THE CITY OF EMERYVILLE
DISASTER DEBRIS MANAGEMENT PLAN

February 2024

TABLE OF CONTENTS

Attachments

List of Tables and Figures

ACRONYMS

44 CFR	Title 44 of the Code of Federal Regulations
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
C&D	Construction and Demolition
Cal OES	Governor's Office of Emergency Services
CalRecycle	Department of Resources Recycling and Recovery
CDAA	California Disaster Assistance Act
CDM	City Debris Manager
CFR	Code of Federal Regulations
City	City of Emeryville
CY	Cubic Yards
DCDC	Debris Collection and Disposal Coordinator
DES	Director of Governor's Office of Emergency Services[1]
DMC	Debris Monitoring Coordinator
DSOD	Division of Safety of Dams
EHP	Environmental and Historic Preservation
EMI	Emergency Management Institute (FEMA)
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FRP	Federal Response Plan
GIS	Geographic Information Systems
GPS	Global Positioning System
HHW	Household Hazardous Waste
HWMC	Hazardous Waste Management Coordinator
ICS	Incident Command System
LEA	Local Enforcement Agency
LHMP	Local Hazard Mitigation Plan
MFD	Multi-Family Dwelling
NFIP	National Flood Insurance Program

[1] The DES here is different than the Director of Emergency Services for the City (i.e. City Manager), which is not abbreviated throughout this Plan.

PAFN	People with Access and Functional Needs Public Assistance
PAPPG	Program and Policy Guide
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
Plan	Disaster Debris Management Plan
PNP	Private Non-Profit
PRT	Planning Response Team
PWD	Public Works Department
ROW	Right-Of-Way
SDEQ	State Department of Environmental Quality
SEMS	Safety and Environmental Management Systems
SITREP	Situation Report
Stafford Act	Robert T. Stafford Disaster Relief & Emergency Assistance Act
SWANA	Solid Waste Association of North America
TDMS	Temporary Debris Management Site
USACE	U.S. Army Corp of Engineers
USDA	U.S. Department of Agriculture
USFG	U.S. Department of Fish and Game

DEFINITIONS

The following definitions are provided as related to the City's Disaster Debris Management Plan and may differ from other uses found in other City documents.

Bulky Items – Non-disaster-related yard waste, white goods, or household furnishings placed on the curbside for pickup by local solid waste management personnel. Not synonymous with garbage.

Chipping – The process of reducing woody material, such as lumber and vegetative debris, by mechanical means, into small pieces for use as mulch or fuel.

Construction and Demolition Debris – C&D debris herein is defined 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; pipe; concrete; fully cured asphalt; equipment; furnishings; and fixtures.

Contractor – Term used to refer to the *debris-clearance* and *-removal* contractor, or the *debris - monitoring* contractor.

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; C&D material; and personal property.

Debris Clearance – Clearance of disaster-related debris.

Debris Monitoring – Actions taken, either by the City staff or by the Contractor, that includes, but is not limited to documenting eligible quantities and reasonable expenses during debris-clearing activities to ensure that the work complies with the contract scope of work and/or is eligible for public assistance grant reimbursement.

Debris Removal – Physically picking up debris and transferring it to a TDMS, composting facility, recycling facility, permanent landfill, or other reuse or end-use facility.

Demolition – The act or process of reducing a structure, as defined by state or local code, to a collapsed state. It differs from, and should not be confused with, deconstruction, which is the taking down of a building while carefully preserving valuable elements for reuse.

Disaster Debris (Debris) – Items and materials broken, destroyed, or displaced by a natural or man-made disaster. Examples of debris include, but are not limited to: vegetation; hazardous stumps; hanging limbs; leaning trees; C&D; HHW; white goods; boats; vehicles, and personal property.

Electronic Debris – Includes debris generated from electronics or other technologies, such as: televisions; computer screens; hard drives; printers; fax machines; and cell phones.

Federal Response Plan – Used by FEMA to coordinate the government response to disaster or emergency situations. It describes the basic mechanisms and structures by which the Federal government mobilizes resources and conducts activities to augment State and local response efforts.

Final Debris Disposal – Placing mixed debris and/or residue from volume reduction operations into an approved landfill.

Garbage – Waste material that is regularly collected by the City's franchised hauler.

Green Waste – Waste that is accepted in the City's green cart collection. Common examples of green waste include grass clippings, yard trimmings, and other vegetative material.

Hazardous Waste – Waste that appears on one of the four hazardous waste lists in Title 40 of the Code of Federal Regulations (CFR) Part 261 or exhibits at least one of the following four characteristics: ignitability; corrosivity; reactivity; or toxicity.

Hazardous waste is regulated under the Resource Conservation and Recovery Act and contains properties that make it potentially harmful to human health or the environment. The California and U.S. Environmental Protection Agency (EPA) provide first response functions in cases of commercial, agricultural, industrial, and toxic waste spills.

Hold Harmless – A contractual arrangement whereby one party agrees not to hold the other party responsible for damage or other liability incurred as a result of a particular action or transaction.

Household Hazardous Waste – A hazardous product or material used and disposed of by residential consumers, rather than commercial or industrial consumers. HHW includes some paints, stains, varnishes, solvents, pesticides, and other products or materials containing volatile chemicals that catch fire, react, or explode under certain circumstances or that are corrosive or toxic.

Illegal Dumping – Refuse, abandoned junk, solid waste, or other offensive material that is dumped or thrown onto any non-designated lot or space within the City.

Incineration – The destruction of debris by burning. Incineration is to be avoided and generally prohibited as a way to manage waste due to its potential health risks.

Industrial Waste – Any liquid, gaseous, solid, or other waste substance, or combination thereof, resulting from any process of industry, manufacturing, trade, or business or from the development of any natural resources.

Local Emergency – The duly proclaimed existence of conditions of disaster or extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, as described in Government Code section 8558(c). Such conditions are or are likely to be beyond the control of the services, personnel, equipment, and facilities of that political subdivision and require the combined forces of other political subdivisions to combat, as stated in the proclamation by the governing body of a county, city and county, or city, or by an official so designated by ordinance adopted by such governing body to issue such proclamation.

Monitoring – Actions taken to ensure that a contractor complies with the contract scope of work.

Mutual Aid Agreement – Written understanding between communities, cities, counties, and the states obligating assistance to each other during a disaster.

Preliminary Damage Assessment – A mechanism used to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and the community as a whole.

Public Assistance Program and Policy Guide – This single volume, published by FEMA, incorporates all Public Assistance (PA) policy, provides an overview of the PA Program implementation process, and includes links to other publications and documents that provide additional process details.

Putrescible Waste – Debris that will decompose or rot, excluding vegetative matter. Examples include animal carcasses; marine waste; and other fleshy organic matter.

Recycling – The recovery and reuse of metals, soils, and construction materials that may have a residual monetary value.

Rendering – The processing of grease, fat, or bone into usable products.

Right of Entry – As used by FEMA, Cal OES, and CDAA, this refers to the document issued by a property owner that confers to a city, an eligible applicant's contractor or the City's contractor or the United States Army Corps of Engineers (USACE) the right to enter onto private property for a specific purpose, without committing trespass.

Right-of-Way – The portion 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.

Situation Report – A form of status reporting that provides decision-makers and readers with a quick understanding of the current situation.

State of Emergency – The duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the state, as described in Government Code section 8558(b), which conditions, by reason of their magnitude, are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city, and require the combined forces of a mutual aid region or regions to combat, as stated in a proclamation by the Governor.

Sweeps – The number of times a contractor passes through a community to collect all disaster-related debris from the ROW. Usually limited to three passes through the community.

Temporary Debris Management Site – A location where debris is temporarily stored until it is sorted, processed, and reduced in volume and/or taken to a permanent landfill.

United States Army Corps of Engineers – A component of the United States Army responsible for constructing and maintaining military installations and other government-owned and controlled facilities. The USACE may be engaged by FEMA when direct federal assistance, issued through a mission assignment, is needed.

Volume Reduction Operations – Any of several processes used to reduce the volume of debris brought to a TDMS. It includes such processes as chipping and mulching of woody debris, shredding and baling of metals, and air curtain burning.

White Goods – Discarded household appliances, such as: refrigerators; freezers; air conditioners; heat pumps; ovens; ranges; washing machines; clothes dryers; and water heaters.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Introduction

This Disaster Debris Management Plan (Plan) is designed to guide the City of Emeryville (City)'s Public Works Department (PWD)'s response during the debris-removal planning and post-event operations during:

1. A debris-generating event that exceeds the City's capacity to respond; or
2. A federally declared debris-generating event in the City.

This Plan is limited to helping the City plan for and mitigate the effects of debris generated by natural disasters but recognizes that man-made disasters could also occur in the City. The debris generated by man-made disasters is expected to be less significant than that generated by natural disasters and would be addressed in the same manner as laid out in this Plan.

The City intends to utilize this Plan to reduce the cost associated with a debris-generating event. The Plan will accurately and efficiently guide the City's PWD to execute a pre-, mid-, and post-disaster (from debris-removal planning through post-event operations) recovery effort. It is further designed to identify agencies and activities that are involved in debris operations to ensure a coordinated response that achieves removal, storage, reduction, and final disposition of debris deposited on or immediately adjacent to public rights-of-way (ROW).

The plan has three main functions:

1. Debris Monitoring and Coordination;
2. Debris-Collection and -Disposal Coordination; and
3. Hazardous Waste Management Coordination.

General

The City of Emeryville (**Attachment 1 – City of Emeryville Area Map)** is vulnerable to numerous natural and technological hazards, including severe weather and hazardous materials spills. Flooding and strong winds are the most likely extreme weather threats to the City.[2] Other potential disasters identified by the Association of Bay Area Governments (ABAG) multi-jurisdictional Local Hazard Mitigation Plan include the following, all of which are caused by earthquakes: shaking; earthquake-induced landslides; liquefaction; and tsunamis. ABAG also identified landslides, drought, and wildfires as potential disasters related to weather events.

The City can manage many disaster situations with internal resources. However, there are potential debris-generating events that may overwhelm the City's assets and capabilities. It is particularly important in the event of a federally declared disaster to follow specific FEMA requirements for the clean-up and monitoring of debris. The City acknowledges it will be asked

[2] http://www.usa.com/emeryville-ca-natural-disasters-extremes.htm

to follow specified procedures and document personnel and material resources used in response to a disaster, in order to benefit from federal assistance.

Scope

This Plan provides organizational structure and standardized guidelines for field operations in debris clearance, collection, removal, and disposal caused by a major debris-generating event. It shall be a guidance document for all City departments and agencies for debris-management purposes. This Plan is designed to assist City staff in implementing and coordinating public and private sector debris removal and disposal operations to maximize clean-up efficiencies. Expeditious debris-removal and -disposal actions will mitigate the threat to the health, safety, and welfare of City residents.

Purpose

Many communities wait until after disaster strikes to assess their capacity for recycling, composting, and disposal of disaster debris. The primary purpose of this Plan is to provide a standard operating guideline (SOG) for the City in the event of a federally declared emergency affecting the jurisdiction. It will aid the City in proactively determining the appropriate management options in advance of a natural or man-made disaster. This Plan will identify agencies and activities that are involved in debris operations to ensure a coordinated response that achieves removal, storage, reduction, and final disposition of debris deposited along or immediately adjacent to public ROWs.

Since debris removal and recovery can represent up to 45% of the total cost of damages caused by a disaster, it is important for the City to have a Plan that is cost-effective, efficient, timely, and reimbursable (to the maximum extent possible). Although the recovery process can potentially take years to complete, careful planning can significantly minimize costly mistakes, speed recovery, protect human health and the environment, and prevent the generation of additional waste. To that end, this Plan incorporates federal and state requirements with which the City must comply during disaster-debris-recovery efforts in order to receive reimbursement for those activities, with particular emphasis on the very specific eligibility requirements for maximum federal reimbursement.

If an emergency or minor disaster affects the City but doesn't require federal recovery funds, the City will manage such an event outside of this Plan through its in-house public works staff, contracted solid waste and recycling providers, and/or state-requested assistance.

During a federally declared emergency that affects the City, this Plan will serve as a resource document for negotiating technical and financial disaster assistance with the Governor's Office of Emergency Services (Cal OES), the California Disaster Assistance Act (CDAA), FEMA, and other agencies. It explains how the City can reduce the burden on their solid waste management systems in the event of a disaster. The Plan should be reviewed annually and updated as needed in conjunction with the State of California and FEMA disaster-related documents.

The City's Plan is designed to achieve the following key objectives:

1. Establish and provide a centralized repository of information critical to developing and operating a disaster-debris-management program, including: locations of community drop-off stations and Temporary Debris Management Sites (TDMS); site criteria for locating new TDMS; City boundary map; floodplain maps; and earthquake fault lines;
2. Identify the rules, regulations, and guidelines enacted by Cal OES, Cal-EPA (California Environmental Protection Agency), US-EPA, CDAA, FEMA, and other agencies governing the disaster-debris-removal process in a federally-declared emergency;
3. Identify the roles and responsibilities of all involved parties;
4. Provide a detailed approach to procurement and provision of recovery services;
5. Outline the process for distributing public information in the event of a debris-generating disaster;
6. Establish language and a protocol for the content of pertinent public information, such as press releases and other debris-management information; and
7. Document procedures that will assist the City in receiving the maximum allowable FEMA and state reimbursement in the event of a federally declared emergency.

Sequence of Events in a Disaster

When a disaster strikes and creates debris-management issues, the first agency to respond with assistance is the jurisdiction; in this case that would be the City of Emeryville. If the City does not have sufficient debris-clearing, -removal, and -disposal capabilities necessary to successfully respond to the disaster, it will need to request assistance from the County. If the magnitude of the disaster is so great as to exceed City and County resources, the state will serve as an agent to provide disaster assistance, under the CDAA. If the debris demands of the disaster surpass the available resources of both local and state governments, the state will request that a federal emergency be declared on behalf of the local jurisdiction, whereby federal aid will be provided and FEMA will implement the Federal Response Plan (FRP).

As the first line of assistance after a disaster, jurisdictions must take the following steps in response to debris damage:

- Act as the primary “first provider” of emergency response services;
- Activate EOC and the Comprehensive Emergency Management Plan;
- Coordinate their response with public and private organizations and agencies;
- Notify Cal OES of the situation by regularly submitting situation reports (SITREPs);
- Activate necessary jurisdictions and organizations that are signatory to mutual aid compacts;
- Activate response agreements with state and federal departments or agencies;
- Proclaim a local State of Emergency to authorize the use of local resources and funds, and waive the usual bidding process for goods and services; and

- Request that Cal OES provide state and/or federal assistance.

Once the state is called in to assist with disaster-debris management, these are the steps they take:

- Monitor the situation;
- Review and evaluate local response efforts and requests for assistance;
- Activate the state Emergency Operations Center (EOC) to coordinate available state assistance;
- Determine if the situation is beyond the ability of the state and if federal assistance is needed;
- Proclaim a State of Emergency by the governor that:
  - ✓ Activates the state disaster preparedness plan;
  - ✓ Provides for the use of state assistance or resources; and
  - ✓ Begins the process for requesting federal assistance;
- Request federal assistance. Requests can include:
  - ✓ A request for "emergency" or "major disaster declaration" under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended; or
  - ✓ A request to federal agencies under their own authorities from existing or emergency programs, such as the Small Business Administration (SBA) or the U.S. Department of Agriculture (USDA).

If both state and local agencies cannot provide adequate response assistance, then the federal government steps in to do the following:

- Conduct joint Preliminary Damage Assessments (PDA) with state and local governments to identify: damage to individuals, farms, and businesses; damage to public agencies, special districts, and private nonprofit organizations; and potential mitigation activities that can occur during repairs and before another disaster occurs;
- Approve or deny requests for federal assistance. If approved:
  - ✓ Assigns a federal coordinating officer to head the emergency response team;
  - ✓ Sets up a disaster field office to coordinate response and recovery efforts; and
  - ✓ Works with the state coordinating officer to address response and recovery efforts;
- Activate the procedures outlined in the FRP, which determines how federal agencies and the American Red Cross will coordinate their efforts to provide immediate response assistance;
- Establish an emergency support team to monitor operations from Washington; and

- Identify the necessary emergency support functions to respond.

City Profile

The City of Emeryville is one of the smallest cities in California. It has a strategic location on the east shore of the San Francisco Bay in Alameda County, bordered by the City of Berkeley to the north and the City of Oakland to the east and south. Interstate 80/580 passes through Emeryville towards Sacramento, running north from the Bay Bridge, while Interstate 580 towards Hayward passes just to its south. The City is compact, occupying only 2.25 square miles, of which approximately 1.2 miles is land area and one square mile is tidal on the San Francisco Bay. Emeryville is largely flat and is distinguished by a peninsula created in the 1960s that extends just over a mile into the Bay. According to the California Department of Finance, Emeryville's estimated residential population was 12,680 as of January 1, 2019; that includes 819 single-family households and 6,393 multi-family households.[3]

Before the settlement of Spanish land grants in the 1800s, the Emeryville area was the site of extensive Native American communities. Following the arrival of Europeans, Emeryville was incorporated as a City in 1896, largely due to the efforts of its namesake, Joseph S. Emery, a local businessman. Emeryville soon became a city of big industrial enterprises and rail terminals. At that time residential areas were confined to small portions of the City's eastern edge, bordering Oakland, and the City remained this way for many years.

In the 1970s the City's composition started undergoing a change. Older industries began either relocating to the suburbs or closing. Along the peninsula, in 1974, the City experienced growth from the addition of a major residential development – the 1,249-unit Watergate Apartments (now condominiums) – and multi-story high-rise office buildings. The City also created a small boat harbor by filling in 7.8 additional acres of the San Francisco Bay, which included parks and a 500-berth marina.

Expansion and investment continued in the 1980s. Emery Bay Village (112 units), located on 53rd Street, was built in 1980, followed by the Pacific Park Plaza, on Christie Avenue, in 1984 (a high-rise with 583 units). These two developments, along with the Watergate Condominiums, doubled the city's population to nearly 5,000 residents. Many multi-unit buildings have been built in the City over the past 30 years, effectively doubling the City's population since 1984.

Previously an industrial town, the City is no longer dominated by a single land use. Around half of the developable land (excluding roads, highways, and other ROWs) is in Commercial (36%) or Industrial (14%) use and just under a quarter (21%) is in Housing. Approximately one quarter of the City is in Public Use (7%), Parks and Open Space (7%), or a mix of uses (8%), with around 7% vacant unassigned.

Because Emeryville is largely flat, topography does not play a factor in the City's land use pattern. Transportation corridors, however, split the City into several sub-districts. The main dividers are I-80 and the railroad, and to a smaller extent Powell Street. I-580 separates Emeryville from Oakland along the southern City limits, although a portion of the area north of I-580 is in Oakland.

[3] http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

Almost all of the Bayfront and freeway edge area west of the railroad tracks has been redeveloped over the past 30 years. Much of this space is now devoted to retail and office uses in large-scale developments, such as Bay Street, IKEA, the Public Market, and the Powell Street Plaza, all of which serve a regional clientele. This area of the City is almost devoid of industrial use and most of the remaining industrial parcels are likely to be changed into new uses in the future. Residential developments to the west of the tracks (e.g., Watergate Condominiums, Pacific Park Plaza, Avenue 64, Archstone/Bridgewater, Bay Street, and newly added Emme 64th and Christie) are large and high-density, totaling approximately 3,200 housing units, which comprises almost half of the housing in the City.

Emeryville has remade itself into a thriving mixed-use community with a rich urban and retail core, even becoming a retail destination for the East Bay and beyond. Development of the City continues in current day. Large-scale commercial/retail projects have changed and will continue to change the landscape of the City. As these large tracts of industrial land are converted, Emeryville will see an ongoing substantial increase in employment and population. It is projected that Emeryville's current population could increase by 40% to approximately 16,600 by 2030.

City facilities that are non-critical include the Civic Center, the Child Development Center, the Veteran's Memorial Building/Senior Center, the Emeryville Amtrak Station, the Public Works Corp Yard, a community center, and the Emeryville Center for the Arts.

Critical facilities and infrastructure are those that are essential to the health and welfare of the population. Typically, these include police and fire stations, schools, and emergency operation centers, such as hospitals. Critical infrastructure can include roads and bridges that allow emergency vehicles access to those in need and to the utilities that provide water, electricity, and communication services to the community. The City's critical facilities and infrastructure include: one police station; two fire stations; and two schools operated by the TK-12 Emeryville Unified School District – the Anna Yates Elementary School and the Emery High School.

For purposes of this Plan, critical facilities and infrastructure are categorized as follows:

Primary Facilities

These are facilities that are essential to the ability to immediately respond to and mitigate the impacts of disasters. These include emergency operation centers needed for disaster response before, during, and after hazard events, facilities that house critical information technology and communication infrastructure, and vehicle and equipment storage facilities.

Secondary Facilities

These facilities play an essential role in the recovery process after a disaster. They include those that can provide food, shelter, health, and safety services, such as educational facilities and community gathering places.

Priority Response Facilities

These are facilities that need early warning to enable them to prepare for and respond to the impacts of disasters. They include facilities with vulnerable populations such as educational and medical facilities, as well as large multi-family buildings.

Vulnerable Facilities

These facilities have structures that are particularly vulnerable to disasters. They include those that produce, manufacture, or store materials that create an exposure to secondary hazards of concern, such as highly volatile, flammable, explosive, toxic, and/or water-reactive materials.

Critical Infrastructure and Utilities

These are public and private utilities and infrastructure vital to maintaining or restoring normal services to areas damaged by disaster events, such infrastructure for energy, communications, drinking water, wastewater, and stormwater, as well as major road and rail systems. Clearing roadways of debris is critical for emergency vehicles, law enforcement agencies, and other critical services such as power, water, and communications.

A comprehensive list of City facilities and infrastructure that fall into the above-named categories is included in **Attachment 6 – Critical Facilities and Infrastructure**.

SECTION 1: OVERVIEW, STAFF ROLES, AND RESPONSIBILITIES

SECTION 1: OVERVIEW, STAFF ROLES, AND RESPONSIBILITIES

1.1 Emergency Operations Center Organization and Staff

1.1A Emergency Operations Center

Upon determining the existence of a disaster in the City with the potential to affect life, property, or the public peace, the Governor may proclaim a State of Emergency. Furthermore, the Governor has the authority to command the service and equipment of citizens under the CDAA provisions and limitations.

Upon proclamation of a State of Emergency that requires debris removal, the City Manager will activate the Emergency Operations Center (EOC) when it is determined to be necessary. The EOC will be organized to provide a central location at the time of the event for coordination and control of all emergency operations, including debris management activities. The primary EOC will be located at the Hollis Street Fire Station, 6303 Hollis Street. If for some reason this location is not available, an alternate EOC, located at the Bridgecourt Room, 3990 Harlan Street, will be used. Complete details of the City's EOC can be found in the City of Emeryville's Emergency Operations Plan (EOP).

1.1B Emergency Operations Center Organization

The City's EOC will be organized to provide a central location for the coordination and control of all debris management requirements. Various staff from City Departments will form the EOC team assigned to the primary responsibilities. The City's PWD will be primarily responsible for duties related to disaster debris management services. The main functions of the EOC team will include: Operations; Planning/Intelligence; Logistics; and Finance/Administration.

Staff at the City's PWD shall coordinate emergency debris clean-up and flood operations with other City agencies and departments, local governments, private sector contractors, and regional, state, and federal partners. When properly implemented, the result will be a coordinated and comprehensive effort to reduce debris-related impacts of an emergency or disaster.

To respond to a significant debris-generating event, the City's Public Works Director will be designated as the City Debris Manager (CDM) for the duration of the disaster-response-and-recovery operation. The CDM will be the primary point of contact for all disaster-debris operations and will receive support from other debris-management staff, as necessary. In the event that the City's Public Works Director is unavailable, the City Manager will designate an alternate CDM.

