



**STATE OF HAWAII**  
**PLAN FOR**  
**STORM-GENERATED DEBRIS REMOVAL**  
**FROM STREAMS**

**I. AUTHORITY**

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Hawaii Revised Statutes, Chapters 127-128.

**II. PURPOSE**

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This plan provides a course of action and coordinating instructions for the removal of the December 10-16, 2008, severe storms and flooding (FEMA-1814-DR-HI) disaster-generated debris from stream beds in communities of Waianae, Makaha, Haleiwa, and Laie.

**III. SCOPE**

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This plan applies to all governmental and non-governmental organizations with responsibility and supporting roles for community debris clearance and removal.

**IV. BACKGROUND**

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An upper level low pressure system developed north of the State of Hawaii around December 9, 2008. This system brought heavy rains and strong winds which caused flooding, landslides, power outages, and extensive damage to crops, homes, and personal property. Areas around Oahu received over ten inches of rain in a 6 hour period and flooded areas with unprecedented water levels.

The City and County of Honolulu (C&C) used a strategy which combined curbside collection and collection centers to remove debris from affected areas. The C&C issued a news release on Special Storm Debris Removal and initiated special refuse collection services for the affected areas, including assigning extra workers to assist with debris removal. Residents were also encouraged to haul their own trash to the city's Convenience Centers, Kapaa, Keehi, and Kawaihoa Transfer Stations, or the Waimanalo Gulch Landfill and to separate the debris into five categories: green waste, white goods, household hazardous waste, construction and demolition debris, and ordinary household trash.

On December 12, 2008, Governor Lingle issued a disaster proclamation covering the counties of Kauai, Maui, and the C&C for the period of December 10-16, 2008. Mayor Hannemann issued an emergency proclamation on December 13, 2008, after his inspection of affected areas.

Governor Lingle requested a Presidential Disaster Declaration on December 24, 2008, upon completion of a Joint Preliminary Damage Assessment by State Civil Defense (SCD), the

Federal Emergency Management Agency (FEMA), and the Small Business Administration (SBA). On January 5, 2009, President Bush declared a major disaster for the State of Hawaii authorizing individual assistance for the C&C, public assistance for the County of Kauai and the C&C, and federal funding for hazard mitigation measures for the entire State. The disaster has been designated as FEMA-1814-DR-HI.

## V. SITUATION

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There is a risk of additional flooding in the communities of Waianae, Makaha, Haleiwa, and Laie due to disaster-generated debris fields and debris dams. Disaster generated debris must be removed from stream beds to reduce the threat to life, public health, and safety.



Most of the stream beds are privately owned with property lines that extend into the middle of the streams. An assessment of tax map data has revealed that the streams are owned by a mix of government, individual families, and large partnerships or corporations. The larger landowners include: HRT, Ltd.; Makaha Valley, Inc.; RNI-NV Ltd. Partnership; Honolulu Ltd.; Property Reserve, Inc.; and Makaha Hotel and Resort, Inc.

Generally, government assistance programs are not able to remove debris on private property as it normally is the responsibility of the property owner. However, the large amount of disaster-generated debris in the streams and the threat of additional flooding and infrastructure damage require the cooperation of respective private property owners and a coordinated government and community effort to remove the debris to mitigate the threat.

The December 10-16, 2008, severe storms and flooding caused streams on Oahu to rise rapidly and flooded adjacent properties with over 36 inches of water. The rain and associated flash flooding has left disaster-generated debris fields and pockets of accumulated debris in streams in Waianae, Makaha, Haleiwa, and Laie. Subsequent heavy rains and flash flooding will push the disaster-generated debris downstream to create debris dams at choke points and against existing bridges which may damage critical transportation infrastructure and result in additional flooding of adjacent properties. Severe damage to any of these bridges will cut off the sole ingress and egress route for the surrounding communities.

Hawaii National Guard (HING) personnel, at the request of State Civil Defense, have initiated debris removal operations at designated sites along streams in Waianae, Makaha, Haleiwa, and Laie to mitigate the threat of flooding from subsequent storms. State and county maintenance crews have removed debris from areas adjacent to the bridges and have submitted work requests to have sediment removed from areas adjacent to and under the bridges.

