

Disaster Debris Management and Operation Plan



City and County of Honolulu
Department of Environmental Services
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RECORD OF CHANGES

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TABLE OF CONTENTS

Record of Changes..... iii

Table of Contentsv

1. Introduction..... 1-1

 1.1 Purpose..... 1-1

 1.2 Scope 1-1

 Definitions 1-1

2. Situation and Assumptions..... 2-1

 2.1 Situation Overview 2-1

 Hazard Analysis..... 2-1

Table 2-1..... 2-1

 Vulnerability Analysis 2-2

 2.2 Situations and Assumptions 2-2

 Situation 2-2

 Assumptions 2-3

Table 2-2 2-3

3. Roles and Responsibilities 3-1

 3.1 Government..... 3-1

 Department of Environmental Services 3-1

 3.2 Private Sector 3-1

 Debris Contractor 3-1

 Debris Management Monitoring Contractors..... 3-1

4. Concept of Operations 4-1

 4.1 General 4-1

 4.2 Notification and Activation..... 4-1



4.3 Key Actions 4-1

 Increased Readiness Phase..... 4-1

 Response Phase 4-2

 Recovery Phase..... 4-2

4.4 Direction, Control and Coordination 4-3

5. Section 5: Debris Collection and Hauling Operations..... 5-1

 5.1 Assessment Priorities 5-1

 5.2 Debris Clearance and Removal Guidelines..... 5-1

 5.3 Debris Removal Priorities 5-2

 5.4 Debris Operations..... 5-2

Table 5-1..... 5-3

 Debris Operations Plan..... 5-4

TABLE 5-2..... 5-6

 5.5 Debris Management Operations Monitoring..... 5-16

 5.6 Debris Management Contractor Monitoring 5-17

Considerations for Unit Price Contracts..... 5-17

Electronic Load Tickets 5-17

Truck Certification and Periodic Recertification 5-17

6. Information Collection, Analysis and Dissemination..... 6-1

TABLE 6-1..... 6-1

7. Communications..... 7-1

8. Administration, Finance and Logistics 8-1

9. Plan Development and Maintenance..... 9-1

10. List of Attachments..... 10-1

 10.1 Attachment 1: List of Acronyms 10-2



10.2 Attachment 2: TDSR Sites with Primary and Alternate Locations 10-5

Primary Debris Management Sites..... 10-5

Potential Alternate Debris Management Sites 10-6

10.3 Attachment 3: Disposal and Recycling Facilities with Map 10-10

10.4 Attachment 4: Sample Public Service Announcements (PSA’s) 10-11

SAMPLE PRESS RELEASE #1..... 10-11

SAMPLE PRESS RELEASE #2..... 10-13

SAMPLE PRESS RELEASE #3..... 10-15



1. INTRODUCTION

1.1 PURPOSE

The City and County of Honolulu (City), recognizes that natural and human-caused disasters have the potential to create debris that can cause safety threats to public health and safety, disrupt the quality of life, and complicate disaster response and recovery. Planning for such disasters can lessen the impact on the community, economy, and environment. Therefore, the City has developed this Disaster Debris Management and Operation Plan (DDMOP) to facilitate a rapid response and recovery from debris-causing incidents.

The DDMOP provides direction to facilitate and coordinate the management of debris operations and disposal following a disaster to:

- Identify and address planning and staff training needs before a debris-producing event.
- Mitigate against potential threats to the impacted area's lives, health, safety and welfare, and economic and environmental well-being.
- Expedite recovery efforts in the impacted area.
- Identify threats of significant damage to improved public or private property.

During plan review, specific attention will be directed to crucial plan components, including specific assigned roles and responsibilities, reviewing and updating contracts and contractor information for internal staff and external resources, and the location and status of identified Temporary Debris Storage and Reduction sites (TDSR).

1.2 SCOPE

This DDMOP covers the response and recovery for debris generating events that require resources beyond what can be managed by the City's regularly scheduled refuse operations. This plan also covers additional tasks required to maintain the City's disaster debris management readiness including training, exercises, and plan maintenance.

This DDMOP is an annex to the City and County of Honolulu's Comprehensive Emergency Management Plan (CCHNL-CEMP). This plan is Citywide in scope and applies to all agencies with responsibilities listed in this plan. The focus is on the multi-agency and multi-jurisdictional procedures and coordination required for debris management operations. Agencies named in this plan are expected to maintain internal tactical plans and procedures addressing how they will execute assigned duties, but the DDMOP does not address or direct internal operations of involved agencies.

DEFINITIONS

Chipping or Mulching – The process of reducing woody material, such as lumber and green waste, by mechanical means into small pieces to be used as mulch or fuel.

City – City and County of Honolulu

Construction and Demolition Debris (C&D) – FEMA’s Publication Public Assistance Program and Policy Guide (PAPPG) defines eligible construction and demolition (C&D) debris as damaged components of buildings and structures such as: lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and floor coverings, window coverings, plastic pipe, concrete, fully cured asphalt, heating, ventilation and air conditioning systems and their components, light fixtures, small consumer appliances, equipment, furnishings and fixtures that are a result of a disaster.

County –City and County of Honolulu, State of Hawaii.

Debris – Items and materials broken, destroyed or displaced by a natural or man-made federally declared disaster. Examples of debris include, but are not limited to, trees, construction and demolition debris and personal property.

Debris Contractor – City designated Debris Management Company, who will lead the debris removal process and provide general oversight for all phases of debris removal operation(s) within the City and County of Honolulu.

Debris Monitoring – Actions taken by applicants in order to document eligible quantities and reasonable expenses during debris activities to ensure that the work complies with the contract scope-of-work and/or is eligible for federal or state grant reimbursement.

Debris Monitoring Contractor – City designated Debris Monitoring Company, who will document eligible quantities and reasonable expenses during debris activities to ensure that the work complies with the contract scope-of-work and/or is eligible for federal or state grant reimbursement.

Debris Removal – Picking up debris and taking to a debris management site, composting facility, recycling facility, permanent landfill or other reuse or end-use facility.

Emergency Road Clearance (PUSH) – Clearing roads by pushing debris to the roadside to accommodate emergency traffic.

Eligible – Eligible means qualifying for and meeting the most current stipulated requirements (at the time written Release Orders are issued and executed by the City to the Service Provider) of the Public Assistance grant program, FEMA’s Publication Public Assistance Program and Policy Guide and all current FEMA fact sheets, guidance documents and disaster-specific documents. Eligible also includes meeting any changes in definition, rules or requirements regarding debris removal reimbursement as stipulated by the Federal Emergency Management Agency during the course of a debris removal project.

E-Waste – Also called electronic waste, e-waste is devices or components containing one or more circuit boards used primarily for data transfer, storage, communication, or entertainment. Electronic waste also encompasses end of life electronics, typically televisions, computers and related components.

Green Waste –Eligible Green Waste consists of plant material including tree trunks and branches, leaves, stumps, root balls, brush, and grass clippings.

Grinding – Reduction of disaster-related green waste debris through mechanical means into small pieces to be used as mulch or fuel. Grinding may also be referred to as chipping or mulching.

Hazardous Hangers – A Hanger is a hazardous limb that poses immediate threat are eligible. The current eligibility requirements for hazardous hangers according to FEMA’s Publication Public Assistance Program and Policy Guide were amended on September 2, 2022 by FEMA Memo and are now:

- The limb must be suspended in a tree and threatening improved property or public-use area; and
- The limb could fall and cause injury or damage to improved property.

FEMA does not fund removal of broken limbs or branches located on private property unless:

- The limbs or branches extend over the public ROW;
- The limbs or branches pose an immediate threat; and
- The Applicant removes the hazard from the public ROW (without entering private property).

Hazardous Leaners – A tree is considered hazardous and defined as an eligible leaner when the tree’s present state is caused by a disaster, the tree poses a significant threat to the public. The current eligibility requirements for leaning trees according to FEMA’s Publication Public Assistance Program and Policy Guide include:

- The tree has more than 50 percent of the crown damaged or destroyed (requires written documentation from an arborist).
- The tree has a split trunk or broken branches that expose the heartwood.
- The tree has fallen or been uprooted within a public use area.

Hazardous Stump - A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met. The current eligibility requirements for hazardous hangers according to FEMA’s Publication Public Assistance Program and Policy Guide are:

- The stump has 50 percent or more of the root-ball exposed.
- The stump is located on a public right-of-way.
- The stump poses an immediate threat to public health and safety.

Household Hazardous Waste – Any chemicals, paints, solvents, cleaners, varnishes, fuels, oil, and any other materials utilized in daily living as may be deemed hazardous if not handled, stored, or disposed of properly.

Recycling – The recovery or use of wastes as a raw material for making products of the same or different nature as the original product.

Refrigerant – Ozone depleting compound that must be removed from white goods or other refrigerant containing items prior to recycling or disposal.

Right of Entry – As used by FEMA, the document by which a property owner confers to an eligible applicant or its Service Provider or the United States Army Corps of Engineers the right to enter onto private property for a specific purpose without committing trespass.

Right-of-Way (ROW) – The portions of land over which facilities such as highways, railroads or power lines are built. It includes land on both sides of the facility up to the private property line.



Temporary Debris Storage and Reduction Site (TDSR) – Site where collected debris is taken by the City and/or Debris Contractor for staging and processing prior to final disposal.

White Goods – As outlined in FEMA’s Publication Public Assistance Program and Policy Guide, White Goods are defined as discarded disaster related household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers and water heaters. White goods can contain ozone-depleting refrigerants, mercury or compressor oils and must be removed. The EPA Clean Air Act specifies that only qualified technicians can extract refrigerants from white goods before they can be recycled.



2. SITUATION AND ASSUMPTIONS

2.1 SITUATION OVERVIEW

This plan provides a scope of services for all incidental work required. This DDMOP is updated annually to incorporate any changes for successful implementation. This chapter provides an overview of the types, amounts, and distribution of natural or human-caused incidents that may impact O’ahu. It also provides tools to estimate debris volumes following an incident. Finally, it includes a list of the planning assumptions used to develop this plan.

HAZARD ANALYSIS

Table 2-1

Characteristics of Disaster Events Possible in the City and County of Honolulu.¹

INCIDENT	DEBRIS CHARACTERISTICS	REGIONAL PROBABILITY	DEBRIS IMPACTS
Tropical Storm <i>FEMA groups the following under the Tropical Storm Incident Category: Hurricane, Tsunami, Typhoon</i>	Primarily green waste and C&D debris will be prevalent. The debris may also include municipal solid waste from damaged structures, municipal solid waste, sediment, and green waste. Additionally, the event could generate animal carcasses and hazardous household waste. Extended power outages may result in large amounts of putrescible waste.	High	High
Flooding	Construction/demolition debris, municipal solid waste, sediment, green waste, animal carcasses, and household hazardous waste. Much debris from flooding events may be considered hazardous waste because of contamination from wastewater, petroleum, or other substances.	High	High
Severe Storm	Heavy wind damage and flooding resulting in construction/demolition debris, municipal solid waste, sediment, green waste, animal carcasses, and household hazardous waste. Much debris from flooding events may be considered hazardous waste because of contamination from wastewater, petroleum, or other substances.	Moderate	Moderate/High

¹ Fema.gov

Fire	Fires generate ash, green waste, incidental soil, concrete, metal debris.	Moderate	Moderate/High
Other <i>Biological and Earthquake</i>	Earthquakes primarily generate construction/demolition debris. Biological events are not applicable as they do not generate debris	Moderate	Low

VULNERABILITY ANALYSIS

The island of O’ahu faces unique challenges in addressing disaster debris. O’ahu’s location in the central Pacific makes the island exposed and vulnerable to natural disasters and isolated from sources of support. O’ahu is generally mountainous with broad flats on the northern and southern shores. There are large areas of undeveloped, mountainous land surrounding the central portion of the island. The mountainous terrain has caused development of population centers to be limited generally to the flatter areas along the shoreline and in the hills and ridges above the city of Honolulu. The primary urban center of the island is located on the southern shores. The roadway system is primarily located in these flats or around the shores of the island in the primary population centers with few mountain crossings. The flat areas of the island along the shores are vulnerable to flooding associated with tsunamis and hurricanes. With this limited road network and mountainous terrain, the population centers tend to be isolated from each other. O’ahu has very limited landfill capacity, and as such, advanced planning for large amounts of disaster debris is critical.

