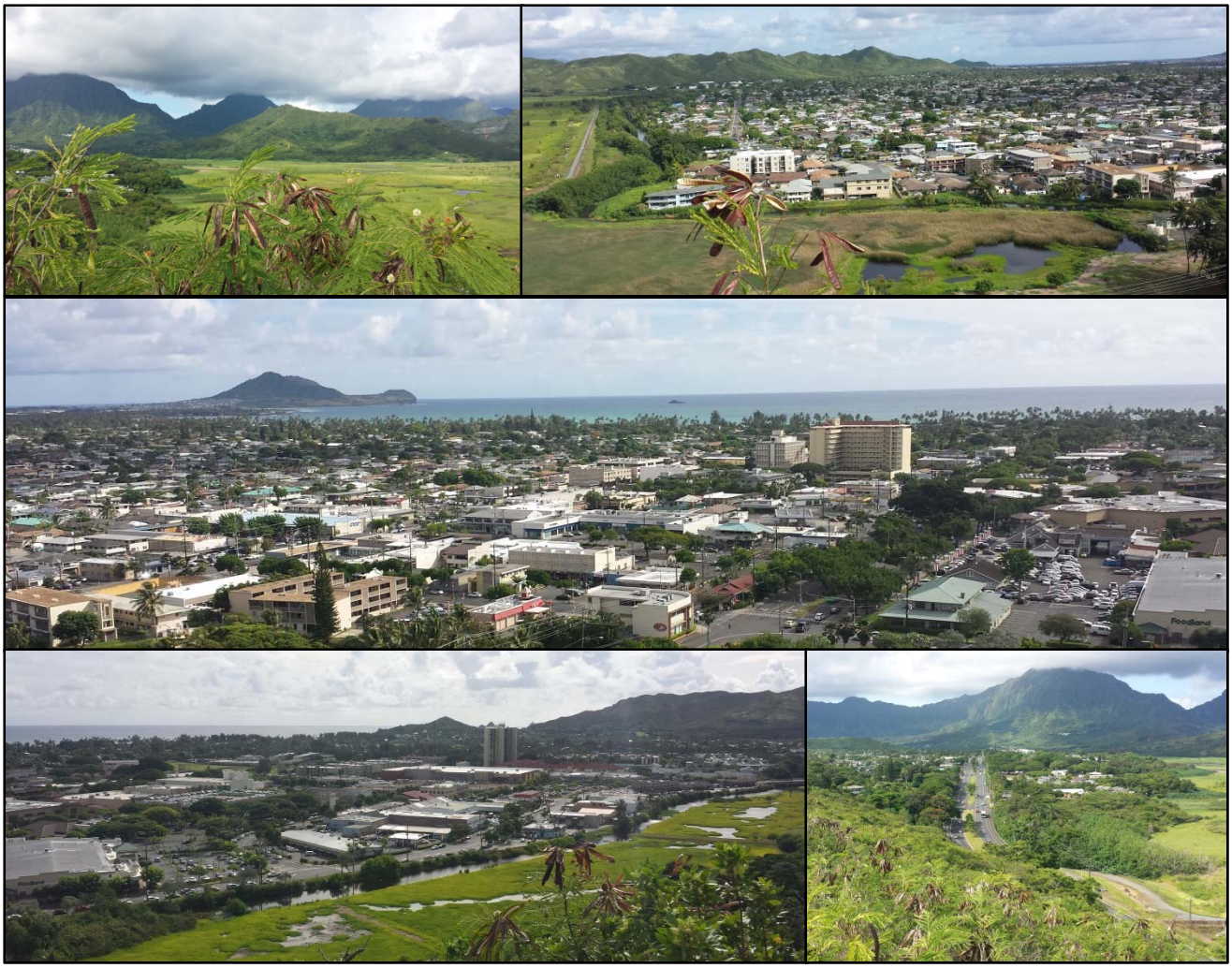
KAILUA DISASTER RESPONSE PLAN



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RECORD OF CHANGES

Date of Change	Pages Changed	Changes made by:

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ACRONYMS

4DEM	District IV Unified Command, DEM representative
ARES	Amateur Radio Emergency Service
CERT	Community Emergency Response Team
D4UC	District IV Unified Command
DEM	Department of Emergency Management, City & County of Honolulu
EOC	Emergency Operations Center
FRS	Family Radio Service
HAM	Amateur licensed radio operator
HESD	Honolulu Emergency Services Department
HFD	Honolulu Fire Department
HPD	Honolulu Police Department
HSCD/HI-EMA	Hawai`i State Civil Defense/Hawai`i – Emergency Management Agency
IAP	Incident Action Plan
IC	Incident Commander
ICS	Incident Command System
IMT	Incident Management Team
KCERT	Kailua Community Emergency Response Team
KDRP	Kailua Disaster Response Plan
KOC	Kailua Operations Center
PTWC	Pacific Tsunami Warning Center
RACES	Radio Amateur Civil Emergency Service

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INTRODUCTION

As a result of the Tohoku, Japan earthquake and tsunami on March 11, 2011, the Kailua Neighborhood Board's committee on Public Health, Public Safety, and Civil Defense designated the Kailua Disaster Preparedness Subcommittee (KDPSC) to address disaster preparedness. The KDPSC developed The Kailua Multi-Hazard Mitigation Preparedness Plan: A Storm Ready, Tsunami Ready Community, dated October 2011 (http://www.honolulu.gov/demvolunteer/communitypreparedness.html). The purpose of this plan is "to educate and train the Kailua community about the all-hazard approach to disaster preparedness, mitigation, response, and recovery, and to reduce the impact of a disaster upon the community."

In September 2013, the Kailua Community Emergency Response Team (KCERT) group began meeting monthly to prepare for a disaster specific to the Kailua community. The City and County of Honolulu, Department of Emergency Management (DEM) uses the Community Emergency Response Team (CERT) program to train community members in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations (Department of Emergency Management Community Emergency Management Team. 2014. http://www.honolulu.gov/demvolunteer/cert.html).

Knowing that in an island-wide or state-wide catastrophic disaster/incident professional emergency responders may be overwhelmed and unable to immediately respond to emergencies in Kailua, the KCERT group developed the Kailua Disaster Response Plan (KDRP). The KDRP provides a strategy to mobilize CERTs into Kailua following a catastrophic tsunami or hurricane. Although other types of disasters may occur in Kailua, tsunami and hurricanes are the disasters most likely to cause catastrophic damage. Future efforts may be pursued to add additional incidents to this report. The KDRP is included as a supplement to The Kailua Multi-Hazard Mitigation Preparedness Plan.

Community Emergency Response Teams

The CERT concept was developed and implemented by the City of Los Angeles Fire Department (LAFD) in 1985. They recognized that citizens would very likely be on their own during the early stages of a catastrophic disaster, such as a major earthquake. Accordingly, LAFD decided that some basic training in disaster survival and rescue skills would improve the ability of citizens to survive and to safely help others until responders or other assistance could arrive.