HING personnel have been used to address specific sites that pose an immediate threat to communities. State Civil Defense is organizing a community clean-up effort to address specific sites on the Eku, Mailiili-Puuhulu, Kahawainui, and Helemano-Opaepala streams. Aerial photos of the specific sites on these streams are attached at the end of the plan. The tan colored box highlights the area to be cleaned. The community clean-up effort has been named Operation Lauwai and will take place on February 6-7, 2009.

## VI. ASSUMPTIONS

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- A. A legally authorized representative has ordered the exercise of public authority to enter private property to remove disaster-generated debris.
- B. Property owners will sign the Consent to Enter, Release, Indemnification, Defend and Hold Harmless Agreement.
- C. State/county agencies and volunteer organizations will be granted right of entry to streams of interest to clear the hazard and mitigate the threat.
- D. Community organizations, large landowners, and private homeowners will assist with clearance efforts.
- E. Resources are available from C&C, State, HING, and the Federal government, under appropriate programs and regulations, to support disaster debris clearance and removal operations.
- F. State and C&C departments with responsibility for roads and bridges will take action to clear debris and initiate actions to remove sediment build-up within ten (10) feet of bridges.
- G. State and county agencies will expedite soil testing, procurement of contractor support, and issuance of required permits for sediment removal. (Sediment removal is not a task to be performed on February 6-7, 2009).

## VII. OBJECTIVES

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This plan provides a course of action for joint government and community effort to:

- A. Reduce the threat to adjacent properties and transportation infrastructure, and
- B. Mitigate damage from flash flood events in the immediate future.

## VIII. CONCEPT OF OPERATION

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Senior Leaders Intent. The C&C and State, in a joint effort with property owners and community organizations, will clear disaster-generated debris from specific areas within streams in Waianae, Makaha, Haleiwa, and Laie in order to alleviate the immediate flooding threat from future weather events. The mission will be considered complete upon clearance of disaster-generated debris and debris dams from the designated work sites.



Operation Lauwai is currently underway. Stream assessments have been completed and HING has removed debris from selected locations. The community outreach and joint debris removal phases augment debris removal efforts in the selected communities.

The community clean-up phase is scheduled for February 6-7, 2009. SCD will coordinate volunteer and private sector support, provide operational oversight, and maintain safety and situational awareness of the operation.

#### Phase 1 – Stream Reconnaissance (January 7, 2009 to January 31, 2009)

Joint teams, comprised of representatives from government agencies and HING, assess streams of interest and identify sites with accumulated storm-related debris. The teams will assess debris quantity/composition and select the debris management approach appropriate for the situation.

Effort will be made to identify possible conditions that contributed to the flooding and source locations for large accumulation of debris. Sites with conditions that contributed to the flooding or experienced major flooding will be identified and may be sites for future hazard mitigation projects.

#### Phase 2 - Concurrent HING debris removal operations (December 15, 2008 – Present)

HING assets will assist and provide resources, as required, and continue to target selected debris sites as directed by SCD. HING may be tasked to support operations at one of the Operation Lauwai sites or may be tasked to complete debris removal from other nearby sites. SCD prioritizes and provides mission taskings to HING and coordinates support through the HING Director of Operations and Military Support.

#### Phase 3 - Community outreach (January 19, 2009 – Present)

SCD coordinates community outreach, with assistance from legislative representatives and community organizations, to assemble volunteers with desired skill sets and resources to conduct operations. SCD coordinates use of rally points and debris staging areas and provides information on where to report and required clothing/equipment to volunteers. SCD coordinates a public information message to announce the date and times of the operation and inform residents of the possibility of heavier traffic in the designated areas. SCD, HING, and community leaders contact property owners and obtain signatures on the Consent to Enter, Release, Indemnification, Defend and Hold Harmless Agreements.

#### Phase 4 - Joint debris removal operations (February 6-7, 2009)

Debris removal operations for the Eku, Mailiili-Puuhulu, and Helemano-Opaepala streams are scheduled for Friday, February 6, 2009, and Saturday, February 7, 2009. The debris removal effort for the Kahawainui stream in Laie is a one day operation scheduled for Saturday, February 7, 2009. All operations will be carried out between the hours of 7:30 a.m. to 12:00 p.m.