2.2 SITUATIONS AND ASSUMPTIONS

This section describes the situation and assumptions used during this plan's development.

SITUATION

This plan is based on the debris generating capacity of a category four hurricane moving northwest through the center of O’ahu for planning purposes and pre-positioning response assets. Specifics are found below. A storm of this magnitude would have the following characteristics or effects:

- Extreme wind speed and wind gusts
- Heavy rainfall and potential flooding
- Foliage is torn from trees and large trees are uprooted
- Most signs are blown down
- Most power poles and lines are down
- Roofing materials are damaged
- Homes are significantly destroyed
- Buildings are structurally damaged

The fact that this plan is based on a particular size and type of event in no way diminishes the value of the plan for use in response to other types and categories of events. This plan establishes a general framework that can, with minor modifications, be used in any debris-generating event.



ASSUMPTIONS

The following assumptions were made during the development of this plan:

The assumption utilized a category four hurricane that approaches from the southeast and moves northwest over the most populated parts of the island. The hurricane continues northwest, impacting 24 of the 36 neighborhood board areas within 36 hours. Winds reach 130 mph with gusts up to 160 mph, and a storm surge of 10-15 feet and rainfall of 1-2 inches per hour has been modeled.

Modeling relative to storm surge used estimates from the City RFB-ENV-157603 Disaster Debris Clearing, Removal, Hauling & Processing, rain and flood modeling (digital flood insurance rate maps), and wind (HAZUS).

The City and County of Honolulu contains a mix of urban and rural land that will create different amounts of green waste vs. C&D debris. With a total population of 1,016,508², a total debris field of over 19 million cubic yards might be expected.

The City has been divided into four (4) Debris Sheds as follows:

1. Debris Shed I – The Primary Urban District and ‘Ewa Census Districts
2. Debris Shed II – The Central O‘ahu and North Shore Census Districts
3. Debris Shed III – The East Honolulu, Ko‘olau Poko, and Ko‘olau Loa Census Districts
4. Debris Shed IV – Wai‘anae Census District

Table 2-2³

DEBRIS SHED	MIXED TO TDSR SITE (CU. YD.)	GREEN DIRECT TO RECYCLER (CU. YD.)	WHITE GOOD & METALS DIRECT TO RECYCLER (CU. YD.)	MIXED TO LANDFILL (CU. YD.)	TOTAL (CU. YD.)
1	15,430,000	534,000	656,000 (~594,500 units)	4,760,000	21,380,000
2	992,000	323,000	46,000 (~41,688 units)	477,000	1,838,000
3	2,990,000	108,000	108,000 (~97,875 units)	1,130,000	4,336,000
4	817,000	33,000	33,000 (~29,906 units)	310,000	1,193,000
Total (cu. yd.)	20,229,000	998,000	843,000 (~763,969 units)	6,677,000	28,747,000

² [HAWAII: 2020 Census](#)

³ MA-ENV-2300007



3. ROLES AND RESPONSIBILITIES

Having already assembled the debris management team pre-disaster, the Team organizes the operations section to facilitate successful coordination following a disaster event. Each team member is responsible for implementing debris operations per the planned goals and objectives and in compliance with Federal, State, and local laws. The debris management team will be led by the debris management group leader, who will identify staff for the group. The following staff could participate as part of the debris management team.

3.1 GOVERNMENT

DEPARTMENT OF ENVIRONMENTAL SERVICES

The Department of Environmental Services (ENV) is the lead department responsible for pre-event debris management planning. ENV will coordinate debris removal and disposal requirements for City-owned facilities. A Debris Manager will be assigned to work with the Debris Contractor, Debris Monitoring Contractor, and the City. Primary points of contact include:

- Director, ENV
- ENV Deputy Director
- ENV, Refuse Division, Chief
- ENV, Refuse Division, Assistant Chief

3.2 PRIVATE SECTOR

DEBRIS CONTRACTOR

The Debris Contractor will provide disaster debris clearing, removal, hauling, and processing services for City when there are debris generating events that require resources beyond what can be managed by the City’s regularly scheduled refuse operations. The Debris Contractor is responsible for clearing, hauling, and lawfully disposing of disaster debris, except hazardous waste, that has been pushed along the sides of roads and rights of way. The Debris Contractor will remove or arrange for the removal of all the debris from the TDSR site to a lawful final disposal facility or site.

DEBRIS MANAGEMENT MONITORING CONTRACTORS

The Debris Monitoring Contractor provides oversight and documentation of debris management operations. These functions may include check-in and certifying debris hauler trucks, issuing load tickets, and load verification and load call at the TDSR or final disposition site. Additional duties include supervising other debris management contractors, documenting debris clearance and disposal operations for potential reimbursement, and operations of temporary debris sorting and reduction sites.



4. CONCEPT OF OPERATIONS

4.1 GENERAL

This section provides information on how the City will carry out debris management operations, including response levels, organization, roles and responsibilities, communications strategies, and health and safety strategies.

4.2 NOTIFICATION AND ACTIVATION

This plan will be used by the City's staff when a command structure is established in response to debris generating events that require resources beyond what can be managed by the City's regularly scheduled refuse operations.

4.3 KEY ACTIONS

Response to debris management events is characterized by the three phases described below and may overlap based on the incident.

INCREASED READINESS PHASE

Within 48 hours from the notice of the impending disaster, ENV shall contact the Debris Contractor and Debris Monitoring Contractor to advise of impending conditions and to begin mobilization. The City will issue a Delivery Order to initiate the Disaster Debris Clearing and Hauling Services and Disaster Debris Monitoring Services. The Contractors shall mobilize and deploy all required and essential staff to O'ahu within 24 hours of receiving the City's Initial Delivery Order. Activities under this phase must be in compliance with the Contract Documents, the DDMOP, Disaster Debris Clearing and Hauling Plan, and FEMA requirements.

- The Debris Contractor, Debris Monitoring Contractor, and ENV will review plans, standard operating procedures, generic contracts, and checklists relating to debris removal, storage, reduction, and disposal operations.
- The Debris Contractor will ensure the pre-positioning of personnel, equipment, and resources out of harm's way and stage in areas where they can be effectively mobilized.
- The Debris Contractor, Debris Monitoring Contractor, and ENV will review potential TDSRs that may be used in the response and recovery phases in the context of the impending threat.
- The Debris Contractor, Debris Monitoring Contractor, and ENV will attend meetings that include discussion on briefings, coordination, work progress, and other key information.
- The Debris Contractor and Debris Monitoring Contractor will assist the City with public notification, which at a minimum, includes basic details for disaster debris management (e. g., logistics, directions, instructions, etc.).



RESPONSE PHASE

Debris management response operations address immediate or short-term effects of debris-causing incidents. During the response phase, City personnel will initiate the following tasks within two (2) hours after the disaster has passed:

- The City will activate the debris management plan, Debris Contractor, Debris Monitoring Contractor, and coordinate with damage assessment team (joint response; City/ Debris Contractor /Debris Monitoring Contractor).
- The Debris Contractor, Debris Monitoring Contractor, and ENV will establish priorities regarding the allocation and use of available resources.
- Identify and activate TDSRs (Debris Contractor).
- Begin debris clearance from transportation routes based on debris removal priorities (joint response).
- Begin documenting all costs associated with the disaster (Debris Monitoring Contractor/City Staff/Debris Contractor).
- Coordinate and track public and private resources (Debris Monitoring Contractor).
- Address any legal, environmental, and health issues relating to the debris removal process (jointly with the Debris Contractor).
- Continue to keep the public informed through appropriate methods (e.g., coordination with the City PIO).

RECOVERY PHASE

After the first 72 hours the Debris Contractor shall work from 6:30 am to 6:30 pm Hawaii Standard Time (“HST”), seven (7) days per week or as directed by the City. Adjustments to work hours, as local conditions may dictate, shall be as directed by the City following consultation with the Debris Contractor. Duties under the Recovery Phase includes, but is not limited to, the following:

- Operations continue to collect, store, reduce, and dispose of debris generated from the event cost-effectively and environmentally responsible.
- Operations continue to document costs (Debris Monitoring Contractor/City Staff/Debris Contractor).
- Support and coordinate with the City PIO with public outreach regarding the debris operations, including segregation and final pass information.
- Upon completing the debris removal mission, close out TDSRs by developing and implementing the necessary site restoration per local/State regulations.
- Monitoring Company will work with the City to ensure compliance with required FEMA documentation.
- Perform necessary audits of operation and submit a claim for federal assistance with support from Monitoring Company.



4.4 DIRECTION, CONTROL AND COORDINATION

- The City will provide directions to the Debris Contractor and Debris Monitoring Contractor that follow the structure of the Debris Management Plan, or shall be adjusted by the City as necessary.
- Debris Monitoring Contractor will provide the City and Debris Contractor with access to a debris removal dashboard to provide situational awareness.
- Data provided by the Debris Monitoring Contractor will provide the City with data needed to make operational adjustments.
- Debris operations meetings held by the City will provide daily directives. Meetings will be scheduled as often as necessary but no less than daily for the first phase of the debris removal operations.



5. SECTION 5: DEBRIS COLLECTION AND HAULING OPERATIONS

This section provides information on disaster debris response and recovery operations, including damage assessment, debris collection, and the establishment of TDSRs.

5.1 ASSESSMENT PRIORITIES

- Egress for fire, police, and Emergency Operations Center personnel;
- Ingress to hospitals and public shelters;
- Major traffic routes;
- Major flood drainage ways;
- Supply distribution points and mutual aid assembly areas;
- Government facilities;
- Public Safety communications towers;
- American Red Cross shelters and the City shelters;
- Secondary roads;
- Access for utility restoration;
- Neighborhood streets; and
- Private property adversely affecting public welfare.

During a disaster event, City agencies will coordinate to obtain information and mapping for road clearing priorities.

5.2 DEBRIS CLEARANCE AND REMOVAL GUIDELINES

The City has developed the following guidance for prioritizing debris removal:

1. Life Safety
2. Situation Stabilization
3. Property Protection
4. Economic Stability and Environmental Protection

These guidelines will dictate planning, response, and recovery during disaster debris-creating events.

5.3 DEBRIS REMOVAL PRIORITIES

The City has developed priorities for debris clearance. Circumstances, such as downed power lines, may require a delay in debris clearing during disaster operations until power crews can deactivate lines.