The training model that the LAFD initiated was adopted by other fire departments around the country, including communities where the major threat is hurricanes rather than earthquakes. Building on this development, in 1994 the Federal Emergency Management Agency expanded the CERT materials to make them applicable to all hazards and made the program available to communities nationwide. Since that time, thousands of dedicated trainers, organizations, and citizens have embraced the responsibility to learn new skills and become prepared to execute safe and effective emergency response.

While emergency services personnel are the best trained and equipped to handle emergencies, they may not be immediately available in a catastrophic disaster. In such a situation, members of

the community may be on their own for several days or longer. They may have to rely on their own resources for food, water, first aid, and shelter, and neighbors or coworkers may have to provide immediate assistance to those who are hurt or need other help.

The CERT Program can provide an effective first-response capability. Acting as individuals first, then later as members of teams, trained CERT volunteers can fan out within their assigned areas, extinguishing small fires, turning off natural gas at damaged homes, performing light search and rescue, and rendering basic medical treatment. CERTs also act as effective "eyes and ears" for uniformed emergency responders. Trained volunteers also offer an important potential workforce to service organizations in non-hazardous functions such as shelter support, crowd control, and evacuation.

While CERTs are a valuable asset in emergency response, CERTs are not trained to perform all of the functions or respond to the same degree as professional responders. CERTs are a bridge to professional responders until they are able to arrive (Federal Emergency Management Agency. 2012. "CERT Basic Training Participant Manual." http://www.fema.gov/media-library/assets/documents/27403?id=6137).

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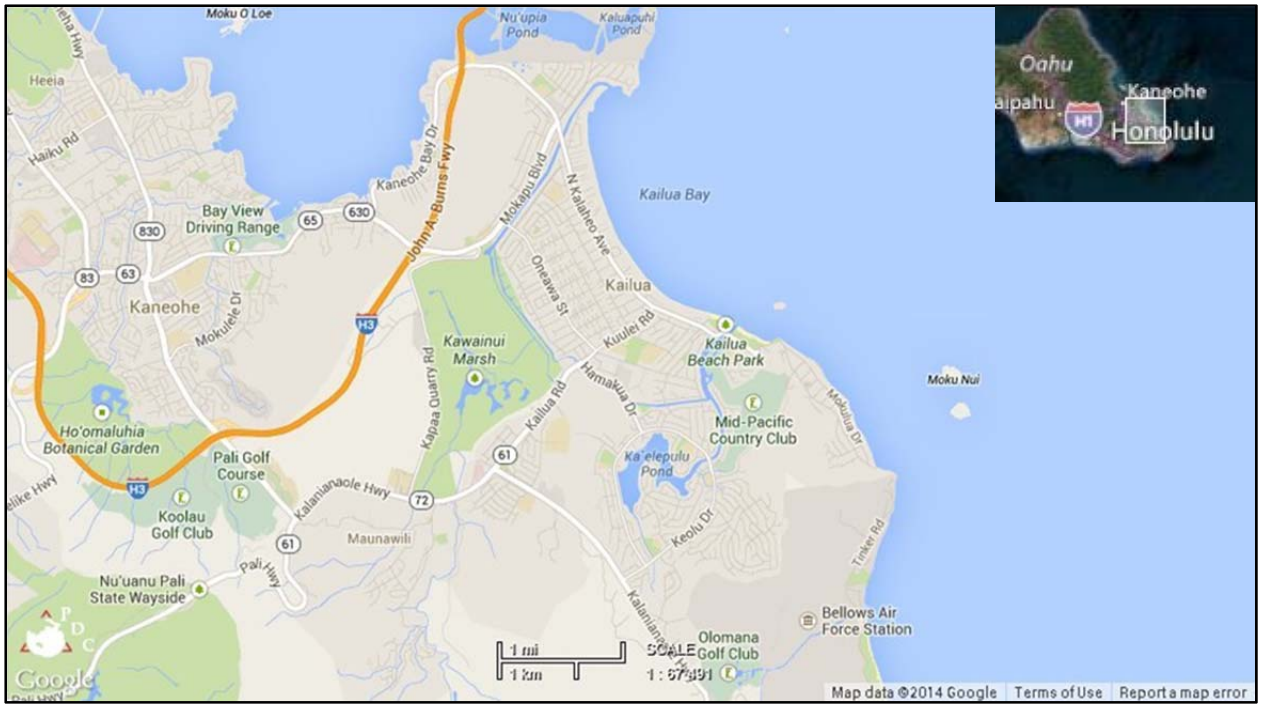
KAILUA INFORMATION

Demographics

Based on 2010 Census data, the total population of Kailua is 38,635. There are 12,921 occupied housing units (U.S. Census Bureau, American Fact Finder. "Profile of General Population and Housing Characteristics: 2010." http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1).

Kailua Map

Kailua is located on the windward side of the island of Oahu. See map below.



Kailua Zones

To effectively and efficiently mobilize KCERTs into the community, Kailua is divided into nine disaster response zones. A map of the nine zones, along with a description of the zone boundaries and its associated attributes are provided in Appendix A.

SITUATION

Tsunamis

A tsunami is a series of traveling ocean waves of extremely long length generated by earthquakes, underwater volcanic eruptions, or landslides below or near the ocean floor. In the deep ocean tsunami waves can travel 500 mph with a wave height of 1 foot or less. As the waves reach shallow waters of the coastline, the waves slow down and the water piles up into a wall of destruction. Wave heights can vary from a few inches to 100 feet. Crests of waves may arrive every 10 to 60 minutes; often the first wave may not be the largest (Intergovernmental Oceanographic Commission. 2008. "Tsunami, The Great Waves." http://tap.pdc.org).

The force of some tsunamis is enormous. Large rocks weighing several tons, along with boats and other debris can be moved inland hundreds of yards by tsunami-wave activity, causing damage to homes and property, and loss of life. In addition, tsunamis can travel up rivers and streams from the ocean (Intergovernmental Oceanographic Commission. 2008. "Tsunami, The Great Waves." http://tap.pdc.org).

The Hawaiian Islands have a long history of destruction due to tsunamis and are the most vulnerable place in the world, particularly vulnerable to tsunamis originating in the north and the southeast Pacific Ocean. Twenty-six tsunamis with flood elevations greater than 3.3 ft (1 m) have made landfall in the Hawaiian Islands during recorded history, and 10 of these had significant damaging effects on Oahu. This translates into a recurrence interval of tsunami reaching Hawaiian shores every 7 years and one damaging tsunami reaching Oahu every 19 years, although there hasn't been a large tsunami since 1975. Annual tsunami losses are estimated at $44 million (Department of Emergency Management. 2012. "Multi-Hazard, Pre-Mitigation Plan, Executive Summary." http://www.honolulu.gov/demresources/plans.html).

Hawai`i is at risk from tsunamis caused by both distant and local sources. A large (greater than 7.0 magnitude), shallow (less than 40 miles deep) earthquake originating beneath the ocean floor has the potential to generate a tsunami (Pacific Tsunami Warning Center. 2009. "Tsunamis in Hawai`i." http://ptwc.weather.gov/ptwc/hawaii.php).