SCD and HING provide site coordinators and staff for operational oversight of the operation. The site coordinators are tasked to oversee the designated sites, designate work priorities, and utilize available staff and volunteers to reduce the debris piles and provide for the safety and security of personnel, vehicles, and equipment. SCD provides resources to augment volunteers with necessary tools and safety equipment.

As required, the C&C and State will coordinate and designate temporary debris storage and reduction sites for specific types of debris to facilitate recycling, disposal, and comply with environmental requirements. Personnel will be tasked to ensure that only disaster-generated debris is collected at the temporary debris storage and reduction sites.

#### Phase 5 – Recovery (February 6-7, 2009)

Site coordinators will account for all staff, volunteers and State-owned equipment at their site prior to departure from the site. Site coordinators ensure that all personnel have departed the area and equipment is loaded for return to the appropriate location. Provide information on any remaining sites that need additional support and after-action comments to the SCD Plans and Operations Branch Chief.

### IX. STATE AGENCY ROLES AND RESPONSIBILITIES

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State agencies will support the community's effort to remove disaster-generated debris from the designated sites. State agencies will report measures taken in accordance with their departmental roles and responsibilities to SCD.

### X. ANTICIPATED FEDERAL AND NON-GOVERNMENT AGENCY ACTIONS

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- A. Active military may provide volunteers or support under Defense Support to Civil Authorities or Innovative Readiness Training.
- B. Non-government agencies will provide support as requested by SCD or C&C.

### XI. ANTICIPATED COUNTY ACTIONS

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- A. The mayor will provide overall direction for C&C recovery and the Department of Emergency Management (DEM) will provide overall coordination of C&C resources.
- B. The Department of Facility Management will provide heavy equipment support and technical assistance, as required.
- C. The Department of Environmental Services will coordinate debris disposal.
- D. DEM will coordinate engineering support and technical assistance from the Department of Planning and Permitting, as required.

### XII. ANTICIPATED COMMUNITY ACTION

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- A. Legislative representatives and City Council members may report information on disaster-generated debris in stream beds obtained from their constituents and urge

- affected property owners to sign the Consent to Enter, Release, Indemnification, Defend and Hold Harmless Agreement and assist with clearance of the streams.
- B. Neighborhood board may share information and concerns from community members and provide assistance to obtain property owner signatures on the Consent to Enter, Release, Indemnification, Defend and Hold Harmless Agreement.

### XIII. PUBLIC INFORMATION

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- A. The City and County of Honolulu may issue situation updates and release media releases, as required.
- B. As required, SCD will coordinate and disseminate public information and media releases.
- C. State Representative Maile Shimabukuro will prepare and disseminate a press release regarding Operation Lauwai.

### XIV. COORDINATING INSTRUCTIONS

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- A. Safety of all personnel is of paramount importance and a responsibility of all involved. A risk assessment will be performed and a safety briefing will be provided to all participants by the SCD site coordinator prior to the start of all operations.
- B. A basic first aid kit will be available at the designated rally points. For emergency medical situations, 911 will be called immediately and available personnel will provide assistance as directed by trained medical personnel. Report all medical emergencies to the SCD Plans and Operations Branch Chief and State Warning Point at 733-4300 by the most expeditious means.
- C. Primary communications will be by radio, cell phone, and telephone, in that order.
- D. An Incident action plan will be prepared by SCD for each geographic area, i.e., Makaha-Waianae, Waialua-Haleiwa, and Laie.
- E. All site coordinators will create a list of all volunteers and organizations that provide support and resources at their respective sites to facilitate distribution of letters of appreciation.
- F. If inclement weather affects operations on February 6-7, 2009, the operation may be rescheduled for February 13-14, 2009.
- G. This plan is effective for planning upon receipt and for execution. Questions concerning this plan should be directed to Mr. Leighton Ah Cook, SCD Planning Section Chief, Ph. (808) 733-4300, email lahcook@scd.hawaii.gov.

