name:

Telephone:

Neighborhood Meeting Place:

Meeting Place Telephone:

Dial 9–1–1 for Emergencies!

< FOLD HERE >

Other Important Phone Numbers & Information:

Family Communications Plan

Contact Name:

Telephone:

Out-of-State Contact Name:

Telephone:

Neighborhood Meeting Place:

Meeting Place Telephone:

Dial 9–1–1 for Emergencies!

< FOLD HERE >

Other Important Phone Numbers & Information:

Family Communications Plan

Contact Name:

Telephone:

Out-of-State Contact Name:

Telephone:

Neighborhood Meeting Place:

Meeting Place Telephone:

Dial 9–1–1 for Emergencies!

Appendix A - Oahu ARES® Contacts
As of 9/30/2012

SECTION EMERGENCY COORDINATOR

Kevin Bogan (AH6QO)
6606 Kahena Place
Honolulu, HI 96825-1016
E-mail: kevin.bogan@gmail.com
Cell: 778-4697
Work: 733-4300, ext. 104

WINDWARD OAHU EMERGENCY COORDINATOR

Clement Jung (KH7HO)
1443 Akialoa Place
Kailua, HI 96734-4237
E-mail: chmjung4@yahoo.com
Cell: 683-8163
Home: 261-2368

WINDWARD OAHU ASSISTANT EMERGENCY COORDINATOR

Richard “Rick” Kimitsuka (KH6OM)
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E-mail: rich_mere@yahoo.com
Cell: 256-5567
Home: 261-1413

OAHU EMERGENCY COORDINATORS

Ron Hashiro (AH6RH)
State RACES Coordinator
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Honolulu, HI 9822-3447
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Work: 948-5349

Robin Liu (AH6CP)
State RACES Assistant Coordinator
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Honolulu, HI 9816
E-mail: robin@aloha.com
Cell: 554-4966
Cell: 354-1368
Jack Tsujimura (KH6DQ)
HealthComm NCS

3597 Kumu Street
Honolulu, HI 96822
E-mail: tsujimur@hawaii.edu
Home: 988-7337
Cell: 864-6384

Bart Aronoff (KH7C)
HealthComm Coordinator
1015 Wilder Avenue, Apt. 305
Honolulu, HI 96822-2640
E-mail: ba@hawaii.rr.com
Cell: 352-3678

CITY & COUNTY DEPARTMENT OF EMERGENCY MANAGEMENT RACES

Chuck Oh (N6NCT)
DEM RACES Coordinator
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Honolulu, HI 96821
E-mail: N6NCT@arrl.net
Cell: 221-3325
Cell: 499-7647 (DEM)

Appendix B - Go Kit

Go Kit, Jump Kit, Ready Kit, whatever you choose to call it, is the list of items that you have packed and ready to go in the event of an activation. Several versions exist and can be found on the internet, from the very simple and obvious, to the very extensive for the Ham. Below is only a suggestion. You should plan for a minimum of a 72 hours kit. Suggest a 7 days go kit, if possible, that can supplement your 72 hour kit. You can use a backpack, a luggage with wheels, a duffel bag or a combination for your personal gear. Your radio gear can be in a Pelican case with wheels, a bag, etc.

Personal equipment:

- Clothes
  - Long pants
  - Shorts
  - Long sleeve shirt (can roll down sleeves for warmth when cold or if mosquitoes are present)
  - T-shirt
  - Warm jacket
  - Extra sox and underwear
  - Rain suit/poncho
  - Large handkerchief or bandana
  - Hat or cap
  - Work gloves
  - Closed toe shoes
  - Extra large handkerchief or bandana
- Bedding
  - Blanket or sleeping bag and/or folding cot
  - Plastic tarp for ground cover and a foam pad if not using a cot
- Food
  - Water, a gallon per day
  - Canned food (that requires no heating) and/or Meals Ready to Eat (MRE) and high energy snacks
  - Hard candy
  - Manual can opener
  - Spoon and knife
  - Cup (which also be used as an eating bowl)
- First Aid / medications / toilet kit
  - First Aid kit
  - Minimum 7 day supply of personal medications
  - Tooth brush and tooth paste
  - Small towel for washing up
  - Comb or brush
  - Deodorant
  - Toilet paper
  - Moist towelettes or Purell (waterless hand wash)
  - Lip balm
  - Sun screen
  - Insect repellent