1. **Clear Emergency Access Routes – Lifelines.** Lifelines are those routes in a traffic network that provide access for emergency responders, evacuation routes, and damage assessment routes. Lifelines should include areas identified for potential staging, temporary shelters, and other community resources that support emergency response. The City will work closely with the state and the Debris Contractor to identify priorities for clearing transportation access routes.
2. **Clear Access to Critical Facilities and Infrastructure.** Assets, systems, and networks, physical or virtual, are so vital that their incapacitation or destruction would have a debilitating effect on security, economic security, public health, or safety. These include hospitals, fire stations, police stations, emergency operation centers, cellular and land-line telephone services, drinking water, power utilities, and sanitation facilities.
3. **Clear Major Freeways or Arterial Routes.** Major freeways and arterial routes are portions of the public transportation network needed to aid in response and recovery operations. Still, they may not have been cleared as an emergency access route.
4. **Clear Areas Necessary for Movement of Goods and Services/Economic Restoration.** These areas include those portions of the public transportation network necessary for effectively transporting goods and services throughout the region that are not included in one of the categories mentioned above. These may access warehouses, airports, seaports, and major business districts.
5. **Clear Minor Arterial Routes.** These routes include those portions of the public transportation network that receive moderate traffic flows but are not included in one of the categories above.
6. **Clear Local Routes.** These areas include those portions of the public transportation network in residential neighborhoods that are not included in one of the categories mentioned above.

5.4 DEBRIS OPERATIONS

The City's standby Debris Contractor intends to adhere to the following time frames in which services can be provided without unwarranted delay or interference. The Debris Contractor shall mobilize the appropriate number of personnel and equipment crews as required immediately upon request. Advance deployments will be strategically staged in advance of a predicted weather event. The Debris Contractor shall commence mobilization of equipment, operators, and laborers **immediately** upon receipt of a Task Order (TO) that shall meet all owner requirements.

Please see Table 5-1 on the following page.



Table 5-1

Implementation and Transition Schedule		PROPOSED TIMEFRAME																
		Contract Award	NTP +24 Hours	NTP +48 Hours	NTP +96 Hours	NTP +7 Days	NTP +10 Days	NTP +15 Days	NTP +30 Days	NTP +60 Days	60 Plus Days	90 Plus Days						
City and County of Honolulu	Assigned Personnel																	
	Project Manager Assigned	Debris Removal Contractor																
	DMS Identified	Debris Removal Contractor																
	Training Held	Debris Removal Contractor, Debris Monitor, City/County Personnel																
	Project Manager on Site	Debris Removal Contractor																
	DMS Permitting	Debris Removal Contractor																
	DMS Operational	Debris Removal Contractor																
	Mobilization of Crews	Debris Removal Contractor																
	Fully Mobilized	Debris Removal Contractor, Debris Monitor																
	Certification of Equipment	Debris Removal Contractor, Debris Monitor																
	Debris Operations Begin	Debris Removal Contractor, Debris Monitor																
	Processing Begins	Debris Removal Contractor, Debris Monitor																
	Ancillary Services Begin	Debris Removal Contractor, Debris Monitor																
	Debris Operations Conclude	Debris Removal Contractor, Debris Monitor																
	Processing and Restoration Conclude	Debris Removal Contractor, Debris Monitor																
	Hot Wash Held	Debris Removal Contractor, Debris Monitor, City/County Personnel																

MAJOR PROJECT TASKS

DEBRIS OPERATIONS PLAN

5.4.1.1 RESPONSE TIME

The Debris Contractor shall perform the work in the following time frames in which services can be provided without unwarranted delay or interference. Advance deployments will be strategically staged in advance of a predicted weather event. The Debris Contractor shall commence mobilization of equipment, operators, and laborers immediately upon receipt of a TO Notice to Proceed (NTP) that shall meet all requirements of the City.

- **WITHIN 24 HOURS:** Upon direction of the City, the Debris Contractor initiates Emergency Road Clearance (Push) operations with 15-20 crews or more as dictated by the event's severity. These crews will work with the City Department(s) of Facility Maintenance and the Hawai'i Department of Transportation (HDOT). Crews generally consist of equipment capable of blading the roadway clear (Front Loader, Motor-grader, etc.), a chainsaw operator, and a ground crew of two persons. This process is operated for a short period (generally 70 hours) or a reasonable time per FEMA guidance.
- **WITHIN 48 HOURS:** When the initial assessment phase is complete, the Debris Contractor shall submit the required information such as a site-specific safety plan, insurance, bonds, quality control plan, subcontracting plan with specific subcontractors, location of the staging area, location of TDSR sites, final disposal sites and all applicable licenses, permits, organizational structure, etc. Truck certification is underway from the Debris Monitoring Contractor.
- **WITHIN 72 HOURS: 20% MOBILIZATION** - Emergency Road Clearance is complete, TDSR final selection is made, permits applications (or processes) for use have been completed, and construction is underway. The Debris Contractor's projected management staff, including subcontractors and consultants, have become operational. All loading and hauling resources are local.
- **WITHIN 10 DAYS: 75% MOBILIZATION** – At this level of mobilization, the average daily production rate for load and haul will be approximately 100,000-150,000 cubic yards/day. It will involve approximately 250 hauling trucks with loaders.
- **WITHIN 15 DAYS: 100% MOBILIZATION**- Considering the volumes estimated within this model (19 million cubic yards), the Debris Contractor shall be required to ship additional pre-secured loading and hauling equipment from California. This equipment will consist of self-loading vehicles of large capacity which will be used in the heaviest burdened regions of the island. The total loading and hauling fleet will be approximately 300 vehicles, about 60 front end loaders, and significant support staff (flaggers, ground maintenance crews, supervisors, etc.). This debris project's load and haul portion can be concluded within 120 days, with peak daily collection volume nearing 200,000 cubic yards.

5.4.1.2 PROJECT MOBILIZATION TEAM

The Debris Contractor's Project Mobilization Team of Project Managers and administrative staff will be on-site within 12 hours of TO notification before or immediately following a disaster event. The Team will then conduct an immediate disaster assessment in coordination with the City staff and begin the staging and deploying equipment, crews, and logistical support.

The Debris Contractor's staff has established the site location(s) on O'ahu for the temporary field office/s, a communication unit, lay-down yard, and support systems at our local teaming Partner(s) areas.

5.4.1.3 OPERATIONS MANAGER

The Senior Management and the Project Management Team will assign and provide a Program Manager to the City's Debris Manager. The Program Manager will subsequently be on call and available to respond to the City's Debris Manager 24 hours a day, seven days a week throughout the life of the Project. The Debris Contractor's Program Manager will have complete electronic linkage to the City via cell phone, satellite phone, internet, or two-way radios.

5.4.1.4 OPERATIONAL PLANS

Within three days of a NTP, the Debris Contractor shall furnish the City's Debris Manager with a Management/Operations plan specific to the TO and a Site Specific Safety Plan. The Debris Contractor shall also provide the City with a complete Subcontracting Plan listing all subcontractors used and intended to be used.

5.4.1.5 MEASUREMENT

Trucks and trailers used for transportation of debris will be measured by the Debris Monitoring Contractor during the mobilization phase (12-24 hours after impact). The Debris Contractor/ Debris Monitoring Contractor will provide appropriate measurement forms as specified by the City, and certifications will be entered into the monitor's electronic system. A placard will be secured to each vehicle, specifying truck identification, cubic yard capacity, and bar-code identification.

With City approval, the Debris Monitoring Contractor anticipates using a fully automated Electronic Load Ticketing and Data Management System.

5.4.1.6 MOBILIZATION-EMERGENCY ROAD CLEARANCE (PUSH)

This operation is accomplished when time is of the essence, generally within the first 72 hours after an event. Although this is a time-critical operation, the safety of personnel and the general public is paramount to a successful process. Extreme caution must be exercised during this phase of the debris management operation to avoid downed live electrical wires and other dangerous circumstances. Once this task is accomplished or coincides with this task's progress, debris removal from public easements, property, and rights-of-way begins.

The City's Department of Facility Maintenance is tasked as the primary "push" resource for City roadways. However, as tasked by the City, the Debris Contractor shall supplement Emergency Road Clearance which involves the emergency clearing, cutting, tossing, or pushing of debris from the primary transportation routes to the medians or sides of the public rights-of-way (ROW). Under the direction of the City and the Debris Monitoring Contractor, Debris Contractor crews shall work independently or in conjunction with the City and HDOT crews to temporarily clear debris from pre-designated critical arteries. This portion of the response will facilitate the movement of emergency vehicles and other essential traffic in the immediate aftermath of a disaster. Only a single lane is usually cleared at first, with the additional lanes being cleared according to the needs and requirements of the City. In addition, entrances and routes to hospitals and emergency service facilities, such as fire and police departments, are given priority during this emergency debris and fallen tree clearance period. The

equipment utilized in this operation can include, but is not limited to, large rubber-tired loaders with grapples or rakes; small bobcat-type loaders to access narrow areas; and other specialized clearing equipment as may be required by local conditions. Additionally, service trucks for maintenance and fueling vehicles used for personnel transportation and supervision are required. Personnel, such as heavy equipment operators, truck drivers, chainsaws, general laborers with tools, flagmen, mechanics, supervisors, and project managers are always required.

5.4.1.7 DEBRIS REMOVAL FROM PUBLIC RIGHT-OF-WAYS

Through the installment of PSAs, public participation can enhance the efficiency of the collection/material separation process. A typical flyer that defines material separation is illustrated below.

TABLE 5-2

Debris Removal Guidelines for Private Residential Properties

In efforts to expedite the debris removal process, please follow these rules.

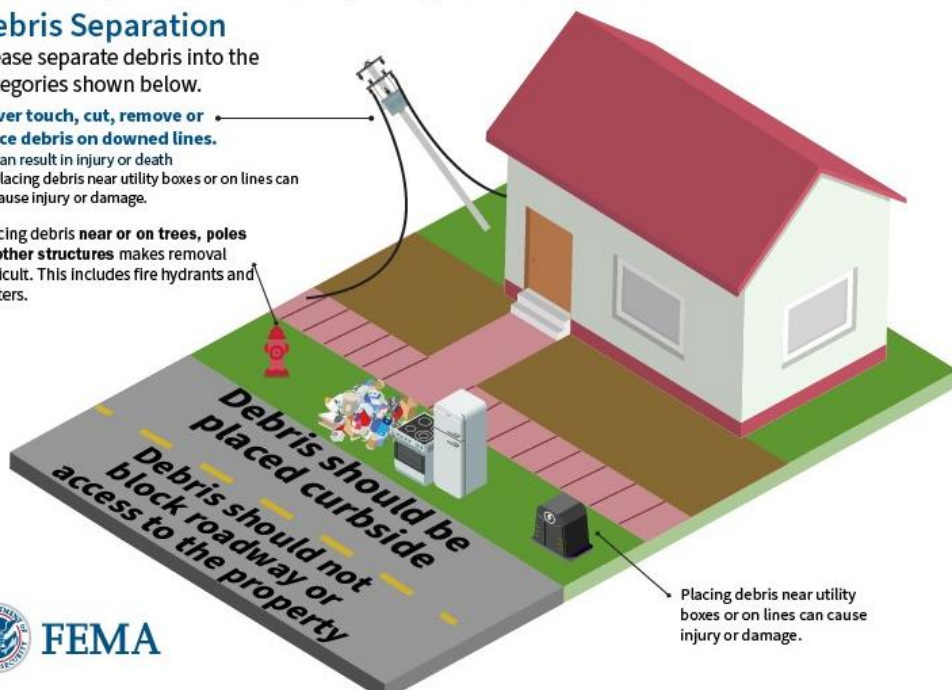
Debris Separation

Please separate debris into the categories shown below.

Never touch, cut, remove or place debris on downed lines.

- Can result in injury or death
- Placing debris near utility boxes or on lines can cause injury or damage.