ROBERT G. F. LEE  
Major General, HING  
Director of Civil Defense

OFFICIAL:



EDWARD T. TEIXEIRA  
Vice Director of Civil Defense

State of Hawaii Plan for Storm-Related Debris Removal from Streams, February 2009

This plan is supported by the following State legislators:

MAILE S. L. SHIMABUKURO  
State Representative  
District 45

KAREN L. AWANA  
State Representative  
District 44

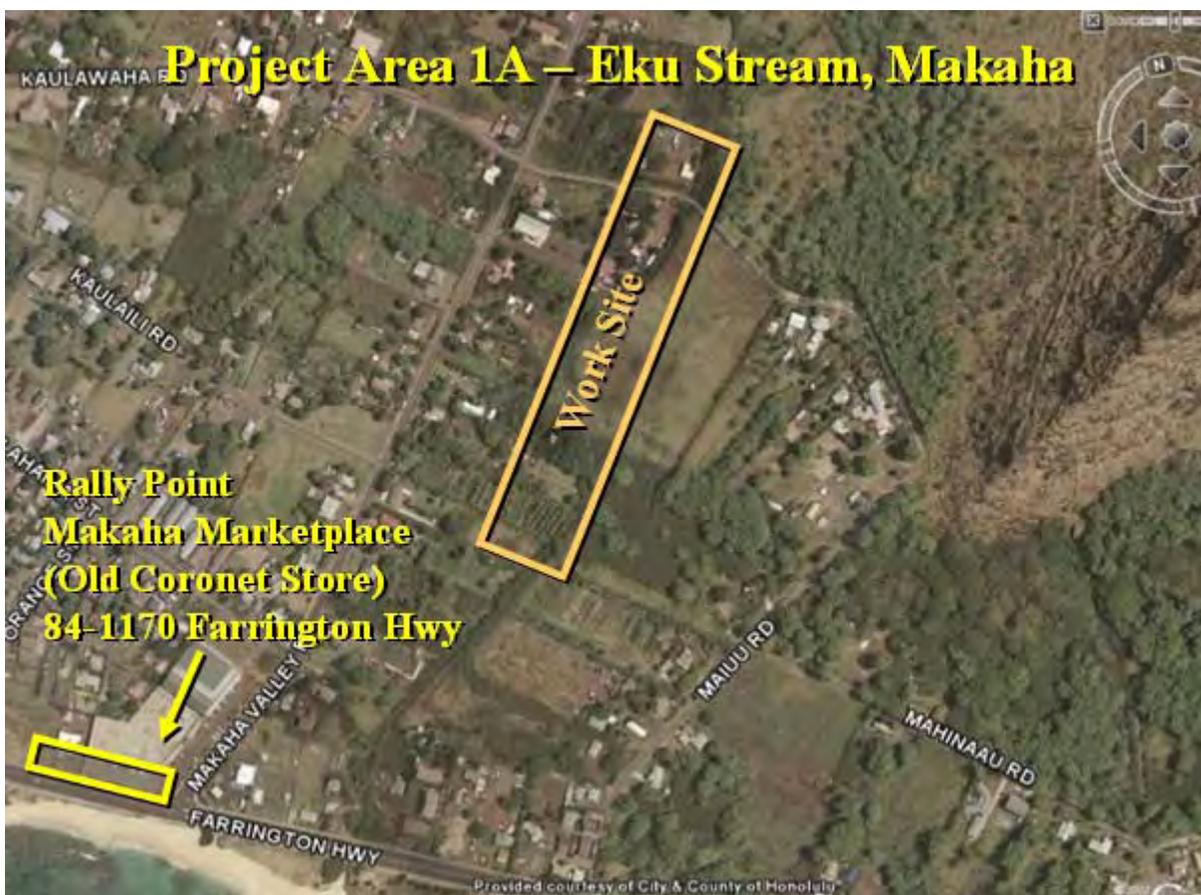
MICHAEL MAGAOAY  
State Representative  
District 46