In addition to the CDM, the debris management team will be comprised of the following lead roles, which either may be given to individuals with the additional title beyond their normal scope of work or, more likely, will be contracted positions from qualified private companies:

- Debris Collection and Disposal Coordinator (DCDC);

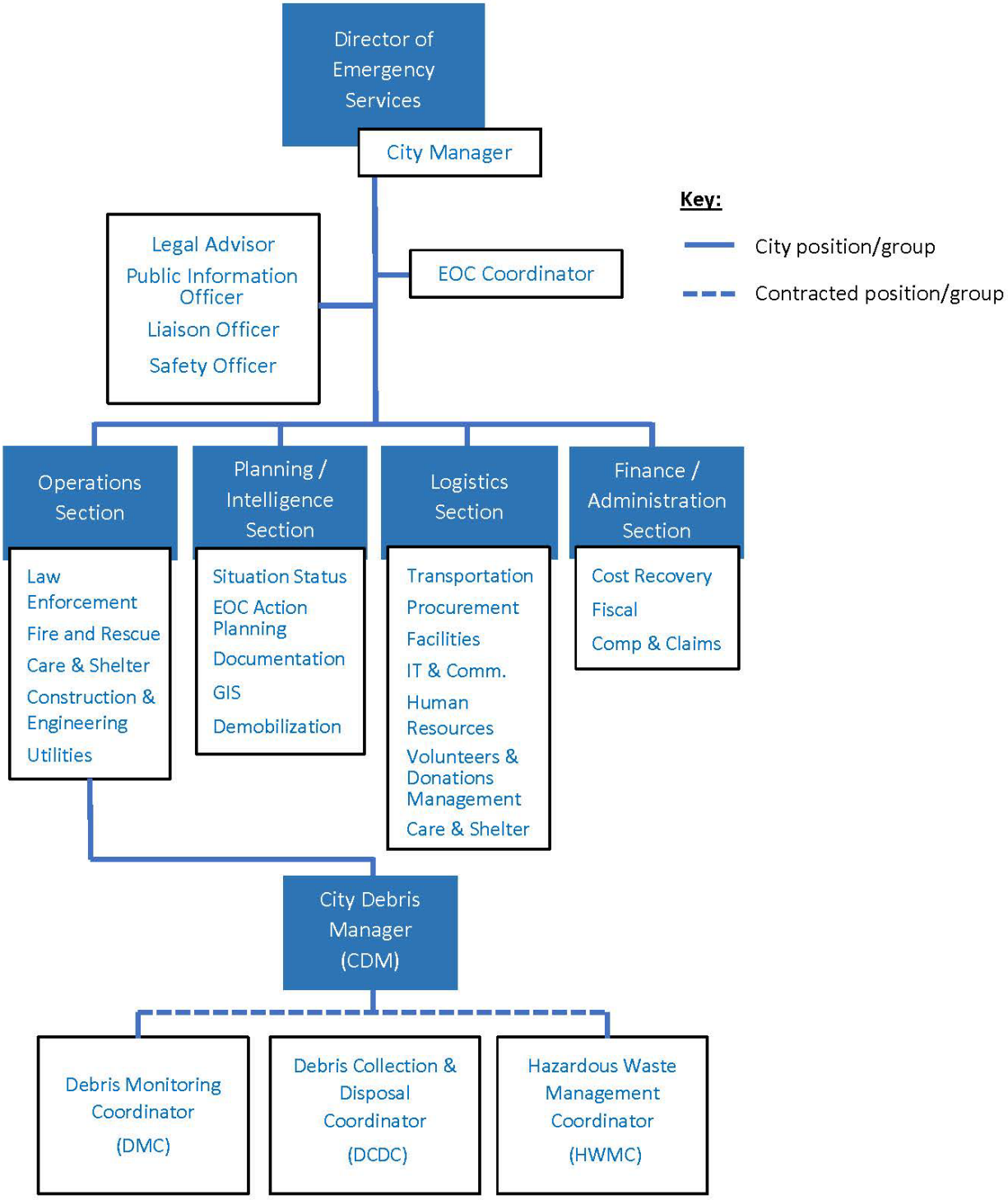
- Debris Monitoring Coordinator (DMC); and
- Hazardous Waste Management Coordinator (HWMC).

The City will use a private disaster-debris-clearance and -removal service contractor (all contracting will be conducted in compliance with Title 2 of the Code of Federal Regulations/CFR 200.317-200.326).

1.1C City Debris Management Team

The EOC organizational diagram shown in **Figure 1.1 – City of Emeryville Debris Management Team** provides a visual representation of the organizational structure of the debris-management team that will be needed by the City in the event of a federally-declared disaster. It identifies the staff positions expected to be required to coordinate the actions necessary to remove and dispose of debris using both City and Contractor assets. The EOC staff will be under the direction of the Director of Emergency Services.

Figure 1.1 – City of Emeryville Debris Management Team



1.2 Roles and Responsibilities of the Debris Management Team

Table 1.1 – Table of Responsibilities – provides an overview of the EOC City staff, state agency, and/or private contractor primary job duties and responsibilities, which may or may not be presented in the order that tasks will be executed at the time of a local emergency.

Table 1.1 – Table of Responsibilities	
EOC Branch / Role	**Local Debris Management Responsibilities**
City Council	• Authorize contracts with private companies for services pertaining to the DCDC, DMC, and HWMC positions and/or certified haulers during emergency declaration.
City Manager/ EOC Director	• Convene Emergency Management Organization leadership to consider the impending disaster • Proclaim a Local Emergency, as required; • Transition to state of heightened preparedness; • Designate a CDM; and • Update City Council on disaster debris operations. • Establish EOC location and staff at appropriate level based on initial determination of the level of emergency; • Provide leadership in the EOC; • Hold initial briefing with EOC staff.
Public Works	• Examine hazard level/impact and gather information; • Deploy appropriate field responders; • Initiate appropriate field response to implement initial priorities; and • Monitor response activities and respond accordingly until conditions return to normal.
Police and Fire	• Establish and maintain Incident Command at the appropriate locations; • Activate the EOP, as directed; • Set up the EOC; • Facilitate Incident Command procedures from the field to the EOC; • Conduct Urban Search and Rescue; • Oversee medical coordination with county; • Ensure public safety and response by available resources; • Activate the EOP, as directed; and • Establish and maintain Incident Command at the appropriate locations.
City Attorney	• Provide review of local proclamations of emergency, curfew, or other orders, and modifications to ordinances, as needed.
Liaison Officer	• Coordinate contact with outside agencies; and • Support the Public Information Officer and manage visits with dignitaries.

Table 1.1 – Table of Responsibilities	
EOC Branch / Role	**Local Debris Management Responsibilities**
Public Information Officer	• Develop press releases for the public regarding the debris removal process; • Prepare information related to the following: ✓ Proper debris set-out procedures; ✓ Governor's Proclamation; ✓ Progress of debris removal process; ✓ Explanation of FEMA disaster declarations; ✓ Deadlines for debris set-out and removal; ✓ Special and Hazardous Waste Collection sites; and • Locations of residential neighborhood debris drop-off sites.
EOC Coordinator / Safety Officer	• Monitor and track impact of the emergency on employees; • Provide employee services for physical injuries or emotional impacts; and • Provide for any coordination of Workers Compensation.
Finance	• Manage financial recovery activities in the event of a federally declared emergency as defined by the Stafford Act; • Track costs associated with obtaining supplies and equipment to respond to the emergency; and • Document purchasing contracts to support the operations according to the Federal Emergency Management Agency requirements; and • Assist in the compilation of filing for reimbursement claims.
City Debris Manager (CDM)	• Coordinate repair to affected utilities; • Coordinate drainage programs as needed; • Coordinate debris clearance; • Maintain City maintenance programs as required; • Report impact on City facilities and parks; • Provide for the coordination of any and all safety assessments, track damage information, and request aid, as needed, from outside inspectors; • Prepare and manage incoming safety inspectors and track the impact of the emergency to City facilities and private residences; • Coordinate emergency information regarding building safety; • Manage documentation about the impact of the emergency response actions to deal with conditions and identify resource needs; and • Develop Action Plans for effective and coordinated response.
Care & Shelter Unit in Logistics Section	• Assume care and shelter responsibilities for patrons and residents; and • Identify additional support needs of City residents during response.

Table 1.1 – Table of Responsibilities	
EOC Branch / Role	**Local Debris Management Responsibilities**
Planning & Intelligence Section	• Initiate short- and long-term recovery activities; • Identify housing and business development impact; and • Develop action plans to assist in economic recovery in the community.

One of the primary functions of this Plan is to clearly delineate a basic organizational structure and assign specific responsibilities. The responsibilities are sufficiently defined here so that if unexpected issues arise during the conduct of debris-management operations, they can be assigned and resolved efficiently.

1.2A City Debris Manager (CDM)

The CDM will be ultimately responsible for managing removal and recycling and/or disposal of all debris deposited along or immediately adjacent to public ROWs throughout the City. The CDM will provide overall supervision of debris management staff made up of personnel from the City's PWD and, possibly, from other City agencies and departments and contracted private companies.

The CDM's responsibilities include the following with respect to all debris management activities:

- Appoint staff and approve all alternate designees, including contracted private companies, depending on personnel realities;
- Serve as the liaison between the DCDC, DMC, HWMC and the City, in the event that these are contracted positions;
- Convene meetings;
- Ensure that the EOC is provided all needed administrative staff support;
- Determine necessity of, and instruct, if necessary, external collection contracts to be executed;
- Determine necessity of, and activate if necessary, TDMS;
- Activate existing or new temporary HHW facilities for the reception of HHW by self-haulers;
- Provide inter-departmental debris collection updates to the Public Information Officer (PIO); and
- Activate HHW collection, prioritized by area, in consultation with Cal OES and CalRecycle

1.2B Debris Collection and Disposal Coordinator (DCDC)

The DCDC will be the point of contact responsible for routine disaster debris removal operations on a daily basis and will identify debris collection issues between the City and other local government, state, or federal agencies, and collection contractors.

The DCDC will act as the "eyes and ears" for the CDM to ensure that all contract requirements, including safety, are properly implemented and enforced. The City will identify pre-qualified private waste hauling companies for disaster debris clearance and removal through a procurement process and therefore the responsibilities listed below will most likely be performed by the hired contractor.

The DCDC's responsibilities include the following with respect to all debris-management activities for the City:

- Coordinate, oversee, and provide disposal, transfer, and processing and/or temporary storage of disaster debris limited to City streets, roads, and other ROWs, all City municipal properties, other municipality facilities, and TDMS, as directed;
- Determine the method and manner of all debris removal, processing, and lawful disposal operations, consistent with applicable regulations and the scope of work;
- Construct and maintain a monitoring station tower with a complete view of the load bed of each piece of equipment being utilized to haul debris;
- Provide each site with chairs, tables, and portable sanitary facilities;
- Prepare daily reports to the City to detail the progress of the debris removal services;
- Provide a detailed description and operational specifications of all equipment to be used for debris handling, sorting, processing, loading, and hauling;
- Communicate timely information to the CDM and EOC staff, as necessary, regarding the status of the debris removal;
- Inform CDM and the HWMC of anticipated degree of debris generation, utilizing some method of debris generation projection described in SECTION 2 of the Plan;
- Inform CDM of progress implementing collection;
- Inform CDM when operational capacity will not be capable of handling projected debris;
- Inform CDM when TDMS will be necessary;
- Inform CDM when collections operation is ready to conduct HHW collection either through the departmental staff or contractors;
- Provide information regarding collection operations to the PIO;
- Identify and establish additional TDMS, if needed;
- Communicate timely information to the CDM, as necessary, regarding the status of TDMS;
- Provide management, supervision, labor, machines, tools, and equipment necessary to accept, process, and transport disaster-related debris;
- Ensure all equipment and operator qualifications meet federal, state, and local regulatory requirements. The Contractor, using applicable forms, will inspect equipment prior to its use. The completed forms will be provided to the County, if requested;

- Ensure worker safety, including for subcontractors and suppliers, in accordance with all federal, state, and local laws and regulations;
- Coordinate traffic control, dust control, erosion control, fire protection, on-site roadway maintenance, and safety measures at the TDMS;
- Direct all loading and unloading operations at the TDMS and direct traffic entering and leaving the TDMS;
- Obtain the necessary permits to perform all TDMS activities;
- Use only TDMS designated by the County and/ or participating cities;
- Operate the TDMS and allow only Contractor and others specifically authorized by the City to use the sites;
- Stockpile and segregate the debris into various categories;
- Pay any tipping fees or other costs associated with disposal of collected materials;
- Remove all debris from TDMS daily;
- Clear the TDMS of all debris and restore the TDMS to their original condition and to the satisfaction of the Local Enforcement Agency (LEA) upon completion of work under this agreement;
- Ensure that operations are being followed as specified in the applicable Debris Removal and Disposal Contract with respect to local, state, and federal regulations;
- Complete the Stockpiled Debris Field Survey Form (**Attachment 16 – Stockpiled Debris Field Survey Form**) at least weekly at all TDMS to determine estimated quantities of stockpiled debris; and
- Prepare and submit a daily written report to the CDM of all observed contractor activities, to include photographs and the aforementioned checklists.

1.2C Debris Monitoring Coordinator (DMC)

The purpose of the City's Contracted Debris Monitoring Coordinator (DMC) is to ensure timely and coordinated monitoring of operations that support incident objectives as defined in this Plan. All monitoring will follow guidance outlined in FEMA 327 Public Assistance Debris Monitoring Guide and **Attachment 19 – FEMA Debris Monitoring Checklist**. Services may be delivered using a combination of the City's and private contractors' workforces. Specified monitoring requirements outlined by FEMA must be followed to ensure maximum FEMA reimbursement.

The DMC will provide the following services related to debris management activities, which are reinforced in **Attachment 19 – FEMA Debris Monitoring Checklist:**

- Assist in the monitoring of disaster debris collection and disposal operations, ensuring compliance with federal requirements and the City's Plan as related to contractor oversight, truck measurement, load ticket preparation and issuing, report preparation, and project administration;

- Provide all management, supervision, labor, transportation, and equipment necessary to initiate load tickets at debris loading sites, estimate the volume of debris being delivered by trucks to each disposal site, and support the operations of the field supervisor(s), debris loading and elevated platform monitors, and clerical staff;
- Assign a field supervisor to provide oversight of loading site and elevated platform monitors;
- Provide personnel to monitor debris loading and management sites/disposal sites located in Alameda County;
- Complete a Debris Loading Site Monitoring Checklist (**Attachment 14 – Debris Loading Site Monitoring Checklist**) for every site visited;
- Complete a Debris Disposal Site Monitoring Checklist (**Attachment 15 – Debris Disposal Site Monitoring Checklist**) for every TDMS visited;
- Monitor TDMS operations and report back to the CDM; and
- Report observations at loading sites, disposal sites, and the locations of any illegal dumping sites, including layout and environmental considerations.

1.2D Hazardous Waste Management Coordinator (HWMC)

The HWMC will assist in connection with the discharge of hazardous substances that may include the following responsibilities:

- Collaborate with the EOC and the Alameda County Environmental Health Department, the California Department of Toxic Substances Control, Cal OES and the U.S. Department of Fish & Game (USFG) for managing hazardous materials during the disaster;
- Assist/manage with containment, recovery, repackaging, and removal of materials;
- Conduct site evaluation, decontamination, and restoration;
- Oversee transportation, storage, treatment, or disposal of wastes;
- Conduct technical services, including sampling, laboratory analysis, and other related services;
- Organize/supervise standby of personnel and equipment in anticipation of imminent activation; and
- Conduct training and mock spill drill deployments.

1.3 Health and Safety Plan and Procedures

During disaster debris management operations, the EOC staff will follow departmental safety procedures developed in the EOP. Additionally, the EOC staff will receive and follow any disaster-specific health and safety procedure as directed by the EOC, County Department of Environmental Health and Health and Human Services, and other City Agencies and staff involved

with disaster debris management. Based on the disaster situation, the EOC staff may also receive, and subsequently follow, procedures as defined by the relevant local, state, or federal agencies.

Health and safety are also primary responsibilities of the contracted parties involved in debris removal activities.

1.4 EOC Communication During Disaster Event

EOC staff, under most emergency/disaster situations, will primarily communicate by land telephone lines, cellular telephones, radios, and electronic mail. EOC staff will also be responsible for EOC set-up, which will include fixed telephones, cellular phones (with extra batteries), two-way radios, internet, and a fax machine.

1.5 Training Schedule

The CDM and select EOC staff will attend disaster management training provided by Cal OES and/or FEMA, when available. The CDM will distribute the Plan, including the staff responsibility checklist (**Table 1.1 – Table of Responsibilities**) to the staff associated with the debris management process. Additionally, the City will plan a periodic disaster debris management training workshop for the relevant EOC staff. The City-identified debris management staff may attend this training. The CDM or a designee will be responsible for coordinating the training workshop, which will likely be a tabletop debris management exercise. The purpose of the training workshop is to review the Plan procedures and ensure that the disaster debris recovery operation follows the necessary procedures and requirements as intended.

The training should ideally take place annually, before fire season, and may include the following:

- Contract hauler procurement strategies and process;
- Roles of the debris management team;
- Damage assessment for debris;
- TDMS selection, procurement, permitting, and management;
- Mobilization, operation, and closure of the TDMS;
- Contract districts/zones, routing, and load ticket tracking;
- Hazardous material/waste management procedures;
- Communication procedure and equipment needs;
- Debris management equipment needs assessment;
- Private property debris removal process;
- External agency liaison;
- Health and safety conditions and requirements;

- Environmental and historical preservation;
- Review of truck requirements and certification issues;
- Process for opening and operating one or more TDMS;
- Review of debris collection zones, sites, and flow patterns, including haul routes;
- Load ticket completion in the field; and
- Load ticket data entry and invoice reconciliation.

As they are available and beneficial to the City, staff will take advantage of online learning opportunities offered by organizations such as the Solid Waste Association of North America (SWANA), Cal OES, CDAA, and FEMA's Emergency Management Institute (EMI).

Training options provided by FEMA's EMI include the following:

- **FEMA E202: Debris Management Planning for State, Tribal, and Local Officials.** This is a 4-day in-person class providing an overview and recommended actions for a major debris-generating event.
- **FEMA IS-634: Introduction to FEMA's Public Assistance Program.** This is a 4-hour online course to familiarize participants with the Public Assistance Program, the process applicants follow, and the documentation needed to receive grant-funding assistance after a disaster.
- **FEMA IS–632.A: Introduction to Debris Operations.** This is a 2-hour online course to familiarize participants with general debris-removal operations and identify critical debris-operations issues. The course will help participants understand the types of debris generated in disasters, strategies and procedures for removal, and special issues.

Information on these courses can be found at: https://training.fema.gov/is/crslist.aspx?all=true

1.6 References

1.6A Local

- City of Emeryville Emergency Operations Plan, 2014
- City of Emeryville Local Hazard Mitigation Plan, 2019

1.6B State

- California Office of Emergency Services (Cal OES) Disaster Debris Management Training Manual, July 2014
- California Environmental Protection Agency (Cal-EPA) Guidance for Conducting Emergency Debris, Waste, and Hazardous Material Removal Actions Pursuant to a State and Local Emergency Proclamation

1.6C Federal

- FEMA Debris Management Plan Template, April 2014
- FEMA Public Assistance Alternative Procedures Pilot Program Guide for Debris Removal (version 6.1), June 28, 2018
- FEMA Publication FP 104-009-2, Public Assistance Program and Policy Guide, 2018
- FEMA 329 Debris Estimating Field Guide, September 2010

SECTION 2: SITUATION AND ASSUMPTIONS

SECTION 2: SITUATION AND ASSUMPTIONS

2.1 Introduction

Information on potential debris-generating disasters in the City provided in this Plan has been largely excerpted from the City's Local Hazard Mitigation Plan, which goes into greater detail than is provided here on potential natural and man-made debris-generating disasters. The newest version of the City's Local Hazard Mitigation Plan should be referenced for the most accurate list of debris-generating disasters. As explained in the Executive Summary, this Plan is limited in focus on helping the City plan for and mitigate the effects of debris generated by natural disasters, but the debris generated by man-made disasters would be addressed in the same manner as laid out in this Plan.

Each year, natural disasters, such as wildfires, floods, earthquakes, hurricanes, tornadoes, and winter storms, challenge American communities. Natural disasters generate large amounts of debris, causing considerable challenges for public officials. Debris is the waste stream resulting from a natural disaster and often includes building materials, sediment, vegetative debris, personal property, and other materials. Cleaning up this debris can be time-consuming and costly.

After a disaster occurs, communities are faced with the dilemma of how to use their existing capacity for recycling, composting, and disposing of natural disaster debris.

Alameda County is subject to 6 major natural debris-generating disasters that could have a significant impact on the City:

1. Flooding
2. Earthquake
3. Wildfire and Urban Fire
4. Landslide
5. Dam failure
6. Drought

2.2 Situation

Disasters can create a variety of debris including fallen trees, sand, gravel, building construction material, vehicles, personal property, and hazardous materials. The quantity and type of debris generated from any particular disaster will be a function of the location and kind of event, as well as its magnitude, duration, and intensity.

The quantity and type of debris generated, its location, and the size of the area over which it is dispersed will have a direct impact on the type of collection and disposal methods utilized to address the debris problem, associated incurred costs, and how quickly the problem can be addressed. In a major or catastrophic disaster, many state agencies and jurisdictions may have difficulty locating staff, equipment, and funds to devote to debris removal.

Once the debris area is defined, it is important to be consistent with FEMA's requirements and keep detailed notes on how, where, and which method will be used for estimating the expected amount of generated disaster debris. These notes must be well documented and maintained for future reference. For federally-declared disasters, the information must be documented in a manner consistent with the City EOP and the requirements outlined by FEMA **(Attachment 19 – FEMA Debris Monitoring Checklist).**

2.3 Assumptions

The following sections (2.3A – 2.3G) on local hazards are excerpted from the City's Local Hazard Mitigation Plan, in which natural hazards were identified and evaluated:

- Flood Assumptions
- Severe Weather Assumptions
- Earthquake Assumptions
- Wildfire and Urban Fire Assumptions
- Landslide Assumptions
- Dam Failure Assumptions
- Drought Assumptions

2.3A Flood Assumptions

A flood is defined as an overflowing of water that submerges an area of land that is normally dry. Flooding occurs when streams, rivers, lakes, reservoirs, or coastal water bodies are abnormally high and overflow into adjacent low-lying areas. Areas at risk of recurring floods are known as floodplains. Floods can result from natural causes, such as storms, and man-made causes, such as dam or large diameter water main failures.

High waters destroy structures and personal property, uproot trees, and displace sand, soil, and sediment. Floods can also destroy roads, which can isolate communities and impact a community's ability to clean up debris. When flood waters recede, people dispose of flood-damaged household items. Mud, sediment, sandbags, and other reinforcing materials also add to the volume of debris needing management, as do Construction & Demolition (C&D) materials and mixed metals from demolished and dismantled structures and automobiles.

Emeryville lies in the Central Basin within the San Francisco Bay watershed. Although the topography of the City is generally flat, its elevations range from 0 to 60 feet above mean sea level, sloping down slightly to San Francisco Bay. San Francisco Bay is the most prominent surface water body that receives surface water runoff from the City and groundwater discharge from the East Bay Plain. The southern portion of the Bay Shoreline in the City includes a salt marsh.

The other surface water feature in the City is Temescal Creek, which flows west from the East Bay Hills through the City, passes under Interstate 80, and discharges into San Francisco Bay in

the Emeryville Crescent. The creek, a main drainage outfall, is a channelized creek, whose flows are regulated by the Lake Temescal Reservoir (located in Oakland).

The latest FEMA map of the City's flood risk potential is from December 2007 and went into effect on August 3, 2009. The majority of the City is outside the 500-year flood zone. Zone V, the Coastal High Hazard Area, only includes City coastal and tideland areas, which lie within the 100-year flood zone; however, these areas do not contain urban uses or structures. Flooding in the City could occur as a result of a storm, inundations from a tsunami, and dam failure.

Due to the geographic location of the City, there are currently no identifiable residential, commercial, or institutional properties that have experienced repetitive losses related to flooding within any 10-year period since 1987. Estimated risk for flooding in the City is one percent in the 100-year floodplain (once every 100 years) and 0.2 percent in the 500-year floodplain. The City participates in the National Flood Insurance Program (NFIP) but, as highlighted in the FEMA Flood Hazard Map (**Attachment 2 – FEMA Flood Zone Maps**), the City's zoning does not require property owners to purchase flood insurance. The majority of Emeryville is designated as Zone X, which means most areas of the City are outside the 500-year flood zone.

The City enforces FEMA and NFIP regulations through the Emeryville Municipal Code Title 8, Chapter §8-21 Floodplain Management. Only Zone V is considered a Special Flood Hazard Area (100-year flood zone). Although Zone V covers the coastal waters and tideland areas, the City's Floodplain Management Ordinance requires a development permit be obtained before any construction or other development can occur in this area. Furthermore, any construction or development in this area must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Only a small portion of the City is in Zone V, the Costal High Hazard Area. However, these areas do not contain urban uses or structures.

Seasonal Flooding

Floods often occur from natural causes, usually weather-related, often in conjunction with a wet or rainy winter or with sudden and very heavy rainfalls. Homes, businesses, roads, and other infrastructure can all sustain damage as the result of seasonal flooding. Coastal flooding is generally associated with Pacific Ocean storms from November through February when high tides coincide with strong winds both on the outer coast and within the Bay. Impacts from seasonal flooding can include water intrusion into homes and businesses and inundated, impassible, damaged streets. This damage can cause a detrimental economic impact on residents, businesses, and the City.