Tsunamis from Distant Sources

Most tsunamis that affect Hawai`i originate from seismically active areas around the Pacific. In particular, areas where tectonic plates are in collision (subduction zones), such as Alaska's Aleutian Island chain and the west coast of South America, generate most of the world's tsunami-producing earthquakes. When this occurs, residents of Hawai`i have ample time to prepare for an incoming tsunami (4 hours from Alaska, 14 hours from Chile). Distant tsunamis with runups (wave height) in Hawai`i exceeding 9 feet have occurred in 1868 (Chile), 1877 (Chile), 1896 (Japan), 1906 (Chile), 1923 Kamchatka, 1933 (Japan), 1946 (Aleutians), 1952 (Kamchatka), 1957 (Aleutians), 1960 (Chile), and 1964 (Alaska).

Tsunamis with a runup of 5 to 6 feet in Kailua Bay were generated from the 1947 and 1960 earthquakes. Also, a tsunami could move up the Kawainui Channel and drainage canals and causing flooding in nearby homes and businesses.

Tsunamis from Local Sources

Because Hawai`i is seismically active, a shallow undersea earthquake can reach sufficient size to generate a local tsunami. While destructive local tsunamis are less frequent, there is little time to react to such an event. Waves from the tsunami caused by the 1975 Kalapana earthquake killed two campers in the Halape area about a minute after they experienced the strong shaking. The travel time for a tsunami generated from the southeast coast of the Big Island will only take 5-10 minutes to reach Hilo or Kona, 15-20 minutes to reach Maui, and 30-40 minutes to reach Oahu. Local tsunamis with runups exceeding 3 meters have occurred in 1868 (Ka`u) and 1975 (Kalapana).

The Pacific Tsunami Warning Center provides tsunami warnings for Pacific basin to almost every country around the Pacific rim and to most of the Pacific-islands.

Potential impacts on the population, infrastructure, and environment

As stated under **Tsunamis from Distant Sources**, tsunamis that impacted Kailua had a runup of 5 to 6 feet along the Kailua Bay coastline. This size of tsunami would cause coastal and canal flooding. Evacuation zones for Kailua are based upon these historical tsunamis.

According to the report Great Aleutian Tsunamis (Butler, R. 2014. Great Aleutian Tsunamis. Hawaii Institute of Geophysics and Planetology, HIGP-2014-1: p.1. http://www.higp.hawaii.edu/reports/2014/Butler.R.Peer-Reviewed-Report-HIGP-2014-1.pdf), modeling results show that a Mw 9.25 Aleutian earthquake would cause a tsunami to "overtop the sandbar along the beach with substantial inundation far inland." Scientists and emergency management professionals, however, consider this scientific model an "unlikely worst-case scenario."

Based on the December 24, 2004, Sumatra, Indonesia and the March 11, 2011, Tohoku, Japan giant earthquakes, impacts to the Hawai`i population, infrastructure, and environment may include:

- Although there is about a 4.5-hour warning time, death may occur to those who choose not evacuate.
- Displaced and houseless persons and families.
- Damaged/destroyed harbors and coastal airports and roads, prohibiting transportation of outside disaster relief assistance and supplies (to include food and water).
- Damage to power plants located along the coastline.
- Damage to buildings, bridges, houses, etc.
- Extensively flooded coastal areas.
- Large amounts of debris deposited along coastal areas.
- Debris dragged into the ocean by receding tsunami waters.
- Mixing of hazardous materials with damage debris.
- Salination of water bodies such as rivers, wells, inland lakes, and groundwater aquifers.
- Damage to water and sanitation systems.

Hurricanes

A tropical cyclone is a rotating, organized system of clouds and thunderstorms that originates over tropical or subtropical waters and has a closed low-level circulation. Tropical cyclones

rotate counterclockwise in the Northern Hemisphere (National Oceanic and Atmospheric Administration, National Weather Service. 2014. "Tropical Cyclones: A Preparedness Guide." http://www.nhc.noaa.gov/prepare/).

The Saffir-Simpson Hurricane Wind Scale categorizes hurricanes based on sustained wind speed. The table below depicts hurricane categories along with their annual odds of occurrence for Hawai`i.

Hurricane Category (Saffir-Simpson)	Sustained Wind Speed mph	Odds of Occurrence Anywhere in Hawai`i	Odds of Occurrence Oahu Only
1	74-95	1 in 25	1 in 80
2	96-110	1 in 50	1 in 320
3 or 4	111-155	1 in 75	1 in 400
Any Hurricane	>74	1 in 15	1 in 55

Department of Emergency Management. 2014. "Multi-Hazard, Pre-Mitigation Plan, Executive Summary." http://www.honolulu.gov/demresources/plans.html

In the Central Pacific basin hurricane season is officially from 1 June to 30 November with peak season from August through September.

Hurricanes not only pack high winds, but can also cause torrential rains that lead to flash flooding and abnormally high waves and storm surge. Known as "the triple threat," each of these alone can pose a serious threat to life and property. Taken together they are capable of inflicting a large loss of life and widespread destruction (Central Pacific Hurricane Center. 2012. "Hurricane – A Dangerous Triple Threat." http://www.prh.noaa.gov/cphc/pages/pr3.php).

High waves and storm surge

Large ocean swells ahead of the hurricane may reach island shores while the storm is several hundred miles away. As the hurricane nears the coastline, rapidly rising water levels from the wind-driven waves and storm surge will inundate coastal areas, erode beaches, and undermine waterfront structures and roadways.

In 1992, Hurricane Iniki's high waves and storm surge devastated the south shore of Kauai to elevations over 20 feet above sea level.
High winds

High Winds

In Hawai`i, mountainous terrain accelerates hurricane and tropical storm winds causing extremely high winds that can destroy buildings, structures, trees, vegetation and crops. Ridge tops and exposed locations downslope from the mountains are at greatest risk. There will be a momentary calm that occurs with the passage of the hurricane's eye. Wind speed will then increase rapidly from the opposite direction as the center of the hurricane moves forward.

Most of the existing residential structures in Hawai`i are under-designed for high winds, depending on their construction type and location. Terrain or topographic amplification of wind speed has been a significant additional contributing factor in the past hurricane loss experiences

of Hawai`i (Department of Emergency Management. 2014. "Multi-Hazard, Pre-Mitigation Plan, Executive Summary." http://www.honolulu.gov/demresources/plans.html). Amplification of wind speeds are a particular concern for Kailua residents, as they live below the Ko`olau Mountain range.

Heavy rain and flash flooding

Heavy and prolonged rains can accompany all types of tropical cyclones including hurricanes, tropical storms, and tropical depressions. Even the weakest tropical depressions can bring torrential rains and flash flooding to the Hawaiian Islands.

High waves from hurricanes most often hit the eastern shores as hurricanes approach the islands from the east, and south- and west-facing shorelines as the storm passes to the south and west. Projected average hurricane losses on Oahu are $216 million per year (Department of Emergency Management. 2014. "Multi-Hazard, Pre-Mitigation Plan, Executive Summary." http://www.honolulu.gov/demresources/plans.html).

Historical hurricanes in Hawai`i occurred in 1957 (Nina), 1959 (Dot), 1986 (Estelle), 1982 (Iwa), and 1992 (Iniki).