- Miscellaneous items
    - Spare eyeglasses or contacts and solutions
    - Sun glasses
    - Cash, including small bills and coins to purchase things (electricity may be down; ATM will not function and credit cards can not be used without electricity)
    - Fanny pack/back pack
    - Space blanket
    - Large trash bags
    - Small refillable water bottle
    - Flashlight w/extra batteries (white LED type preferred; does not use as much power)
    - Headlamp
    - Whistle
    - Folding chair

Tools:

- Swiss Army knife and/or Leatherman type multi-tool
- Screwdrivers, Phillips and flat
- Needle nose pliers
- Vise grip
- Crescent adjustable wrench
- Hammer
- Electrical tape
- Volt/Ohm meter
- Duct tape
- Crimper and wire stripper
- Soldering iron w/solder
- Assorted adapters and connectors

Radio equipment:

- Amateur radio license (keep in wallet)
- VHF / UHF radio
    - Handi talkie (HT) preferable a true dual-bander
    - Extended rubber duck antenna for better reception
    - Spare battery packs (charged and AA-cell battery adapter with extra AA batteries)
    - Speaker mic
    - Operator's manual
- And / or
    - Mobile radio (preferable true dual-bander)
    - Operator's manual
    - Extra fuses
    - Switching power supply
    - Minimum 50 feet extension cord
    - Multi-outlet power strip
- Headset with or without boom mic for both HT and mobile radio
- Vertical ¼ wave or larger mag-mount /ground plane antenna, dual band (VHF/UHF); 1/2 wave antenna is better (no need for radials)

- Minimum 50 feet RG8X coax with UHF connectors
- BNC or SMA to PL259 adapters if needed
- UHF-UHF barrel connectors

Operating station:

- FCC amateur radio license (on person)
- ID badge (on person)
- Note book or pad
- Pens and pencils, including a large marking pen
- Clip board
- Watch and/or wind up clock
- Maps (Bryan's Sectional Map)
- Blank message forms (ICS-213)

Optional items:

- 2M beam (dual band VHF/UHF preferred) antenna w/tripod, mast, guy rope and pegs
- Nut driver set
- Folding set of Allen wrenches
- Zip cord
- Battery operated AM/FM radio
- Scanner
- Binoculars
- Extra 50 feet RG8X coax
- Hammer

HF Operations:

- HF rig that can operate from 6 – 160M
    - Operator's manual
    - Extra fuses
    - Mic
    - Key (if knows CW)
    - Head phones, external speaker
    - Tuner, if required
    - 50 feet RG8X or better
- NVIS antenna
    - Multi-band dipole or off center fed dipole or 130 feet of wire or equivalent which can cover 75M, 40M, and 20M (minimum)
    - Antenna tuner with built-in SWR meter
    - Insulators
    - 3 masts, 8 feet or more, preferably non-conductive
    - Guy ropes
    - Pegs for guys
    - Lead weight or 50 feet light line for tossing over tree branches
    - Bright marking tape to warn passers-by of guys and lines

- Power source (one or more)
    - 12V gel cell, 75 Ah and higher

    - TGE Battery Booster
    - Emergency generator and fuel tank with fuel
    - Solar panel to charge the battery
    - 20-30 amp switching power supply
    - 50 feet extension cord
    - Multi-outlet power strip (preferably a surge protector)
- Portable shack
    - Canopy, shelter tent or pop up tent
    - Table and chair(s)
    - Portable light (preferably fluorescent or LED to save on energy/batteries)

Appendix C – North Shore Kaua`i Frequencies (NEED TAD TO UPDATE THESE)

Windward Oahu Repeaters:

- 145.150 (-) PL 103.5; located on Kaneohe Bay Drive and the H-3 saddle road; no emergency power
- 146.640 (+) PL 103.5; EARC Laie repeater; located in C&C Laie base yard; no emergency power
- 146.660 (-); EARC Olomana repeater; above DEM District 4 EOC off Old Waimanalo Road; manual emergency generator
- 147.000 (+) PL 103.5; Puu Papaa repeater; located between Kaneohe Bay Drive and Kailua; no emergency power; **Primary Command and Control Repeater**
- 147.140 (+); KH6BS; Valley of the Temples, Kaneohe; no emergency power
- 444.325(+) PL 103.5; KH6HPZ; located above Sea Life Park, Waimanalo; emergency generator; linked with via All Star to 444.350(-) PL 103.5, IRLP; to 146.98 (-) PL 88.5, located above the Frank Fasi City Municipal Building, and to 146.76 (-) on Peacock Flats (able to reach North Shore of Oahu); all linked repeaters have emergency generators
- 444.175 (+); DEM portable UHF repeater; may be available for use for Kailua/ Windward Oahu
- 444.375(+) PL 114.8; KH6FV; IRLP; located above Sea Life Park, Waimanalo; emergency generator; **Alternate Command and Control Repeater**

Other Repeaters:

- 146.880(-) EARC repeater; used by DEM RACES for emergency information; Diamond Head; emergency generator
- 146.980(-) PL 88.5; DEM RACES; located above the Frank Fasi Building, Downtown Honolulu; for **DEM Command and Control**; emergency generator
- 147.02(+) PL 103.5; Linked to State RACES 2 Meter link; located on Haleakala, Maui; emergency generator
- 147.06(-) PL 103.5; State RACES, linked to the State RACES 2 Meter link; located above Diamond Head Crater; emergency generator; **State RACES Command and Control frequency**

Simplex Frequencies:

- 146.490 District 4 Alternate Simplex Plan
- 146.505 District 4 Simplex Plan, **Primary Simplex Command and Control for District 4 and Windward Oahu**
- 146.520 National Calling Simplex Frequency; used by DEM EOC
- 146.565 District 7 Simplex Plan

Repeater Simplex Frequencies if repeaters are down (use the repeater output frequency):

- 145.150 Simplex; Kaneohe Bay Drive and H-3 saddle road
- 146.640 Simplex; Laie/Kahuku
- 146.660 Simplex; Kailua
- 147.000 Simplex; between Kailua and Kaneohe
- 147.140 Simplex; Valley of the Temples/Kaneohe/Hauula

HF Frequencies:

- 7.088 LSB primary 40 Meter frequency for State Civil Defense
- 7.090 USB primary for Fldigi MT63-1KL digital ICS-213 messages
- 7.290 LSB secondary 40 Meter frequency for State Civil Defense
- 3993.5 LSB primary 75 Meters frequency for State Civil Defense if 40 Meters is not operational
- 5.330.5 USB (Channel 1) primary 60 Meter frequency for State Civil Defense

HF Frequencies for Windward Oahu:

- 7.090 USB primary for Fldigi messages
- 7.098 LSB primary 40 Meter frequency
- 7.280 LSB secondary 40 Meter frequency
- 3.888 LSB primary 75 Meter frequency
- 5.357.0 USB (Channel 3) primary 60 Meter frequency

HF Notes: Primary means of communications in Windward Oahu will be through VHF and UHF. However, HF will be utilized as a secondary means of communications with Laie and Kahuku if VHF/UHF is not available. HF will also be utilized as a secondary means to contact with DEM and SCD. Please note if above HF frequencies are being utilized either go up/down 3 – 5 kHz, except 60 meters.

Family Radio Service (FRS)/General Mobile Radio Service (GMRS). These are recommended channels to use for FRS:

- Channel 1 – Primary communications for monitoring what is happening in the community and as a calling channel
- Channel 2 – Emergency messages to be relayed to neighborhood coordinator or designated communications coordinators
- Channel 3 – Alternate calling channel
- Channel 4 – Primary channel between Hub and Satellite shelters (when no amateur radio operator at Satellite shelter)
- Channel 5 – Secondary emergency message channel; one side of the neighborhood that is close to another neighborhood using Channel 5 as the primary emergency channel
- Channel 6 – Secondary emergency message channel
- Channel 7 – Alternate channel between Hub and Satellite shelters
- Channel 8 – Inter-family communications
- Channel 9 – Neighborhood light search and rescue efforts for Community Emergency Response Teams (CERT)
- Channel 10 – Evacuation/relief/health/welfare communications
- Channel 11 – 13 – Secondary channels for communications within a shelter or for other purposes or as alternate channels
- Channel 14 – Primary communications within a shelter

Note: Channels 1 – 7 should be used for emergency communications that needs to be relayed. Other channels can be used for other purposes or as alternate channels.
Do not use tones when using for communications between hub and satellite shelters. Some of the inexpensive FRS radios do not have tone capability.
Channel 1 – 7 is used for both FRS/GMRS; .5 watts for FRS; up to 5 watts on GMRS; need FCC license to operate on GMRS.