Placing debris **near or on trees, poles or other structures** makes removal difficult. This includes fire hydrants and meters.



Check with your local office of emergency management for more information on debris removal.



Large Appliances
Refrigerator, washer/dryer, air conditioner, stove, water heater, dishwasher. Do not leave doors unsealed or unsecured.



Construction Debris
Building materials, drywall, lumber, carpet, furniture, plumbing.



Vegetative Debris
Tree branches, leaves, logs, plants.



Hazardous Waste
Oil, battery, pesticide, paint, cleaning supplies, compressed gas.



Electronics
Television, computer, stereo, phone, DVD player.



5.4.1.8 MULTIPLE SCHEDULED PASSES

Multiple scheduled passes of each area impacted by the disaster may be required to allow citizens and municipal agencies to return to their properties and bring debris to the right-of-way. Typically, three passes are performed to ensure the work's quality and complete performance.

Each location where debris collection occurs shall be under the direction of a qualified supervisor and a representative from the Debris Monitoring Contractor. Electrical equipment or conductors in the vicinity shall be considered energized. Before collection operations, the employee operators shall consider:

- Consider the surrounding area and any trees for anything that may cause dangerous situations when the trees are loaded.
- Consider the tree's shape, lean, and decayed or weak spots within the tree.
- Wind force.
- Location of bystanders.
- Electrical hazards.
- Traffic control devices/personnel.

The work area shall be cleared to ensure safe working conditions. Brush and logs shall not be allowed to create a hazard at the work site. Logs and brush shall be securely loaded onto trucks so as not to obscure tail or brake lights and vision or to overhang the side of the vehicle.

5.4.1.9 LOADING AND HAULING OPERATIONS

All field supervisors shall ensure that all debris disposal-hauling operators are licensed and certified to operate the required equipment. All debris disposal operators are given area maps designating assignment and authorized areas of operations as well as transport routes designated and approved by the City. All debris equipment operators shall display colored placards provided by the Debris Contractor and, if applicable, the City. Any signs provided by the government will be displayed on both sides of the forward most section of the vehicle bed unless otherwise directed by the City. Colored paper signs/passes will be displayed on each vehicle's driver's side windshield. The color of the sign/pass is subject to change, without notice, to ensure quality control measures and to regard authority to exit work sites and enter disposal site(s). This system, in conjunction with the Debris Monitoring Contractor's electronic monitoring system, provides a redundant check and balance.

All debris will be picked up and loaded into haul trucks safely and professionally to ensure compliance with all local, state, and federal regulations. *Safety will not be compromised.* All crew foremen and field supervisors will be responsible for ensuring a rapid and cost-effective (as possible) operation. Hand crews ensure maximum loading and safe transport of material and will right size all green waste. All C&D materials will be sized using heavy equipment to ensure maximum loading and secure transportation of materials within HDOT standards. With appropriate safety equipment, traffic control personnel will be stationed at each TDSR approach point (where practical) to maintain traffic control and prevent personal injury.

This operation entails the recovery and removal (pick-up and hauling) of all eligible debris from public easements, property, and ROW to designated TDSR sites and/or directly to a final disposal site. Eligible debris is typically

debris that was either generated directly by the event or as a result of the event and is in the public ROW and not on private property unless PPDR is authorized:

1. Green Waste (stumps, logs, and limbs)
2. Mixed Debris (C&D)
3. Metal debris
4. White goods (refrigerators, air conditioners, washers, dryers, etc.)
5. Electronics
6. Household Hazardous Waste
7. Putrescible Waste
8. Soils and Sand
9. Vehicles
10. Boats and Water Crafts

The equipment and personnel utilized for each operational phase will vary by the type, quantity, location, and proposed disposal and reduction method of the debris. In all operations, regardless of the debris, appropriate personal protective equipment for personnel is critical and will be employed.

Debris not defined as eligible by FEMA Publication Public Assistance Program and Policy Guide (PAPPG) version 5, January 2025 or State or Federal Disaster Specific Guidance or policies will not be loaded, hauled, or dumped.

5.4.1.10 PRIVATE PROPERTY DEBRIS REMOVAL (PPDR)

Upon request and approval, FEMA may extend the PA program to private property debris removal when it poses a threat to the public. An event like the one being modeled herein will most likely require a PPDR Program. When requested, the Debris Contractor and the Debris Monitoring Contractor will initiate and manage a Right of Entry (ROE) program to remove debris on private property. Additionally, demolishing private structures is a separate program that FEMA must approve. The Debris Monitoring Contractor also manages demolition. The property owner must grant access before entering their property unless there is an immediate threat to the lives, health, and safety of the owner's citizens. FEMA PAPPG⁴ guide outlines procedures in more detail.

5.4.1.11 MAJOR DEBRIS TYPES AND SPECIALIZED EQUIPMENT REQUIREMENTS

5.4.1.11.1.1 GREEN WASTE

Green Waste operations equipment may include, but is not limited to, rubber-tired loaders with buckets, rakes, or grapples; rubber-tired excavators with grapples or thumbs; telehandlers; track type loaders with rakes, grapples (to be utilized only under certain permitted conditions); trailer or truck mounted knuckle booms with grapples or clam shells; self-loading trucks (knuckle boom with grapples or clam shells); farm type tractors with box blades, flat blades or brooms; bobcat-type loaders; bucket trucks with 50' booms for hazardous tree and limb trimming (including hangers and leaners located on improved public property, overhanging and threatening a public use area or a possible threat to traffic); 30 ton or larger cranes to remove heavy stumps and/or trunks; haul trucks

⁴ Page 127 of the PAPPG depicts Private Property Debris Removal, [FEMA PAPPG V5 2025](#)

ranging in size from 16 to 120 cubic yard capacity; roll-off dumpsters; and flat-bed tractor trailers to transport equipment or stumps and oversized tree trunks, fuel and service trucks.

Green Waste operations personnel requirements may include, but are not limited to, equipment operators; superintendents with trucks; foremen with trucks; operators with chainsaws; traffic control personnel; general laborers with tools; safety personnel; mechanics; hazardous materials technicians; documentation personnel; quality assurance personnel; and project managers.

5.4.1.11.1.2 MIXED DEBRIS (C & D)

C&D debris operations may use the same equipment as green waste removal. Curbside separation⁵ by the Debris Contractor and public is essential to ensure proper segregation of green waste, C&D debris, and to segregate any hazardous or household hazardous waste. A debris pick-up and haul operation primarily focused on C&D debris may also require TDSR equipment such as D-6 or larger dozers, track-type excavators with impact hammers, electromagnets, concrete shears, and grapples, and other specialized equipment to segregate or prepare the debris for transport. The personnel requirements for C&D debris operations are similar, if not identical, to those of green waste operations. The Debris Contractor and its subcontractors have made provisions for acquiring necessary equipment on the island. The additional equipment required for these services includes front-end loaders, excavators, rubber-tired backhoes with grapples, knuckle boom loaders, dump trucks, dump trailers, and service trucks on Island.

5.4.1.11.1.3 WHITE GOODS

White goods can present a dilemma to the recovery efforts. If white goods contain refrigerants, the refrigerants must be removed before they are accidentally released into the air in violation of the U.S. EPA regulations. Typically, white goods are moved to TDSRs before refrigerant removal so the removal activities can be more effectively monitored and thoroughly controlled. A licensed refrigerant recycler then removes the refrigerant, and the white goods are recycled.

5.4.1.11.1.4 HOUSEHOLD HAZARDOUS WASTE

HHW requires special handling that must be accomplished with precise adherence to standards and regulations. Safety for the workers and the citizens of the area is paramount. With this in mind, the Debris Contractor works with their specialized subcontractors to establish and implement proper handling procedures for HHW and HTW. These procedures include the segregation and removal of HHW from the debris stream at the curbside. Additional recovery of HHW will/can occur within each TDSR. Recovered HHW is removed to a proper disposal site or temporarily stored in the lined or contained HHW disposal areas constructed within each TDSR as required. The Debris Contractor shall set up a lined containment area and separate any HHW inadvertently delivered to a debris management site by debris haulers and will be responsible for the removal and disposal of this material.

5.4.1.11.1.5 VEHICLES

Vehicles damaged by the storm may be deposited along the streets. Vehicle fluids, such as oil, radiator fluid and windshield wiper solution, could potentially be released to the environment. The Debris Contractor will take

⁵ See page 40 for the curbside debris segregation poster.



necessary precautions to prevent the release of fluids from the vehicles when transporting vehicles to the TDSR or recycling site. The Debris Contractor will develop procedures to remove, document, and dispose of vehicle fluids. The Debris Contractor will record information on the vehicle (i.e., make, model, color, and VIN) in order to identify the vehicle at a later time. The vehicles will be hauled to the TDSR site or a separate prepared site as designated to enable insurance companies to identify the vehicles.

5.4.1.11.1.6 BOATS/WATERCRAFTS

Damaged boats/watercrafts may need to be removed to a disposal facility from along the streets. Damaged boats located at harbors, marinas or in navigable waters shall not be removed unless directed by the City. The Debris Contractor shall take necessary precautions to prevent the release of fluids (e.g., oil and gas) from the boats/watercrafts when transporting boats/watercraft to the TDSR or recycling site. The Debris Contractor will develop procedures to remove, document, and dispose of boat/watercraft fluids. The Debris Contractor will record information on the boat/watercraft (i.e., make, model, color, and size) in order to identify the boat/watercraft at a later time. The boat/watercraft shall be hauled to the TDSR site or a separate site developed to enable insurance companies to identify the boat/watercraft.

5.4.1.12 TDSR SITE OPERATIONS

5.4.1.12.1.1 STAGING

Within 24 hours of the issuance of the TO, personnel and equipment will be deployed to establish TDSRs at locations identified in conjunction with the City. The operation may include, but is not limited to, building roads, erecting fences, constructing containment areas, and placing scissor lifts for load inspection. At a minimum, the TDSR equipment and crew may consist of: an air curtain incinerator, one track-hoe, two dozers, two scissor lifts, five 16-20 cubic yard dump trucks, one rubber-tired loader, one water truck, one motor grader, tub or belt grinder, one site manager, one night manager, eight equipment operators, two supervisors, five laborers, and sufficient light plants.

The Debris Contractor shall provide all specified equipment, operators, and laborers for TDSR management, processing debris, and recycling operations.

TDSR Teams will complete any processes and/or secure all necessary clearances, permits, and licenses to operate the site(s). The team will also submit site plans to the owner, complete with site-specific safety and accident prevention plans, a traffic control plan to manage site ingress properly, and egress, a dust control plan, and a fire prevention plan. Within 48-72 hours, the required TDSR location(s) will be fully operational, complete with ingress and egress points and inspection towers.

Inspecting every load, in and out, is critical to the documentation of the overall process. The TDSR inspection scissor lifts provide a location for load verification and documentation by the Debris Monitoring Contractor of all incoming and outgoing debris. Once documented, all debris is processed per applicable local, state, and federal rules, standards, and regulations.

5.4.1.12.1.2 MAINTENANCE/FUEL VEHICLES AND PERSONNEL

Maintenance and fuel vehicles will be assigned and manned to provide an adequate fuel supply to maintain equipment operations.

5.4.1.12.1.3 SITE SAFETY PLAN

The following information will be utilized to create location-specific site management and safety plan.