Potential impacts on the population, infrastructure, and environment

Impacts to the Hawai`i population, infrastructure, and environment from a hurricane may include:

- Serious injury or death may occur to those who choose not evacuate.
- Displaced and houseless persons and families.
- Damaged/destroyed harbors and coastal airports and roads, prohibiting transportation of outside disaster relief assistance and supplies (to include food and water).
- Hurricane-strength winds can destroy buildings, topple trees, bring down powerlines, and blow vehicles off roads. Flying debris, such as signs, roofing material, building siding, and small items left outside, can also add to infrastructure damage.
- Coastal flooding due to storm surge, waves, and tides. This results in large amounts of debris being deposited along coastal areas.
- Widespread torrential rains, which cause massive flooding and triggering of landslides and debris flows. Flash flooding can occur quickly due to intense rainfall over a relatively short period of time, threatening lives and property.
- Mixing of hazardous materials with damage debris.
- Salination of water bodies such as rivers, wells, inland lakes, and groundwater aquifers.
- Damage to water and sanitation systems.

MISSION

In response to a catastrophic tsunami or hurricane, activate the Kailua Operations Center (KOC) and mobilize KCERTs and amateur licensed radio operators (HAM) to save lives and conduct damage assessments.

ORGANIZATIONAL STRUCTURE

The organizational structure for the KOC follows the Federal Emergency Management Agency's, Incident Command System (ICS) of which the ICS is a standardized, on-scene, all-hazard incident management approach. The ICS is a flexible structure that allows emergency responders to adopt an integrated organizational structure that matches the complexities and demands of the incidents without being hindered by jurisdictional boundaries. It can grow or shrink to meet different needs. The flexibility of ICS makes it a very cost-effective and efficient management approach for both small and large incidents.

The KOC organizational chart, along with roles and responsibilities for each position, are provided in Appendix B.

EXECUTION

This section details the execution of the Kailua Disaster Response Plan.

Concept of Operation

The concept of operations for a tsunami or hurricane response in Kailua will be conducted in three phases: pre-disaster, disaster, and post-disaster. The pre-disaster phase includes the activation of the KOC. The disaster phase includes evacuation, sheltering and care for families of KCERT members. During the post-disaster (recovery) phase KCERTs will be mobilized to perform duties.

Pre-Disaster Phase

Notifications

The following agencies will issue watches, advisories and warnings, depending on the type of expected threat:

- Tsunami - The Tsunami Pacific Tsunami Warning Center, in conjunction with the HSCD/HI-EMA and DEM, will issue a tsunami watch, advisory, or warning via the Emergency Alert System.
- Hurricane - The National Weather Service, in conjunction with HSCD/HI-EMA and DEM, will issue a hurricane watch (within 48 hours of the onset of tropical cyclone winds) or warning (within 36 hours of the onset of tropical cyclone winds).

The action of the KOC and KCERTs based on the expected threat, are listed in the KOC Disaster Action Matrix below.

KOC Disaster Action Matrix

Event	Conditions		KOC Action	KCERT Action
Tsunami Watch	**Danger level not yet known**. Automatically declared by the Pacific Tsunami Warning Center (PTWC) for any earthquake magnitude 7.5 or larger (7.0 or larger in the Aleutian Islands) if the epicenter is in an area capable of generating a tsunami.		Monitor information from DEM and media outlets.	Monitor information from DEM and media outlets.
Tsunami Advisory	Issued when a tsunami with the potential to generate strong currents or waves dangerous to those in or very near the water is imminent, expected, or occurring. The threat may continue for several hours after initial arrival, but significant inundation is not expected for areas under an advisory.		Monitor information from DEM and media outlets. Notify KCERT members to be on standby for possible activation.	Monitor information from DEM and media outlets. Be on standby for activation.
Tsunami Warning	Issued when a **tsunami has been detected** with the potential to generate widespread inundation and is imminent, expected, or occurring. Warnings alert the public that dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after initial arrival.		The IC may activate the KOC.* Notify KOC property point of contact to open facility. Notify KCERT members via text messaging and email.	Report to the KOC with disaster preparedness supplies. Once the ALL CLEAR signal is given, follow KOC IC instructions for mobilization.
Tropical Cyclone Watch	Hurricane conditions are *possible* within the specified area	Issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.	Monitor information from DEM and media outlets.	Monitor information from DEM and media outlets.
Tropical Cyclone Warning	Hurricane conditions are *expected* within the specified area	Issued 36 hours in advance of the anticipated onset of tropical-storm-force winds	The IC may activate the KOC at a shelter or other safe location.** Notify KCERT members.	Shelter until the ALL CLEAR signal is given. Then mobilize to KOC or zone of responsibility.
Extreme Wind Warning	Extreme sustained winds of a major hurricane (115 mph or greater), usually associated with the eyewall, are **expected to begin within an hour**.		The IC may activate the KOC at a shelter or other safe location. Notify KCERT members.	Shelter until the ALL CLEAR signal is given. Then mobilize to KOC or zone of responsibility.

***Watch* lets you know that weather conditions are favorable for a hazard to occur.**
***Warning* requires immediate action.**

*Activation of the KOC will depend on the location and strength of the earthquake that generates the tsunami warning. Kailua is particularly vulnerable to tsunamis generated from the north (Alaska) or northeast (Cascadia subduction zone).

**Depending on expected hurricane conditions, the IC may have to establish the KOC at a shelter until the hurricane passes. The IC may then move to the predetermined KOC location if conditions allow.

Location of KOC

Location of the KOC will be dependent upon the type disaster and anticipated level of damage. The KOC will set up at a predetermined location. Possible locations and points of contact for the KOC are provided in Appendix C.

Evacuation of Kailua

It is incumbent upon all KCERT members to evacuate, shelter, and care for themselves and their families. KCERT members should encourage their neighbors to do the same.

In the event Kailua needs to be evacuated:

- HPD and HFD will announce evacuations in siren-gap areas and for at-risk populations (i.e. homeless).
- HPD will setup road blocks to keep people from entering Kailua at the following locations:
    - Kailua Road & Hāmākua Drive
    - Kailua Road & Wana`ao
    - Mokapu Saddle Road & Oneawa
    - Kaneohe Bay Drive & H-3 Highway
    - Other roads deemed necessary by emergency response personnel.

Disaster Phase

While at the KOC, the IC and any other available IMT members will be monitoring the disaster. Methods for obtaining information include:

- Monitoring local radio and television stations for reports from DEM, National Weather Service, Pacific Tsunami Warning Center, etc.
- Telecommunication with D4UC and KCERT members, if cell phone service is working.
- HAM radio operator in contact with DEM, D4UC, and other operators.
- Visual observations

In addition, KCERT members may text, call or use their FRS radios to relay information concerning conditions in their area.

Post-Disaster (Recovery) Phase

The overarching objective of response activities is life safety, followed by protecting property and the environment.

Conduct a Size Up

The KOC IC and IMT will conduct a size up to determine the impacts of the disaster on Kailua. Sizeup is a continual process that enables responders to make decisions and respond

appropriately in the areas of greatest need. The nine steps of the CERT size up are provided in Appendix D.

Note: KCERTs will not be mobilized until the ALL CLEAR signal has been given by DEM.