Channel 8 – 14 is used only for FRS, no FCC license is required; .5 watts output.
Channel 15 – 22 for only for GMRS, FCC license is required; up to 5 watts output.

Weather Channels and Frequencies in Hawaii:

- WX1 – 162.550 (Can be heard in Honolulu; also in limited areas in Windward Oahu)
- WX2 – 162.400 (Can be heard in Windward Oahu)

Appendix D – HealthComm Frequencies

HealthComm is amateur radio communications for the various medical centers throughout the State when normal communications fail.

VHF:
147.220(+) Primary repeater (Located at old St. Francis Hospital in Liliha); linked to 444.100 (Located at Leahi Hospital)
147.360(+) Secondary repeater (Red Cross repeater; located at Leahi Hospital)

VHF Simplex:
147.420
147.440
147.460
147.480
147.500 (NCS)
147.520
147.540
147.560
147.580

UHF:
443.775(+) CTCSS 123.0 NH6XO Repeater located at Round Top linked to the following NH6XO repeaters:
442.775(+) CTCSS 123.0 (Located at Koko Head)
442.925(+) CTCSS 123.0 (Located at Puu Papaa, Windward Oahu)
443.925(+) CTCSS 123.0 (Located at Haleakala, Maui)
444.775(+) CTCSS 123.0 (Located at Kaala)
444.775(+) CTCSS 127.3 (Located at Hilo, Hawaii)
443.925(+) CTCSS 127.3 (Located at Lihue, Kauai)

UHF Simplex:
446.000
446.025
446.050
446.075
446.100 (NCS)
446.125
446.150
446.175
446.200

HF:
7.080 LSB
3.900 LSB
5.371.5 USB (Channel 4)
HF Digital Band Plan:

75 meters
3.582 – MT63 500Hz Long interleave
3.858 – MT63 1000Hz Long and other modes

40 meters
7.090 – MT63 digital modes and other modes

30 meters
10.137 – MT63 digital modes

20 meters
14.109 – MT63 digital modes and other modes

17 meters
18.100 – MT63 digital modes and other modes

15 meters
21.130 – MT63 digital modes and other modes
21.070 – MT63 digital modes and other modes

12 meters
24.920 – MT63 digital modes

10 meters
28.120 – MT63 digital modes
28.130 – MT63 digital modes

Note: HealthComm VHF or UHF Net is held on the first working day of each month at 11:45 a.m. The HF Net is held on the first Saturday of each month at 9:00 a.m. on 7.080 LSB.

Appendix E – Hub Shelters and Assigned Satellite Shelters

Castle High School – Hub Shelter (Also Special Health Need & Pet Friendly Shelters)

Satellite Shelters Assigned to Castle High School:

- Ahuimanu Elementary (Also Special Health Need Shelter)
- Benjamin Parker Elementary
- Heeia Elementary (Also Special Health Need Shelter)
- Kahaluu Elementary (Also Special Health Need Shelter)
- Kaneohe Elementary
- Kapunahala Elementary
- King Intermediate (Also Special Health Need & Pet Shelters)
- Puohala Elementary
- Waiahole Elementary (Also Special Health Need Shelter)

Kahuku High and Intermediate School – Hub Shelter (Also Special Health Need Shelter)

Satellite Shelter Assigned to Kahuku High and Intermediate School:

- Brigham Young University of Hawaii (Also Special Health Need Shelter)

Kailua High School – Hub Shelter (Also Special Health Need & Pet Friendly Shelters)

Satellite Shelters Assigned to Kailua High School:

- Enchanted Lake Elementary (Also Special Health Need Shelter)
- Keolu Elementary
- Maunawili Elementary (Also Special Health Need Shelter)
- Pope Elementary (Also Special Health Need Shelter)
- Waimanalo Elementary and Intermediate (Also Special Health Need & Pet Friendly Shelters)

Kalaheo High School – Hub Shelter (Also Special Health Need & Pet Friendly Shelters)

Satellite Shelters Assigned to Castle High School:

- Aikahi Elementary
- Kainalu Elementary
- Kailua Elementary (Also Special Health Need Shelter)
- Kailua Intermediate (Also Special Health Need Shelter)
- Lanikai Elementary (Also Special Health Need Shelter)

Appendix F – Shelter Radio Operator Letter of Introduction

To Shelter Manager / Site Supervisor:

The following Volunteer Radio Operator(s):

_____

_____

Is (are) here to set up **EMERGENCY RADIO COMMUNICATIONS** between your shelter/site, the City & County of Honolulu Department of Emergency Services (DEM) and your sponsor organization.