Emeryville has a number of sites that have been susceptible to floods, such as the areas east of the Southern Pacific railroad tracks, including the Hollis Street business areas and the Federal Post Office property. Low-lying areas affected by tidal and high winds have been and are susceptible to damage and flooding in the west peninsula shoreline area. Prior to 1963, periodic flooding and erosion occurred along Temescal Creek, resulting in extensive property damage. Following that period, the creek's floodplain was incorporated into Alameda County Flood Zone

12. Most of the creek's length was converted into an underground culvert, and a deeper and wider concrete channel was constructed to contain the 100-year flood level.

On February 25, 2004, the City experienced severe flooding from a winter storm that generated a rain event with an intensity of at least a 25-year storm, combined with high tide. Emeryville's Drainage Basin 27 had streets flooded to depths of greater than two feet. The streets impacted were LaCoste Street, 62nd Street (where the Emeryville Post Office was located), Overland Drive, and 64th Street. Cars parked along those streets were damaged by the flood waters, but no businesses suffered water intrusion. Access to businesses located on these streets was impeded for several days until the waters receded.

On January 20, 2010, the City again experienced flooding conditions on the above-referenced streets, although not as severely as in 2004. As with the earlier flood, no businesses suffered water intrusion, but access to these businesses was severely limited due to the flooded streets.

2010 flooding along 62nd Street, Emeryville, looking west

Previous flooding on 61st Street, Emeryville

To mitigate potential future flooding on the above-mentioned streets , the Alameda County Flood Control District, working with the City, designed an underground flood control bypass system that added connections to the existing drainage system to pipe storm water off the streets and into San Francisco Bay. The project was completed in November 2010 at a cost of $8.5 million; this area has not suffered any flooding since its completion.

NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. For most communities participating in the flood insurance program, FEMA has prepared a detailed Flood Insurance Study (FIS) that estimates water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood (the 100-year flood) and the 0.2-percent annual chance flood (the 500-year flood). Base flood elevations and the boundaries of the 100- and 500-year floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tools for identifying the extent and location of flood hazards.

Specific areas of the City have been designated by FEMA as 100-year flood hazard areas, which signifies that there is a one-percent chance of flooding in these areas in any given year. (See **Attachment 2 – FEMA Flood Zone Maps**.)

A serious local flood will primarily affect the City's transportation networks, potentially limiting access to the local highway and railways. This could compromise the ability to move disaster

debris outside the City by truck until the flooding is resolved. Emergency assets in the City are located outside the floodplain.

The damp conditions associated with flood aftermath can contribute to the growth of mold. Mold is considered to be a hazard; precautions regarding the removal and disposal of it and all affected materials need to be considered. Debris left in ROWs can encourage mold spores to become airborne, which can cause severe respiratory problems for the public and the debris collection crew.

2.3B Severe Weather Assumptions

Climate can influence the occurrence of natural disasters. Emeryville has a mild climate. On average it enjoys an annual temperature of 59 degrees Fahrenheit, less than one day per year over 90 degrees (this number could climb after mid-century), and rarely freezing temperatures. Additionally, the City experiences an average annual rainfall of 22 inches.

Among the states in the U.S., California ranks low for frequency and severity of tornadoes, and has no associated reported deaths. Tsunamis pose a low risk to the City of Emeryville, due to the rarity of the occurrence, but such an event could cause significant disaster debris. Tsunami inundation maps can be found in **Attachment 5 – Tsunami Inundation Maps.**[4]

During February and March of 2023, Emeryville experienced damage from severe winter storms that ravaged the Bay Area with winds over 80mph. The Emeryville Marina lost nearly 80 trees from these storms and the event generated a large amount of wood debris. Severe weather events like these can be expected to continue and potentially worsen over time due to climate change.

2.3C Earthquake Assumptions

In Emeryville, earthquakes are the hazard with the highest combined likelihood to cause extensive damage to the City and the entire surrounding region. The City is located in the seismically active San Francisco Bay Area, which lies within the San Andreas fault system – the largest in California and the one with potential for the strongest earthquakes.

The San Francisco Bay area has experienced earthquakes over a magnitude of 6.0 once every seven years over the last 160 years. There have been six earthquake-related disasters in the Bay Area since 1950. In a report published in 2015, the U.S. Geological Survey estimated that there was a 72 percent probability that a magnitude 6.7 or greater earthquake will occur in the Bay Area between 2015 and 2045.

The majority of major active faults in Alameda County are strike-slip faults. The City is in close proximity to these major faults: The San Andreas (approximately 15 miles); the Hayward (approximately 3 miles); the Calaveras Fault (approximately 19 miles); and the Concord-Green Vallejo. A map of the City's fault lines can be found in **Attachment 3 – USGS Bay Area Faults and Hazard Map**.

[4] https://www.conservation.ca.gov/cgs/tsunami/maps/alameda

The entire City is subject to hazardous ground shaking in a major earthquake. Earthquakes have the potential for widespread damage, are associated with other hazards such as liquefaction and fires, and have the potential to generate large amounts of disaster debris. The City's Local Hazard Mitigation Plan includes an estimate of the likelihood of earthquake-induced threats to the City.

In the event of an earthquake, the location of the epicenter as well as the time of day and season of the year can have a profound effect on the number of deaths and casualties, the amount of property damage, and the level of disruption of normal government and community services and activities. The effects can be compounded by collateral emergencies such as fires, dam failure, flooding, tsunami, hazardous material spills, utility disruptions, bridge collapses, structural collapses, street blockage by debris, street surface breakage due to liquefaction, landslides, and transportation emergencies.

With an earthquake, there is no containment of potential damage, as is possible with a brushfire or flood. Earthquakes generate shock waves and displace the ground along fault lines. These seismic forces can cause buildings to collapse or be displaced in a localized area and can also cause regional damage to buildings and other structures. Additionally, earthquakes can cause unsecured materials to fall, generating broken glass and other debris, including hazardous materials spills. Post-seismic slips can occur up to a year after the initial shaking and can cause continued damage to buildings.

Earthquake debris includes building materials, personal property, and sediment from mudslides. Post-earthquake debris composition evolves with time. If the material is from damaged structures, it is likely to contain personal belongings, valuables, and mementos. For damaged structures that are still habitable, residents and businesses will usually begin soon after the main shock to clean up broken glass, ceramics, and spilled foods. Secondary damage from fires, liquefaction, explosions, landslides, and localized flooding from broken water pipes can increase the amount of debris.

Immediately after an earthquake, it will be necessary to gain situational awareness, which is achieved by passing standard Incident Command System (ICS) forms along the Standard Emergency Safety Management Systems (SEMS) levels. Situational awareness for debris management includes determining the utility of and accessibility to the State highway system, priority routes that are linked to critical facilities, areas with hazardous material spills, areas of large amounts of debris and/or earthen debris caused by landslides, and the names and/or locations of infrastructure, critical facilities, and large buildings that have partially or totally collapsed. As situational awareness is gained, priorities for the clearance of debris will be established. Because life-safety efforts take priority in a response effort, the City will first address efforts for fire response and search and rescue missions, then incorporate their capabilities to assess and repair immediate essential services to the City. Secondary priorities, such as area damage and restoration activities, will then be addressed as resources become available or will be covered simultaneously if staffing allows.

The City is at risk for earthquake events that may be catastrophic. Debris-related threats and hazards from earthquakes include:

- Structural and non-structural damage to buildings;

- Damage to critical infrastructure, including damage to roadways, water and power systems, transit lines, storm drains, potable waterlines, sanitary sewer collection systems, and telecommunications infrastructure;
- Widespread ignition of fires;
- Tsunamis;
- Flooding;
- Hazardous materials spills and incidents;
- Landslides;
- Wildfires;
- Liquefaction;
- Ground shaking;
- Natural gas pipeline failure;
- Civil disorder;
- Damage to transportation systems;
- Extensive and completely damaged structures; and
- Widespread generation of debris.

Ground shaking is both a hazard created by earthquakes and the trigger for other hazards, such as liquefaction and landslides. Most earthquake damage results from the shaking caused by seismic waves passing beneath buildings, roads, and other structures. The intensity of ground shaking is based on the magnitude of the earthquake and other factors, including the distance to the fault, the direction of the rupture, and the type of soil (landfill vs. bedrock). These are the risks to the City of Emeryville from hazards triggered by earthquakes:

- **Earthquake faulting** – No active faults run within the City, so rupture of a fault is not a direct concern at this time;
- **Earthquake shaking** – The entire city of Emeryville is located in the highest two categories for ground-shaking potential, which includes: 4 schools; 2 Fire Stations; the Police Station; City Hall; the Senior Center; two senior housing facilities; ten high-rise buildings (office building, apartment condo complexes, and five hotels); and the 40th Street and Amtrak Pedestrian Bridges;
- **Earthquake-induced landslides** – The California Geological Survey has not completed mapping of this hazard in the City. However, this is unlikely to be an issue because no City roads are in existing landslide areas and the City is relatively flat, so it is not susceptible to earthquake-triggered landslides;
- **Earthquake liquefaction** – The entire City lies within a liquefaction hazard zone. The peninsula has a very high susceptibility to liquefaction, while the areas around the rail line and to the east have a moderate to low risk of liquefaction. Liquefaction is a

potential failure mode of dams that are loaded at the time of an earthquake. A dam's susceptibility to liquefaction is determined by how frequently it is loaded.

Areas of liquefaction are more vulnerable to fire because of the greater potential for underground gas mains to break, due to ground displacements and damaged water lines. Fires following earthquakes present a significant problem in dense urban environments like the City, where many simultaneous ignitions can lead to a firestorm. In these cases, fire damage is even more severe than damage from earthquake shaking.

The following buildings and infrastructure (City-owned and private) are located in moderate, high, or very high liquefaction-susceptibility areas:

- 200 acres are in areas of moderate, high, or very high liquefaction susceptibility;
- Three miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility;
- Six miles of roadway are in the highest two categories of shaking potential;
- Some City-owned facilities are located in moderate, high, or very high liquefaction susceptibility (e.g., Fire Station 34, the City's only Police Station, Hong Kong East Ocean Restaurant);
- 3,500 residential units;
- 10 major high-rise and hotel buildings;
- Major interstate freeway system (I-80);
- Sanitary sewer lifting station;
- Lake Temescal Dam, located approximately 3.5 miles upstream of the City, may be susceptible to liquefaction;
- Potential for explosions and release of toxic smoke due to hazardous materials stored at industrial facilities and labs located in the City. A number of biotech companies are located in Emeryville.

2.3D Wildfire and Urban Fire Assumptions

A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger and destruction to property and lives. Wildfires can occur in undeveloped areas and spread to urban areas where structures and other human development are more concentrated. While some wildfires start by natural causes (lightning), humans cause four out of every five wildfires, which are usually the result of debris burns, arson, or carelessness. Wildfire hazard is a relatively low risk to the City of Emeryville.

Wildfires pose the greatest risk in early spring and through late fall every year during the hotter, dryer months.

Prior to the North Bay Fires in October 2017, the Oakland-Berkeley Fire of 1991 was the most destructive wildfire in state history, resulting in 25 lost lives, 150 injuries, destruction of 3,354 single-family homes and 456 apartments, and $9 billion in economic losses (in 2015 dollars).

Fortunately, the conditions in the City are not conducive to such a large wildfire. There is, however, a section of the Shoreline Park on the peninsula that has brush and vegetation. This section is located near the I-80/580 corridor and the MacArthur Maze, a major artery in the area's transportation system. An average of 270,000 vehicles transit this portion of freeways every day. Any ignition of this area could reduce visibility along portions of this very dense transportation corridor and cause a serious smoke threat to the cars and trucks on the road.

There is also potential for wildland-urban interface fires – wildfires that occur in undeveloped areas and spread to urban areas. Nearby areas of the Berkeley and Oakland Hills have been designated by Cal Fire as very high fire hazard severity zones. If such a fire were to occur, it would have the potential to spread to Emeryville.

The year 2020 was the largestwildfire season recorded in California's modern history with nearly 10,000 fires burning over 4.2 million acres of land..[5] As climate change contributes to changed rainfall patterns, lengthier drought seasons, and increased heat, Emeryville's wildfire risks may increase.

Smoke and air contaminants from nearby wildfires can be a health hazard, especially for vulnerable populations. Recent wildfires in Butte, Napa, and Sonoma counties have led to air quality warnings from the Bay Area Air Quality Management District (BAAQMD).

Urban conflagration, or a large disastrous fire in an urban area, is a major hazard that can occur due to a number of causes: wildfires; earthquakes; gas leaks; chemical explosions; or arson. The urban fire conflagration that followed the 1906 San Francisco earthquake did more damage than the earthquake itself. It is unlikely that the City will experience an urban conflagration – thanks to the improvements in community design, construction materials, and fire protection systems. There is, however, a potential threat of urban conflagration to the Emeryville community because of the current trend towards increased urban density and infill.

2.3E Landslide Assumptions

No roads in Emeryville are in existing landslide areas and since the City is relatively flat, it is not susceptible to earthquake-triggered landslides.

2.3F Dam Failure

A dam failure is usually caused by neglect, poor design, or structural damage from a natural hazard event. FEMA has outlined potential reasons for dam failures, which include: overtopping caused by floods that exceed the capacity of the dam; deliberate acts of sabotage to the dam; structural failure of materials used in dam construction; movement and/or failure of the foundation supporting the dam; settlement and cracking of concrete in the dam; piping and internal erosion of soil in the dam; and inadequate maintenance and upkeep of the dam.

[5] http://cdfdata.fire.ca.gov/incidents/incidents_stats?year=2018

According to the Safety Element in the City's General Plan, the closest dam to the City is at Lake Temescal, which is located 3.5 miles east of the City limits. Lake Temescal Dam is managed by the East Bay Regional Parks Department and is overseen by the California Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD supervises dam maintenance, which includes conducting regular inspections and seismic analysis of existing dams to ensure their integrity. The likelihood of a flood hazard is dependent upon the occurrence of a major earthquake and the ability of the dam to withstand seismic activity.

Lake Temescal Dam was last inspected by the DSOD in May 2011. At that time, it presented no issues necessitating corrective action and was "judged satisfactory for continued operation." If the dam were to fail, it is estimated that it would cause overflowing of Temescal Creek and inundation of nearly 1,000 feet of land area on either side of the creek within 15 minutes. The water could reach the rest of the City, west toward the Bay and north approximately to Powell Street, within 25 minutes.

2.3G Drought Assumptions

A prolonged drought in the City could have economic, environmental, and social impacts for the City. Such an event might require water companies to spend more money on new or additional water supplies, resulting in increased customer rates. Drought could cause lower water levels in the waterways in and around the City, which could increase the risk of wildfires and cause loss of wetlands. Drought could create a threat to public safety in the form of health problems related to dust, lower water flows, and poor water quality. There also could be damage to landscaping and City trees, as well as an increased urban fire hazard. At a drought crisis level the City, along with the entire Bay Area, would be severely impacted, which could result in water rationing.

2.4 Estimating the Type and Amount of Debris Generated in the City

In the event of a disaster, the DCDC will most likely be responsible for estimating the amount of debris generated. If the DCDC position is not contracted, the CDM must initiate the process of estimating the amount of debris generated in order to set up the necessary collection and removal resources.

To estimate the amount of debris generated as a result of a disaster, the CDM will assign personnel or a contractor to determine that figure using a combination of computer-based modeling and field investigation. Below are the major tasks that must be conducted in order to estimate the amount of debris generated by the event:

- **Visual Field Survey**: This task will likely be conducted by persons designated by the CDM. This will involve documenting the geographic areas that are impacted by the disaster. The goal is to develop maps and notes that record the extent of the disaster. Two techniques can be utilized separately or together:
    - ✓ On-the-ground field crews can conduct drive-by windshield surveys. The best approach is to utilize a GPS receiver to record locations where damage begins and ends. Hand-drawn sketches on hardcopy maps can also be utilized.

- ✓ Aerial assessment by flying over the impacted area with assistance from State Police, National Guard, and/or Civil Air Patrol. For further documentation, the air crews can take photographs and provide them to GIS staff.

- **Calculation of Debris:** A task likely conducted by the EOC staff, this will involve converting the physical assets to an estimation of volume and weight by debris type. For each type of debris, a plan will be developed estimating how it will be disposed and how much capacity each accepting location can take. These estimates will be provided to the CDM for further consideration in the collection and removal activities. The City will also meet with the County of Alameda to review their plans to see if there are any conflicts or items where the City and County may be doubling up on efforts.

Based on the preliminary reports on the scope and magnitude of the disaster, one of the following visual estimation methods, or a combination of both, will be utilized to estimate the debris: volume-to-weight conversion factors; or a Geographic Information Systems (GIS)-based analysis, which involves a conversion of damage to physical assets.

Table 2.1 Debris Types and Management Considerations, on the following page, summarizes various types of debris and disposal options.

Table 2.1 – Debris Types and Management Considerations

Categories	Types of Materials	Notes
Construction and demolition waste	Concrete, brick, wallboard, wood, carpet, glass, roofing materials	Evaluate the potential presence of asbestos and other hazardous materials. Deliver to a C&D landfill/sorting facility (**Attachment 7 – C&D Facilities in the Region**).
Electronic Discards	Computers, laptops, printers, TVs, microwaves	Must be segregated and recycled.
Household / Personal Property	Furniture, personal belongings	Rugs, furniture, and mattresses should be treated as mixed debris and landfilled or recycled if possible.
Household Hazardous Waste	Paint, solvents, cleaning supplies, insecticides, chemicals, gasoline, oils	HHW should be segregated from other waste and kept in a dry, safe place for transport to a County-run HHW facility or one-day event.
Hazardous Waste	Asbestos, industrial chemicals, propane tanks	Must be segregated for special handling or management.
White Goods / Metals	Refrigerators, Stoves, Washers, Dryers, etc.	To be segregated and recycled if possible. Ensure that refrigerants are removed from cooling units by certified professionals.
Boats / Autos	Removal and disposal will be the owner's responsibility.	
Mixed Debris	Debris becomes mixed by uncontrolled collection and disposal. Roadside debris piles often contain a mixture of debris types. Separation of the mixed debris is not always cost-effective. Whenever possible and feasible, mixed waste will be processed to remove recyclable material. Residual debris will be landfilled.	
Vegetative Debris	Trees, brush, limbs should be segregated at curbside. Whenever possible and feasible, vegetative "green" waste can be placed in green waste containers for pick up and processing.	
Sediment / Silt	Sediment flow combined with high-velocity floodwater may cause extensive structural damage. Both the sediment and structural debris will require disposal. Removal of sandbags must be handled cautiously; they can be contaminated and may require testing and special handling. Standing and contaminated water will need to be tested and will require special handling.	
Animal Carcasses	Animal owners are responsible for the disposal of their animals that are governed under CalEPA Guidelines. Should disposal of dead animals from the wild become necessary, the City will follow the following set of animal mortality management practices: **Collection and Temporary Storage of Carcasses for Transport to Rendering**: This is the preferred means of animal disposal. It offers a relatively safe and integrated system that complies with the fundamental requirements of environmental quality and disease control. **Disposal at Permitted Landfills**: If rendering capacity is exceeded or suspended, permitted landfilling offers the next best environmental solution to the disposal of carcasses.	

SECTION 3: DEBRIS COLLECTION AND REMOVAL PLAN

SECTION 3: DEBRIS COLLECTION & REMOVAL PLAN

This Disaster Debris Management Plan (Plan) is designed to be a "working document" that is reviewed and updated annually to ensure that the content remains current and up to date. The activities described in the following sections are coordinated annually by the CDM.

3.1 Concept of Operations

3.1A Identification of Debris

Earthquake and flooding debris are the forms of disaster debris that are most likely to be generated, and therefore need to be collected and removed, in the City.

3.2 Initial Response

Initial response activities are performed in the early days of an event and are limited to the clearance of debris that hinders immediate life-saving actions and poses an immediate threat to public health and safety.

The primary activity performed in the initial response includes clearance of debris from roadways to the shoulders or curbs to allow:

- Movement of emergency vehicles: fire trucks, ambulances;
- Movement of law enforcement agencies into the affected areas;
- Resumption of critical services: power, water, and telephone; and
- Damage assessment of critical public facilities and utilities in order to begin emergency repairs.

Clearance priorities are established to address the most critical situations in the following order:

- **First Priority Clearance**: For critical facilities that are pre-identified as having a potential for disruption of life-saving services; and
- **Second Priority Clearance:** For restoration of critical community, health, and safety services.

The City's PWD will take the lead in prioritization and execution of roadway clearance. The CDM will, in close coordination with the PWD and contractors, prioritize and execute debris collection and disposal.

3.3 Preliminary Damage Assessment

The Preliminary Damage Assessment phase will be implemented immediately after a debris-generating event to open emergency evacuation routes and roadways to critical facilities and affected neighborhoods, in accordance with the City's EOP. The major emphasis during this phase is to push debris from the traveled way to the ROW or curb, an activity commonly referred

to as Debris Clearance. Little or no effort is made to remove debris from the ROW during this period.

The CDM will be responsible for implementing all Preliminary Damage Assessment activities with support, as required, from the City's EOC team. Preliminary Damage Assessment activities include:

- Implementation of the Disaster Debris Management Plan;
- Determination of incident-specific debris management responsibilities;
- Establishment of priorities based on evacuation needs and prediction models;
- Identification and procurement of debris management contractors;
- Activation of pre-qualified contractors and contracts, if necessary, to support clearance operations;
- Implementation of Public Information Plan (PIP);
- Coordination and tracking of resources; and
- Formal documentation of costs.

3.4 Recovery

Recovery will be implemented once the area can be safely accessed following a major debris-generating event, and will encompass the processes of debris removal and disposal. This delay allows time for affected property owners (and their tenants) to return to their homes. It also allows homeowners to begin their own clean-up operations. Property owners or their designees must transfer debris to the ROWs or curb to be eligible for removal. In general, commercial properties are typically ineligible for debris removal under FEMA debris removal guidelines.

The CDM will be responsible for implementing all recovery activities with support, as required, from other PWD staff and contractors. All debris removal and disposal operations will be coordinated by the CDM and conducted by contractors. The recovery process may be quite lengthy as disaster recovery continues until pre-disaster conditions are restored.

Recovery activities include:

- Emergency establishment of contracts;
- Notification to citizens of debris-removal procedures;
- Activation of debris-management sites;
- Removal of debris from ROWs and critical public facilities;
- Movement of debris from debris-management sites to permanent landfills and recycling facilities; and
- Final documentation of costs for reimbursement, as applicable.

Note: For federal disaster declarations, Cal OES and FEMA have very specific guidelines that must be followed, relative to the removal of debris from private property by a public agency. Significant logistical issues can arise when numerous debris-removal trucks are navigating through local residential traffic plus response and recovery traffic.

It is important for jurisdictions, residents, and business owners to understand how to manage recyclable and hazardous disaster-debris materials. To maximize proper handling of recycling and household hazardous materials (HHW), the City will conduct the following activities during recovery:

- Coordinate with local, state, and federal agencies;
- Conduct daily update briefings to ensure information is correct and timely; and
- Ensure that residents know which materials can be placed in the curbside recycling program to save time and reduce disposal cost. Provide information to residents on how to safely store and dispose of HHW.

3.5 Emergency Operations Center Activation

The EOC will be activated by the Director of Emergency Services. The CDM or a designated representative will determine the extent of damage and resulting debris and issue appropriate directives to implement.

The City will provide a list of key debris management contacts in its master emergency contact list. The size and composition of the EOC and TDMS organized to manage debris clearance, removal, and disposal issues will depend on the magnitude and type of the disaster.

3.6 Debris Collection Methods

The City has a current franchise agreement with Waste Management to provide for residential and commercial solid waste (including garbage, recyclables, and organics) collection and transportation to disposal facilities. That agreement also provides for collection of used oil, transportation to processing/disposal sites, processing, and marketing services. The City intends to have Waste Management continue providing normal curbside collection of garbage, recyclables, and organics depending on the severity of the disaster. The City may implement debris collection using temporary roll-off bins at community drop-off stations or TDMS.

This Plan assumes that the City will hire a consultant to develop a scope of work to procure bids and pre-qualify private waste hauling companies to perform the majority of the anticipated disaster-debris-clearance and -removal services, once the Plan is approved by Cal OES. The pre-qualified hauler(s) will be responsible for all debris removal and disposal duties in the event of a federally-declared disaster. Additionally, the City may use other solid waste, recycling, landscaping, and transportation service providers from the region to assist with disaster-debris removal, as needed.