- **Site Access** - Separate ingress and egress points should be established if possible. Temporary acceleration and deceleration lanes should be established adjacent to the primary road leading to and from site access points, approved by the City. All temporary roads leading to and through the debris-staging site should be constructed and maintained for all-weather use.
- **Inspection Towers** - Inspection scissor lifts shall be placed to facilitate observation and quantification of debris hauled for storage at debris staging sites. Ideally, one scissor lift shall be positioned at the point of ingress for use by the Debris Monitoring Contractor's inspectors and possibly a City inspector, and one scissor lift at the point of egress. FEMA requires that haul vehicles are inspected before the exit to ensure the debris has been emptied. One scissor lift may be utilized if the ingress and egress point is the same.
- **Traffic Controls** - With appropriate traffic control safety equipment, traffic control personnel will be stationed at the ingress observation tower to maintain vehicular and pedestrian traffic control. Additional traffic control personnel will be stationed throughout the site, as needed, to enforce proper dumping and prevent personal injury to ensure compliance with the accident prevention plan.
- **Clearing And Grading** - Clearing and grading debris staging sites will be accomplished to the required level per the site management plan and practical necessity.
- **Environmental Protection**⁶ – An environmental protection plan will be followed to ensure compliance with required standards (Clean Water Act, Storm Water Act, Resource Conservation and Recovery Act, Superfund Amendments, Reauthorization Act, and others). The plan follows FEMA PAPPG guidelines on page 101 with procedures concerning erosion control, hazardous and toxic wastes, and dust and smoke control.

5.4.1.12.1.4 DEBRIS STORAGE AREA

Debris will be segregated into six sections

- **Green Waste** – C&D will be removed from green waste to the extent possible to facilitate compliance with reduced requirements.

⁶ Environmental and Historic Preservation Considerations Although debris removal is usually statutorily excluded from NEPA review, FEMA must ensure compliance with other Federal laws, regulations, and EOs prior to funding the work. Accordingly, FEMA must ensure that the Applicant's debris removal operations avoid impacts to such resources as floodplains, wetlands, federally listed threatened and endangered species and their critical habitats, and historic properties (including maritime or underwater archaeological resources if waterways are impacted). The Applicant must stage debris at a safe distance from property boundaries, surface water, floodplains, wetlands, structures, wells, and septic tanks with leach fields. Additional coordination may be necessary for debris removal from waterways, stump removal, and use of fill. The Applicant should contact applicable Federal, State, Territorial, and Tribal regulatory agencies to ensure compliance with requirements and permits for debris-related operations. Upon completion of debris removal and disposal, site remediation may be necessary at staging sites and other impacted areas. See more detailed discussion of EHP considerations above in Chapter 7, I.

- **Construction and Demolition (C&D) Debris** - C&D debris may be dampened prior to dumping and periodically as needed. Segregation of materials within TDSRs will provide separate piles for wood, metals, bricks, mortar, and soils.
- **Recyclable/salvage** - Recyclable/salvageable materials will be stockpiled per FEMA PAPPG (Brick, concrete, metals, recyclable wood, roofing material)
- **White goods** - White goods will be stockpiled and prepared for recycling.
- **Hazardous and/or toxic wastes (HTW)** - HTW will be segregated and stored in an environmentally approved containment area. All site personnel will receive a safety briefing regarding operations involving HTW to prevent personal injury and ensure compliance with the safety plan. HTW containment site perimeter will be posted and secured for personnel safety.
- **Soils and sand** – Sand sometimes is considered a natural resource. Sand displaced from beach areas must be screened before returning to the beach. Soils will be utilized per the environmental agencies' requirements.

5.4.1.12.1.5 DEBRIS REDUCTION METHODS

5.4.1.12.1.5.1 GRINDING AND CHIPPING OPERATIONS

Grinding/Chipping will be used when the situation is required (around populated areas). All green waste will be reduced by grinding and/or chipping and burning operations where allowed.

Although grinding and/or chipping operations are preferred for environmental purposes, it is the most time-consuming and costly reduction method due to material handling, hauling, and disposal costs after grinding and/or chipping operations have been accomplished. Grinding and/or chipping operations will be accomplished on the type of debris (green waste and/or C&D) as directed by the City and the State DOH. Grinding and/or chipping of green waste will be accomplished on the piles of green waste as set out below.

Green waste will be placed into two separate piles. The first pile will be the dumping point until a sufficient quantity has been accumulated to begin a reduction operation. The second pile will be started and accumulated until the first pile's reduction has been completed, when dumping of green waste on the second pile will cease, and the first pile will be replenished. This rotation will continue until the reduction is complete.

5.4.1.12.1.5.2 OPEN AIR BURNING

Open air burning of disaster-related debris will be utilized when approved and appropriate. Open air burning will only be applied to green waste and/or clean woody debris when directed by a government TO. The site management plan will establish and maintain all appropriate fire protection measures. All personnel involved in open-air burning operations will receive safety training. Open air burning will be conducted above ground level. No open air burning will be conducted within 1,000 feet of a structure or 300 feet of the debris pile. An area not less than 100 feet surrounding each burn site will be cleared of all combustible materials and marked to delineate the area as restricted.

5.4.1.12.1.5.3 AIR CURTAIN BURNING

This burning method will be used to reduce green waste and clean woody debris only unless otherwise directed. All appropriate fire protection measures will be established and maintained per the site management plan, site safety plan, and the government TO. All personnel involved in air curtain burning operations will receive safety training. Air curtain burning will be conducted below ground level in a below-ground pit and above ground when geographically necessary. If above-ground burning is required, it will be conducted in an approved container suitable for the operation. If a below-ground pit is used, it shall be at least 8 feet and no more than 20 feet in depth and will be no wider than 1.1 times the width of the air curtain nozzle and no longer than 15 feet. No air curtain burning will be conducted within 1,000 feet of a structure or 300 feet of the debris pile. An area not less than 100 feet surrounding each burn site will be cleared of all combustible materials and marked to delineate the area as restricted. All burning will be accomplished as set out in the U.S. Army Corps of Engineers' "Disaster Guidebook."

5.4.1.12.1.5.4 ASH DISPOSAL AREA

At the end of each burning cycle, the ash residue from the burning operations shall be removed from the burning area and placed in a pre-identified ash disposal area. The burning operations personnel will temporarily use this area to store the ash material before final disposal. Ash residue will be tested per the soil testing procedures approved by the final disposal sites Toxicity Characteristic Leaching Procedure (TCLP) Control of dust produced as a result of handling and/or storage of ash residue will be accomplished per the appropriate requirements of the site plan. Once the ash residue has reached a quantity requiring disposal, samples of the ash will be taken and examined per the established guidelines to determine the requirements for disposal (Class I Subtitle D Landfill vs. Class III Landfill vs. agricultural recycling techniques).

5.4.1.12.1.6 FINAL DEBRIS DISPOSAL

The Debris Contractor shall dispose of all debris, reduced debris, ash residue, and other materials resulting from the debris management process per the applicable federal, state, and local laws, standards, and regulations. Identifying and acquiring the final disposal locations will be a joint effort between the City, Debris Monitoring Contractor, the Debris Contractor, and the State Department of Health. Final disposal locations can vary from a City approved landfill to after-market locations (metal recyclers, municipal recycling facilities, mulching operations, mulch incineration programs, co-generation plants, etc.) The Debris Contractor and Debris Monitoring Contractor inspectors assigned to the final disposal site will maintain disposal records and documentation throughout the process.

5.4.1.12.1.7 DISPOSAL FACILITIES

During an incident, it may be necessary to utilize various resources to dispose of different types of debris. Attachment 3, *Disposal and Recycling Facilities*, lists the City's disposal resources that can be used during debris operations. Keep in mind that the amount and type of debris each facility accepts may change based on the size and severity of the incident. It is also essential to understand that the Debris Contractor is responsible for securing agreements with disposal and recycling vendors. The City may have economically beneficial agreements in place. In such cases, these price benefits should be captured.

5.4.1.12.1.8 RECYCLING STRATEGIES (SEE MAP-ATTACHMENT 3)

5.4.1.12.1.8.1 GREEN WASTE

Green waste such as trees, stumps, brush, and leaf and yard waste make up the most significant portion of the debris produced during tornadoes, hurricanes, and other natural disasters. Green waste can be collected, stockpiled, and processed to the specifications of a mulch or boiler fuel product.

5.4.1.12.1.8.2 AGGREGATES

Large amounts of aggregate debris, such as asphalt pavement and concrete, may result from the destruction of roadways during disasters. These materials can be collected, stockpiled, and processed to road base aggregate or solid fill material specifications.

This segregated material will be sent to a City approved landfill or recycled when necessary.

5.4.1.12.1.8.3 CONSTRUCTION AND DEMOLITION DEBRIS (C&D)

Another significant component of disaster debris is the C&D material that results from the destruction of homes, commercial and non-commercial buildings, and other structures. The materials produced from these sources may include wood, aggregates, metals, gypsum, plastics, and other miscellaneous components. These materials will be separated at various TDSR locations and transported to a City approved recycling facility.

5.4.1.12.1.8.4 WHITE GOODS

White goods is defined as refrigerators, washers, dryers, freezers, air conditioners, stoves, water heaters, and dishwashers. Collection can be performed with light duty trucks and trailers typically possessing a lift-gate. Citizens are informed through PSAs, fliers and social media to remove all contents from refrigerators and freezers prior to collection or to duct tape doors shut to facilitate safety and ease of collection. White goods will be collected separately and stored separately at various TDSR sites. White good refrigerant will be handled appropriately by a certified company, such as Refrigerant Recycling or Island Recycling.

5.4.1.12.1.8.5 E-WASTE

Electronic waste are devices or components containing one or more circuit boards used primarily for data transfer, storage, communication, or entertainment. Electronic waste also encompasses televisions, computer monitors, DVD players, video cameras, fax and copy machines, video game consoles, radios, cell phones, etc. Electronics contain an assortment of metals and materials that can be dangerous, given the large numbers that are likely to be thrown out in a hurricane's aftermath. Older electronics can contain lead, chromium, cadmium, mercury, nickel, and zinc, all toxic to humans. However, materials like metals and plastics in electronics can be recycled, saving energy and resources. E-waste will be collected independently, stored separately at designated TDSRs, and recycled primarily through a recycler, such as T&N Computer Recycling.

5.4.1.12.1.8.6 COMPOSTING TO PRODUCE VALUABLE FINES AND DE-CONTAMINATED MATERIALS

Wood chips, contaminated sediments, and other organic debris may be blended into windrows for thermal composting, such as is used to recycle green waste in many cities. Some composting may be available through local subcontractors on the island.



5.4.1.12.1.8.7 SEGREGATION OF BRICKS AND AGGREGATE FOR LOW-GRADE STRUCTURAL USES

Solid materials such as brick, fractured brick, cinder block, and aggregate may be segregated from the waste stream and used for structural applications such as erosion control, diversion features, and landscape elements, and light-duty pavements. The City intends to recycle this material.

5.4.1.12.1.8.8 RECOVERY OF COPPER AND OTHER METALS

Copper wire and other metals may be separated and recycled into new wires, signs, and light-duty structures. A local company will be used to recycle these materials.

5.4.1.12.1.8.9 PRODUCTION OF BIOFUELS FOR DISTRIBUTED USE

The organic fraction of the debris stream may be pulverized and fashioned into high-BTU pellets or anaerobically digested into natural gas. The production and sale of refuse-derived energy are economically rewarded because renewable energy credits may be sold along with the energy produced. H-POWER is a potential consumer of biofuels.

5.4.1.12.1.8.10 OTHER MATERIALS FOUND IN THE WASTE STREAM ARE LIKELY TO BE RECYCLED

5.4.1.12.1.8.10.1 TIRES

Sometimes recycled and used for roadbed or a fuel source. Several recyclers can be found on O’ahu, such as Unitek Solvent Services or Retired Tires Hawaii LLC.