JESSICA WOOLEY  
State Representative  
District 47

Enclosures

1. Project Area 1A – Eku Stream, Makaha
2. Project Area 1B – Mailiili-Puuhulu Stream, Waianae
3. Project Area 2 – Helemano-Opaecula Stream, Haleiwa
4. Project Area 3 – Kahawainui Stream, Laie
5. Volunteer Flyer
6. Safety Briefing

## PROJECT AREA 1A – MAKAHA-WAIANAE EKU STREAM



**The effort for this site is scheduled for Friday, February 6, 2009, and Saturday, February 7, 2009.** Adult volunteers are needed to clear the debris from the stream. Please wear long pants, boots or closed toe shoes, a hat, gloves, and sunglasses (recommended). Please bring water in a closeable container. We also recommend sunscreen and bug repellent.

Report to the Rally Point at the **Makaha Marketplace (Old Coronet Store), 84-1170 Farrington Highway**, at 7:30 a.m. and sign in with the SCD Site Coordinator. Please park in the parking lot and you will receive further direction from the Site Coordinator.

A safety briefing will be provided at 7:45 a.m. and you will be provided information on the scope of the clean-up effort.

## PROJECT AREA 1B – MAKAHA-WAIANAE MAILILI-PUUHULU STREAM

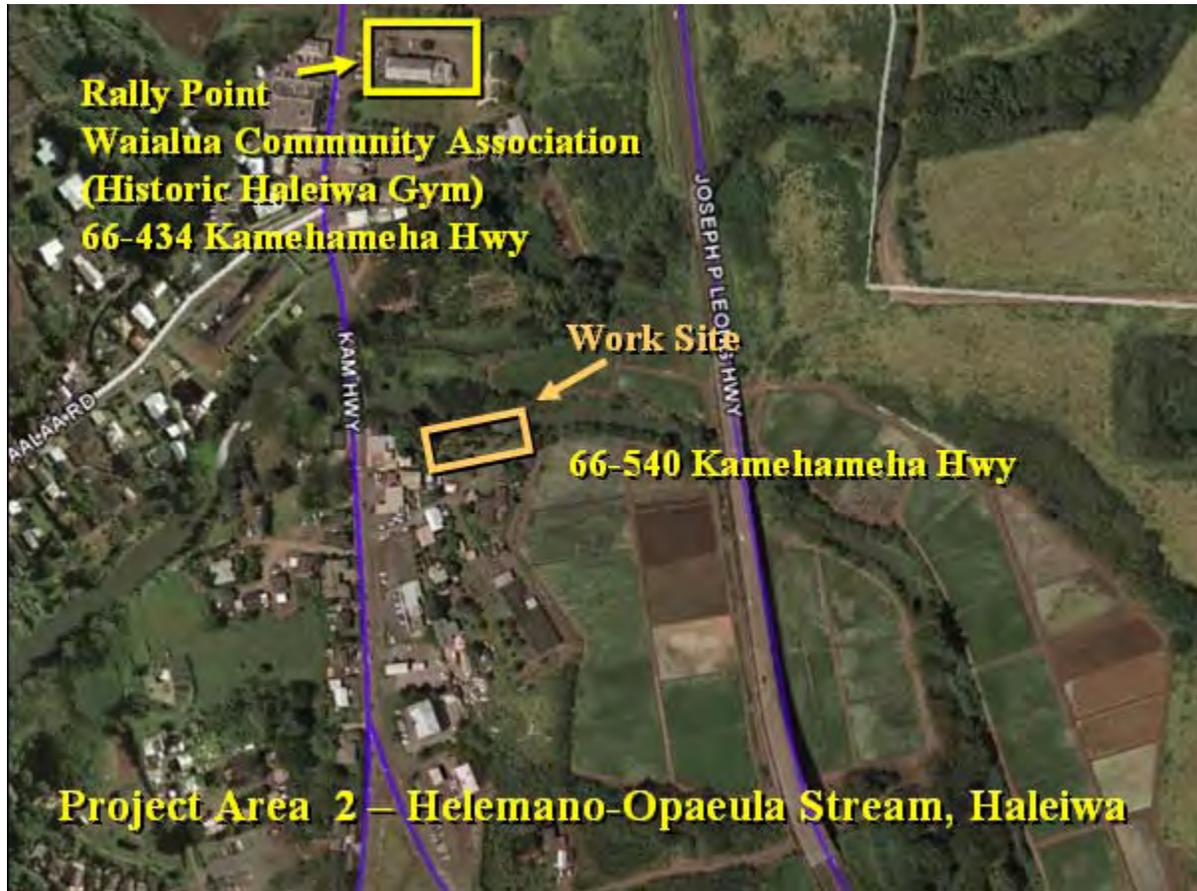


The effort for this site is scheduled for **Friday, February 6, 2009, and Saturday, February 7, 2009**. Adult volunteers are needed to clear the debris from the stream. Please wear long pants, boots or closed toe shoes, a hat, gloves, and sunglasses (recommended). Please bring water in a closeable container. We also recommend sunscreen and bug repellent.

Report to the Rally Point at the **Waianae Samoan Church at 86-130 Puhawai Road** at 7:30 a.m. and sign in with the SCD Site Coordinator. Please park in the parking lot at the church.

A safety briefing will be provided at 7:45 a.m. and you will be provided information on the scope of the clean-up effort.

## PROJECT AREA 2 – HALEIWA HELEMANO-OPAEULA STREAM



**The effort for this site is scheduled for Friday, February 6, 2009, and Saturday, February 7, 2009.** Adult volunteers are needed to clear the debris from the stream. Please wear long pants, boots or closed toe shoes, a hat, gloves, and sunglasses (recommended). Please bring water in a closeable container. We also recommend sunscreen and bug repellent.

Report to the Rally Point at the **Waialua Community Association (Historic Haleiwa Gym), 66-434 Kamehameha Highway**, at 7:30 a.m. and sign in with the SCD Site Coordinator. Please park in the parking lot and you will receive further direction from the Site Coordinator.