Based on the type, magnitude, and spread of the disaster, the CDM may define various debris zones and then award collection contracts to private haulers for single or multiple zone(s) and/or type(s) of debris material (e.g., vegetative debris). To ensure reliable services, the CDM will scope the disaster debris collection needs from various debris zones and determine the necessary collection frequency for each debris contractor. The debris contractor(s) will be tasked with collecting and hauling debris from their assigned debris zones through monitored route points to the designated TDMS.

This Plan further assumes that the debris collection contracts will be executed between the City and the pre-qualified private haulers. The contract payments may initially come from City funding and later be reimbursed by state and/or federal sources. The CDM will manage the private contract invoicing process. It is the City's understanding that if funding is not in place (either specifically earmarked or in the General Fund) to pay for the performed contracted work, emergency funding may be provided by CalEPA or by Congress.

The CDM will coordinate with the utility agencies for the removal of all utility-related debris, such as power transformers, utility poles, cables, and other utility company material. The CDM will provide support with specialized equipment and operators, as needed.

3.6A Mutual Aid Agreements

The City may need to enter into agreements, in advance, with various jurisdictions to provide mutual aid during a disaster event, to facilitate debris management operations. The City may also elect to operate under an inter-local or mutual aid agreement with the County for the provision of solid waste disposal services. Mutual aid agreements may be specifically necessary for debris management disposal at the Davis Street Transfer Station and the Altamont Landfill or local C&D facilities (**Attachment 7 – C&D Facilities in the Region**). These agreements should outline operational expectations and reimbursement procedures for each participating entity.

3.7 Contracting Procedures for Debris Management

Contracting for labor and equipment may be necessary if the magnitude of the disaster and the resultant debris is beyond the capabilities of City labor and resources (City labor and resources are considered "force account resources" by FEMA), state resources, mutual aid agreements, and volunteer labor and equipment. **Section 7** of this Plan has detailed information on contracting procedures for debris management services to meet FEMA requirements.

The following are general requirements to carefully consider and include in debris-related bid documents and contracts to ensure maximum available reimbursement:

- **Competitive bidding**: Identify the criteria for the scope of work, including response time, scope of response, and the time required between awarding the work and mobilizing to initiate the work;

- **Scope of work**: Develop a comprehensive description of the expected work that provides specific, detailed descriptions for each intended task; and
- **Contractor's compensation method**: Provide a precisely worded explanation of what is required from the haulers (e.g., load tickets, debris origin, etc.) to facilitate regulatory compliance plus the state and federal agency reimbursement process.

3.8 Contract Types

3.8A Debris Collection and Removal

Jurisdictions typically use one of three types of contracts for recovery operations associated with long-term debris collection and removal: Unit Price Contracts; Lump Sum Contract; and Time and Materials Contracts.

- **Unit Price Contracts**: Based on weight (tons) or volume (cubic yards) of debris hauled. They should be used when the scope of work is not well defined. They require close monitoring of pick-up, hauling, and dumping to ensure that quantities are accurate. Unit price contracts may be complicated by the need to segregate debris for recycling and disposal.
- **Lump Sum Contracts**: These can be defined either by the Area Method (scope of work is based on a one-time clearance of a specified area) or the Pass Method (scope of work is based on a certain number of passes through a specified area, such as a given distance along an ROW). These contracts should be used only when the scope of work is clearly defined, and the areas of work and quantities of material are clearly identified. The total contract price (or "lump sum") should be established using a one-item bid from the contractor.
- **Time and Material (T&M) Contracts**: (NOT RECOMMENDED) FEMA generally limits using these contracts for only a reasonable time and in cases where applicants can't define a clear scope of work or work duration, because these contracts don't provide adequate incentive to contractors to control costs or work efficiently. FEMA will reimburse costs incurred under a T&M contract only if the following apply:
  - ✓ No other contract was available or suitable;
  - ✓ The contract has a ceiling price that the contractor exceeds at its own risk; and
  - ✓ The applicant (City) provides a high degree of oversight to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

Just as in equipment leasing, state and federal regulations have established reimbursement requirements for contracted debris collection and removal services. Documentation must satisfy the following requirements:

- Be auditable. Proper documentation is critical to support contractor invoices and meet CDAA's and FEMA's reimbursement policies. Required information includes the source of the material, the weight or volume of the material, the disposal cost, and the salvage value remitted to the jurisdiction as per CDAA and FEMA recommendation. Lack of proper documentation can jeopardize or delay state and/or federal funding;
- Define a reasonable period of performance;
- Be based on an estimate of debris removal services prepared by the EOC staff;
- Ensure the procurement process is fully documented, including proof of bid advertisement, responses, and contract award, in order to meet local, state, and/or federal procurement requirements;
- Ensure the costs are reasonable and include a justification of costs;
- Ensure the debris activities are well monitored and documented;
- Ensure that all activities included in the contract are required for debris removal and eligible for reimbursement; and
- Ensure that load tickets are used to document the volume of debris transported by the contractor and force account vehicles. (**Attachment 8 – Load (Incoming) Ticket & Attachment 9 – Haul Out (Outgoing) Ticket)**

3.8B Equipment Lease

During the response and recovery phase, jurisdictions may need to lease equipment for debris clearance. State and federal agencies have developed cost codes that establish the reasonableness of the costs associated with equipment rentals. In order to qualify for state and federal reimbursement, it is essential that jurisdictions limit the equipment lease costs to a reasonable level. (**Attachment 12 – FEMA Schedule of Equipment Rates)**[6]

3.9 Contractor Debris Removal Operations for the City of Emeryville

The intent of this Plan is to pursue recycling of disaster debris as the first option for final disposition of all material. Recycling options may be limited due to lack of outlets that accept and/or process debris, which could result in cost-prohibitive conditions.

The CDM or a City representative will be in contact with potential debris management contractors to initiate the service procurement process to remove and lawfully dispose of all disaster-generated debris, with the exception of household, industrial, and commercial hazardous waste. The debris removal will be limited to disaster-related material placed by residents at or immediately adjacent to the edge of City streets, roads, and other public ROWs, within designated areas of the City, based on the extent of the disaster.

[6] https://www.fema.gov/schedule-equipment-rates

The contracted debris management hauler(s), upon Notice to Proceed, will mobilize such personnel and equipment as necessary to conduct all debris removal and disposal operations as required by the debris collection and removal contract(s). Concurrent with the debris collection and removal phase, Waste Management will continue to provide (or resume provision as soon as it is feasible) residential and commercial garbage, recyclables, and organics collection according to the procedures, routes, and removal schedules defined by the current franchise agreement.

A listing of all CDM-designated TDMS will be provided to the debris management contractor(s). These TDMS will be used to expedite the removal of mixed and C&D material from the City's ROWs. The City may choose to use one large TDMS with different areas segregated for different material types or separate TDMS for mixed debris and C&D, as necessary and available. When feasible, these sites will be centrally located to handle C&D material.

All contractor operations will be subject to review by the CDM or designee. The contractor(s), as directed by the CDM, will make multiple, scheduled passes of each site, location, or area impacted by the disaster, according to assigned debris zones. This manner of debris removal will allow residents to return to their properties and bring all debris to the edge of the ROWs adjacent to their properties. Sufficient time shall be scheduled between subsequent passes to accommodate reasonable recovery by residents. Schedules will be provided to the Public Information Officer (PIO) for publication and notification by the news media and other public information outlets.

The CDM or their designees will monitor the contractor(s)' performance for debris removal and disposal operations in each debris zone. The contractor(s) will keep the monitoring staff informed of clean-up progress and any problems encountered on a regular basis, as defined by the contractual agreements.

The CDM will coordinate with the EOC, local, state, and federal government agencies regarding:

- Demolition of private structures;
- Removal of debris from private property;
- Local law and/or code enforcement issues;
- Identification of historic and archaeological sites and cultural institutions;
- Qualified environmental contractors to remove hazardous waste such as asbestos and lead-based paint; and
- Abandoned vehicles.

3.9A Load Ticket

Load tickets will be used by debris collection and removal contractor(s) as the primary tracking mechanism for each load of debris they load, haul, and dispose of at designated debris sites

(**Attachment 8 – Load (Incoming) Ticket**). Load tickets will be initiated at pick-up and closed out upon drop-off of each load.

The CDM will provide pre-numbered load tickets to all contractors, unless the contractors already have a load ticket in place. The DCDC will appoint field staff to monitor contractors' work at the loading sites within their designated debris zones to ensure eligibility of the debris being picked up. The DCDC will also appoint staff at the TDMS to verify the quantity of material being hauled by the contractor(s). The DCDC will record the estimated cubic yards (CY) of debris in each truck entering the TDMS or recycling or landfill disposal site on debris load tickets, complete and sign each load ticket, and return the respective copy to the CDM.

Contractors will only be paid based on the number of CYs of material deposited at the disposal site, as recorded on the debris load tickets. Completed load tickets will serve as verification documentation for contractor payment as well as for requests for state and federal assistance and reimbursement.

The following is the correct disposition of each part of the load ticket:

- Part 1: Load Site Monitor (Turned in daily to the CDM)
- Part 2: Disposal Site Monitor (Turned in daily to the CDM)
- Part 3: Driver or Contractor's on-site representatives (Contractor Copy)
- Part 4: Driver or Contractor's on-site representatives (Subcontractor Copy)

Payment for hauling debris will only be approved when contractor's invoice accompanies Part 3 of the load ticket.

3.9B Household Hazardous Waste

The City participates in a Countywide HHW program, administered by County Environmental Health, which includes four permanent HHW facilities (closest is the Oakland facility) for residents to drop off HHW, sharps, universal waste, and electronic waste. During a disaster debris management event in the City, HHW responsibilities will most likely be conducted by a contractor serving as a Hazardous Waste Management Coordinator (HWMC). The HWMC will determine the proper HHW collection procedure and coordinate with County Environmental Health.

HHW includes:

- Gasoline cans
- Aerosol spray cans
- Paint
- Lawn chemicals
- Cleaning agents
- Batteries
- Fire extinguishers
- Fluorescent lamps
- Household electronics

During a disaster-debris-management event in the City, it is not anticipated that there will be HHW curbside collection. The CDM will direct residents to haul and properly dispose of HHW at one of the County's four HHW facilities (closest is the Oakland facility). If those facilities are not accessible, residents will be directed to deliver HHW to the TDMS for proper disposal. It is

important that residents separate HHW from other disaster debris to ensure that HHW does not enter the regular debris stream at TDMS.

The HWMC and CDM will determine where to direct delivery of HHW in consultation with the Manager of the County's HHW program. The PIO will communicate to residents regarding HHW storage and transportation following an event, in coordination with input from County Environmental Health.

3.9C White Goods Debris Removal

White goods debris removal is eligible for reimbursement if the debris is a result of the disaster. White goods must be removed from publicly maintained property and roadways whose maintenance is the responsibility of the City. White goods debris that contain ozone-depleting refrigerants, mercury, or compressor oils are hazardous materials and require removal of those materials by a certified technician, prior to recycling. Refrigerator cooling fluid must be disposed of properly by a local EPA-Certified Refrigerant Reclaimer.

Following a disaster event, the DCDC will determine the need for white goods collection based on input from debris management staff. The CDM will ensure that white goods are properly disposed of at a licensed disposal facility. The CDM will coordinate with the PIO, who will communicate to City residents about white goods eligibility. It is important that residents separate white goods from other disaster debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.

White goods include:

- Refrigerators
- Freezers
- Air conditioners
- Heat pumps
- Ovens
- Ranges
- Washing machines
- Clothes dryers
- Commercial chillers

3.10 Open Neighborhood Debris Drop-off Stations

Following a debris-generating disaster event, it may be necessary to open neighborhood debris drop-off stations to collect vegetative debris. These stations can be established based on need, and can be as simple as 20-, 30-, or 40-yard bins for neighbors to share. These stations would be opened in addition to the TDMS and would not accept HHW or e-waste.

3.10A Obtain Guidance for Commercial Property and Private Property Debris Removal

Eligibility for disaster debris collection on commercial or private property is determined by Cal OES and/or FEMA on a case-by-case basis following a debris-generating disaster event. Removal of debris from such commercial properties as industrial parks, apartments, and condominiums is generally ineligible for reimbursement from FEMA because commercial enterprises are expected to retain insurance that covers debris removal. In very limited, extraordinary circumstances, FEMA may provide an exception. Typically, the debris and devastation must be so widespread that the debris removal from commercial or private

property is in "the interest of the public." In the event that such removal is critical to the economic recovery of a community, FEMA may provide reimbursement under specific conditions. Private property debris removal will require Right-of-Entry agreements with the landowners. A sample agreement is provided in **Attachment 10 – Right-of-Entry Permit.**

3.10B Leaning Tree and Hanging Limb Removal

The PWD will determine the necessity of an ROW leaning tree and hanging limb debris removal program. Upon authorization by the City, a damage assessment will be conducted to identify hazardous leaning trees and hanging limbs in the ROW, per the guidance and eligibility criteria provided in FEMA's Pubic Assistance and Program Policy Guide (PAPPG).

Surveys and operations associated with the removal of leaning trees and hanging limbs must be documented and monitored by the debris monitoring firm using the documentation requirements established in PAPPG. The CDM also informs the FEMA Debris Team prior to beginning the operation to ensure they are aware of the operation.

3.11 Emergency Waiver Considerations

After a disaster, existing or closed waste management facilities within the County may be used as storage, transfer, or processing sites for the disaster debris. Transfer stations may be set up for temporary storage of debris before being moved to other processing or disposal facilities. A facility's permit may restrict the amount of material that can be stored, transferred, or processed, thus limiting the amount of debris that can be transported to the site. The disaster debris disposal method may also be inconsistent with the disposal hierarchy that is identified in the planning documents required by CalRecycle under AB 939 and other regulations.

The CDM will follow the existing state-issued waiver process for facility permitting and diversion requirements. Please see **Section 4 – Temporary Debris Management Sites** and **Attachment 18 – Emergency Waiver of Standards** for more information on emergency waivers.

The discharge of waste to land is an action subject to restrictions adopted as individual or general Waste Discharge Requirements by the Regional Water Quality Control Board. The CDM may need to obtain a conditional waiver of Water Discharge Requirements for properties where waste management practices meet specified conditions.

SECTION 4: TEMPORARY DEBRIS MANAGEMENT SITES

SECTION 4: TEMPORARY DEBRIS MANAGEMENT SITES

4.1 General

This section discusses the planning components to be considered with regard to establishing TDMS. All activities associated with massive debris clearance, removal, and disposal activities depend upon the availability of suitable sites for managing debris. In major disasters, there may be insufficient landfill capacity available in the short term to handle the debris in a timely fashion. Having appropriate TDMS to store, segregate, or reduce the volume of debris will aid the City's recovery efforts. State agencies and communities may use TDMS to store, segregate, or reduce the volume of debris.

Disposal sites to be used by the City during a disaster debris event will be the Davis Street Transfer Station and the Altamont Landfill. If these sites aren't accessible, the City may consider establishing an agreement with the City of Berkeley Transfer Station, if they are not affected by the disaster, the Vasco Road Landfill in Livermore (addresses provided in this section), and possibly other nearby landfills, if agreements can be reached. Other nearby landfills include the West Contra Costa Sanitary Landfill in Richmond and the Redwood Landfill in Novato.

Although TDMS are planned for and expected to be needed, in some instances direct hauling the debris (e.g., mixed C&D debris to a mixed C&D facility or a landfill that accepts mixed C&D) may be the more efficient solution to debris management. These decisions will need to be made at the time of the disaster in consultation with Cal OES and FEMA staff, and will be dependent on access to facilities and other variables.

4.2 TDMS Selection Guidelines

In the event of a significant disaster, the City will make it a top priority to determine TDMS for the collection and processing of disaster-generated debris. Section 4.3 lists pre-designated sites that are best suited for TDMS near Emeryville. C&D sites located in the region are also identified in this Plan (see **Attachment 7 – C&D Facilities in the Region.)**

Public lands should always be considered first for municipal debris management operations to avoid the leasing of new properties. If public sites are unavailable, private lands must have City (or its designated contractor) oversight and management.

Large open sites are needed for any type of debris-staging activity. Pre-designated sites should ideally be on public property parcels and consist of 10 acres or more, depending on the anticipated volume of debris to be collected and the planned volume-reduction methods. As a general rule, a larger TDMS equates to fewer total TDMS needed and an easier closeout. However, larger sites have the potential to cause logistical problems, such as increased distance travelled to each site, as compared to an operation where multiple smaller TDMS are available throughout the affected area. Additionally, TDMS should not be located where they would significantly impede transit routes, as listed in Attachment 4 – Transit Routes in City of Emeryville. Smaller TDMS may be more appropriate depending on the type of waste being managed and

regional space constraints. In the event of a significant disaster, the City will prioritize which sites will be opened based on the estimated amount of debris.

Paved sites are optimal. Large parking lots paved in stone dust or gravel, such as those designed for trucks, are the next best option. Meadows are the least desirable option because saturated soils after extended and heavy precipitation may make them inaccessible. Sites should have good ingress/egress to accommodate heavy truck traffic and a site configuration that will allow for an efficient layout, which may be more feasible with larger sites. Sites should not have critical habitat or rare ecosystems, threatened and/or endangered species, historic and/or archaeological sites. All potential TDMS require extensive environmental impact planning. Per state and federal guidance, the soil, groundwater, and/or surface water at and near a proposed staging area should be tested prior to receipt of disaster-generated debris to establish pre-existing baseline conditions.

Impacts from noise, dust, and traffic that are tolerated by the public early in a disaster recovery may have to be curtailed later. Thus, to the extent feasible, the placement of the TDMS near residential areas, schools, and hospitals should be avoided.

As a result of its small size and density, the City lacks large paved, publicly owned sites and unused vacant lots. City parks do not have parking lots and the City facilities with parking have small lots. None of the publicly owned facilities and sites, with the exception of the marina commercial lot, meet the criteria for a good TDMS.

4.3 Primary and Secondary Potential Temporary Debris Management Sites

- **First Priority:** Pre-determined TDMS
- **Second Priority:** Public property within the damaged area
- **Last Priority:** Emeryville Recreation and Parks District Property. However, as none of the parks in the district has a large parking lot, these are not particularly viable sites.

While the city would prefer to designate a public site as a TDMS, there are none that meet the criteria outlined above. It is likely that private lands will need to be utilized for debris management operations. Such sites should have City (or its designated contractor) oversight and management, and baseline data should be collected with photographs, soil testing, and other measures (listed on the following page), as needed.

Based on the above-outlined guidelines, including consideration to ownership, size, location, and environmental and historic concerns, the City has identified the following as **potential** pre-designated TDMS (**Attachment 13 – Emeryville Temporary Debris Management Sites**). The City acknowledges that no Environmental Impact Review has been conducted for these sites and that an emergency EIR needs to be performed prior to utilizing the land for the collection and/or storage of disaster debris.

First Priority Potential Temporary Debris Management Sites

Marina Commercial lot
3310 Powell Street

This is a large paved lot with good access.

Second Priority Potential Temporary Debris Management Sites (if first priority site is unavailable)

IKEA parking lot
4400 Shellmound Avenue

Or:

East Bay Bridge Shopping Center parking lot
3838 Hollis St, Emeryville, CA 94608

These locations both contain large paved parking lots with good entries and exits.

Emeryville public schools are not ideal TDMS since those sites are small, potentially needed for shelter, and close to residential areas.

Baseline data (on the physical features, historical significance, and soil/water content) have not yet been gathered for the above-listed *potential* TDMS. Prior to operating any of the *potential* TDMS, the City will conduct some, if not all, of the following actions to document the baseline data:

- **Videotape and/or photograph the site:** Thoroughly videotape and/or photograph (ground or aerial) each site before beginning any activities. Periodically update video and photographic documentation to track site evolution.
- **Document physical features:** Note existing structures, fences, culverts, irrigation systems, and landscaping that can help evaluate potential future damage claims.
- **Investigation of historical significance:** Research the past use and ownership of the property to document any issues regarding the existence of historic structures on archeological sites.
- **Sample soil and water:** Soil and groundwater samples may be collected prior to use of the site, if a site is not already paved. Advance planning with community and state environmental agencies can establish requirements, chain of custody, acceptable sampling methods, certified laboratories, and testing parameters. The City may consider establishing a contract with an environmental consulting firm that can respond rapidly. Planned HHW, ash, and fuel storage areas may be sampled prior to site setup.

As all of the sites that the City has pre-identified as potential TDMS are paved sites, the soil and water sampling will not be necessary. If any unpaved sites become viable, the City will undertake this activity.

The following lists the disposal facilities and transfer stations in and around Alameda County. The City, through its contracted waste and recycling hauler, Waste Management, uses the Altamont Landfill and the Davis Street Transfer Station. In the event of a disaster, and if additional capacity is needed, agreements with other nearby facilities may be necessary.

4.3A Landfills in Alameda County

- **Altamont Landfill**
  Location: 10840 Altamont Pass Road, Livermore, CA 94550
  Acreage: 472 (permitted landfill acres)
  Maximum Permitted Capacity: 7,000 tons per day (tpd)
  Remaining Capacity: 40 million tons
- **Vasco Road Landfill**
  Location: 4001 North Vasco Road, Livermore, CA 94551
  Acreage: 246 (permitted landfill acres)
  Maximum Permitted Capacity: 2518
  Remaining Capacity: 5.6 million tons

4.3B Landfills Near Alameda County

- **Keller Canyon**
  Location: 901 Bailey Road, Pittsburg, CA 94565
- **Redwood Landfill**
  Location: 8950 Redwood Highway, Novato, CA 94945
- **Marin Resource Recovery Center**
  Location: 565 Jacoby Street, San Rafael, CA 94901
- **West Contra Costa Sanitary Landfill**
  Location: 1 Parr Blvd, Richmond, CA 94801

4.3C Alameda County Transfer Stations

- **Davis Street Transfer Station**
  Location: 2615 Davis Street, San Leandro, CA 94577
  Acreage: 53
  Permitted Capacity: 5600 tpd
- **City of Berkeley Transfer Station**
  Location: 1201 Second Street, Berkeley, CA 94710
  Acreage: 4.6
  Permitted Capacity: 400 tpd
- **Pleasanton Transfer Station**
  Location: 3110 Busch Road, Pleasanton, CA 94566
  Acreage: 7.6
  Permitted Capacity: 350 tpd

- **ACI San Leandro Transfer/Processing Facility**
  Location: 610 Aladdin Avenue, San Leandro, CA 94577
  Acreage: 2.17
  Permitted Capacity: 412 tpd
- **Fremont Transfer Station** (also has a dedicated space used as an HHW facility)
  Location: 41149 Boyce Road, Fremont, CA 94538
  Acreage: 13.5
  Permitted Capacity: 2400 tpd
- **Livermore Sanitation Recyclable Material Transload Facility**
  Location: 7050 National Drive, Livermore, CA 94550
  Acreage: 4.29
  Permitted Capacity: 385 tpd
- **Hayward Transfer Station**
  Location: 3458 Enterprise Avenue, Hayward, CA 94545
  Acreage: 3.4
  Permitted Capacity: 174 tpd

4.3D Transfer Stations Near Alameda County

- **Contra Costa Transfer and Recovery Station**
  Location: 951 Waterbird Way, Martinez, CA 94553
  Acreage: 19
  Permitted Capacity: 1,900 tpd
- **Golden Bear Transfer Station**
  Location: 1 Parr Blvd, Richmond, CA 94801
  Acreage: 7.5
  Permitted Capacity: 1,000 tpd
- **Pittsburg Recycling Center and Transfer Station**
  Location: 1300 Loveridge Road, Pittsburg, CA 94565
  Acreage: 11.3
  Permitted Capacity: 1,500 tpd

4.4 Emergency Waiver

Immediately following a major disaster, the clean-up effort and reconstruction often results in a need to handle more and different types of debris than existing solid waste facility permits allow. An Emergency Waiver of Standards is requested by the City (**Attachment 17 – Draft Request for Emergency Waiver of Standards**) and issued by an enforcement agency that grants a solid waste facility operator temporary relief from specific state minimum standards or specific terms or conditions of a solid waste facility permit. More specifically, an enforcement agency may approve and issue a waiver for the express purpose of enabling the operator of an existing permitted solid waste facility or locally approved temporary transfer or processing site to accept disaster debris

and other nonhazardous wastes, in a manner not consistent with the terms and conditions of the relevant solid waste facility permit, only during the recovery phase of a state of emergency or local emergency.

An Emergency Waiver of Standards may only be issued when there has been a proclamation of a state of emergency or local emergency as those terms are defined under 14 CCR 17210.1 (j) and (k), respectively.

To obtain a waiver, a solid waste facility operator submits a written request to the LEA, which is the Alameda County Department of Environmental Health for Emeryville. The request shall include, but not be limited to, the following information:

- A listing of the permit terms and conditions and state minimum standards to be waived in order to facilitate recovery and disposal of disaster debris;
- A statement of the remaining disposal capacity of the solid waste disposal site;
- A description of all facility-related diversion programs and on-site recycling facilities; and
- A listing of locally approved temporary transfer or processing sites to be used to store disaster debris for future reuse or recycling.