Incident Action Plan

With facts collected from the size up, the IMT will develop the Incident Action Plan (IAP). The IAP will detail the mobilization of KCERTs and include:

- Objectives as established by the IC.
- What must be done.
- Who is responsible.
- How information will be communicated.

The IAP will be updated at the beginning of each operational period (usually each morning before KCERTs are mobilized).

Appendix E includes guidelines for KCERT members.

Memorandums of Understanding

The IAP will take into account services offered by partners. Memorandums of Understanding with the following partner organizations are provided in Appendix F.

- Facility that will host the KOC.
- Windward Oahu Amateur Radio will provide KOC, shelter, and other emergency communications to the Kailua community during a disaster.
- Blue Knights motorcycle club will provide courier service between the KOC, designated hub and satellite shelters, and other locations as necessary.

Demobilization

The KOC will demobilize once its IAP objectives are accomplished.

COMMUNICATIONS

The KOC will operate with two forms of communication, licensed amateur radio operators (HAM) and Family Radio Service (FRS) communications. FRS radio channels are provided in the Appendix G.

Licensed Radio Operators

In the event the disaster disables established communication links (i.e. cell phone, landline, etc.), HAM radios will be used. In coordination with the Windward Oahu ARES emergency coordinator, a HAM team (2 people) will be assigned to the KOC to provide communication among the KOC, D4UC and other Kailua-based HAM operators. The activation of HAM operators will be done by Radio Amateur Civil Emergency Service (RACES) and/or Amateur Radio Emergency Service (ARES).

Family Radio Service

In addition, the KOC (which includes the IMT) and KCERTs will utilize FRS radios to communicate among each other.

- Channel 9 is the designated channel for neighborhood light search and rescue efforts for CERT.
- *Note: Each KCERT member is responsible for providing their own FRS radio, with back up batteries or power source.*

Call Signs

Entity	Tactical HAM	Tactical FRS
D4UC	D4UC	--
KOC	KOC	KOC
KCERTs	--	KCERT1 KCERT2 Etc.

Alternative Forms of Communication

- If service is available, cell phones may be used.
- Blue Knights motorcycle club serve as couriers.
- Runners – people walk or bike.

ADMINISTRATION AND LOGISTICS

KOC Forms

The General Staff (Operations, Planning and Logistics) personnel will complete the forms listed below as part of performing their appropriate functions. Forms are provided in Appendix H.

- Damage Assessment Survey
- Personnel Resources Sign-In Form
- Incident/Assignment Tracking Log
- Briefing Assignment (instructions to team)
- Team Action Log
- Victim Treatment Area Record
- Communications Log
- Equipment Inventory
- General Message Form

In addition, ICS forms may be used, as deemed necessary.

KOC Supplies and Equipment

KOC and KCERT list of supplies and equipment are provided in Appendix I.

APPENDIX A – KAILUA ZONES

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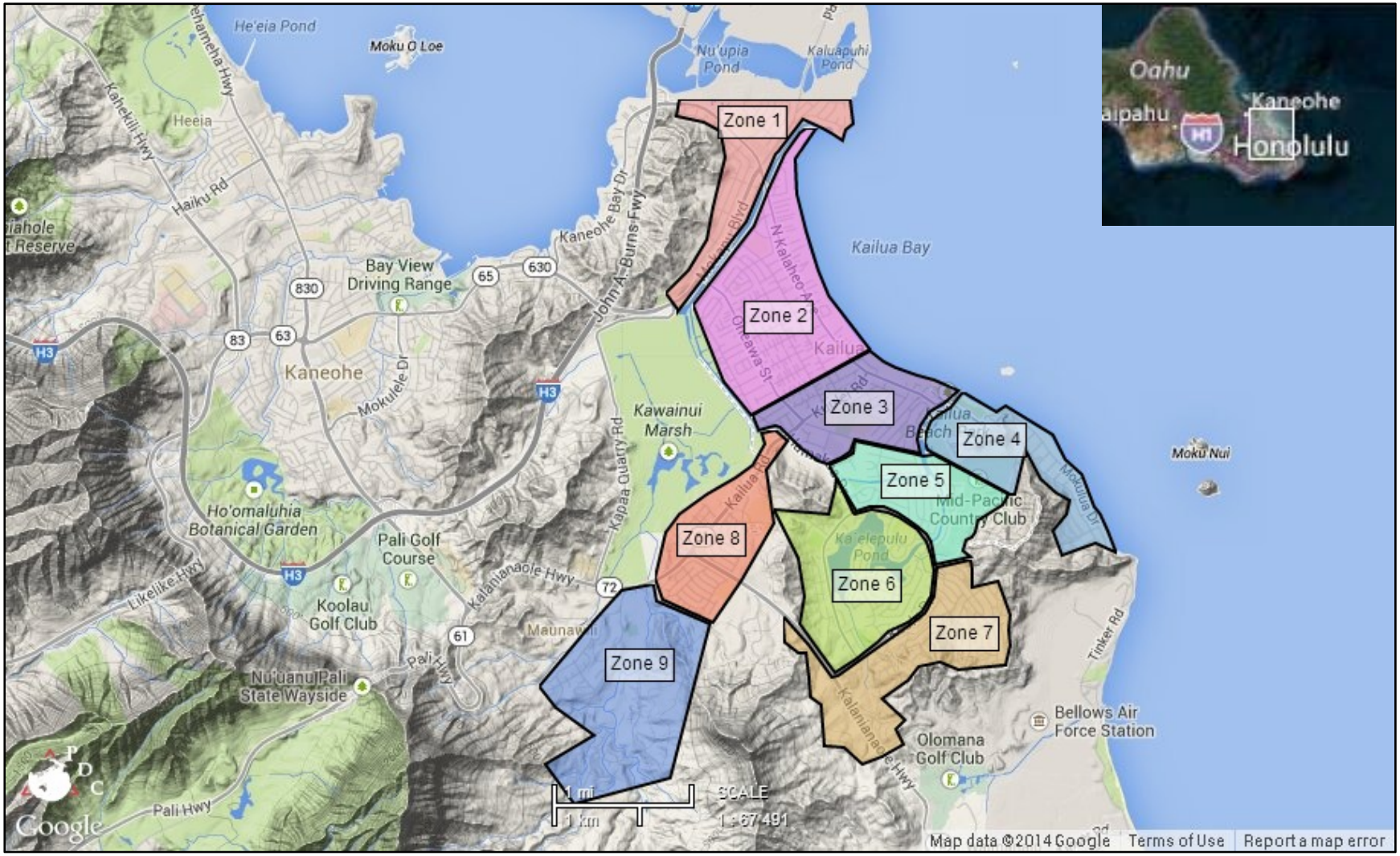

Map of Kailua divided into nine disaster response zones.