A safety briefing will be provided at 7:45 a.m. and you will be provided information on the scope of the clean-up effort.

## PROJECT AREA 3 – LAIE KAHAWAINUI STREAM



**THE EFFORT FOR THIS SITE IS ONLY SCHEDULED FOR SATURDAY, FEBRUARY 7, 2009.**

Adult volunteers are needed to clear the debris from the stream. Please wear long pants, boots or closed toe shoes, a hat, gloves, and sunglasses (recommended). Please bring water in a closeable container. We also recommend sunscreen and bug repellent.

Report to the Rally Point on **Cane Haul Road**, at 7:30 a.m. and park along the shoulder of the road in the area indicated above. **Cane Haul Road is right next to the Cackle Fresh Outlet Store at 55-730 Kamehameha Highway.** A State Civil Defense representative will be at the intersection of Cane Haul Road and Kamehameha Highway to direct you.

Please sign in with the SCD Site Coordinator and you will receive further direction from the Site Coordinator.

A safety briefing will be provided at 7:45 a.m. and you will be provided information on the scope of the clean-up effort.

You're invited to join the

# Clean Stream Volunteer Team

In early December 2008 the Waianae, Makaha, Nanakuli, Haleiwa and Laie communities were devastated by flood waters. Join State Civil Defense, the City and County of Honolulu, private businesses and community organizations with **Operation Lauwai**, a community volunteer effort is to clean-up community streams and prevent future floods.

**When:** Friday, February 6, 2009 and Saturday, February 7, 2009

**Time:** 7:30 a.m. to Noon on both days

**Where to Meet:** **Makaha Marketplace** – 84-1170 Farrington Highway

**Waianae Samoan Church** – 86-130 Puhaiwai Road

**Waialua Community Association (Historic Haleiwa Gym)** -  
66-434 Kamehameha Highway

**Laie – (Saturday Only) Cane Haul Road** next to the Cackle Fresh Outlet Store at 55-730 Kamehameha Highway. A State Civil Defense representative will be at the intersection of Cane Haul Road and Kamehameha Highway to direct you.



Adult volunteers are needed to clear the debris from the stream beds. In most instances the stream beds are dry and rocky. You will want to wear long pants, boots or closed toe shoes, a hat, gloves, and sunglasses. We also recommend sunscreen and bug repellent.