Please see **Attachment 18 – Emergency Waiver of Standards** for more information on emergency waiver.

4.5 Debris Collection and Disposal

Mixed debris will be collected and hauled to the designated TDMS, C&D sites, designated landfill locations, or commercial transfer stations. Clean woody debris will be hauled to the nearest designated vegetative TDMS or taken for grinding. It is expected that the franchised garbage contractor will continue to pick up curbside refuse, recyclables, and organics in accordance with current procedures, routes, and removal schedules. Load tickets will be used by contracted haulers to track all debris that is loaded, hauled, and disposed of. They will serve as supporting documentation for contractor payment, as well as for requests for federal assistance or reimbursement.

All material deposited at the TDMS will be processed on site for recycling or taken to a properly permitted landfill for final disposal. The CDM may direct contractors to bypass the TDMS and approve the hauling of debris directly to a final disposal site if recycling is not feasible.

4.6 Debris Reduction Methods

4.6A Volume Reduction by Incineration

California has strict rules prohibiting the use of incineration by individuals and discourages its use for volumetric reduction of disaster debris (unless the material is wood-based and suitable for biofuels). However, under certain circumstances, and after consultation with the appropriate

regulatory agencies, including Cal-EPA and the BAAQMD, incineration may be considered as a last resort.

Burning of specified waste will only be allowed if it is determined by the local fire department, in conjunction with the BAAQMD, as the only way to remove a hazard. Setting of fires for specified purposes in emergency conditions is governed by California HSC Section 41801. If burning is necessary, the rules from HSC Section 41812 should be followed, which requires burning to take place in a mechanized burner, (e.g., air curtain burner), to minimize air contaminants.

4.6B Vegetative Debris Volume Reduction by Grinding and Chipping

Large-scale floods may produce large volumes of vegetative debris. Grinding and chipping the woody debris can be viable components in a vegetative debris volume-reduction strategy. These methods can produce mulch that is suitable for replenishing the flood-eroded topsoil and for other beneficial use.

In the event of a natural disaster, the CDM intends to work closely with local agricultural groups and StopWaste to determine if there is a market for mulch and an outlet for woody debris as an alternative fuel at cogeneration plants. The City will also work closely with the Community Services Department to use vegetative debris generated from parks as mulch in Emeryville.

Chipping is ideal in residential areas. Damaged and uprooted trees present significant problems if they are pushed to the ROWs for eventual pick-up and transport to staging and reduction sites. Chipping operations are also suitable in urban areas where streets are narrow. In both cases it is cheaper to reduce the woody vegetation to mulch on site than to move it to a central grinding location and then return it to the affected area. This process eliminates the need to handle and transport the material twice, thus making it cost-effective.

Grinders are ideal for use at TDMS because of their high-volume reduction capacity. It is critical to address the noise and safety issues associated with grinders by securing them in appropriate locations. Moreover, they require a large area to hold the woody debris and the resulting mulch. Ingress and egress to the site are also an important consideration.

4.6C Volume Reduction by Recycling

Recycling reduces the volume of mixed debris requiring landfill disposal. It should be considered early in the debris-removal and -disposal operation because it can help reduce the overall cost of the process.

Recycling is an attractive option for the City because it supports the City's diversion goals and objectives. Furthermore, the City is fortunate to be situated near several facilities that take mixed C&D debris and sort it for recyclables. A portable Materials Recovery Facility could be set up at the TDMS.

The following materials are suitable for recycling:

- **Metals:** Flood disaster may cause a large volume of metal debris from damaged structures. Most of the metals are suitable for recycling and can be separated using an

electromagnet. Metals that have been processed for recycling can be sold to metal recycling firms.

- **Soil:** Large equipment used in clean-up operations picks up significant amounts of soil. That soil is then unintentionally transported to the TDMS where it combines with other organic materials that decompose over time. Much of this transported soil can be recovered if it is put through a screen or shaker system, and then it can either be sold, recycled back into the agricultural community, or used at local landfills for alternative daily cover (ADC). Monitoring and testing of the soil may be necessary to ensure that it is not contaminated with chemicals.
- **Wood:** Woody debris can be either ground or chipped into mulch.
- **C&D Material:** Concrete, asphalt, wood, and other building materials can be reduced in volume or taken as is to a C&D facility. Alameda County and the surrounding counties have several facilities that accept mixed C&D materials. **Attachment 7 – C&D Facilities in the Region** provides a list of C&D facilities that accept mixed C&D, including several that have been certified to meet a specified recovery rate. These facilities recover and recycle as much of the mixed material as possible. Some unrecyclable portion may be used as ADC at landfill or be disposed at landfill.
- **White goods:** These goods can be recycled, reconditioned, or broken down into their reusable parts to help rejuvenate other salvaged units. These recycling approaches keep damaged appliances out of the waste stream and allow up to 95% of these recyclable materials to be reused.
- **E-waste:** Recyclers recover more than 100 million pounds of materials from electronics each year. Electronics recycling reduces the pollution, energy, and extraction of valuable and limited virgin resources, which are side effects of manufacturing new product manufacturing.

Residue material that cannot be recycled, such as cloth, rugs, and bulky items, can be sent to a landfill for final disposal.

The City intends to procure a disaster recovery contractor to maximize the recycling of mixed and segregated C&D, white goods, e-waste, metals, and other recyclable materials, wherever possible and practical.

4.7 TDMS Preparation

Once debris is removed from areas damaged in the disaster, it will be taken to the TDMS. Removal and disposal should follow the normal chain of government responsibility, starting at the city level and then progressing to county and state levels, consistent with the magnitude of the event. Federal assistance may be requested, according to established procedures, when resources exceed all local levels of responsibility.

The City will establish and operate its TDMS by contracts, which will include the required scope of work. The CDM will monitor contractor performance to ensure that the TDMS preparation, operations, and close-out procedures comply with the requirements established by this Plan.

The DCDC will develop procedures and guidelines to:

- Inspect incoming loads;
- Construct and maintain monitoring station towers at each TDMS for use by the DCDC. The towers should have a floor elevation that affords the DCDC a complete view of the load bed of each piece of equipment being utilized to haul debris;
- Ensure proper handling and record-keeping of the load tickets at the monitoring station towers as haulers enter and exit the TDMS;
- Develop a contingency plan and procedures for hazardous wastes;
- Segregate materials in consolidated stockpiles;
- Keep non-disaster waste separate from disaster waste; and
- Identify processing techniques and equipment to be used based upon materials to be collected.

4.8 TDMS Operations

TDMS should have:

- Visible, demarcated buffer areas based on the established wetland setback line;
- Storm water controls, such as silt fences, to prevent discharge of contaminated runoff into water bodies;
- A method to control the off-site migration of dust, wood chips, or other debris residuals from vehicular traffic and from the handling of debris and ash;
- An adequate supply of water to ensure that the debris is sufficiently wet during the segregation, processing, and/or packaging of waste to prevent the risk of fire and/or dust migration;
- Access control to prevent unauthorized dumping and scavenging;
- Monitors to correctly identify and segregate waste types, (particularly critical is separating hazardous waste from nonhazardous waste), for appropriate management; and
- Oversight management for the TDMS.

When staging debris other than green waste, if appropriate and feasible:

- Provide specific fuel storage areas;
- Take photos of the TDMS before operations begin;

- Periodically sketch/map layout including "hot" areas; and
- Prepare quality assurance reports, spill reports, etc. as part of the overall project.

The City's TDMS will be managed in such a way to ensure that the contractors monitor fueling and equipment repair to prevent and mitigate spills such as petroleum products and hydraulic fluids. The CDM should also include clauses in contract scope of work to require immediate spill clean-up by the contractor.

The City's contracts with debris management haulers should stipulate that the contractors are responsible for monitoring fueling and managing equipment repair to prevent and immediately mitigate spills of such materials as petroleum products and hydraulic fluids.

The operations of the TDMS should be conducted to mitigate operational impacts to the neighbors, such as:

- **Dust:** Employ water trucks;
- **Noise:** Construct perimeter berms. Restrict hours of operation; and
- **Traffic:** Ensure proper layout of ingress and egress procedures to facilitate traffic flow.

4.9 Construction & Demolition Sort Facilities

Following a disaster event in the City, dumpsters will be staged in areas of accumulated debris. Debris will either be hauled to a recycling facility (for processing of recyclable materials), to a transfer station, or to a landfill (for garbage disposal). Mixed C&D dumpsters will be hauled to one of the certified C&D sort facilities in and around Alameda County, including the Davis Street Transfer Station, to sort and further recycle construction debris. Other C&D facilities in and near Alameda County may be used if an in-County C&D facility cannot accept the City's materials.

The facilities listed in **Attachment 7 – C&D Facilities in the Region** all take a variety of C&D materials for recycling. Materials that may be accepted include some or all of the following: wood; cardboard; concrete; asphalt; metal; dirt; rock; brick; plastics; and roofing. These facilities must be contacted periodically to determine which materials they are accepting, given that the list of accepted materials changes, depending on market conditions. The recyclewhere tool on the StopWaste website is a useful resource that enables users to input the name of a material and receive a list of facilities in or near Alameda County that currently recycle that material. The recyclewhere website address will be disseminated in information to residents and businesses after a disaster to encourage maximum recycling and reuse of debris.

4.10 TDMS Close-Out Procedures

Each TDMS will eventually be emptied of all material and restored to its previous condition and use. The debris-removal contractor will be required to remove and dispose of or recycle all mixed debris, C&D debris, and debris residue to approved landfills or recycling facilities. The DCDC should monitor closeout and disposal activities to ensure compliance with all contract

specifications. Due to the nature of staging and reduction operations, additional measures will be necessary to meet local, state, and federal environmental requirements.

The key to timely close-out of the TDMS is the efficient scheduling of the following activities. Critical path scheduling of all the activities as far in advance as possible will minimize down time between steps. The CDM should consider the following requirements for close-out of a TDMS:

- Coordinate with local and state officials responsible for construction, real estate, contracting, project management, and legal counsel regarding requirements and support for implementation of a site remediation plan;
- Ensure the debris-monitoring contractor is responsible for environmental restoration of both public and leased sites;
- Contractors will also be required to remove all debris from sites for final disposal at landfills or recycling facilities prior to closure;
- Ensure compliance to appropriate and applicable environmental regulations;
- Prioritize site closures;
- Develop cost estimates for site closure and remediation;
- Develop decision criteria for certifying satisfactory closure based on available baseline information;
- Develop administrative procedures and contractual arrangements for closure phase;
- Inform local and state environmental agencies regarding acceptability of program and established requirements;
- Designate approving authority to review and evaluate contractor closure activities and progress;
- Retain staff during the closure phase to develop site-specific remediation for sites, as needed, based on information obtained from the closure checklist; and
- Execute the site remediation plan.

4.11 Site Remediation

During the debris removal process and after the material has been removed from each of the debris sites, environmental monitoring on the soil and groundwater may be needed to close each of the sites. This is to ensure that no long-term environmental contamination is left on the site.

The debris management contractor(s) must provide proof to the CDM that all sites have been properly remediated. It is expected that there will be significant costs associated with this operation, as well as close scrutiny by the local press and environmental groups. Site remediation will go smoothly if baseline data collection and site operation procedures are followed.

SECTION 5: ENVIRONMENTAL CONSIDERATIONS AND OTHER REGULATORY REQUIREMENTS

SECTION 5: ENVIRONMENTAL CONSIDERATIONS AND OTHER REGULATORY REQUIREMENTS

5.1 Environmental Requirements

Following a disaster event, compliance with environmental protection laws and regulations is required. All debris-related activities must be coordinated with federal, state, and local agencies, including but not limited to state and federal EPAs, the State Department of Environmental Quality (SDEQ), local Health Departments, and the Historic Preservation Office. These agencies should be consulted to ensure compliance with environmental and historic preservation laws, regulations, and policies, and to determine environmental monitoring and reporting requirements for TDMS. The City must also maintain records for historical purposes.

5.2 Environmental and Historic Preservation Compliance

The CDM will request that FEMA, as required, review the project to ensure the work complies with applicable federal environmental and historic preservation (EHP) laws, their implementing regulations, and applicable executive orders. The CDM or a designated agent will coordinate with Cal OES, Cal-EPA and other applicable state, regional, and local agencies regarding environmental and historic preservation requirements.

The following is a list of federal and state environmental laws and executive orders with which the City must comply, if applicable. Failure to do so can result in loss or delay of funding and legal action.

- National Environmental Policy Act
- California Environmental Quality Act
- National Historic Preservation Act
- Federal Endangered Species Act
- California Endangered Species Act
- Fish and Wildlife Coordination Act
- Clean Air Act
- Rivers and Harbors Act
- California Native American Historical, Cultural, and Sacred Sites Act
- Native American Graves Protection & Repatriation Act
- Clean Water Act
- Coastal Barrier Resources Act
- American Indian Religious Freedom Act

- Coastal Zone Management Act
- Wild and Scenic Rivers Act
- Farmland Protection Act
- Executive order 11990, protection of wetlands
- Executive order 12898, environmental justice
- Executive order 12699, seismic safety
- Executive order 11988, floodplain management

5.2A Historic Properties

Under the National Historic Preservation Act of 1966, historic properties are buildings, structures, sites, objects, and traditional cultural properties that are at least 50 years old, with some exceptions. If a project is funded by FEMA, through the public assistance process, and it has the potential to affect a historic property, FEMA is required to initiate what is called a Section 106 consultation to evaluate the significance of historic properties, assess whether adverse effects are a likely result of the project, and determine if such adverse effects can be avoided.

The City of Emeryville will not start any significant work affecting historical properties until the historic review is requested and completed, unless the work is necessary to eliminate an immediate threat to health and safety.

SECTION 6: HEALTH & SAFETY REQUIREMENTS

SECTION 6: HEALTH & SAFETY REQUIREMENTS

Cal-EPA provides guidance for local and state agencies to conduct disaster debris, waste, and hazardous material (HAZMAT) removal activities. City staff and its contractors will be required to follow Cal-EPA's standard procedures for assessment and removal of asbestos, asbestos-containing material, HAZMAT, and HHW, and conducting air monitoring and sampling from the disaster site. The City of Emeryville's Health and Safety Procedures, contained in its EOP, will also be followed, as appropriate.

Standard operating procedures for conducting HAZMAT assessment activities should be followed according to Cal-OSHA (Occupational Safety and Health Administration) and OSHA HAZWOPER (Hazardous Waste Operations and Emergency Response) requirements. Prior to beginning debris-removal activities, areas must be cleared of HAZMAT (e.g., easily-identifiable asbestos, radioactive, and explosive materials). Prior to the removal of HAZMAT and HHW, an asbestos consultant certified by Cal-OSHA should assess and sample residential and other affected areas of the site to identify and remove gross asbestos. Once the removal of easily-identifiable gross asbestos has been completed, HAZMAT and HHW may be identified, segregated, classified, and properly removed from the site by HAZMAT clean-up personnel. All such personnel must be 40-hour HAZWOPER-trained, per state requirements.

Typical HAZMAT includes: automotive/marine batteries; oils and fuels; compressed gas cylinders; propane tanks; herbicides and pesticides; paint thinners and solvents; oil and latex paints; pool chemicals; and household cleaners.

During debris removal operations, an exclusion zone will be established around any site containing ash, in case the ash contains elevated levels of heavy metals and/or asbestos. Personnel entering this area will be required to wear level C protective attire.

All on-site clean-up personnel entering an exclusion zone must be 40 hour HAZWOPER trained and will be required to wear personal protective equipment.

All clean up contractors working on site with hazardous waste or in asbestos-containing areas must have the following certifications and licenses:

- State contractor's license, including an asbestos certification component if they are conducting asbestos-containing material (ACM) removal, as well as general engineering, demolition, and hazardous substance certifications, depending on the work needed;
- Department of OSHA Asbestos Registration;
- Hazardous Waste Transporter Registration Number, EPA ID number, issued by EPA;
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration – Hazardous Material Certificate of Registration;
- California Highway Patrol – Hazardous Materials Transportation License;
- U.S. Department of Transportation, Federal Motor Carrier Safety Administration – U.S. Department of Transportation Identification Number; and
- California Department of Motor Vehicles – Motor Carrier Permit.

SECTION 7: USE OF FORCE ACCOUNT, CONTRACTED RESOURCES, AND PROCUREMENT

SECTION 7: USE OF FORCE ACCOUNT, CONTRACTED RESOURCES, AND PROCUREMENT

7.1 Force Account

FEMA refers to the personnel of a jurisdiction that is applying for public assistance as "force account." FEMA reimburses force account labor based on actual hourly rates plus the cost of the employee's actual fringe benefits. Straight time labor costs are only eligible for FEMA reimbursement for budgeted employees conducting eligible debris removal activities if the jurisdiction elects to participate in the alternative procedures authorized by Section 428 of the Stafford Act, which the City is opting to do. **(Attachment 21 – Public Assistance Alternative Procedures Pilot Program for Debris Removal Acknowledgement Form)**

Under the standard program, only overtime, (and not straight time labor), is eligible for budgeted employees. For unbudgeted employees performing emergency work, both straight time and overtime labor costs are eligible costs. In the event that additional City staff hours are required, which is likely, the following details will need to be recorded and submitted by the CDM to Cal OES and FEMA regularly:

- Pre-disaster personnel and payroll policies including overtime, vacation, and comp time payment guidelines on how these are paid (i.e., is overtime paid once hours exceed 40 per week or 8 per day?), when the two-week pay period begins, and whether exempt employees are eligible for overtime compensation;
- Documents pertaining to holiday, sick time, and vacation accrual to aid in calculating fringe benefit percentages. All eligible fringe benefits should be documentable, particularly those paid on overtime. Include documents covering collective bargaining agreements for employees covered by and compensated under union contracts;
- Exact dates and hours of force account employee straight time and overtime hours for debris removal, along with job descriptions and duties performed for all employees;
- Timecards, daily timesheets, and payroll registers for all employees, covering claimed dates and hours. All hours must be accounted for and must match logs for any equipment used; and
- Equipment usage sheets, work orders, and an equipment list with a detailed description of all equipment used, matching each piece of equipment to the employee or operator who used it, showing both the dates and times the equipment was used for debris removal.

7.2 Emergency Contracting / Procurement Procedures

As identified in this Plan in **SECTION 3: Debris Collection & Removal Plan**, during a debris-generating disaster the CDM may be challenged to maintain the regular waste collection services while mobilizing resources to respond to the City's debris-management needs. When the debris volumes become high, the CDM may have to rely on pre-qualified debris-clearance contractors for collection and recovery efforts. Similarly, during a large-scale disaster, the CDM may need to secure additional TDMS as well as contracted operators to handle the associated site management.

State and federal guidelines must be followed when jurisdictions contract for assistance with collection, equipment lease, and other services related to disaster-debris removal, -recycling, and -disposal. It is the CDM's intent to follow these guidelines for procuring contracted services, as summarized below:

- Use competitive bidding procedures. Complete and document a cost analysis to demonstrate price reasonableness on any contract or contract modification where adequate price competition is lacking;
- Provide a clear and definitive scope of work and monitoring requirements in the request for proposals/bids. Use acceptable emergency contracting procedures that include an expedited competitive bid process only if time does not allow for more stringent procedures;
- Require bidders to provide copies of references, licenses, financial records, and proof of insurance and bonding;
- Obtain review from the legal representative of the procurement process and any contract to be awarded to ensure they are in compliance with all federal, state, and local requirements; and
- Follow the load ticket requirement to record, with specificity, (e.g., street location) where debris is picked up and the amount picked up, hauled, reduced, and disposed.

7.2A Pre-Disaster and Pre-Qualified Contractor Guidelines

It is critical that any contract procurement for debris-management contractors be in accordance with FEMA procedures, to ensure that the City is reimbursed for all qualified expenses. All contracting will be conducted in compliance with Title 2 of the Code of Federal Regulations 200.317-200.326.

Contract procurement should follow these guidelines:

- The solicitation for a pre-disaster pre-qualified contractor must adequately define, in the proposed scope of work, potential debris types, typical haul distances, and potential size of events for which the contract may be activated; and
- The City may request qualification for multiple scenarios for varying sizes of events.

The City will identify potential debris-removal and -management contractors whose services may be contracted in the event of a federally declared disaster, if Waste Management cannot perform the necessary services and such resources are not available directly from the state or federal government. Potential debris-removal and -management contractors will be identified through a competitive bid process conducted by the City. Potential debris-monitoring and hazardous-waste-management contractors will also be identified.

7.3 Debris Operations to be Outsourced

Based on the type and magnitude of the debris-generating disaster, the CDM may need to outsource some or all of the debris-collection and -processing services. The following debris-operation services have been identified as likely candidates for outsourcing:

- Non-hazardous debris-collection services, TDMS management services, and a DCDC;
- Hazardous-debris-collection services and an HWMC;
- Debris-monitoring services and a DMC.

7.4 General Contract Provisions

The CDM or authorized representative will contact the pre-qualified firm(s) and advise them of impending conditions. The scope of work for the pre-qualified contractors will provide for the lawful removal, disposal, and recovery of all disaster-generated debris, with the exception of household, industrial, and commercial hazardous waste. Debris removal will be limited to disaster-related material placed by residents at or immediately adjacent to the edge of City-maintained streets, roads, and other public ROWs, within designated debris-control zones, based on the extent of the disaster. The City reserves the right to procure additional bids through a competitive process at the time of a disaster.

Each pre-qualified contractor, upon receipt of notice to proceed, will mobilize such personnel and equipment as necessary to conduct the debris-removal and -disposal operations. All debris-removal and -disposal contracts must consider the following:

- Payment provisions must be based on unit prices, with one exception: no payments may be based on time and material costs for anything other than the monitoring work, unless limited to work performed during the first 70 hours of actual work following a disaster event;
- Payment will be made only for eligible debris, referencing state and federal regulations and public assistance guides and fact sheets. (This is an optional provision to protect the applicant, and is only used following a major disaster declaration;)
- Periodic submittal of contractor invoices;
- A “Termination for Convenience” clause, allowing contract termination at any time for any reason, must be included in any contract;

- A reasonable limit on the period of performance for the work to be done must be provided to the contractor;
- A subcontract plan that limits the use of subcontractors to only those approved by the City and limits the percentage of work a contractor may subcontract out;
- A preference that contractors use mechanical equipment to load and reasonably compact debris into trucks and trailers and tarp/cover all loads before leaving the site;
- A requirement that the contractor provide a safe working environment, including properly constructed observation areas at TDMS. The contractor will be required to have regular safety meetings and establish Job Hazard Analysis and Standard Operating Procedures, as required in their safety program or by OSHA or Cal-OSHA;
- Provide a unit price for extracting from the ground and removing eligible stumps (i.e., stumps with 24-inch+ diameters, measured 24 inches above the ground, and with 50% or more of the root ball exposed), or include all stumps in the unit price;
- Provide a requirement that all contract amendments and modifications be in writing; and
- Require the contractor to obtain adequate performance bonds and insurance coverage.

7.5 Qualification Requirements

The City administers the residential and commercial solid waste and recycling franchise within its jurisdiction, currently held by Waste Management. Though the franchised hauler is a potential subcontractor for disaster-debris-collection services, the City intends to ensure that all contractors and subcontractors are capable of providing disaster-debris-management services in a manner consistent with FEMA requirements.

7.6 Solicitation of Contractors

It is essential for the CDM to develop strategies for procuring contracted services for debris collection and TDMS management. In addition to this procurement process, the following tasks should be completed as soon as possible after the development of this Plan:

- Develop sample debris-collection contracts;
- Develop a list of pre-qualified contractors though a Request for Qualification (RFQ) process that can provide:
  - ✓ Debris-collection, -disposal, and TDMS-management contractors;
  - ✓ Hazardous-waste-management coordination, and
  - ✓ Pre-qualified debris-monitoring contractors;
- Develop contract hauler payment procedures; and
- Develop record-keeping requirements for both the collection and TDMS-management contracts to facilitate state and federal guidelines.

The following are general requirements to be carefully considered and included in debris-related bid documents and contracts to ensure maximum available state and federal agency reimbursement:

- Use competitive bidding. Identify criteria for the work, including criteria for response time, scope of response, and the time required between awarding work and mobilizing to initiate the work;
- The scope of work must be comprehensive and clearly defined, with each intended task specifically addressed; and
- Contractor's compensation method must be well defined (e.g., load tickets, debris origin, etc.) and is necessary to facilitate the state and federal agency reimbursement process and regulatory compliance.