5.4.1.12.1.8.10.2 BATTERIES

Batteries will be collected and stored separately at designated TDSRs or transported directly to any number of recyclers, such as Battery Bill's or Exide Battery Corporation or Island Recycling, Inc.

5.4.1.12.1.9 RECYCLING FACILITIES

During an incident, it may be necessary to utilize various resources to recycle or reduce different types of debris. These resources provide an alternative to diverting waste from landfills and may provide additional economic and environmental benefits. Attachment 3, *Disposal and Recycling Facilities*, lists local debris processing resources that can be used during debris operations. Keep in mind that the types of waste each facility accepts or is approved to accept may change based on the size and severity of the incident.

5.4.1.12.1.10 DEBRIS MANAGEMENT SITE CLOSEOUT

The restoration of TDSRs takes place during the closing of each TDSR. The scope of remediation is determined at closure, relative to terms of the land lease (if any) or City directive. Generally, the site shall be restored to the same condition as before use. Remediation consists of the final removal of all debris (including residual debris), removal and remediation of HHW and HTW, abatement of any safety and/or environmental concerns (to include environmental testing and/or monitoring, if required), the removal of temporary structures (including any scissor lifts), grading and leveling, removal of roads and fencing, if appropriate, and potentially grassing or seeding of the site, if necessary, to documented pre-use condition.



5.4.1.12.1.10.1 DOCUMENTATION AND INSPECTION

A narrative description shall be prepared for each site. Photographs shall be produced to illustrate the site's current condition compared to the beginning pictures. Environmental sampling to include:

- Soil samples, surface and sub-surface, may be taken and sealed in containers for comparison with post-use samples taken at the time of site closure.
- Before sealing these samples, a small portion of each sample will be tested to determine the presence of contaminants before use of the site.
- On-site and off-site samples will be taken from any water source.
- Water source samples will be stored and tested using the criteria stated above.
- Water and soil samples will be taken per the above standards after operations have ended (post-use samples).
- A certified laboratory will test pre-use and post-use samples to establish a baseline for comparison.

5.4.1.12.1.10.2 FINAL INSPECTION, RELEASE, AND ACCEPTANCE OF GOVERNMENT AND/OR LANDOWNER

The Debris Contractor's Senior Management, the Supervisor responsible for a particular site, the City's Representative, and if applicable, the landowner shall constitute an inspection team. The Company Supervisor responsible for the relevant site shall have, for examination by all Inspection Team members, the documentation package to include pre-use and closure inspection documentation as well as all chronological documentation created during the operational period. Upon completion of all inspections, team members shall accept the post-closure condition of each site.

5.5 DEBRIS MANAGEMENT OPERATIONS MONITORING

Debris monitoring operations document the debris clearance and removal operations, including the location and amount of debris collected. Monitoring is needed to ensure that the Debris Contractor(s) are performing the scope of work (SOW) required by the contract.

The Debris Monitoring Contractor will accomplish debris monitoring.

The key elements to observe and record when monitoring and documenting debris operations include:

- Type of debris collected
- Amount of debris collected
- Original collection location
- Equipment used to load and haul
- Staff labor hours (Force Labor Tracking)
- Quantities processed and final disposition for each type of debris (reuse, recycle, special waste)

5.6 DEBRIS MANAGEMENT CONTRACTOR MONITORING

This plan aims to track costs and accurately protect the City's financial interests. Monitoring debris removal operations achieve five objectives:

- Verify that the Debris Contractor properly completes the work included in the contract scope.
- Documented justification, as required, for PA grant reimbursement.
- Provide guidance and advice to the City relative to the entire program.
- Capture reimbursable costs.
- Assist in the packing of information for Project Worksheets.

CONSIDERATIONS FOR UNIT PRICE CONTRACTS

A unit price contract requires that all trucks be accurately weighed or measured and numbered and that all loads are documented. Trained contract monitors are usually necessary for this type of contract to accurately account for the quantities of debris transported (in cubic yards or tons). Monitors must be available at debris pick-up locations to ensure the debris is eligible. In addition, this type of contract requires the Debris Contractor to provide scissor lifts at all reduction and disposal sites so the contract monitor can certify the load. If scales are used, monitors must also ensure that proper weights are registered before and after trucks have been emptied.

- If unit price payments are based on weight, a truck scale must be available at the disposal site for weighing trucks. The weight of an empty truck must also be confirmed.
- If unit price payments are based on volume, monitors must verify truck capacities and inspect trucks for proper loading and compaction.

ELECTRONIC LOAD TICKETS

The term "load ticket" refers to the primary debris-tracking document. A load ticket system tracks the debris from the original collection point to the TDSR or disposal location. The eligible SOW can be properly documented by positioning debris monitors at each point of the operations (collection, TDSR, and/or final disposition). This process enables the City to document and track debris from the initial collection location to the TDSR and final disposal locations. The load ticket represents the pay item. Load tickets have historically been multi-copy and sequentially numbered. This type of ticket is seldomly used today. The Debris Monitoring Contractor uses an automated electronic ticketing system that expedites the reconciliation of tickets and vastly speeds up the reimbursement process. The system used by the Debris Monitoring Contractor also provides foolproof load documentation as well as real-time tracking and progress reporting.

TRUCK CERTIFICATION AND PERIODIC RECERTIFICATION

Before beginning contract work, each truck must be certified. Certification includes a record of the following:

- The volume of the truck bed in cubic yards or empty truck weight.
- Truck license number.
- Any identification number assigned by the monitor.



- A short description of the truck.
- Pictures of each truck and driver.

Monitors are trained to measure truck capacities for certification purposes. Recertification of some hauling trucks on a random and periodic basis should be implemented for enhanced contract compliance and reimbursement considerations. Debris monitors maintain a listing of certified trucks to ensure that truck's identification has not been altered. Additionally, a bar-code system is sometimes used for the same purpose.



6. INFORMATION COLLECTION, ANALYSIS AND DISSEMINATION

The Debris Contractor will provide weekly public notices of the debris removal schedule. These notices will be advertised in local major newspapers and will be of sufficient size to be easily seen by readers. They can also be advertised on at least two local major radio stations which have markets on O’ahu. All public notices must be approved by the City prior to release. The notices will contain a description of the work, how debris should be placed on the right of way, what eligible debris is, and the schedule for removal. Through the installment of PSAs, public participation can enhance the efficiency of the collection/material separation process.

TABLE 6-1

Debris Removal Guidelines for Private Residential Properties

In efforts to expedite the debris removal process, please follow these rules.

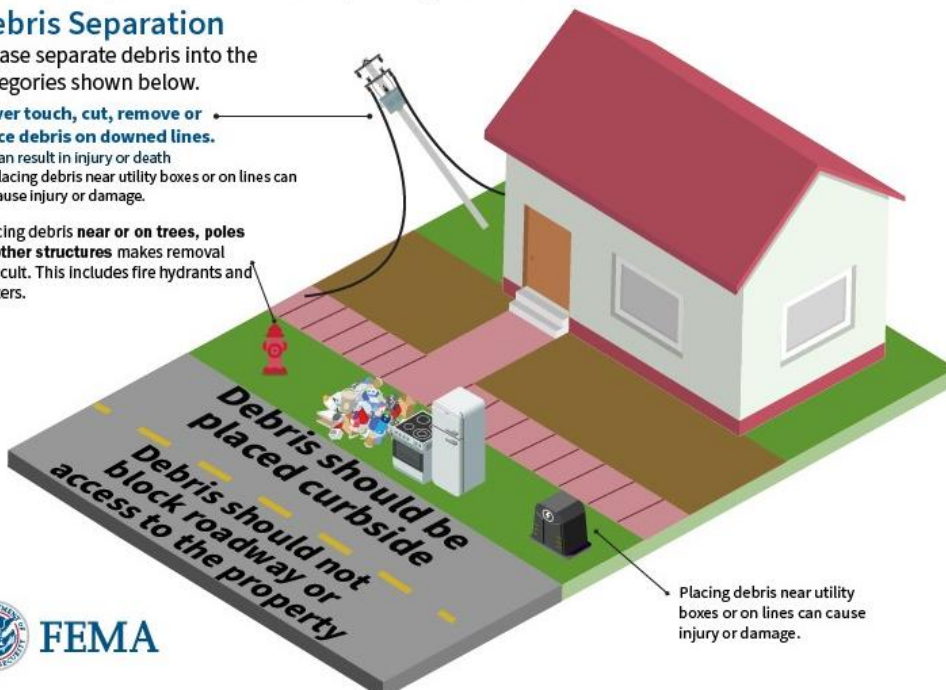
Debris Separation

Please separate debris into the categories shown below.

Never touch, cut, remove or place debris on downed lines.

- Can result in injury or death
- Placing debris near utility boxes or on lines can cause injury or damage.

Placing debris near or on trees, poles or other structures makes removal difficult. This includes fire hydrants and meters.



Check with your local office of emergency management for more information on debris removal.



Large Appliances

Refrigerator, washer/dryer, air conditioner, stove, water heater, dishwasher. Do not leave doors unsealed or unsecured.



Construction Debris

Building materials, drywall, lumber, carpet, furniture, plumbing.



Vegetative Debris

Tree branches, leaves, logs, plants.



Hazardous Waste

Oil, battery, pesticide, paint, cleaning supplies, compressed gas.



Electronics

Television, computer, stereo, phone, DVD player.



Additional PSA samples can be found in Attachment 4.



7. COMMUNICATIONS

Real-time communication is used to facilitate the field team’s access to project resources and allow reporting by the field teams to program management. Satellite/cell phones are used to initiate mobilization, support communication between the off-site and on-site personnel before utilities are established and provide a means of ongoing communication with site management team. Satellite phones will be provided by the Debris Contractor and are to be utilized for communicating in the aftermath of a disaster, should cellular technology fail.

8. ADMINISTRATION, FINANCE AND LOGISTICS

- Should the City require logistical support for items that are included in the Debris Removal Contract, the City shall make each request with written communication or make a written request as soon as practical after a verbal request. The written request shall be provided to the Debris Monitoring Contractor to ensure each item is appropriately documented for reimbursement purposes.
- Data collected by the Debris Monitoring Contractor will be accessible to both the City and Debris Contractor.
- To ensure timely invoicing with accurate data, all debris data shall be reconciled daily between the Debris Monitoring Contractor and Debris Contractor. All data discrepancies shall be resolved daily.
- Debris Monitoring Contractor shall submit recommended invoice amounts to the City for contracted debris removal operations.
- Debris Contractor invoices shall be submitted to the City in accordance with signed contract.
- Debris Monitoring Contractor invoices shall be submitted to the City in accordance with signed contract.
- The City will review submitted invoices and upon approval, make payments to each contractor.
- Upon request by the City, Debris Monitoring Contractor shall assist the City's administrative team or administrative contractor with submitting contracted debris removal documentation or Essential Elements of Information, into FEMA's Grants Portal system.

Federal Programs

The Public Assistance Program of FEMA is aimed at providing support and resources for disaster recovery efforts. These programs facilitate the reimbursement of eligible expenses incurred by state and local governments, as well as certain nonprofit organizations, following a federally declared disaster.

The Public Assistance Program and Policy Guide (PAPPG) is a comprehensive, consolidated program and policy document for FEMA's Public Assistance Program. The Disaster Contractor will thoroughly review and follow the PAPPG. The latest version is FEMA Policy 104-009-2, Public Assistance Program and Policy Guide Version 5 (issued January 6, 2025). This latest PAPPG supersedes all previous policies and publications for disasters declared on or January 6, 2025.