Most of the debris will be greenery, branches, corrugated metal, white goods and some trash.

To sign up to volunteer or for more information contact

Cynthia Keolanui Iverson at 733-4320 ext. 203



## SAFETY BRIEFING

Good morning, my name is \_\_\_\_\_ and I am with State Civil Defense. I am the Site Coordinator for this project. I am assisted by (introduction of other SCD/HING personnel). This will be the command post for your site. SCD or HING representatives are here to assist you and they have radios and/or cell phones for communication with the command post. We have water jugs to refill your individual water containers and there will be designated personnel to provide security for your vehicles.

Thank you very much for volunteering to help us with this community clean-up effort. Your assistance will help to mitigate the threat of additional flooding for this community. Our overriding concern today is for your safety and the safety of those around you.

I need you to write your name and address on this clipboard. I need everyone to sign in on this form. This will assist with accounting for everyone at the end of the day and to allow us to send you a letter of appreciation. It is important that you sign out with me or another SCD representative prior to leaving the area to ensure that we know you have safely exited the work area.

There will be personnel using chain saws and there will be vehicles operating around you. Please be aware of your surroundings and watch out for your partners. If you see an unsafe act, please stop it immediately.

Please make sure that you have the proper safety equipment for the task that you are doing. We have some gloves and hard hats available (modify as needed). Also, make sure that you have water and remain hydrated, it may get hot and the work may be strenuous.

If you have any physical limitations, please let us know and we will find an appropriate task for you to perform.

If you have any open cuts, please ensure that you avoid any standing pools of water or contact with the stream water to avoid the risk of infection.

The terrain that you will be working in is uneven, so please watch your step and assist your co-workers, if they need assistance. Please exercise caution when bending branch limbs to ensure that they do not hit the person behind you. Alert the person next to you of any hazards that you observe.

Please work within your ability. Ask for assistance if you need help to move an object and please use proper lifting techniques. Please use your legs to assist with lifting and not just your back.

If you don't know how to use a piece of equipment, please do not attempt to use it and leave it for an experienced operator to do.

If you begin to feel fatigued, please take a break.

For our chain saw operators, the chain saw can be dangerous if used improperly. Please follow these simple guidelines for your safety and the safety of those around you:

- Survey the job at hand and plan your task.
- Keep both hands on the chainsaw handles.
- Keep your eye on the blade and what you are cutting.
- Cut only on the right side of your body.
- Always cut below the level of your head.
- Cut with the lower edge of the saw blade whenever possible. Cutting with the tip of the saw is inviting injury.
- Watch out when cutting limbs and branches that are bent, they may snap back and hit you.
- Let the chainsaw do the work. Don't try to force the saw.
- Wear protective clothing; a hard hat, goggles, safety shoes, gloves and trim-fitting clothes.
- Don't wear yourself out. Stay alert.

If you are not operating a chain saw, maintain a safe distance until the cutting is done and the chain saw operator sees you before you move in to remove the smaller pieces.

The nearest restrooms are located at: \_\_\_\_\_

We have a basic first aid kit here. **If there is a MEDICAL EMERGENCY:**

- Report the emergency by calling **911**.
- Assist the injured person(s) and offer reassurance and comfort.
- If you are trained in first aid, you may offer medical assistance within the scope of your training.
- When an emergency situation involves blood or other bodily fluids, **do not touch the fluids without proper personal protection.**
- Do not move individuals with suspected spinal injuries.
- Report the emergency to the SCD or HING representative.

The nearest hospital to our location is \_\_\_\_\_ and the phone number is \_\_\_\_\_

Queens Medical Center	547 -4311
Straub Clinic & Hospital	522-4000
Waianae Coast Comprehensive Health Center.	697-3499
Hawaii Medical Center – West	678-7001
Kahuku Medical Center	293-9221
Wahiawa General Hospital	621-8411
Castle Medical Center	263-5500
Kapiolani Medical Center at Pali Momi	486-6000
Kaiser Moanalua Medical Center	432-0000
Kuakini Medical Center	536-2236