If a disaster is proclaimed a state of emergency by Cal OES or FEMA, the City may choose to contract with one or more of the pre-qualified contractors or coordinate disaster-debris removal with CalRecycle.

Reference Section 1.2 for the descriptions of the DCDC, DMC, and HWMC duties.

7.7 Fiscal Matters

The City's Finance Department, with oversight from the CDM, will coordinate the submission of documentation for state and/or federal reimbursement. Financial staff will use the structure to establish appropriate coding for all costs related to the incident.

Fiscal accountability and responsibility rests in 5 areas:

- **Training**: Appropriate fiscal and operating staff will need to be trained to complete state and federal claims;
- **Claim Preparation:** Department fiscal staff will oversee the collection of data and the preparation of reimbursement claims to the Department of Finance. The data and claim-supporting documentation will vary depending on the nature of the disaster;
- **Reimbursement of Costs:** Department fiscal staff will work with the CDM and/or designee to oversee and monitor reimbursement. The CDM will ensure that reimbursements are separated by fund center in relation to actual costs incurred and paid out of the Solid Waste Enterprise Fund;
- **Record Retention:** State and federal agencies require that claim documents and supporting schedules be maintained until completion of the reimbursement audit. Fiscal staff will store and maintain these records either electronically or as paper copy until authorized to destroy the records. Record retention will be maintained in an organized manner that would allow for easy retrieval several years after the fact; and
- **Audit:** State and federal agencies conduct audits of reimbursement claims. The Department of Finance will coordinate these audits and work with fiscal staff to provide records and assist with questions in a timely manner.

SECTION 8: MONITORING OF DEBRIS OPERATIONS

SECTION 8: MONITORING OF DEBRIS OPERATIONS

8.1 Debris-Monitoring Responsibilities

Force account labor has the capability to monitor small amounts of debris; however, in larger, widespread disasters that create a considerable volume of debris, the CDM may decide to request services from a qualified debris-monitoring company. Inadequate monitoring can jeopardize funding from the state and/or FEMA. The City, in consultation with FEMA, Cal OES, and CalRecycle will determine whether the state or FEMA will be able to provide the debris-monitoring staff and coordinator. If it does not, the City will be prepared with a list of pre-qualified debris-monitoring contractors that it can use.

Cal OES has the authority to monitor debris-removal operations. Cal OES' responsibilities include:

- Monitoring debris-removal operations;
- Periodic site visits to ensure compliance with eligibility requirements;
- Reviewing field notes and/or reports prepared by DMCs;
- Preparing a summary of observations, issues, and resolutions;
- Notifying the City of compliance issues and outlining possible solutions; and
- Providing training to DMCs. (Reference Section 1.2 for descriptions of the DMC's duties.)

FEMA also has the authority to monitor debris-removal operations, which includes these additional responsibilities:

- Using FEMA monitors to ensure sufficient monitoring of the debris-removal operation;
- Monitoring at load and disposal sites; and
- Notifying Cal OES of compliance issues and outlining corrective actions.

8.2 Monitoring of Debris-Removal Operations

The DMC will monitor debris-removal operations through observation and documentation of debris-removal work at two locations: 1) the point of collection; and 2) the point of disposal (temporary or final). Monitoring debris-removal operations involves observing workers to ensure they are performing their work in accordance with local, state, and federal regulations.

Documentation is critical in supporting contractor invoices and justifying CDAA's and FEMA's reimbursement policies. Required documentation includes the source of the disaster-debris material, the weight or volume of the material, the disposal cost, and the salvage value remitted to the local government.

8.2A Load-Site Monitoring

Day-to-day activities in the aftermath of a disaster-debris-generating event will include monitoring on-site debris at loading sites to verify eligibility based on contract requirements and

initiating debris-removal documentation using load tickets. The DMC will ensure that load tickets are used to document the volume of debris transported by the contractor and force account vehicles. (**Attachment 8 - Load [Incoming] Ticket**)

8.2B Disposal Monitoring

The disposal monitors will document the disposal of disaster debris at approved TDMS and final disposal or end-use locations. The disposal monitor will perform quality assurance/quality control checks on all load tickets to ensure the information is complete. This process includes:

- Inspecting truck placards for authenticity and signs of tampering;
- Verifying that placard information is documented properly; and
- Verifying that all required fields are complete on the load ticket (**Attachment 9 – Haul Out [Outgoing] Ticket**).

SECTION 9: PRIVATE PROPERTY DEMOLITION AND DEBRIS REMOVAL

SECTION 9: PRIVATE PROPERTY DEMOLITION AND DEBRIS REMOVAL

9.1 Private Property Demolition and Debris Removal

The demolition of dangerous structures as a result of a disaster is the responsibility of the property owners. However, the City may become involved in order to protect the health and safety of adjacent residents. The City will respond to reports of damaged buildings that pose potential public safety hazards within the City, as needed. The City may "red tag" buildings that cannot be occupied.

The Building Division of the City's Community Development Department is responsible for determining when a building is unsafe to occupy. **A draft Right-of-Entry Agreement is included as Attachment 10**. It will be used as a model in the event that the City staff or contractors need to access a private property to remove disaster debris.

9.1A Demonstrating a Threat

To be eligible for state and federal reimbursement, the City must demonstrate that removal of disaster-related debris on private property is required to reduce or eliminate an immediate threat. To that end, the City should be mindful of the following recommendations/procedures:

- After a disaster, the City should pass a resolution that states that debris on private property that constitutes a threat to public health and safety does not in and of itself qualify the debris removal for reimbursement by the state or federal agency;
- The City should submit specific legal requirements for declaring the existence of the threat to DES for review and approval;
- A damaged structure may be a public health and safety hazard if it can be condemned as such, pursuant to the provisions of the City ordinance related to condemnation of damaged structures. A qualified individual, such as a certified building inspector, must make this determination; and
- A public health hazard may exist if such a determination is made pursuant to the provision of the City ordinance related to public health. An individual qualified to do so, such as a public health official, must make such a determination.

The following items are not eligible for state and federal reimbursement:

- Privately-owned vehicles, whether or not insured;
- Old white goods located on private property awaiting proper disposal;
- Old tires, batteries, or any equipment/material located on private property awaiting proper disposal;
- Damaged swimming pools, basements, and foundations. If it is determined that a public safety hazard exists, state and federal agencies may reimburse the cost of filling these structures; and

- Reconstruction debris resulting from reconstruction activities.

9.2 Regulations for Private Property Debris Removal

9.2A State Regulations

The CDAA governs the eligibility rules for disaster-debris removal within the state. Under state regulations, debris removal from private property is reimbursable only when there is an immediate threat to life, public health, and safety.

In a case where reimbursement for debris removal from private property is authorized by the DES, the following requirements shall apply, unless waived in part or full by the director. The CDAA Title 19, Section 2925 (2) (A-C) allows for the removal of debris under the following circumstances:

A. The property owner must remove all disaster-related debris from the property to the curb or public ROW;

B. The local agency must obtain a signed statement from the property owner to the effect that the property owner does not have insurance covering the removal of the disaster-related debris; and

C. The local agency must have a signed statement from the property owner giving the local agency the right of entry and absolving the local agency and the state of any liability relative to removal **(Attachment 10).**

9.2B Federal Regulations

State and federal agencies and the Public Assistance Program are governed by the law defined in the Stafford Act and regulations provided in Title 44 of the CFR. These laws and regulations provide the criteria for determining eligibility of debris-management activities. Those activities that are not reimbursable by state or federal agency, such as commercial property debris clearance and removal, will be kept separate from the reimbursable activities. The City may assist commercial properties with debris clearance to speed recovery efforts at separate sites not discussed in this Plan.

The Stafford Act Sections 403 and 407 and 44 CFR 206.224(b) provide the authority to fund eligible applicants to remove debris from private property. This work is only eligible when:

- The disaster caused very severe and widespread damage;
- The removal is necessary to eliminate an immediate threat to life, public health, and safety, to improve public or private property, or to ensure the economic recovery of the affected community to the benefit of the community at large;
- An eligible applicant, such as a municipal or county government or its contractors, performs the work;
- The private property owner has provided all insurance information;

- It is pre-approved by the CDM; and
- The following required legal documents are in place:
  - ✓ Insurance documents;
  - ✓ Hold Harmless Agreement;
  - ✓ Right-of-Entry Agreement. (**Attachment 10 – Right-of-Entry Permit/Attachment 11 – Denial of Right-of-Entry**)

In federally-declared events, applicants and property owners must be aware that only state and federal agencies make eligibility determinations regarding removal of debris from private property. Not all actions that may be taken by the jurisdictions are eligible for state and federal assistance.

9.3 Regulations for Demolition of Public and Private Buildings

9.3A State Regulations

Under Title 19, § 2930(4), the DES approves demolition of a damaged public facility or privately-owned building under the following standards, if the jurisdiction:

- Clearly possesses the legal authority and responsibility to demolish the damaged facility. The jurisdiction must also show that such demolition does not constitute a "taking," which would require compensation to the property owner;
- Inspects the building and determines it to be a health or safety hazard. The jurisdiction must have a certification to this effect signed by the appropriate agency official;
- Requests approval to demolish a privately-owned building. The local agency must be able to demonstrate that the property owner has no other source of funding to pay for structure demolition;
- Obtains a signed statement from the property owner to the effect that the property owner does not have insurance covering the damage or the demolition of the building;
- Obtains a signed statement from the property owner giving the local agency the right of entry and absolving the local agency and the state of any liability relative to demolition and removal; and
- Complies with any other applicable state or federal health and safety regulation, law, or general requirements.

Eligibility is limited to the cost of demolishing designated buildings to the top of the foundation, removal and hauling debris to the waste site, and potentially back-filling basements to a safe condition (only if determined that a public safety hazard exists).

9.3B Federal Regulations

Sections 403 and 407 of the Stafford Act allow for cost recovery for the demolition of unsafe public or private structures that pose an immediate threat to life, property, or public health and safety.

The following is a summary of the key items in the federal policy on the demolition of private and public facilities:

Public and Private Non-Profit (PNP) Eligible Facilities

- Section 403 requires that the structures must be damaged by the disaster;
- The structures must be determined, by local officials verified by state and federal officials, to be unsafe and pose an immediate danger to the public;
- Work must be completed within emergency work deadlines (44 CFR 206.204 – 6 months plus extensions); and
- Section 407 allows for demolition in the public interest and to ensure economic recovery, but only applies when the first two above-named criteria are met to the satisfaction of FEMA's Regional Director, and the structures have been uninhabited since the major disaster.

Private Structures

- The structures must meet the first three criteria defined above for Public and PNP Facilities;
- Liability and legal permission requirements must be met;
- Slabs or foundations, broken or intact, generally do not present a health or safety hazard to the general public. Slabs removed primarily for reconstruction are not eligible; and
- Individuals and private organizations (non PNPs) will not be reimbursed for their efforts on their own property.

For health and safety reasons, the following demolition costs are eligible:

- Capping wells;
- Pumping and capping septic tanks; and
- Filling in basements and swimming pools (only if determined that a public safety hazard exists).

Ineligible activities include:

- Concrete slabs removed for reconstruction purposes, even when brought to the curbside;
- Removal or covering of pads and driveways;
- Structures condemned as safety hazards before the disaster; and

- Habitable structures that are not yet damaged, even when they are in serious danger of total destruction (for example, on a failing slope).

9.4 Tree and Limb Removal

State and federal agencies have specific guidelines regarding debris-removal cost reimbursement for trees and limbs from private property. Hazardous trees and limbs may be eligible for removal if on public property, within or adjacent to improved or publicly-used space, or on private property if they meet the criteria of posing a threat. Examples include:

- Trees alongside public roadways;
- Trees within a naturalized area of public parks or golf courses; and
- Trees within private property posing a threat to health and public safety or to adjacent residences.

Hazardous trees that are unstable and leaning into the areas used by the public are eligible for removal. Normally, trees requiring removal are cut flush to the ground. Removal of cut trees from subdivisions under development or off the ROW in rural areas is typically not eligible, as this condition generally does not pose an immediate threat.

A tree with more than 50% of the tree crown destroyed or damaged, a split trunk, broken branches that expose the heartwood, or a tree that has been felled or uprooted is eligible for removal, especially if it is in a location approximate to or within public-use areas.

Hazardous limbs are also eligible for removal by state or federal agency. Hazardous limbs considered to pose a threat are those that are still hanging in the tree and are threatening a public-use area, such as a trail, sidewalk, road or golf cart path, or other improved and maintained property.

9.5 Hazardous Tree Stumps

Reimbursement for stump removal is extremely limited. Normally, reimbursement is limited to removing stumps that have been uprooted, and are located in an area where they would be a safety hazard. If a tree has been broken, instead of uprooted, the "stump hazard" is removed by cutting the tree at ground level.

The City will document the removal and handling of all stumps on a per-unit cost or those stumps that meet all of the following criteria:

- The stump has 50 percent or more of the root ball exposed (less than 50 percent of the root ball exposed would be flush cut);
- The stump is greater than 24 inches in diameter, as measured 24 inches above the ground;
- The stump is on improved public property or a public ROW; and
- The stump poses an immediate threat to life, public health, and safety.

For any uprooted stump that needs to be removed prior to FEMA's approval, the City will also document all of the following:

- Its location on public property, via photograph and GPS coordinates;
- Specifics of the threat;
- Diameter of the stump 24 inches from the ground; and
- Quantity of material needed to fill the resultant hole.

In some instances, grinding an uprooted stump and filling the resulting cavity may cost less than a complete extraction. In these cases, the City should present the cost comparison documentation to FEMA for consideration.

Stumps measuring 24 inches in diameter or less are not expected to require special equipment for removal. The City will document these with the normal tracking of tree debris.

9.6 Dead Animal Disposal

Disposal of dead animals (domestic pets, livestock, and wild animals) requires great care, particularly with regard to site selection. This is because as carcasses decompose, they release materials that can contaminate the environment or cause disease, particularly when the volume of carcasses is large.

The City should coordinate with the County's Animal Control Services and County Agricultural Commissioner to take required action for animal control measures. Should disposal of dead animals become necessary, the City will follow the following set of animal mortality management practices:

- **Temporary Storage of Carcasses for Transport to Rendering** – This is the preferred means of animal disposal, offering a relatively safe and integrated system that complies with the fundamental requirements of environmental quality and disease control.
- **Disposal at Permitted Landfills** – If rendering capacity is exceeded or suspended, permitted landfilling offers the next best environmental solution to the disposal of carcasses.

9.7 Human Waste

The Alameda County Department of Environmental Health has authority for public health issues. They should be consulted for guidance on how to properly manage and dispose of human waste during a disaster.

SECTION 10: PUBLIC INFORMATION PLAN

SECTION 10: PUBLIC INFORMATION PLAN

10.1 Public Information Officer Responsibilities

Section 1 of this Plan outlines the responsibilities of the PIO during a disaster event. All public information related to the management of disaster debris will be disseminated through the PIO until the recovery has stabilized and throughout the debris-removal stages. The PIO will work with the local jurisdictions and coordinate information through the County Emergency Management system. The PIO will keep the public informed of what to do to prevent injury or property damage and what to do with disaster debris through the available communication vehicles.

During any activation of the City's EOC, the PIO will be the primary point of contact between the EOC, the media, and the public, and will staff the EOC or a Joint Information Center in coordination with other local, state, and federal public information personnel. The PIO will be responsible for preparing information releases, briefing media representatives, providing press conferences, and overseeing rumor control activities. The City PIO will also train other City department personnel to provide PIO functions, if needed. Information will be provided to the media via news releases, news conferences, and media telephone inquiries.

Information regarding debris removal methods and estimates on when debris removal will begin may not be known at the start of the debris-generating event. It is anticipated that the City will work to prioritize collection of normal solid waste and recycling operations before working on accumulated debris piles. The PIO will communicate any necessary information about public handling and placement of disaster debris.

10.2 Public Education and Information

The City of Emeryville has developed a comprehensive emergency plan that establishes policies, guidance, authorities, roles, and responsibilities related to providing coordinated public information in the event of a disaster. The emergency plan was prepared in accordance with the California Emergency Plan and the Federal Response Framework format for emergencies and disasters.

The City's PWD conducts public education (e.g., insights and suggestions for reducing garbage and increasing the rate of recycling) as part of regular business. The division also disseminates preparedness and other public information on its website and at fairs, community outreach events, and meetings. Much of this information is based on all-hazards planning.

The City and County have developed extensive education and information resources that provide a frequent and consistent message designed to familiarize citizens with their role in the generation, diversion, and disposal of solid waste and recycling. After a debris-generating disaster event, these pre-scripted draft informational resources can be quickly customized to effectively educate the public about:

- Initial response-stage preparation of debris;

- Isolation of hazardous materials;
- Separation of divertible materials to the extent possible given the type and intensity of the disaster; and
- Disaster-debris removal schedules, when possible.

The public education and information resources will spotlight citizens' role in the safe, timely, and efficient removal of disaster debris. An example of public information to be disseminated to Emeryville residents is included as **Attachment 20 – Example Public Information Notice**.

To provide public education and information in the aftermath of a disaster, the City will use all available communications options, which may include: 911; telephone; radio (KCBS, KGO, KPFA, KALW); tv (ABC7, CBS5, KTVU2, KRON4, NBC11); and newspaper (Emeryville City News, The Journal, Oakland Tribune, Contra Costa Times, San Francisco Chronicle, Tri-Valley Herald, San Jose Mercury News). The PIO will also post alerts to these and other City and local internet sites and social media accounts (e.g., City and County governments, Fire, Police, library), as more and more residents use these media as their primary source of information, and this will allow the public to comment and voice their concerns:

- **City of Emeryville Emergency Alert web page:** https://www.ci.emeryville.ca.us/1103/Emergency-Alert-Notifications;
- **Twitter:** @EmeryvilleCA plus accounts for Police, Fire, and libraries in the City and Alameda County;
- **YouTube:** Although the Engage Emeryville program is currently used for non-emergency issues, this application could potentially be used to record up-to-the-minute videos that City residents could watch via computer or mobile device. More information at http://emeryville.org/1026/Engage-Emeryville-SeeClickFix;
- **Patch Media**: https://patch.com/california/alameda, for Alameda County emergency announcements;
- **Facebook:** https://www.facebook.com/AlamedaCounty/, for Alameda County emergency announcements plus accounts for Police, Fire, and libraries in the City and Alameda County;
- **Alameda County Community Emergency Response Team (CERT)** website Alerts: https://www.alamedaca.gov/RESIDENTS/ALERTS;

Other methods that will be employed by the City to disseminate public education and information following a disaster, depending on availability, include:

- **Free programs provided by Eden Information & Referral (Eden I&R),** the lead communications agency in Alameda County:
    - **AC Alert** disaster notification program: Alerts via phone/email/text (https://www.acgov.org/emergencysite);

- **Nixle** disaster notification program: Alerts via text (https://local.nixle.com/city/ca/emeryville/municipal/); and
- **2-1-1 Alameda County** disaster notification program: (http://www.211alamedacounty.org/), a public information service that allows residents to call in for general community information as well as emergency public information. The use of this service is especially important when 9-1-1 is overloaded.

The City's choice of communication methods will be dependent upon whether power is available. Immediately following a serious earthquake, a large flood, specific flash flooding, or severe storms, numerous failures may occur, compounded by system-use overloads:

- Telephone systems may be affected by system failure, overloads, loss of electrical power, and possible failure of alternate power systems.
- This will likely disable up to 80% of the telephone system for at least one day, although a week of interruption could occur.
- Radio systems are expected to operate at 40% effectiveness the first 12 hours following a major earthquake, increase to 50% for the second 12 hours, then begin to slowly decline to approximately 40% within 36 hours.

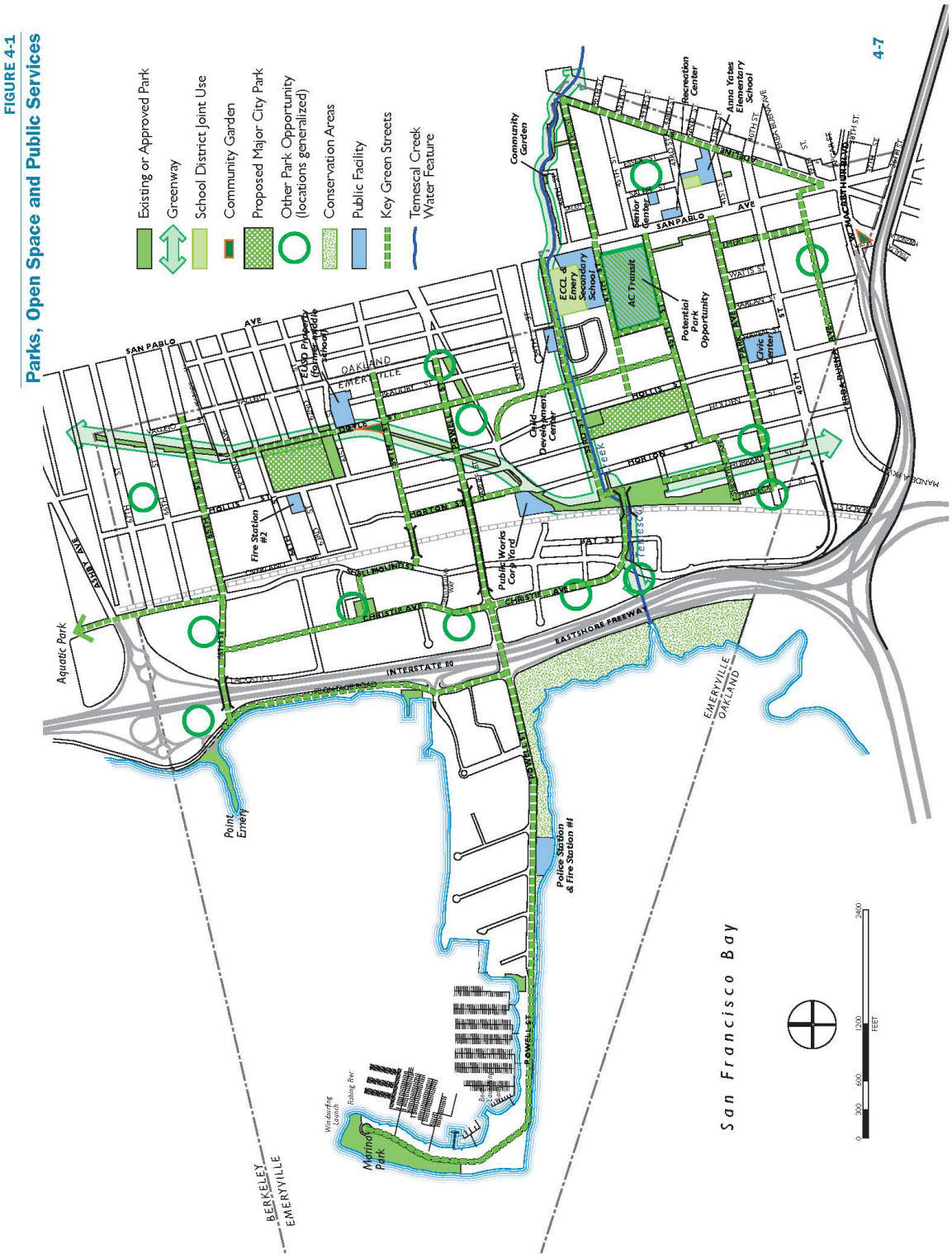
In the event of a federally declared disaster, addition to the public education and information methods utilized by the City, Cal OES and FEMA will also broadcast alerts through the Emergency Alert System (a national public warning system) via all broadcast media and potentially also through the following sites: https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/warning-center/emergency-alert-system/ and https://twitter.com/fema?lang=en.

The City will consider the information delivery needs of People with Access and Functional Needs (PAFNs) , including those who speak and/or read languages other than English. The PIO will work with the EOC to determine the PAFN demographics of the affected populations and to implement specialized communication dissemination methods, as needed.