Funding Sources

After a natural disaster, FEMA Public Assistance applicants have access to various funding sources to support their recovery efforts. These funding sources include the following:

Federal Grants: FEMA provides grants to eligible applicants for disaster-related expenses, including debris removal, emergency protective measures, and infrastructure repair or replacement.



State Matching Funds: Applicants are typically required to provide a percentage of the total project cost as a non-federal match, which can come from state or local government funds, in-kind services, or donations.

Hazard Mitigation Grants: FEMA offers Hazard Mitigation Grant Program (HMGP) funding to support projects that mitigate the risk of future disasters. These grants can be used for measures such as floodplain restoration, structural retrofits, and public education campaigns.

Community Development Block Grants: The U.S. Department of Housing and Urban Development (HUD) may allocate Community Development Block Grant (CDBG) funds to assist with disaster recovery and rebuilding efforts, particularly for housing rehabilitation, economic revitalization, and infrastructure improvements.

Natural Resources Conservation Service (NRCS) Funding: NRCS provides financial assistance through programs like the Emergency Watershed Protection Program (EWP) to address watershed impairments caused by natural disasters. EWP funding supports measures such as debris removal, streambank stabilization, and erosion control to mitigate further damage and protect natural resources.

These funding sources provide crucial financial assistance to FEMA Public Assistance applicants, helping them rebuild and strengthen their communities in the aftermath of a natural disaster.

Reimbursement Process

The FEMA Public Assistance reimbursement process is crucial for assisting applicants in recovering from disasters and restoring essential services to their communities. Key elements of this process include the following:

Eligibility Determination: FEMA evaluates the eligibility of projects submitted by applicants based on established criteria, including the type of work, its relationship to the disaster, and compliance with federal regulations.

Project Formulation: Applicants work with FEMA to develop detailed project worksheets that outline the scope of work, estimated costs, and supporting documentation for each eligible project.

Obligation of Funds: Once projects are approved, FEMA obligates funds to cover the federal share of eligible costs, typically up to 75% of the total project cost, with the applicant responsible for providing the non-federal match.

Documentation: Applicants must maintain accurate records and documentation throughout the project lifecycle, including procurement procedures, labor costs, equipment usage, and invoices, to support reimbursement claims.



9. PLAN DEVELOPMENT AND MAINTENANCE

The Debris Contractor will review this plan annually and update as needed. This can be done in conjunction with the annual training.



10. LIST OF ATTACHMENTS

Attachment 1	List of Acronyms
Attachment 2	Debris Management Sites with Primary and Alternate Locations
Attachment 3	Disposal and Recycling Facilities
Attachment 4	Sample Public Service Announcements (PSA's)



10.1 ATTACHMENT 1: LIST OF ACRONYMS

Below are the acronyms and definitions used in this plan and the State Plan. This list is not all-inclusive.

<u>Acronym</u>	<u>Definition</u>
44 CFR	Title 44 of the Code of Federal Regulations
AAR	After Action Report
ACI	Air curtain incinerator
ACM	Asbestos-containing material
ADDM	Assistant Deputy Debris Manager
APHIS	Animal, Plant and Health Inspection Service
C&D	Construction and Demolition
CPA	Cooperative Purchase Agreement
CPD	Collection, processing, and disposal/reuse
CY	Cubic Yards
DAT	Damage Assessment Team
DCZ	Debris Control Zones
DDMOP	Disaster Debris Management and Operation Plan
DEM	Department of Emergency Management
DFM	Department of Facility Maintenance
DIT	Department of Information Technology
DMT	Debris Management Team
DPP	Department of Planning and Permitting
DPW	Department of Public Works
EDD	Emergency Disaster Debris
EI	Essential Elements of Information
EMAC	Emergency Management Assistance Compact
ENV	Department of Environmental Services
EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
ESF	Emergency Support Functions
EWP	Emergency Watershed Program
FE	Front End



FEMA	Federal Emergency Management Agency
FEMA 325	Debris Management Guide – FEMA Publication 325
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
GPS	Global Positioning System
HAZMAT	Hazardous Materials
HDOT	Hawaii Department of Transportation
HFD	Honolulu Fire Department
HHA	Hold Harmless Agreement
HHW	Household Hazardous Waste
HI-EMA	Hawaii Emergency Management Agency
HPD	Honolulu Police Department
HTW	Hazardous and Toxic Waste
HUD	United States Department of Housing and Urban Development
ICS	Incident Command System
ILA	Inter-local Agreement
ITB	Invitation to Bid
JIC	Joint Information Center
MGR	Manager
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MROW	Maintenance and Right-of-Way Division
NGO	Nongovernmental Organizations
NIMS	National Incident Management System
NOI	Notice of Intent
NRCS	National Resource Conservation Service
NRF	National Response Framework
NTP	Notice to Proceed
OSHA	Occupational Safety and Health Administration
PA	Public Assistance
PAPPG	Public Assistance Program and Policy Guide
PDA	Preliminary Damage Assessment



PDMG	Program Delivery Manager
PIO	Public Information Officer
PM	Project Manager
PNP	Private Nonprofit
PPDR	Private Property Debris Removal
PPE	Personal Protective Equipment
PSA	Public Service Announcement
PW	Project Worksheets
QA/QC	Quality Assurance/Quality Control
RFB	Request for Bid
RFI	Request for Information
RFP	Request for Proposals
ROE	Right-of-Entry
ROW	Right-of-Way
SME	Subject Matter Expert
SOW	Scope of Work
Stafford Act	Robert T. Stafford Disaster Relief and Emergency
SWM	Solid Waste Management
T&E	Time and Equipment
T&M	Time and Materials
TCLP	Toxicity Characteristic Leaching Procedure
TD	Tropical Depression
TDSR	Temporary Debris Storage and Removal
TMK	Tax Map Key
TO	Task Order
TS	Tropical Storm
US	United States
USACE	United States Army Corp of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDHS	United States Department of Homeland Security
USHHS	United States Department of Health and Human Services



10.2 ATTACHMENT 2: TDSR SITES WITH PRIMARY AND ALTERNATE LOCATIONS

PRIMARY DEBRIS MANAGEMENT SITES

10.2.1.1 NAVMAG PROPERTY – WEST LOCH DRIVE (TMKS 91001001 AND 91010011)

This TDSR site has haul distances within the debris shed of up to 25 miles along Interstate Route H-1 (H1). This site, along with Barbers Point Airfield and the Former Feed Lot in Campbell Industrial Park, will be required to handle a portion of the 18.4 million cubic yards of debris in a Category 4 hurricane. This debris will have to be sorted for recycling, landfilling, and processing. Mulching or other means of mechanical reduction of green waste can be performed at this site. The access point for this site should be located at West Loch Drive off of North Road. This site will be required to cycle debris (unprocessed and accepted versus processed debris) to sort, store, and process the debris.

10.2.1.2 KAPĀLAMA YARD SITE (TMK 12025002)

This TDSR site has haul distances within the debris shed of up to 25 miles along H1. This site, along with Barbers Point Airfield, NAVMAG Property at West Loch Drive, and the Former Feed Lot in Campbell Industrial Park, will be required to handle a portion of the 18.4 million cubic yards of debris in the event of a Category 4 hurricane. This site would primarily be used for staging equipment. However, it could be used for temporarily storing debris already sorted for recycling and disposal (e.g., metallic and hazardous wastes). Mulching or other means of mechanical reduction of green waste cannot be performed at this site. The access point for this site should be located at Sand Island Access Road off Nimitz Highway. This site will be required to cycle debris as the available space is very limited.

10.2.1.3 CAMPBELL INDUSTRIAL PARK SITE (TMK 91015001)

This TDSR site has haul distances within the debris shed of up to 35 miles along H1. This site, along with the NAVMAG Property at West Loch Drive, the Former Feed Lot, and the Barbers Point Airfield Site, will be required to handle a portion of the 18.4 million cubic yards of debris in the event of a Category 4 hurricane. This debris will have to be sorted for recycling, landfilling, and processing. Mulching or other means of mechanical reduction of green waste can be performed at this site. If the State of Hawai'i authorizes burning, this TDSR site would be an ideal candidate for reduction by burning, given the site's location on the leeward side of the Island and the surrounding industrial/commercial land use. The access point for this site should be located at Kalaeloa Boulevard at Ōpakapaka Street. This site will be required to cycle debris (unprocessed and accepted versus processed debris) to sort, store, and process the debris.

10.2.1.4 DOLE FIELD ON KAMEHAMEHA HIGHWAY (TMKS 64003001 AND 64003003)

This TDSR site has haul distances within the debris shed of up to 15 miles along Kamehameha Highway. This site, the only candidate TDSR site within Debris Shed II, will be required to handle the entire 1.7 million cubic yards of debris in the event of a Category 4 hurricane. This debris will have to be sorted for recycling, landfilling, and processing. Mulching or other means of mechanical reduction of green waste



can be performed at this site. The access point for this site should be located off of Kamehameha Highway, just west of the Helemano Military Reservation. This site will not be required to cycle debris to sort, store, and process the debris.

10.2.1.5 PVT ACCESS ROAD SITE (TMK 87009007)

This TDSR site has haul distances within the debris shed of up to 7 miles along Farrington Highway. This site will be required to handle 1 million cubic yards of debris in a Category 4 hurricane. This debris will have to be sorted for recycling, landfilling, and processing. Mulching or other means of mechanical reduction of green waste can be performed at this site. The access point for this site should be located along Lualualei Naval Road. This site has ample room for sorting, storing, and processing debris without cycling debris (Category 4 storm only requires 33 acres in this debris shed, this site is 179 acres).

10.2.1.6 KUALOA RANCH (TMK 4-9-05:001)

This site is located at 49-560 Kamehameha Hwy., Ka'a'awa, Hawaii 96730 This site is a back up site the local regional parks. In the event that a category 4 storm impacts the island and the regional parks cannot accommodate the debris shed, Kualoa Ranch would be utilized for green waste only. This debris would be staged, reduced and hauled out of the site. Mulching or other means of mechanical reduction of green waste can be performed at this site. This site has ample room for sorting, storing and processing of green waste debris.