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Zone 1 Boundaries

- North - Marine Corps Base Hawai`i southern boundary line
- South - Mokapu Boulevard
- East – Kawainui Channel
- West – Oneawa Hills
- Includes Kalāheo Hillside, `Aikahi Gardens, `Aikahi Park, Kaimalino communities

Attributes

- `Aikahi Elementary School and Community Park
- `Aikahi Waste Water Treatment Plant
- `Aikahi Park Shopping Center (grocery, gas, restaurants)
- Kalāheo High School

Zone 2 Boundaries

- North and west - Kawainui Channel
- East - Kailua Beach
- South - Kawainui and Makawao Streets

Attributes

- Kainalu Elementary School
- Ali`i Academy
- Kailua Mission School
- St. Anthony School
- Kaha Park
- Kalāheo Park
- Kalama Beach Club (private)

Zone 3 Boundaries

- North – Kailua Beach
- South – Kawainui Channel to Aoloa Road, and Kailua – Wana`ao Roads
- East - Drainage Canal to Kailua Beach Park
- West – Kawainui and Makawao Streets and Kawainui Channel

Attributes

- Kailua Intermediate School
- Kailua Elementary School
- Kailua District Park with swimming pool
- Kaiser Permanente Medical Clinic
- Honolulu Police Department (HPD) Kailua Station
- Honolulu Fire Department (HFD) Kailua Station
- Library
- Kailua Beach Park
- Kailua Town (grocery, gas, restaurants)

Zone 4 Boundaries

- North and East – Lanikai Beach
- South – Mid-Pacific Country Club
- West - Drainage Canal to Kailua Beach Park
- Includes Lanikai Community

Attributes

- Lanikai Elementary School
- Kailua Beach Park
- Lanikai Beach Park
- Kailua Beach Center (grocery, rentals)
- Mid-Pacific Country Club
- Buzz's Steakhouse

Zone 5 Boundaries

- North – from Aoloa Road east along Wana`ao Road
- South – Keolu Drive (ocean side)
- East – Mid-Pacific Country Club
- West – Aoloa Road - Hāmākua Drive

Attributes

- Mid-Pacific Country Club

Zone 6 Boundaries

- North, South and East – Keolu Drive (Ka`elepulu Pond side)
- West – Properties on both sides of Keolu Drive

Attributes

- Ka`elepulu Pond
- Ka`elepulu Elementary School
- Enchanted Lake Elementary School and Park
- Keolu Elementary School and Park
- St. John Vianney School
- Enchanted Lake Shopping Center (grocery, gas, restaurants)

Zone 7 Boundaries

- North – Mid-Pacific Country Club
- East - Keolu Hills and Kailua Heights communities
- South – Old Kalaniana'ole Highway
- West – Keolu Drive

Attributes

- Shopping Center (gas, restaurants)
- Church of Latter Day Saints

Zone 8 Boundaries

- North – Kawainui Marsh
- South – Olomana Community
- East – Women's and Youth Correctional Facilities
- West – Ulukahiki Street (West of Castle Medical Center)
- Includes Olomana and Pōhakupu communities

Attributes

- Castle Medical Center
- Churches (North side of Kailua Road)
- Kailua High School
- Maunawili Elementary School and Park
- Le Jardin Academy
- Strip Mall (gas, food)
- Pōhakupu Park
- Upo Heiau Park
- Windward YMCA (swimming pool)

Zone 9 Boundaries

- North – Kalaniana`ole Highway
- South – Koolau Mountains
- East – Auloa Road/Royal Hawaiian Country Club
- West – Lunaai Street
- Includes the Maunawili Community

Attributes

- Trinity Church and School
- Maunawili Park
- Royal Hawaiian Country Club (adjacent to zone)

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APPENDIX B – KOC Organizational Structure

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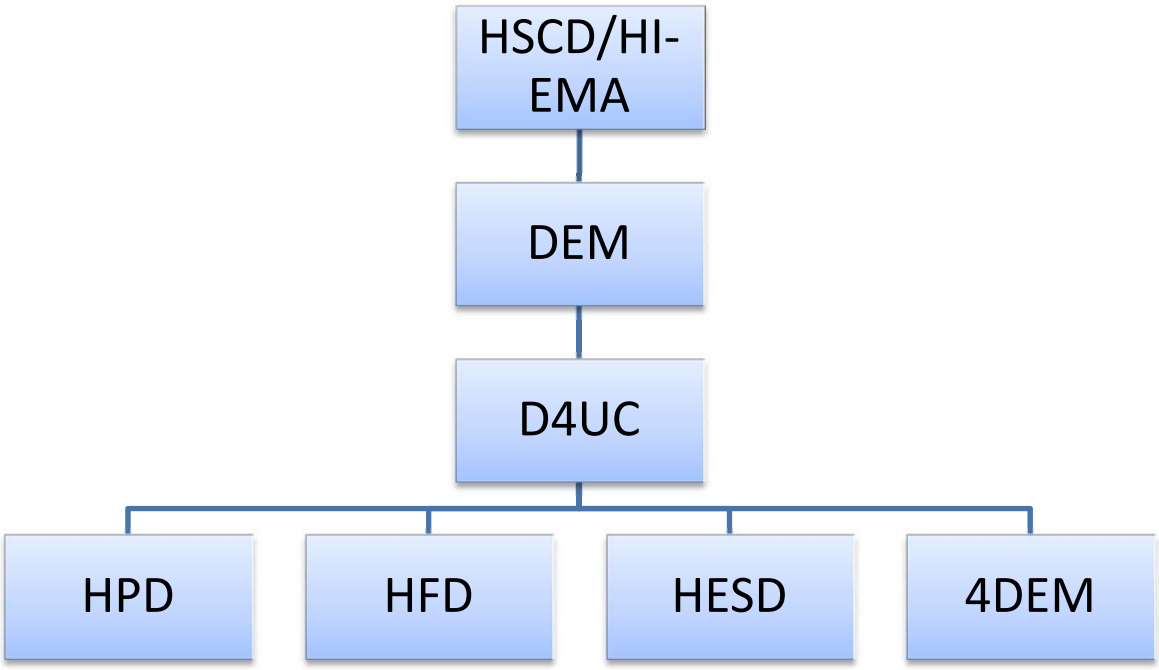
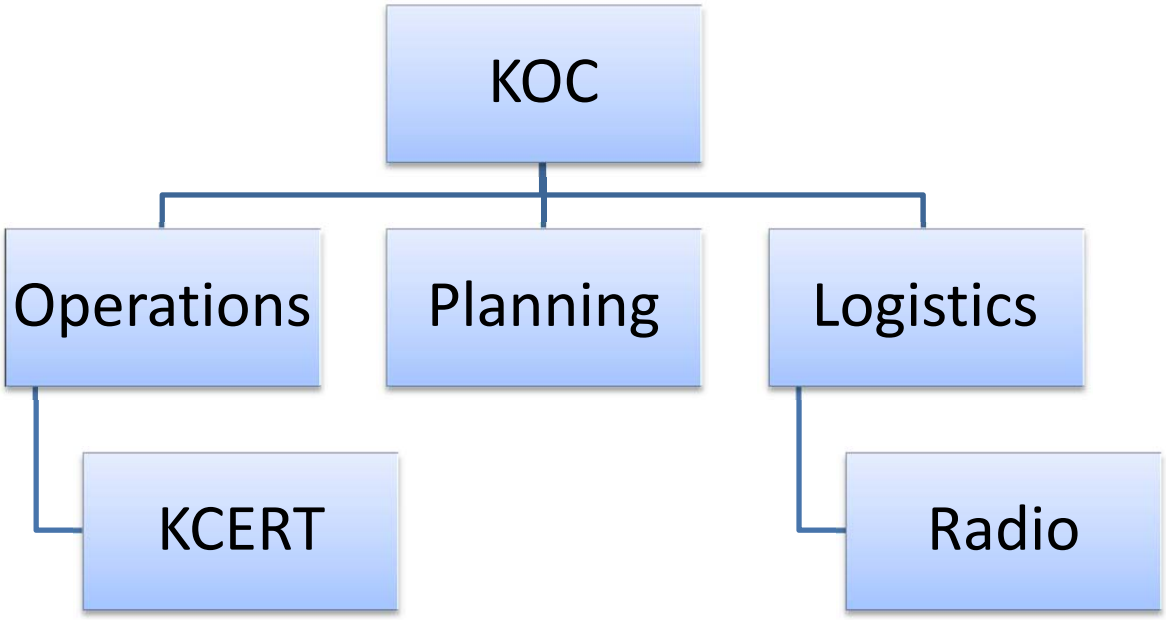
Government and Kailua Operations Center
Organizational Charts