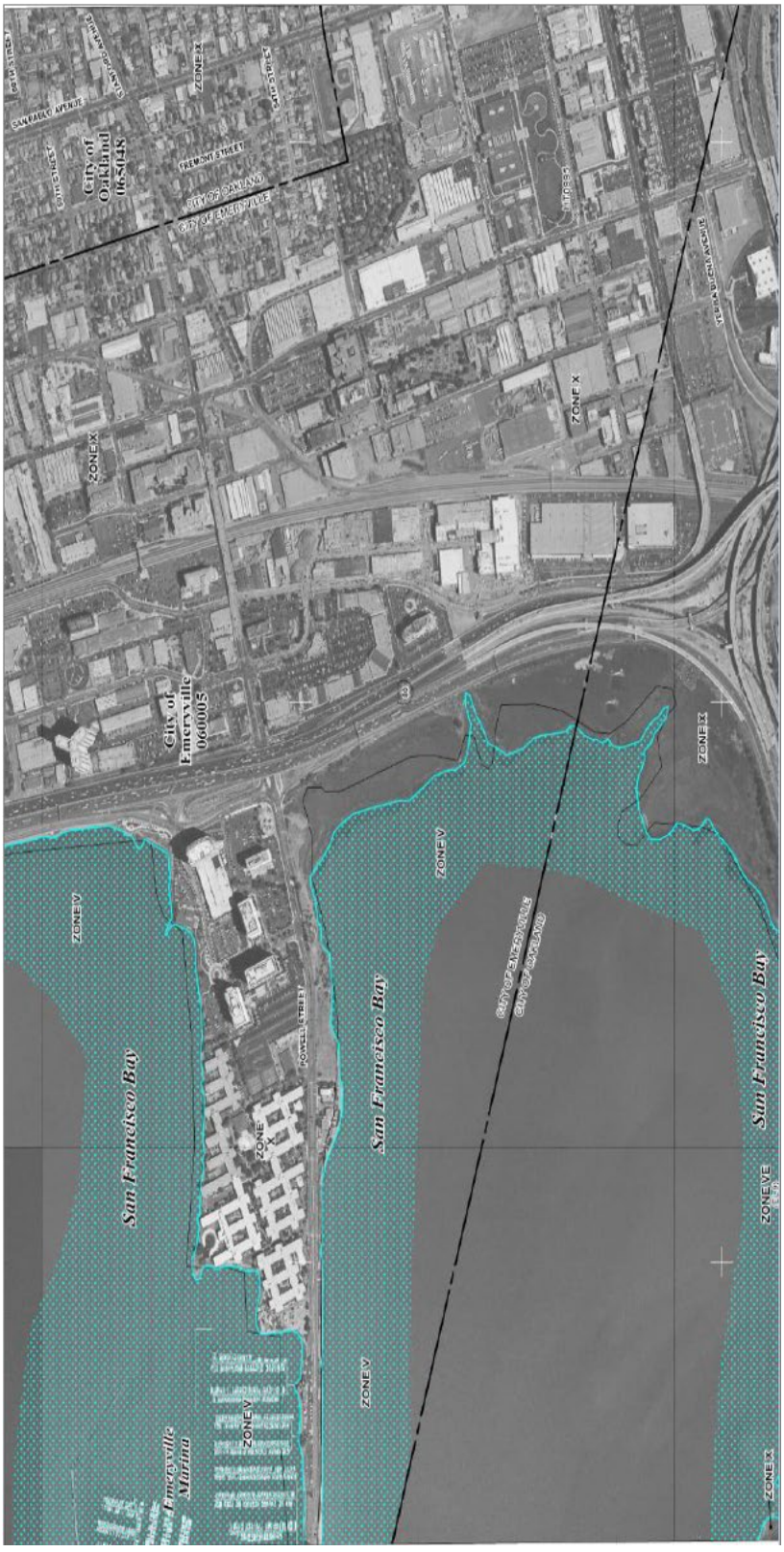
The City will also consider the information delivery needs of those residents in multi-family dwelling (MFD) buildings, given its large MFD population, some of whom rely on their building manager to share information about what to do with debris (e.g., refuse, recyclables, and other debris). City staff will develop and maintain a list of primary points of contact (i.e., manager or owner) for each multi-family building to aid in the dissemination to tenants of debris-recovery information, in the event of a disaster.

ATTACHMENTS

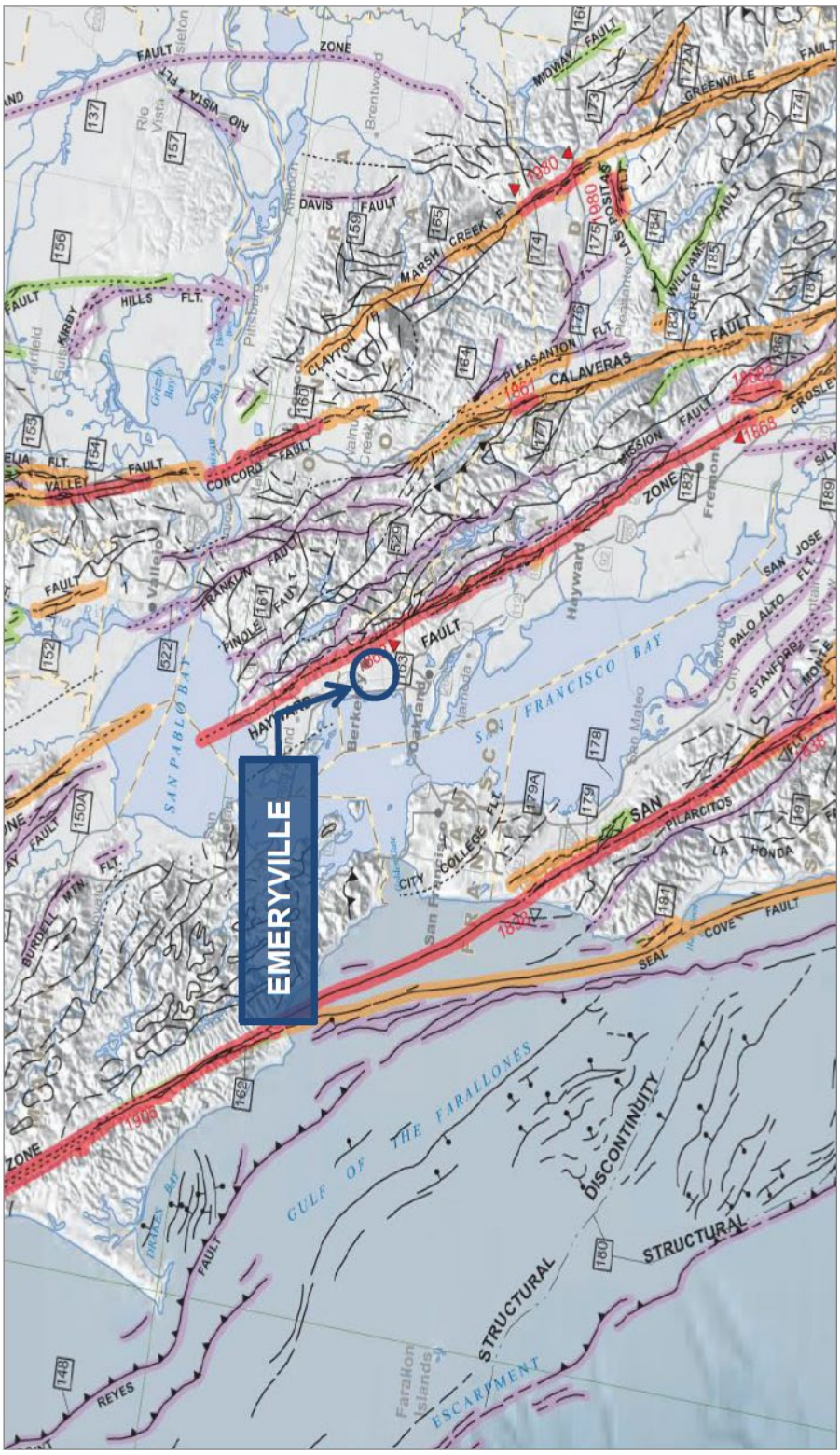
ATTACHMENT 1 – CITY OF EMERYVILLE AREA MAP



ATTACHMENT 2 – FEMA FLOOD ZONE MAPS

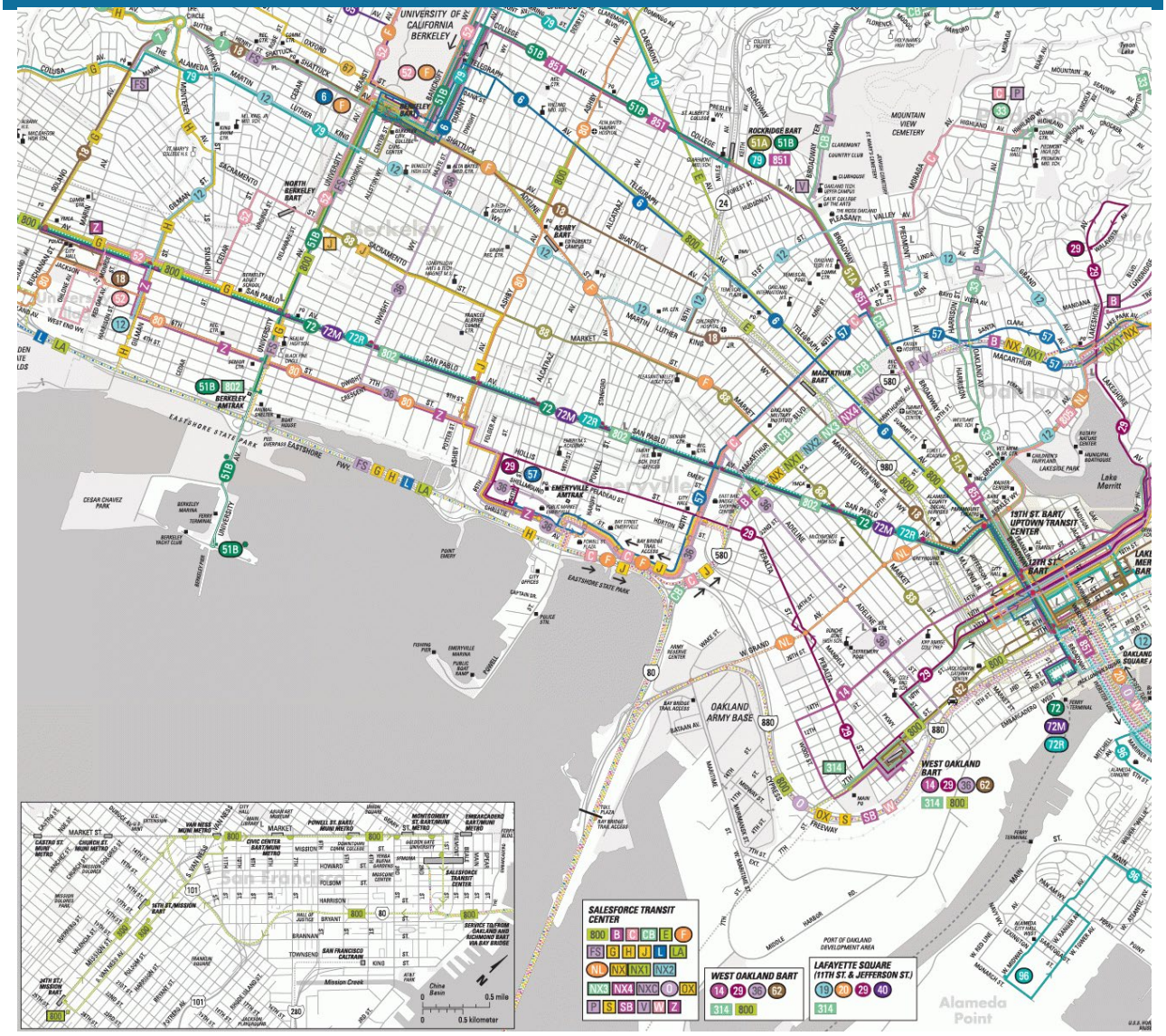


ATTACHMENT 3 – FAULTS MAP



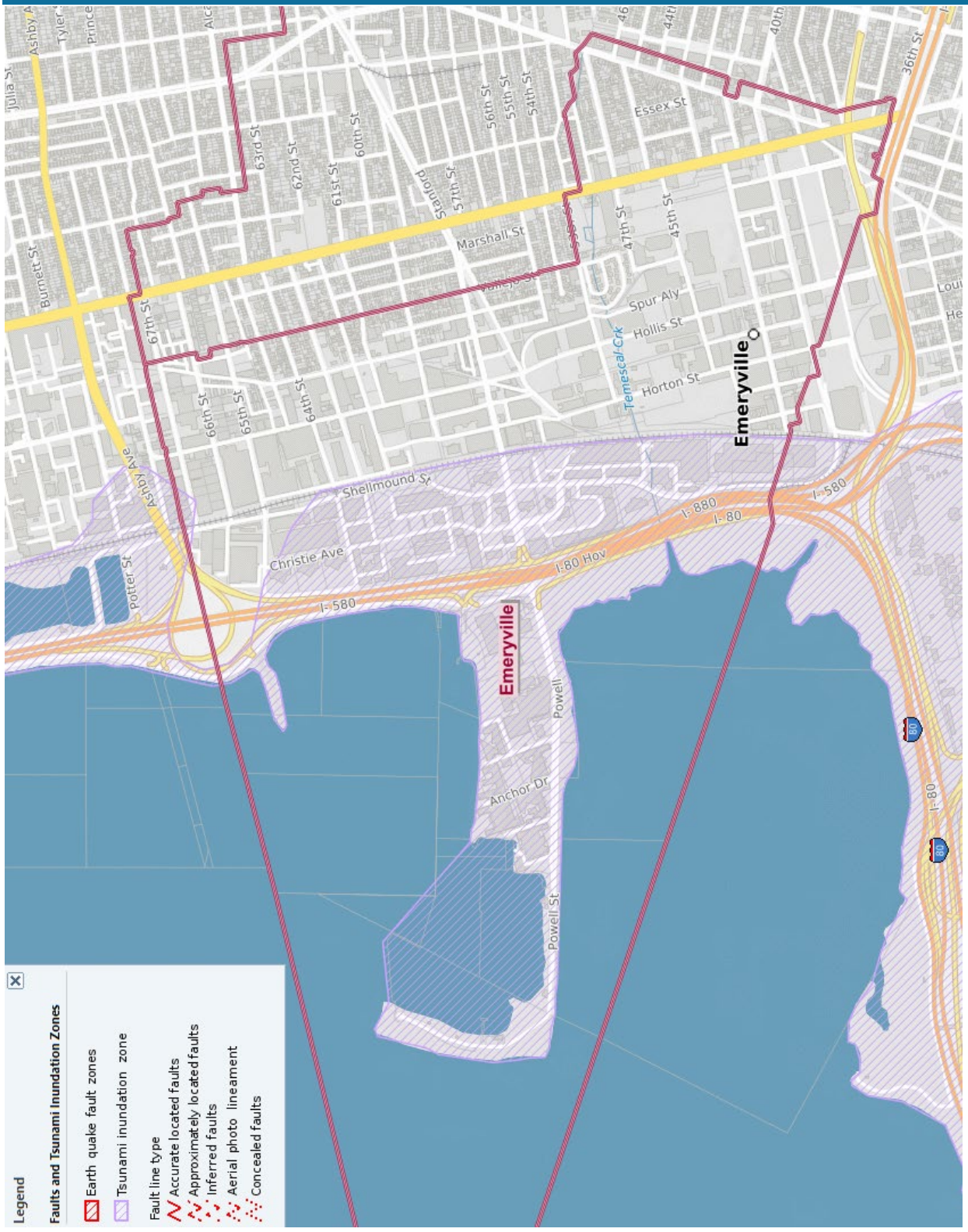
*Source: City of Emeryville, Local Hazard Mitigation Plan, 2019-2024

ATTACHMENT 4 – TRANSIT ROUTES IN CITY OF EMERYVILLE[7]



[7] For complete maps and schedules, visit Alameda-Contra Costa Transit District's website, http://www.actransit.org/maps/maps_results.php?ms_view_type=2&maps_category=1&maps_line=city_map&version_id=41&map_submit=Get+Map

ATTACHMENT 5 – TSUNAMI INUNDATIONS MAP



*Source: https://www.propertyshark.com/mason/ca/Alameda-County/Maps/Fema-Flood-Hazard-Areas

ATTACHMENT 6 – CRITICAL FACILITIES AND INFRASTRUCTURE

CDAA requires documentation for damages sustained to the following: public buildings; levees; flood control work; irrigation works; county roads; city streets; bridges, and other public works.

FEMA requires documentation for damages sustained to the following: roads; water control facilities; public buildings and related equipment; public utilities; facilities under construction; recreational and park facilities; educational institutions; and certain private non-profit facilities.

The following are critical facilities and infrastructure identified in the City.

Primary Facilities

- **EMERGENCY OPERATION CENTER**
  Alameda County Fire Station No. 35
  6303 Hollis Street
- **Police Station**
  2449 Powell Street
- **Alameda County Fire Station No. 34**
  2333 Powell Street

Secondary Facilities

- **Emeryville Center of Community Life**
  1100 47th Street and 4729 San Pablo Avenue
    - Emery High School
    - Anna Yates Elementary and Middle School

Priority Response Facilities

Public Schools

- **Emeryville Center of Community Life**
  1100 47th Street and 4729 San Pablo Avenue
    - Emery High School
    - Anna Yates Elementary and Middle School

Private Schools

- **Guidepost Montessori School**
  1450 63rd Street
- **Pacific Rim International School**
  5521 Doyle Street
- **Escuela Bilingüe Internacional**
  4550 San Pablo Avenue
- **German International School of Silicon Valley**
  1070 41st Street

Senior Centers / Housing

- **Veteran's Memorial/Senior Center**
  4321 Salem Street
- **Emeryville Senior Living**
  4320 San Pablo Avenue
- **Private Marina**
  3300 Powell Street
- **Age Song Senior Living**
  1440 4th Street
- **Avalon Senior Living**
  3850 San Pablo Avenue

Apartment Complexes

- **Watergate Towers**
  1900, 2000, 2100, and 2200 Powell Street
- **Pacific Park Plaza**
  6363 Christie Avenue
- **Avenue 64**
  6399 Christie Avenue
- **Artistry Emeryville Apartments**
  6401 Shellmound Street
- **Avalon Public Market Apartments**
  6301 Shellmound Street
- **Icon at Doyle**
  5540 Doyle Street
- **Oliver Lofts**
  1200 65th Street
- **Bridgewater**
  6400 Christie Avenue
- **AVE Emeryville at Bay Street**
  5684 Bay Street
- **Emme 64th**
  6350 Christie Avenue
- **Parc on Powell**
  1333 Powell Street
- **The Terraces at Emerystation**
  5855 Horton Street
- **The Courtyards at 65th Street**
  1465 65th Street
- **Bayview Apartments**
  6701 Shellmound Street

Hotels

- **Hyatt House Hotel**
  5800 Shellmound
- **Hyatt Hotel**
  5700 Bay Street
- **Hilton Garden Inn**
  1800 Powell Street
- **Sonesta Hotels and Resorts**
  5555 Shellmound
- **Four Points Sheraton Hotel**
  1603 Powell Street

Miscellaneous

- **AC Transit**
  1147 47th Street
- **Powell Street Overpass**
  Between Christie Avenue and Hollis Street, all streets between Anchor Drive and Captain Drive (Captain Drive, Commodore Drive, Admiral Drive, Anchor Drive)

Vulnerable Public Facilities

- **Child Development Center**
  1220 53rd Street
- **Veteran's Memorial/Senior Center**
  4321 Salem Street
- **Civic Center**
  1333 Park Avenue
- **Emeryville Amtrak Station**
  5885 Horton Street
- **Marina Pier & Pump Station**
  3300 Powell Street
- **Emeryville Center for the Arts**
  4062 Hollis Street
- **Alameda County Fire Station No. 35**
  6303 Hollis Street
- **Alameda County Fire Station No. 34**
  2333 Powell Street
- **Police Station**
  2449 Powell Street
- **Doyle/Hollis Park** – restrooms building
- **Community Shelter** - modular (Temporary Emergency Shelter)
- **City of Emeryville Corporation Yard**
  5900 Christie Avenue
  5890 Christie Avenue
  5679 Horton Street

Critical Infrastructure and Utilities

Responsible Agency	Vulnerable Infrastructure in Emeryville
City of Emeryville	• City facilities, streets and storm drains • Sanitary sewer collection system connected to wastewater treatment system • Creeks, open channels, and creek culverts in ROW and on City property • Streetlights, traffic signals, and conduits supplied from the PG&E system
East Bay Municipal Utility District	• Potable and fire suppression water supply system consisting of pipelines and hydrants • Sanitary sewer transmission pipeline
PG&E	• Electricity and natural gas distribution system, including utility poles and substations owned by the Pacific Gas and Electric Company
Telecommunication providers	• Telecommunication aerial and underground conduits • Telecommunications antennae • Fiber optic cabling
Amtrak Station	• Railroad tracks
Caltrans	• I-80 • I-580 • I-880
Kinder Morgan Corporation	• Aviation fuel pipeline

ATTACHMENT 7 – C&D FACILITIES IN THE REGION

The primary streams likely to be collected for recycling include metals, clean vegetative debris, and construction materials. These facilities take a range of materials and should be contacted to determine which materials they are taking at any given time, since markets change continuously. This is not an exhaustive list of C&D facilities.

FACILITY	ADDRESS	PHONE
Davis Street Transfer Station *	2615 Davis Street San Leandro, CA 94577	510-638-2303
Altamont Landfill	10840 Altamont Pass Road Livermore, CA	866-909-4458
Vasco Road Landfill	4001 North Vasco Road Livermore, CA	925-453-3621
Certified Blue Recycling, Inc.	2075 Williams Street San Leandro, CA 94577	510-346-8800
Commercial Waste & Recycling, LLC *	725 Independent Road Oakland, CA 94621	510-636-0852
Hayward Transfer Station	3458 Enterprise Avenue Hayward, CA 94545	510-397-1120
Blue Line Transfer, Inc.	500 East Jamie Court South San Francisco, CA 94080	650-589-4020
Independent Recycling Services	9039 San Leandro Street Oakland, CA 94603	831-637-8803
Marin Resource Recovery Center	565 Jacoby Street San Rafael, CA 94901	415-485-5648
West Contra Costa Sanitary Landfill	1 Parr Boulevard Richmond, CA 94801	510-233-4330
Zanker Materials Processing Facility *	675 Los Esteros Road San Jose, CA 95134	408-263-2385
Premier Recycle *	260 Leo Avenue San Jose, CA 95112	408-297-7910
Recology San Francisco	501 Tunnel Avenue San Francisco, CA 94134	415-330-1400

The facilities in the above table marked with an asterisk (*) have been certified by the Recycling Certification Institute as having demonstrated a high diversion rate. In addition to the facilities listed above, the Berkeley transfer station, the Pleasanton transfer station, the Contra Costa transfer station, and the ACI transfer station in San Leandro all recycle mixed C&D.

ATTACHMENT 8 – LOAD (INCOMING) TICKET

City of Emeryville CALIFORNIA	**City of Emeryville**	**LOAD TICKET** #

Applicant:	Disaster #:	
Program:	Contractor:	
Truck #:	Truck Capacity:	
House #:	Street Name:	Zone #:

Debris Classification:

o Vegetative / Woody o Mixed

o Construction & Demolition o White Goods

o Household Hazardous Waste o Animal Carcasses

Driver's Name:	Loading Odometer:
Loading Time:	Loading Date:
Monitor Signature:	I.D. #
TDMS / Disposal Site Location:	
Load Call (%)	Disposal Odometer:
Disposal Time:	Disposal Date:
Monitor Signature:	I.D. #
Contractor Signature:	I.D. #
Notes:	

ATTACHMENT 9 – HAUL OUT (OUTGOING) TICKET

City of Emeryville CALIFORNIA	**City of Emeryville**	**HAULOUT TICKET** #

Applicant:	Disaster #:
Program:	Contractor:
Truck #:	Truck Capacity:
TDMS Site:	

Debris Classification:

- o Vegetative Mulch
- o Ash
- o C & D Mulch
- o C & D Compacted
- o White Goods
- o Hazardous Materials / Toxic
- o Household Hazardous Waste
- o Other: _____

Driver's Name:	Loading Odometer:
Loading Time:	Loading Date:
Monitor Signature:	I.D. #
TDMS / Disposal Site Location:	Disposal Odometer:
Load Call (%)	Weight (tons / lbs.)
Disposal Time:	Disposal Date:
Monitor Signature:	I.D. #
Contractor Signature:	I.D. #
Notes:	

ATTACHMENT 10 – RIGHT-OF-ENTRY PERMIT

City of Emeryville
CALIFORNIA

RIGHT-OF-ENTRY PERMIT

_____ ("Owner), hereby permits the City of Emeryville, its officers, employees, agents, contractors and subcontractors ("City"), to enter upon Owner's property commonly identified as (address) _____, City of Emeryville, State of California ("Premises") upon the following terms and conditions:

1. Grant of Right-of-Entry. Owner hereby grants City a right-of-entry ("Permit") onto, over, in, and under the Premises for the purpose of inspecting the Premises, testing materials on the Premises, removing and clearing any or all incident-generated debris from the Premises, subject to the terms and conditions set forth in this Permit. It is fully understood that this Permit does not create any obligation on the part of City to perform inspection, testing, or debris removal and clearance. Owner understands that the City will undertake no inspection, testing, or debris removal and clearance action until this Right-of-Entry Permit is completed in full, signed by Owner, and returned to the City.