- **Selecting a radio station location:**
  - Please allow the Amateur Radio Operator(s) to select the appropriate radio station location.
  - It has to be located with the most unobstructed antenna access to the assigned repeater or simplex station, with a window for coax entry.
  - Where 24-hour operations will not disturb any sleeping shelter residents or site occupants.
- If the building maintenance staff is present, please have them assist the Amateur Operator(s) in choosing where to set-up their communications station.
- **Runners:**
  - Please help recruit, or have your shelter volunteer coordinator recruit volunteers from the shelter population to staff the two "runner" positions when the radio is in operations. Teens are great.
  - One "runner" will remain with the radio operator(s) and the other "runner" will be with the shelter manager/site supervisor.
- **Authorized message senders:**
  - Please provide the radio operator a list of one or more shelter personnel, as well as yourself, who can send messages.
  - Please have each authorized person print and sign their names on a paper – only messages signed by these signatures will be sent.
  - We will treat these signatures as confidential information not accessible to the public.
  - They will be kept in a notebook, not on the desk.

THANK YOU.

Appendix G - ICS Form 213

GENERAL MESSAGE	
TO:	**POSITION**
FROM	**POSITION**
SUBJECT	**DATE/TIME**

MESSAGE:

DATE	**TIME**	**SIGNATURE/POSITION**

RECEIVED FROM	**DATE**	**TIME**	**RADIO POSITION/OPERATOR**	**MSG NUMBER**
SENT TO	**DATE**	**TIME**	**RADIO POSITION/OPERATOR**	**MSG NUMBER**

213 ICS 1/79 – Modified SCD RACES 5/08

Appendix H – NIMS Compliancy

Windward Oahu ARES® will adopt the National Incident Management System (NIMS). The point of contact (POC) for Hawaii State ARES® shall be the Pacific ARES® Section Emergency Coordinator.

ARES® adopted the Incident Command system (ICS) as its primary operating guideline for operations during disasters and other public service activities.

ARES® maintains communications links for use between local Incident Command Posts, the county EOC, and the State EOC via planned amateur radio frequencies.

All ARES® members are to complete IS-100, IS-200, IS-700, and IS-800. Also they will complete the ARRL Introduction to Emergency Communication (EC-001) as well as SKYWARN® Weather Spotter class. Community Emergency Response Team (CERT) training is highly recommended for all ARES® members.

All ARES® will utilize ICS concepts in all exercises that it initiates and for all public service events it participates in.

After participation in all exercises and public service events, ARES® members will identify shortfalls within its response application of the NIMS concepts and principles. Corrective actions will then be taken to response actions and plans to be applied to future exercises and public service activities.

ARES® will develop an inventory of response assets and typing of resources which is included in the Appendix H: Resource Typing.

CERTIFICATION AND CREDENTIALING

Certification of ARES® personnel will be through their primary served agencies. Certification will be via the following:

- Records of external training
    - External training will include those courses taken by the ARES® member from outside sources to include, but not limited to the ARRL, ARRL Section ARES®, the National Weather Service SKYWARN® Weather Spotter, CERT, and FEMA Independent Study Courses.
    - ARES® members will provide copies of all certificates of training to the training coordinator of their primary served agency as well as to the Windward Oahu EC.
- Records of internal training
    - Internal training will include those courses that are provided by their primary served agency at regular and special ARES® meetings and training sessions.
    - ARES® members will provide copies of all certificates of training to their EC or AEC.
- ARES® personnel credentialing will be via the following:
    - Credentialing levels
        - Trainee – A new ARES® member with no prior training in emergency communications (Amateur Radio License only)