HSCD, DEM and D4UC Roles and Responsibilities

HSCD/HI-EMA - Hawai`i State Civil Defense/Hawai`i – Emergency Management Agency

- Headed by the governor, HSCD/HI-EMA leads the state in prevention, protection and rapid response during disasters with a full range of resources and effective partnerships.

DEM – City & County of Honolulu, Department of Emergency Management

- Mission is to plan and prepare for, respond to, and recover from disasters to protect the public's health, safety and welfare.
- Responds to natural disasters (e.g. hurricanes, earthquakes, tsunamis, flooding, high surf, wild fires and high winds) and man-caused disasters (e.g. aircraft crashes, radiological and hazardous material releases, and marine and inland oil spills).
- Oversees the city's Emergency Operations Center (EOC) where disaster response and recovery are coordinated. The EOC brings together state and federal government agencies, along with the private sector.
- Responsible for the City and County of Honolulu Incident Management Team for incidents of significance to the County of Honolulu.

D4UC – District IV Unified Command

- Responsible for coordinating responses to incidents or emergencies within the windward area of Oahu (Makapu`u Point to Kawela Bay).
- Commanding officers from Honolulu Police Department (HPD), Honolulu Fire Department (HFD), Honolulu Emergency Services Department (HESD), DEM and other agencies share responsibility for the incident or emergency.
- In an island-wide incident, D4UC will work under the authority of the DEM, providing critical information about conditions in the windward area.
- Should the D4UC ask for Mutual Aid Support (request for manpower and or resources), DEM will be responsible for requesting help from city, county, state, and federal partners.

KOC Roles and Responsibilities

NOTE: There is no command relationship between the D4UC and the KOC. The D4UC and KOC, however, will communicate information regarding on-the-ground assessments, in addition to needed resources and personnel.

In response to a catastrophic tsunami or hurricane, the KOC will activate and mobilize KCERTs and amateur licensed radio operators (HAM) to save lives and conduct damage assessments in the Kailua community. The Incident Management Team (IMT), made up of the KOC IC, Deputy IC and General Staff, will work in cooperation with the D4UC to fulfill its mission.

KOC – Kailua Operations Center

- Is the physical location in Kailua where coordination of information and resources to support incident management activities takes place.
- Functions as a communication center where all information is received and analyzed.
- All information is documented, prepared and posted as reports, maps, and forecasts.

- The KOC staff includes the Incident Commander (IC), Deputy IC, and General Staff (Operations, Planning, and Logistics).

Incident Commander

- Should have training in the Incident Command System (ICS), offered by the Federal Emergency Management Agency. Courses include IS 100, 200, 300, 400, 700, and 800 (http://training.fema.gov/IS/crslist.aspx).
- Has overall incident management responsibility for Kailua.
- Develops incident objectives to guide the incident planning process.
- Approves the Incident Action Plan and all requests pertaining to the ordering and releasing of incident resources.
- Will perform all major ICS Command Staff responsibilities (Public Information Officer, Liaison Officer, and Safety Officer) and General Staff responsibilities (Operations, Planning, and Logistics) unless these functions are activated and/or qualified personnel are available to fill these duties.
    - Public Information Officer - Responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.
    - Safety Officer – Monitors incident operations to ensure health and safety of responder personnel.
    - Liaison Officer - Point of contact for representatives of other governmental agencies, nongovernmental organizations, and/or private entities.

Deputy Incident Commander

- Should have training in the ICS, offered by the Federal Emergency Management Agency. Courses include IS 100, 200, 300, 400, 700, and 800 (http://training.fema.gov/IS/crslist.aspx).
- Perform specific tasks as requested by IC
- Perform IC function in a relief capacity (i.e. taking shifts)

Operations

- Should have training in the ICS, offered by the Federal Emergency Management Agency. Courses include IS 100, 200, 300, 400, 700, and 800 (http://training.fema.gov/IS/crslist.aspx).
- Directs and coordinates all incident tactical operations.
- Is typically one of the first organizations to be assigned to the incident.
- Expands from the bottom up.
- Is responsible to the IC for the direct management of all incident-related operational activities.
- Establishes tactical objectives for each operational period.
- Has direct involvement in the preparation of the Incident Action Plan.

Kailua CERT (KCERT)

- Directed by Operations or the IC.
- Conduct search and rescue operations.
- Conduct triage of survivors.

- Conduct medical operations for survivors.
- Conduct damage assessments

Planning

- Should have training in the ICS, offered by the Federal Emergency Management Agency. Courses include IS 100, 200, 300, 400, 700, and 800 (http://training.fema.gov/IS/crslist.aspx).
- Maintain resource status.
- Maintain and displaying situation status.
- Prepare the Incident Action Plan (IAP).
- Develop alternative strategies.
- Provide documentation services.
- Prepare the Demobilization Plan.
- Provide a primary location for Technical Specialists assigned to an incident.
- One of the most important functions of the Planning Section is to look beyond the current and next operational period and anticipate potential problems or events.

Logistics

- Should have training in the ICS, offered by the Federal Emergency Management Agency. Courses include IS 100, 200, 300, 400, 700, and 800 (http://training.fema.gov/IS/crslist.aspx).
- Provides supplies, facilities, and ground support for incident personnel.

Radio

- The licensed amateur radio operator (HAM) operator assigned to the KOC will set up and establish communication with the D4UC. In addition, the KOC HAM will gather information from other windward Oahu HAMs.
- Family Radio Service radios will be used to communicate between the KOC and KCERTs.

Additional Personnel (as needed)

- Administrative support to maintain records for the IMT.
- Map Recorder who plots on the map all incidents reported by KCERTs.
- Couriers (Blue Knights or others) who deliver messages to/from various locations.
- Security personnel to help protect property and keep out unauthorized personnel.

APPENDIX C – KOC Locations and Points of Contact

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APPENDIX D – CERT SIZEUP STEPS

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The nine steps of the CERT sizeup include:

1. Gather facts. What has happened? How many people appear to be involved? What is the current situation?

2. Assess and communicate the damage. Try to determine what has happened, what is happening now, and how bad things can really get.