POTENTIAL ALTERNATE DEBRIS MANAGEMENT SITES

10.2.1.7 ALA WAI COMMUNITY PARK

2015 Kapi'olani Blvd
Honolulu, HI 96826
(808) 973-7266

10.2.1.8 ALA WAI GOLF COURSE

404 Kapahulu Ave
Honolulu, HI 96815
(808) 733-7387

10.2.1.9 KAMILO IKI PARK

7750 Hawai'i Kai Drive
Honolulu, HI 96825
(808) 395-5314



10.2.1.10 KAPI'OLANI REGIONAL PARK

3840 Paki Ave
Honolulu, HI 96815
(808) 768-4626

10.2.1.11 MĀNOA VALLEY DISTRICT PARK

2721 Ka'aipū Ave
Honolulu, HI 96822
(808) 988-0580

10.2.1.12 HALE'IWA BEACH PARK

66-167 Hale'iwa Road
Hale'iwa, HI 96712
(808) 637-5051

10.2.1.13 KAHUKU DISTRICT PARK

56-170 Pualalea Street
Kahuku, HI 96731
(808) 293-5116

10.2.1.14 KĀNE'OHE DISTRICT PARK

45-660 Kea'ahala Rd
Kane'ohe, HI 96744
(808) 233-7312

10.2.1.15 KUALOA REGIONAL PARK

49-479 Kamehameha Hwy
Kane'ohe, HI 96744
(808) 237-8525

10.2.1.16 WAIMĀNALO DISTRICT PARK

41-415 Hihimanu Street
Waimānalo, HI 96795
(808) 259-8926



10.2.1.17 ALA MOANA BEACH PARK

1201 Ala Moana Blvd
Honolulu, HI 96814
(808) 768-4611

10.2.1.18 ALA PU'UMALU COMMUNITY PARK

1575 Ala Pu'umalu St
Honolulu, HI 96818
(808) 831-7231

10.2.1.19 HĀLAWA DISTRICT PARK

99-795 'Iwa'iwa St
'Aiea, HI 96701
(808) 483-7852

10.2.1.20 ASING PARK

91-1450 Renton Rd
'Ewa Beach, HI 96706
(808) 681-6435

10.2.1.21 'EWA MAHIKO PARK

91-1205 Renton Rd
'Ewa Beach, HI 96706
(808) 681-8315

10.2.1.22 MĀNANA COMMUNITY PARK

1310 Waimano Home Rd
Pearl City, HI 96782
(808) 453-7527

10.2.1.23 NĀNĀKULI COMMUNITY PARK

89-269 Farrington Hwy
Wai'anae, HI 96792
(808) 668-1137



10.2.1.24 WAIKELE COMMUNITY PARK

94-870 Lumiaina St
Waipahu, HI 96797
(808) 678-0871

10.2.1.25 CENTRAL O'AHU REGIONAL PARK

94-801 Kamehameha Hwy
Waipahu, HI 96797
808) 676-6982

10.2.1.26 WAIPI'O PENINSULA SOCCER PARK

93-061 Wai'pio Point Access Rd
Waipahu, HI 96797
(808) 678-0593



10.3 ATTACHMENT 3: DISPOSAL AND RECYCLING FACILITIES WITH MAP





10.4 ATTACHMENT 4: SAMPLE PUBLIC SERVICE ANNOUNCEMENTS (PSA’S)

SAMPLE PRESS RELEASE #1

(Curbside Collection)

Date

FOR IMMEDIATE RELEASE

FOR MORE INFORMATION, CONTACT:

Name / Title of State or Local Debris Manager

Telephone Number / Facsimile Number / E-Mail

Address

(Note: list the hours/days of the week this telephone number is staffed.)

Name of Agency / Web Site Address

Disaster Debris Removal to Begin

(Note: This would be used for a curbside collection/removal operation that does NOT emphasize recycling.)

- Recovery efforts are underway in response to (describe disaster conditions) in (name of jurisdiction). Clearing and removing disaster debris is a major part of the recovery effort. (Name of agency) will begin debris collection and removal in (name of jurisdiction) on (beginning date) and will continue until (end-date). Residents are asked to **separate** disaster debris as follows and **place it in piles at the curb in the public right-of-way**, not on private property:
- **Construction and demolition materials** (building construction materials – wood, metal, drywall, shingles, etc., building contents and personal property – furnishings, clothing, appliances, etc.)
- **Vegetative materials** (trees, limbs, brush, leaves, etc.)
- **Household hazardous waste** (paints, cleaners, oils, batteries, pesticides, etc.); please be sure these materials are in a secured container and are not leaking.
- **Dirt/sediment** (soil, sand, gravel, etc.)

Please be advised that debris removal crews **WILL NOT**, at this time, enter onto private property to collect or remove debris. All debris must be placed in separate piles at the curb in the public right-of-way, as described above. The home/business owner is responsible for bringing the debris to the curb and properly separating it. Your cooperation will make this debris removal operation proceed smoothly and ensure that the community recovers as quickly as possible.

If placing your materials at the curb will cause traffic or other safety hazards, or if you are unable to move the debris to the curb due to physical limitations, debris size/weight, etc., please call (telephone number) before (date/time) to arrange for special pick-up at a later time. Please note that debris **WILL NOT** be removed from private property without a signed Right-of-Entry Agreement from the property owner. (This requirement will be explained when you call.)



To report unsafe debris situations (e.g., leaning trees, trees on houses, partially collapsed structures, etc.), please call (telephone number) immediately.

Please note that this operation is **ONLY** for disaster debris. Please do not attempt to place garbage or other household refuse with the disaster debris, as it will not be accepted. Regular trash removal services in the community will continue as scheduled.



SAMPLE PRESS RELEASE #2

(Curbside Collection)

Date

FOR IMMEDIATE RELEASE

FOR MORE INFORMATION, CONTACT:

Name / Title of State or Local Debris

Manager Telephone Number / Facsimile

Number / E-Mail Address

(Note: list the hours/days of the week this telephone number is staffed.)

Name of Agency / Web Site Address

Disaster Debris Removal to Begin

(Note: This would be used for a curbside collection/removal operation that EMPHASIZES RECYCLING.)

Recovery efforts are underway in response to (describe disaster conditions) in (name of jurisdiction). Clearing and removing disaster debris is a major part of the recovery effort. (Name of agency) will begin debris collection and removal in (name of jurisdiction) on (beginning date) and will continue until (end-date). To reduce the amount of debris that must be disposed of and the associated debris disposal costs, the (name of jurisdiction) will be recycling as many materials as possible. Residents are asked to **separate** disaster debris as follows and **place it in piles at the curb in the public right-of-way**, not on private property:

- **Metals** (window frames; sheet metal siding and roofing; cast iron tubs/sinks; railings; appliances such as washers, dryers, refrigerators, and stoves; mobile home frames; metal parts from cars; personal belongings that are metal such as damaged tools; metal furnishings such as chairs, tables, file cabinets, and bed frames; metal pipes; etc.)
- **Wood materials** (framing materials; plywood; wood flooring; decks and decking material; wood furniture such as tables and chairs; personal belongings that are wood such as picture frames; etc.)
- **Dirt/sediment** (soil, sand, gravel, etc.)
- **Concrete** (concrete chunks; concrete block; bricks; concrete pavers; etc.)
- **Tires** (from automobiles, bicycles, trailers, etc.)
- **Glass** (empty/clean bottles and jars, household items, window panes, glass blocks, etc.)
- **Residual construction and demolition materials** (non-recyclable building materials – drywall, asphalt shingles, plastic sinks/tubs, floor tiles, etc.; non-recyclable building contents and personal property- carpeting/rugs, furnishings, clothing, etc.)
- **Vegetative materials** (trees, limbs, brush, leaves, etc.)
- **Household hazardous waste** (paints, cleaners, oils, batteries, pesticides, etc.); please be sure these materials are in a secured container and are not leaking.



Please be advised that debris removal crews **WILL NOT**, at this time, enter onto private property to collect or remove debris. All debris must be placed in separate piles at the curb in the public right-of-way, as described above. The home/business owner is responsible for bringing the debris to the curb and properly separating it. Your cooperation will make this debris removal operation proceed smoothly and ensure that the community recovers as quickly as possible.

If placing your materials at the curb will cause traffic or other safety hazards, or if you are unable to move the debris to the curb due to physical limitations, debris size/weight, etc., please call (telephone number) before (date/time) to arrange for special pickup at a later time. Please note that debris **WILL NOT** be removed from private property without a signed Right-of-Entry Agreement from the property owner. (This requirement will be explained when you call.)

To report unsafe debris situations (e.g., leaning trees, trees on houses, partially collapsed structures, etc.), please call (telephone number) immediately.

Please note that this operation is **ONLY** for disaster debris. Please do not attempt to place garbage or other household refuse with the disaster debris, as it will not be accepted. Regular trash removal services in the community will continue as scheduled.



SAMPLE PRESS RELEASE #3

(Use of Collection Centers)

Date

FOR IMMEDIATE RELEASE

FOR MORE INFORMATION, CONTACT:

Name / Title of State or Local Debris

Manager Telephone Number /

Facsimile Number / E-Mail Address

(Note: list the hours/days of the week this telephone number is staffed.)

Name of Agency / Web Site Address

Disaster Debris Removal to Begin

(Note: This would be used for a collection/removal operation that EMPHASIZES RECYCLING and the use of Collection Centers.)

Recovery efforts are underway in response to (describe disaster conditions) in (name of jurisdiction). Clearing and removing disaster debris is a major part of the recovery effort. (Name of agency) will begin debris collection operations in (name of jurisdiction) on (beginning date) and will continue until (end-date). Several debris **Collection Centers** will be used. To reduce the amount of debris that must be disposed of and the associated debris disposal costs, the (name of jurisdiction) will be recycling as many materials as possible. Residents are asked to transport their disaster-related debris to any of the Collection Centers that have been opened throughout the community (see locations below) for drop-off. At the Collection Center, residents must **separate** their disaster debris as follows and **place it in large bins for:**

- **Metals** (window frames; sheet metal siding and roofing; cast iron tubs/sinks; railings; appliances such as washers, dryers, refrigerators, and stoves; mobile home frames; metal parts from cars; personal belongings that are metal such as damaged tools; metal furnishings such as chairs, tables, file cabinets, and bed frames; metal pipes; etc.)
- **Wood materials** (framing materials; plywood; wood flooring; decks and decking material; wood furniture such as tables and chairs; personal belongings that are wood such as picture frames; etc.)
- **Dirt/sediment** (soil, sand, gravel, etc.)
- **Concrete** (concrete chunks; concrete block; bricks; concrete pavers; etc.)
- **Tires** (from automobiles, bicycles, trailers, etc.)
- **Glass** (empty/clean bottles and jars, household items, window panes, glass blocks, etc.)
- **Residual construction and demolition materials** (non-recyclable building construction materials – drywall, asphalt shingles, plastic sinks / tubs, floor tiles, etc.; non-recyclable building contents and personal property – carpeting / rugs, furnishings, clothing, etc.)



- **Vegetative materials** (trees, limbs, brush, leaves, etc.)
- **Household hazardous waste** (paints, cleaners, oils, batteries, pesticides, etc.); please be sure these materials are in a secured container and are not leaking in any way.

Separate bins will be available for each type of debris described above. Staff from the (name of agency) will be present at each Collection Center to aid residents in the proper separation and disposal of their disaster debris. Please note that general curbside debris collection/removal will **not occur**. It is each resident’s responsibility to transport (or arrange for the transport of) their disaster-related debris to one of the Collection Centers and properly unloads and separate the debris. Residents are **NOT** to leave their disaster-related debris by the curbside or in the public right-of-way. This action may result in a citation by the (name of agency) and a possible fine. Your cooperation will make this debris removal operation proceed smoothly and ensure that the community recovers as quickly as possible.

Residents that are physically and/or financially unable to transport (or arrange for the transport of) their disaster-related debris to a Collection Center are asked to call (telephone number) on (what days / between what hours?) before (deadline date) to arrange for assistance. Family members or caretakers are asked to call on behalf of those unable to make the call themselves. Please note that debris **WILL NOT** be removed from private property without a signed Right-of-Entry Agreement from the property owner. (This requirement will be explained when you call.)

The Collection Centers will only accept disaster-related debris. Please do not attempt to place garbage or other households' refuse with the disaster debris, as it will not be accepted. Regular trash removal services in the community will continue as scheduled.

Debris Collection Center Locations:

- (Location / Address / Hours of Operation of Collection Center #1)
- (Location / Address / Hours of Operation of Collection Center #2)
- (Location / Address / Hours of Operation of Collection Center #3) Etc.

(Note: If both curbside collection and Collection Centers are used, blend the Sample Press Releases to create a single Press Release with the correct emphasis on each collection method.)