        - Responder – Has met all training requirements for the Responder level in ARES®
        - Leadership – Has met all training requirements for the Leadership level in ARES®
        - Management – Has meet all training requirements for Management level in ARES®
    - Certifications and qualification standards
        - Trainee
            - Possesses a valid Amateur Radio License
            - Has registered with ARES® EC
        - Responder (normal ARES® Responder) - Has completed the following training:
            - Requirements for Trainee level **and**
            - IS-100 (Introduction to the Incident Command System)
            - IS-200 (Basic Incident Command System)
            - IS-700 (Introduction to the National Incident Management System (NIMS)
            - IS-800 (Introduction to the National Response Framework)
            - EC-001 (Introduction to Emergency Communication Course) and/or the original EC 1
            - SKYWARN® Weather Spotter (training via National Weather Service (NWS)
            - Community Emergency Response Team (CERT) (training via DEM)
        - Leadership (AEC, Group Supervisor or Team Leader) – Has completed the following training:
            - Requirements for Trainee and Responder levels **and**
            - ARRL ARECC EC-002 and 003 and/or EC-016 (Public Service and Emergency Communications Management for Radio Amateurs)
        - Management (EC and DEC) – Has completed the following training:
            - Requirements for Trainee, Responder and Leadership levels **and**
            - ICS-300 (Intermediate Incident Command System)
        - Senior Management (SEC or ASEC) – Has completed the following training:
            - Requirements for Trainee, Responder, Leadership and Management levels **and**
            - ICS-400 (Advanced Incident Command System)

Note: Though not required, the following free classes are highly recommended:

American Red Cross (ARC): to get a better idea what is involved by the ARC in a disaster:

- Mass Care Overview
- Disaster Assessment Basics
- Shelter Operations
- Shelter Management TTX

Hawaiian Humane Society:

- Emergency Pet Sheltering

Other Training (may need to pay):

- First Aid
- Adult CPR
- AED

Credentialing of ARES® members will be via an identification badge or card issued by served agencies and/or by the Pacific Section ARES® SEC.

Appendix J – Resource Typing

The resources and typing of resources for ARES® is contained in the pages that follow.

The typing of these resources makes request for these resources by served agencies easier as they can order ARES® communication resources by type, as needed.

Site Name	Potential Tsunami Evacuation Refuge Area	Potential Shelter	Potential Feeding Site/Kitchen/Food Prep Area	Potential Centralized Communications/Staging Area (GO-KIT)	Contact	Phone	Email	Address	**Status** (Need to contact, In-Progress, Signed Red Cross MOA, Will be available but not through Red Cross, Not available)	**Notes (Resources Available: ice machine, generator, walk-in freezer, stocked food/water supplies, gas grills & propane, etc.)**	**Located in Hazard Zone? (Flood, Tsunami)**
Courthouse			Feeding	X	Kauai Parks & Recreation	241-4460					yes
Waioli church			Kitchen		Alpha Goto	826-6253					yes
Powerhouse Road Water Tank	X										
Hanalei School Cafeteria		X	X	X (basecamp)		826-4300				Full kitchen, walk-in freezer, generator ??	yes
Waipā Multi Use building		X	X	X	Leah Welden	826-9969					yes
Hale Halawai `Ohana o Hanalei		X	X	X	Facility coordinator Mary Lucas	826-1011					yes
St Williams Catholic church						822-7900					yes
Mormon church					Charlie Spencer	826-9321					yes
Camp Naue YMCA		X	X	X	Winston Wellborne	246-9090;826-0026;				Known gathering location for community (Iniki)	yes
Hanalei Colony Resort/Mediteranne an Gourmet		X	X	X	Laura Richards	826-6235				generator; housing for volunteers; feeding	yes

Big Save										preparedfoods/sandwiches; donate water, deliver for Red Cross	yes
Snack Shop											yes
L&L											yes
Chicken in a Barrel											yes
Puka dog											yes
Ching Young Center MGMT.					Geoff Culverhouse 826-7222	8826-7222; 651-7466					yes
Limahuli	X			X	Kawika Winter	826-1669					yes
Waipa (Mauka)	X										yes
Waipa (Valley)			X	X	Stacy & Johanna						yes
Caren's house				X							yes
Polly's house				X							yes
Bryson's house				X							yes
Sean's house				X							yes
Kayak Hanalei					Dave Stewart	826-1881					yes

APPENDIX 12. References

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