3. Consider probabilities. What is likely to happen? What could happen through cascading events?

4. Assess your own situation. Are you in immediate danger? Have you been trained to handle the situation? Do you have the equipment that you need?

5. Establish priorities. Are lives at risk? Can you help? Remember, life safety is the first priority!

6. Make decisions. Base your decisions on the answers to Steps 1 through 5 and in accordance with the priorities that you established.

7. Develop a plan of action. Develop a plan that will help you accomplish your priorities. Simple plans may be verbal, but more complex plans should always be written.

8. Take action. Execute your plan, documenting deviations and status changes so that you can report the situation accurately to first responders.

9. Evaluate progress. At intervals, evaluate your progress in accomplishing the objectives in the plan of action to determine what is working and what changes you may have to make to stabilize the situation.

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APPENDIX E – GUIDELINES FOR KCERT MEMBERS

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APPENDIX F – MEMORANDUMS OF UNDERSTANDING

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APPENDIX G – FRS RADIO CHANNELS

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Family Radio Service (FRS)/General Mobile Radio Service (GMRS) recommended channels:

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

Notes:
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.
- Are used for both FRS/GMRS; .5 watts for FRS; up to 5 watts on GMRS; need FCC license to operate on GMRS.

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 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.

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APPENDIX H – KOC FORMS

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APPENDIX I – KOC AND KCERT SUPPLIES AND EQUIPMENT LISTS

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KOC Supplies and Equipment

- Tables and chairs
- Easel/paper
- Colored markers
- Maps of Kailua (ideal if laminated)
- First aid supplies
- Tarps (red, yellow, green & black for medical treatment area)
- Various tools (wrenches, crowbars, shovels, etc.)
- FRS radios
- Tent
- Flashlights/lanterns
- Generator(s)
- Extension cords
- Power strips

KCERT Supply List

Developed by a Kailua CERT member.

GREEN CERT BACKPACK CONTENTS (given at Diamond Head exercise)

- 4 in 1 tool
- 5 in 1 whistle
- All weather notebook
- CERT Field Operations Guide
- CERT vest
- Crescent wrench (adjustable wrench)
- Duct tape
- Emergency/survival blanket
- Goggles
- First Aid kit (assimilated into my first aid kit)
- Flashlight w/2 batteries (replaced with Duracell 500 lumen light)
- Folding shovel
- Hand sanitizer
- Hard hat
- Leather work gloves
- Light stick
- N95 Dust masks
- Paramedic/EMT scissors
- Poncho
- Sharpie pens/permanent markers
- Tarp
- Trash bag
- Triage tape

PACKING YOUR CERT BACKPACK

Use different color bags to group items in the main compartment: 1) first-aid bag, 2) hard hat bag and 3) tool bag. Using bags makes retrieving items fast and easy.

(*) Indicates additional items not originally included with CERT backpack.

First-Aid Bag

- Antibacterial ointment (i.e. bacitracin)*
- Antiseptic wipes (alcohol-based OK)*
- Applicators*
- Assorted adhesive bandages
- Benadryl cream*
- Emergency/space blanket*
- EMT scissors
- Finger splints*
- Gauze pads (2x2, 3x3s, 4x4s, 5x9s and eye pads)*
- Insect-sting relief treatment (i.e. AfterBite)*
- Instant cold compress*
- Medical adhesive tape* (1" or 1.5", can cut thinner if needed)
- Mole skin*
- Pain-relief medication*
- Roller bandage*
- Safety pins*
- Splinter (fine-point) tweezers*
- Triangle bandage w/safety pins (3)*
- Vinyl gloves*

Hard Hat Bag

- CERT vest
- Ear protection*
- Hard hat liner (sweat band, bandana, etc.)*
- Goggles
- Hard Hat
- Knee pads*
- Leather work gloves
- Mechanic gloves
- N95 dust mask (should have 2 or 3)
- Safety glasses*

Tool Bag

- 6 in 1 screwdriver*
- Channel lock pliers*
- Crescent wrench
- Duct tape
- Folding saw*
- Marking paint*
- Paracord*
- Rope*

TOOL CARRIED IN THE CAR

Tools add a lot of weight to the backpack. So to cut down on weight I carry additional tools in my car. The following tools are easily accessible from my car.

- 4 in 1 tool
- Bolt cutters*
- Drill and drill bits*

- Electric screwdriver and bits*
- Fat Max demo bar*
- Folding shovel
- Hammer*
- Handy rescue tool*
- Hatchet*
- Jumper battery (i.e. diehard 1150)
- Jumper cables*
- Machete*
- Extra duct tape*
- One wrap*
- Painters tool*
- Pry bar*
- Ratchet set*
- Staple Gun*

FITTING IT ALL IN THE BACKPACK

NOTE: Threading some colored paracord through the zipper tabs will make them easier to find and open or close.

Before you run out to buy supplies, check around the house. Most of the extras items can be found in your office supplies, garage and medicine cabinet.

Inside Main Compartment of Backpack

- Tarp-against the back
- Poncho/rain gear-on the bottom
- First-Aid Kit
- Hard hat bag
- Tool Bag

Outside Backpack

- Hand Sanitizer (w/snap link to hang on outside of bag)

Top Pocket - Outside

- Triage tape
- Medical gloves (vinyl, NOT latex) put a multiple pairs in a zip bag
- Ziplock bags (quart and gallon size)
- Trash bags (30-gallon or larger)

Little Pocket Inside Top Pocket

- Mirror*
- Emergency Poncho (leave wrapped until you need it)
- Emergency/space blanket

Mesh Pocket on the Front of the Top Pocket

- 5 in 1 Whistle (could also be attached to lanyard)
- Stick light (chemical)

- Stick light (battery)*
- Flasher*

Bottom Pocket

- All weather notebook
- CERT Field Operating Guide
- Emergency Response Guidebook (ERG)*
- Hand sanitizer
- Magnifying glass*
- Toilet Paper*
- Whistle and mini flashlight on a lanyard*

Organizer Pocket Inside the Bottom Pocket

- Car keys*
- Lumber Crayon (Orange or red to show up on various colors of house siding)*
- Pens and pencils
- Sharpies/Permanent markers

Little Pocket Outside of the Bottom Pocket

- Extra batteries
- Extra light

Webbing Across Front of Bottom Pocket

- CPR mask*
- Measuring tape*
- Multi-tool*
- Snap-links*

Right Side Mesh Pocket

- Bottle of drinking water*
    - Consider insulated container, good one keeps drink hot or cold all day

Left Side Pocket

- Container of quarters & singles for phone, snack/soda machine, etc.*
- Energy Bars, jerky, snacks*
- Eating utensils (spork, chopsticks, etc.)*
- Electrolyte replacement, flavor packets for water
- Fisher space pen*
- Gum*
- Sheath Knife*
- Lighter*
- Miniature LED Headlight*
- Personal needs (i.e.: Toothbrush/paste, floss, Vaseline, sunscreen. spare glasses, medications)*

Fully loaded (without water) the bag weighs about 22 pounds.