2. Private Insurance Coverage. Owner agrees to cooperate with the City throughout the insurance claims process as set forth below:
(a) Insurance Policy Information. Check one: The Premises (____ were ____ were not) insured at the time of the incident.

If the Premises were insured, all of the information listed below must be provided. If the Premises were insured by more than one policy, the information listed below must be provided for each policy.

Attach additional if necessary:

Policy holder(s): _____
Insurance company name: _____
Insurance policy number: _____
Insurance company address for claims: _____
Agent's name and address: _____
Agent's phone number: _____
Has the insurer been notified of this loss? _____ (Yes or No)
If so, when was notice provided? _____
How and where was notice provided? _____

(b) Owner agrees to provide to City a complete copy of this policy as soon as possible.
(c) Owner agrees to provide to City a copy of any claim or loss statement tendered to insurer when that statement is provided to the insurer.
(d) Owner agrees to provide to City a copy of any settlement statement or agreement within five days after that statement or agreement is received from insurer.
(e) Owner agrees not to enter into any confidentiality agreement with insurer that would impede the ability of Owner to provide the information set about above.
(f) Owner agrees that City may request copies of any insurance policy, claim or loss statement, or settlement statement or agreement directly from insurer or from Owner's attorney. Owner hereby instructs his or her insurer and attorney to provide such documents directly to City at City's request. If Owner indicated in 2(a) above that the Premises were not insured, Owner certifies under penalty of perjury that there was no insurance in effect at the same time of the fire which may provide coverage for the costs of inspection, testing, or debris removal and clearance.

3. Prohibition on Duplication of Benefits. Owner understands that, pursuant to federal law, if Owner receives federal financial assistance to cover the costs of inspection, testing, or debris removal and clearance, Owner will be required to reimburse such federal financial assistance to the extent that those costs are covered by Owner's insurance policy or some other source. (42 USC §5155, et seq.)

Owner (____ has ____ has not) and (____ will ____ will not) received(d) any compensation for inspection, testing, and/or debris removal and clearance from any other public source, including Small Business Administration (SBA), individual and family grant program, or any other public assistance program.

4. Insurance Proceeds.
(a) City's Limited Right to Reimburse from Insurance Proceeds. Owner will advise City in writing within 10 days of Owner's receipt of any insurance settlement proceeds for disaster-related inspection, testing, or debris removal and clearance. Owner further agrees to reimburse the City, within 30 days of Owner's receipt of such insurance proceeds, for the cost of the inspection, testing, and debris removal and clearance conducted by the City. In the event the insurance proceeds fairly allocated or awarded for the cost of disaster-related inspection, testing, or debris removal and clearance are less than the cost of inspection, testing, and debris removal and clearance incurred by the City, Owner will not be responsible for the difference. If the insurance proceeds for the cost of the disaster-related inspection, testing, or debris removal and clearance exceed the City's cost of inspection, testing, and debris removal and clearance, City will have no right to any such excess proceeds.
(b) Audit. Owner understands that all disaster-related funding, including that for inspection, testing, or debris removal and clearance on private property is subject to audit.

5. Hold Harmless. City shall not be liable for, and Owner shall indemnify and hold harmless, City, the United States Government, FEMA, the State of California and any of their officers, agencies, agents, contractors, subcontractors, employees, and volunteers, against any and all claims,

deductibles, self-insured retentions, demands, liability, judgments, awards, fines, mechanic's liens or other liens, labor disputes, losses, damages, expenses, personal injury, charges or costs of any kind or character, including attorney's fees and court costs (hereinafter collectively referred to as "Claims"), which arise out of or are in any way connected to actions arising out of this Permit, and hereby release, discharge, and waive any claims and actions, in law or equity, arising therefrom.

6. Notice of Hazards. Owner indicates that he/she/they is/are aware that the following items were present on the Premises immediately prior to the incident, by **circling them below**:

Propane tanks
Acetylene cylinders
Compressed gas cylinders
Guns
Ammunition
Hazardous substances
Septic tanks
Underground storage tanks
Other known hazards (describe): _____

The above-circled items were located in the following areas of the Premises (describe locations):
_____
_____
_____
_____
_____

7. Special Requests. If Owner desires that any item(s) not be removed from the Premises pursuant to this Permit, Owner shall clearly mark those items in advance of the commencement of debris removal and clearance activities on the Premises. However, should the City determine that some or all of such items should be removed from the Premises and disposed of for health and safety reasons, Owner agrees that the City is authorized to remove and dispose of those items without compensation or other obligation to Owner.

8. No City Assumption of Liability for Remediation. In consideration of the assistance City is providing to the Owner under the Permit, at no cost to Owner, City assumes no liability or responsibility, and Owner shall not seek to recover from City, the United States Government, FEMA, the State of California or any of their officers, agencies, agents, contractors, subcontractors, employees, and volunteers, the costs of remediating any damages to the Premises incurred as a result of acts or omissions taken pursuant to this Permit.

9. City's Agents. Any person, firm, corporation or other entity authorized by the City to work upon the Premises pursuant to this Permit shall be deemed to be City's agent, including but not

limited to the California Environmental Protection Agency and its contractors, and shall be subject to all applicable terms of this Permit.

10. Authority. Owner represents and warrants that Owner has full power and authority to execute and fully perform Owner's obligations under this Permit. If Owner is an entity, Owner also represents and warrants that Owner has such power and authority pursuant to its governing instruments, without the need for any further action, and that the person(s) executing this Permit on behalf of Owner are the duly designated agents of Owner and are authorized to do so. Owner expressly represents and warrants that fee title to the Premises is vested solely in Owner.

11. Entire Agreement. This Permit constitutes the entire agreement between the parties with respect to the subject matter hereof, and all prior to contemporaneous agreements, understandings and representations, oral or written, are superseded.

12. Modification. The provisions of this Permit may not be modified, except by a written instrument signed by all parties to this Permit.

13. Partial Invalidity. If any provision of this Permit is determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Permit shall not be affected thereby. Each provision shall be valid and enforceable to the fullest extent permitted by law.

14. Successors & Assigns. This Permit shall bind and benefit the parties and their successors and assigns, except as may otherwise be provided herein.

15. Notices. Any notice required hereunder shall be provided as follows:

For the City:
Name: _____
Department:
Address: NEED ADDRESS
Emeryville, CA
Phone number:

For the Owner:
Name: _____
Address #1: _____
_____
_____
Address #2: _____
_____
Phone number: _____
Cell phone number: _____
Work phone number: _____
Email address: _____

IN WITNESS WHEREOF, Owner and City have executed this Permit as of the date and year set forth below:

CITY:
City of Emeryville
By:

_____
Name: _____
Title: _____
Date: _____

OWNER:
Property Address: _____
By: _____
(Owner's signature)
Print Name: _____
Title if applicable: _____
Date: _____

ATTACHMENT 11 – DENIAL OF RIGHT-OF-ENTRY

City of Emeryville
CALIFORNIA

DENIAL-OF-RIGHT-OF-ENTRY/REQUEST FOR VOUCHERS
(Re: Debris Removal and Clean-up on Private Property)

I, _____ ("Owner"), am the owner of that real property
(address)_____,
APN# _____ ("Premises"). I have been advised of and understand that the City of Emeryville ("City") has collaborated with various state agencies to develop an inspection, testing, and debris removal and clean-up program relating to _____. The program provides for the inspection, testing, and removal of all disaster-generated debris pursuant to uniform requirements for debris removal developed by the City of Emeryville and state agencies. I understand that as part of the inspection, testing, and debris removal and clean-up, the City has sought my permission to enter the Premises.

By signing this form, I am **denying consent** to the City, its officers, employees, and agents upon the Premises for purposes of implementing the inspection, testing, and debris removal and clearance plan described above.

I understand that by denying consent to the City, its officers, employees, and agents to enter upon the Premises, I am accepting responsibility for the inspection, testing, and removal of all disaster-generated debris of whatever nature from the Premises, at my expense, in compliance with all federal laws and regulations, local codes and ordinances, and the uniform requirements for debris removal developed by the City of Emeryville in conjunction with the state agencies referenced above.

For purposes of this document, "City Agents" are defined as any person, agency, firm, corporation, or other entity authorized by the City to work upon the Premises including, but not limited to, the California Environmental Protection Agency and its contractors.

Owner represents and warrants that Owner has full power and authority to execute this Denial of Right-of-Entry. If Owner is an entity, Owner also represents and warrants that it has such power and authority pursuant to its governing instruments, without the need for any further action, and that the person(s) executing the Denial Right-of-Entry on behalf of Owner are the duly designated agents of Owner and are authorized to do so. Owner expressly represents that the fee title to the Premises is vested solely in Owners.

OWNER: Property Address:

_____
_____
_____
_____

APN#: _____

By: _____
(Signature of Owner)

Print Name: _____

Title if Applicable: _____

Date:_____

Alternate Address: _____
_____
_____

Phone #1: _____

Phone #2: _____

Email Address: _____

ATTACHMENT 12 – FEMA SCHEDULE OF EQUIPMENT RATES

FEMA's SCHEDULE OF EQUIPMENT RATES

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
RECOVERY DIRECTORATE
PUBLIC ASSISTANCE DIVISION
WASHINGTON, DC 20472

The rates on this Schedule of Equipment Rates are for applicant owned equipment in good mechanical condition, complete with all required attachments. Each rate covers all costs eligible under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5121, et seq., for ownership and operation of equipment, including depreciation, overhead, all maintenance, field repairs, fuel, lubricants, tires, OSHA equipment and other costs incidental to operation. Standby equipment costs are not eligible.

Equipment must be in actual operation performing eligible work in order for reimbursement to be eligible. LABOR COSTS OF OPERATOR ARE NOT INCLUDED in the rates and should be approved separately from equipment costs.

Information regarding the use of the Schedule is contained in 44 CFR § 206.228 Allowable Costs. Rates for equipment not listed will be furnished by FEMA upon request. Any appeals shall be in accordance with 44 CFR § 206.206 Appeals.

THESE RATES ARE APPLICABLE TO MAJOR DISASTERS AND EMERGENCIES
DECLARED BY THE PRESIDENT ON OR AFTER SEPTMBER 1, 2017.

FEMA Code ID		Equipment Description					
Cost Code	Equipment	Specifications	Capacity or Size	HP	Notes	Unit	2017 Rate
8010	Air Compressor	Air Delivery	41 CFM	to 10	Hoses included.	hour	$1.51
8011	Air Compressor	Air Delivery	103 CFM	to 30	Hoses included.	hour	$8.84
8012	Air Compressor	Air Delivery	130 CFM	to 50	Hoses included.	hour	$11.14
8013	Air Compressor	Air Delivery	175 CFM	to 90	Hoses included.	hour	$18.39
8014	Air Compressor	Air Delivery	400 CFM	to 145	Hoses included.	hour	$30.47
8015	Air Compressor	Air Delivery	575 CFM	to 230	Hoses included.	hour	$48.71
8016	Air Compressor	Air Delivery	1100 CFM	to 355	Hoses included.	hour	$92.88
8017	Air Compressor	Air Delivery	1600 CFM	to 500	Hoses included.	hour	$96.96
8040	Ambulance			to 150		hour	$28.00
8041	Ambulance			to 210		hour	$40.50
8050	Board, Arrow			to 8	Trailer Mounted.	hour	$4.43
8051	Board, Message			to 5	Trailer Mounted.	hour	$11.61
8060	Auger, Portable	Hole Diameter	16 In	to 6		hour	$2.14
8061	Auger, Portable	Hole Diameter	18 In	to 13		hour	$4.30
8062	Auger, Tractor Mntd	Max. Auger Diameter	36 In	to 13	Includes digger, boom and mounting hardware.	hour	$3.16
8063	Auger, Truck Mntd	Max. Auger Size	24 In	to 100	mounting hardware. Add this rate to tractor rate for total	hour	$34.28
8064	Hydraulic Post Driver					hour	$35.10
8065	Auger	Horizontal Directional Boring Machine	250 X 100	300	DD-140B YR-2003	hour	$169.40
8066	Auger	Horizontal Directional Boring Machine	50 X 100			hour	$31.95
8067	Auger, Directional Boring Machine	Auger, Directional Boring Machine				hour	$36.97
8070	Automobile			to 130	Transporting people.	mile	**$0.535**
8071	Automobile			to 130	Transporting cargo.	hour	$12.32
8072	Automobile, Police			to 250	Patrolling.	mile	**$0.535**
8073	Automobile, Police			to 250	Stationary with engine running.	hour	$15.69
8075	Motorcycle, Police					mile	**$0.505**
8076	Automibile - Chevy Trailblazer	6 or 8 cl		285 to 300		hour	$22.00
8077	Automobile - Ford Expedition	Fire Command Center				hour	$19.00
8080	All Terrain Vehicle (ATV)	Engine 110cc, 4-Wheel; 20" tyre		6.5-7.5		hour	$8.20
8081	All Terrain Vehicle (ATV)	Engine 125cc, 4-Wheel; 21" tyre		7.6-8.6		hour	$8.50
8082	All Terrain Vehicle (ATV)	Engine 150cc, 4-Wheel; 22" tyre		9.0-10.0		hour	$8.51
8083	All Terrain Vehicle (ATV)	Engine 200cc, 4-Wheel; 24" tyre		12-14.0		hour	$9.00
8084	All Terrain Vehicle (ATV)	Engine 250cc, 4-Wheel; 24" tyre		15-17		hour	$9.40

8085	All Terrain Vehicle (ATV)	Engine 300cc, 4-Wheel; 24" tyre		18-20		hour	$10.20
8086	All Terrain Vehicle (ATV)	Engine 400cc. 4-Wheel; 25" tyre		26-28		hour	$11.64
8087	All Terrain Vehicle (ATV)	Engine 450cc, 4-Wheel; 25" tyre		26-28		hour	$12.40
8088	All Terrain Vehicle (ATV)	Engine 650cc, 4-Wheel; 25" tyre		38-40		hour	$13.20
8089	All Terrain Vehicle (ATV)	Engine 750cc, 4-Wheel; 25" tyre		44-46		hour	$14.00
8110	Barge, Deck	Size	50'x35'x7.25'			hour	$49.10
8111	Barge, Deck	Size	50'x35'x9'			hour	$58.70
8112	Barge, Deck	Size	120'x45'x10'			hour	$109.50
8113	Barge, Deck	Size	160'x45'x11"			hour	$133.75
8120	Boat, Tow	Size	55'x20'x5'	to 870	Steel.	hour	$317.54
8121	Boat, Tow	Size	60'x21'x5'	to 1050	Steel.	hour	$358.65
8122	Boat, Tow	Size	70'x30'x7.5'	to 1350	Steel.	hour	$569.00
8123	Boat, Tow	Size	120'x34'x8'	to 2000	Steel.	hour	$1,094.24
8124	Airboat	815AGIS Airboat w/spray unit	15'x8'	400		hour	$31.00
8125	Airboat	815AGIS Airboat w/spray unit	15'x8'	425		hour	$31.95
8126	Swamp Buggy	Conquest		360		hour	$39.25
8129	Compactor -2-Ton Pavement Roller	2 ton				hour	$28.25
8130	Boat, Row				Heavy duty.	hour	$1.44
8131	Boat, Runabout	Size	13'x5'	to 50	Outboard.	hour	$12.00
8132	Boat, Tender	Size	14'x7'	to 100	Inboard with 360 degree drive.	hour	$16.50
8133	Boat, Push	Size	45'x21'x6'	to 435	Flat hull.	hour	$217.20
8134	Boat, Push	Size	54'x21'x6'	to 525	Flat hull.	hour	$267.35
8135	Boat, Push	Size	58'x24'x7.5'	to 705	Flat hull.	hour	$325.35
8136	Boat, Push	Size	64'x25'x8'	to 870	Flat hull.	hour	$358.50
8140	Boat, Tug	Length	16 Ft	to 100		hour	$42.60
8141	Boat, Tug	Length	18 Ft	to 175		hour	$62.55
8142	Boat, Tug	Length	26 Ft	to 250		hour	$78.95
8143	Boat, Tug	Length	40 Ft	to 380		hour	$196.50
8144	Boat, Tug	Length	51 Ft	to 700		hour	$271.85
8147	Boat, Inflatable Rescue Raft	Zodiac				hour	$1.10
8148	Boat, Runabout	1544 lbs	11 passenger capacity	190-250		hour	$62.55
8149	Boat, removable engine	2000 Johnson Outboard Motor w 15" shaft		15		hour	$1.50
8150	Broom, Pavement	Broom Length	72 In	to 35		hour	$24.50
8151	Broom, Pavement	Broom Length	96 In	to 100		hour	$27.60
8153	Broom, Pavement, Mntd	Broom Length	72 In	to 18	Add Prime Mover cost for total rate	hour	$6.20
8154	Broom, Pavement, Pull	Broom Length	84 In	to 20	Add Prime Mover cost for total rate	hour	$20.77
8157	Sweeper, Pavement			to 110		hour	$76.70
8158	Sweeper, Pavement			to 230		hour	$96.80
8180	Bus			to 150		hour	$20.95
8181	Bus			to 210		hour	$25.45
8182	Bus			to 300		hour	$38.35
8183	Blower	Gasoline powered Toro Pro Force		27		hour	$15.37
8184	Back-Pack Blower			to 4.4		hour	$1.50
8185	Walk-Behind Blower			13		hour	$6.50
8187	Chainsaw	20" Bar, 3.0 cu in				hour	$1.40
8188	Chainsaw	20" Bar 5.0 cu in				hour	$2.45
8189	Chainsaw	20" Bar 6.0 cu in				hour	$2.65
8190	Chain Saw	Bar Length	16 In			hour	$1.70
8191	Chain Saw	Bar Length	25 In			hour	$3.45
8192	Chain Saw, Pole	Bar Size	18 In			hour	$1.25
8193	Skidder	model 748 E		to 173		hour	$52.70
8194	Skidder	model 648 G11		to 177		hour	$104.30
8195	Cutter, Brush	Cutter Size	8 ft	to 150		hour	$115.35
8196	Cutter, Brush	Cutter Size	8 ft	to 190		hour	$129.35
8197	Cutter, Brush	Cutter Size	10 ft	to 245		hour	$136.30

8198	Bruncher Cutter	Cutter, Brush - 247 hp, 1997 Model 511 Feller		to 247		hour	$187.75
8199	Log Trailer	40 ft				hour	$9.90
8200	Chipper, Brush	Chipping Capacity	6 In	to 35	Trailer Mounted.	hour	$8.60
8201	Chipper, Brush	Chipping Capacity	9 In	to 65	Trailer Mounted.	hour	$16.86
8202	Chipper, Brush	Chipping Capacity	12 In	to 100	Trailer Mounted.	hour	$24.31
8203	Chipper, Brush	Chipping Capacity	15 In	to 125	Trailer Mounted.	hour	$35.00
8204	Chipper, Brush	Chipping Capacity	18 In	to 200	Trailer Mounted.	hour	$50.10
8208	Loader - Tractor - Knuckleboom	model Barko 595 ML		to 173		hour	$161.89
8209	Loader - Wheel	model 210 w/ Buck Saw 50 inch Bar		to 240		hour	$97.00
8210	Clamshell & Dragline, Crawler		149,999 lbs	to 235	Bucket not included in rate.	hour	$127.40
8211	Clamshell & Dragline, Crawler		250,000 lbs	to 520	Bucket not included in rate.	hour	$166.20
8212	Clamshell & Dragline, Truck			to 240	Bucket not included in rate.	hour	$145.00
8220	Compactor			to 10		hour	$15.10
8221	Compactor, towed, Vibratory Drum			to 45		hour	$31.70
8222	Compactor, Vibratory, Drum			to 75		hour	$22.30
8223	Compactor, pneumatic, wheel			to 100		hour	$26.00
8225	Compactor, Sanitation			to 300		hour	$92.75
8226	Compactor, Sanitation			to 400		hour	$152.30
8227	Compactor, Sanitation			535		hour	$249.75
8228	Compactor, towed, Pneumatic, Wheel		10000 lbs		Include prime mover rate	hour	$17.00
8229	Compactor, towed, Drum Static		20000 lbs		Include prime mover rate	hour	$15.80
8240	Feeder, Grizzly			to 35		hour	$22.20
8241	Feeder, Grizzly			to 55		hour	$32.45
8242	Feeder, Grizzly			to 75		hour	$64.25
8250	Dozer, Crawler			to 75		hour	$51.30
8251	Dozer, Crawler			to 105		hour	$38.30
8252	Dozer, Crawler			to 160		hour	$93.74
8253	Dozer, Crawler			to 250		hour	$149.75
8254	Dozer, Crawler			to 360		hour	$201.10
8255	Dozer, Crawler			to 565		hour	$311.80
8256	Dozer, Crawler			to 850		hour	$294.10
8260	Dozer, Wheel			to 300		hour	$61.00
8261	Dozer, Wheel			to 400		hour	$94.10
8262	Dozer, Wheel			to 500		hour	$178.65
8263	Dozer, Wheel			to 625		hour	$239.60
8269	Box Scraper	3 hitch attach for tractor; 2007 Befco				hour	$3.50
8270	Bucket, Clamshell	Capacity	1.0 CY		Includes teeth. Does not include Clamshell & Dragline	hour	$4.62
8271	Bucket, Clamshell	Capacity	2.5 CY		Includes teeth. Does not include Clamshell & Dragline	hour	$8.73
8272	Bucket, Clamshell	Capacity	5.0 CY		Includes teeth. Does not include Clamshell & Dragline	hour	$13.10
8273	Bucket, Clamshell	Capacity	7.5 CY		Includes teeth. Does not include Clamshell & Dragline	hour	$22.40
8275	Bucket, Dragline	Capacity	2.0 CY		Does not include Clamshell & Dragline	hour	$3.96
8276	Bucket, Dragline	Capacity	5.0 CY		Does not include Clamshell & Dragline	hour	$9.90
8277	Bucket, Dragline	Capacity	10 CY		Does not include Clamshell & Dragline	hour	$14.10
8278	Bucket, Dragline	Capacity	14 CY		Does not include Clamshell & Dragline	hour	$18.65
8280	Excavator, Hydraulic	Bucket Capacity	0.5 CY	to 45	Crawler, Truck & Wheel. Includes bucket.	hour	$18.00
8281	Excavator, Hydraulic	Bucket Capacity	1.0 CY	to 90	Crawler, Truck & Wheel. Includes bucket.	hour	$34.20
8282	Excavator, Hydraulic	Bucket Capacity	1.5 CY	to 160	Crawler, Truck & Wheel. Includes bucket.	hour	$52.70
8283	Excavator, Hydraulic	Bucket Capacity	2.5 CY	to 265	Crawler, Truck & Wheel. Includes bucket.	hour	$153.00

8284	Excavator, Hydraulic	Bucket Capacity	4.5 CY	to 420	Crawler, Truck & Wheel. Includes bucket.	hour	$264.50
8285	Excavator, Hydraulic	Bucket Capacity	7.5 CY	to 650	Crawler, Truck & Wheel. Includes bucket.	hour	$223.70
8286	Excavator, Hydraulic	Bucket Capacity	12 CY	to 1000	Crawler, Truck & Wheel. Includes bucket.	hour	$455.00
8287	Excavator	2007 model Gradall XL3100 III		184		hour	$105.46
8288	Excavator	2003 model Gradall XL4100 III		238		hour	$113.20
8289	Excavator	2006 model Gradall XL5100		230		hour	$88.80
8290	Trowel, Concrete	Diameter	48 In	to 12		hour	$4.80
8300	Fork Lift	Capacity	6000 Lbs	to 60		hour	$13.00
8301	Fork Lift	Capacity	12000 Lbs	to 90		hour	$18.50
8302	Fork Lift	Capacity	18000 Lbs	to 140		hour	$24.00
8303	Fork Lift	Capacity	50000 Lbs	to 215		hour	$51.40
8306	Fork Lift Material handler	Diesel, CAT TH360B	6600-11500 gvwr lbs	99.9		hour	$27.90
8307	Fork Lift Material handler	Diesel, CAT TH460B		99.9		hour	$30.15
8308	Fork Lift Material handler	Diesel, CAT TH560B		99.9		hour	$35.80
8309	Fork Lift Accessory	2003 ACS Paddle Fork				hour	$3.46
8310	Generator	Prime Output	5.5 KW	to 10		hour	$3.35
8311	Generator	Prime Output	16 KW	to 25		hour	$7.45
8312	Generator	Prime Output	43 KW	to 65		hour	$15.00
8313	Generator	Prime Output	100 KW	to 125		hour	$34.95
8314	Generator	Prime Output	150 KW	to 240		hour	$50.00
8315	Generator	Prime Output	210 KW	to 300		hour	$62.45
8316	Generator	Prime Output	280 KW	to 400		hour	$80.40
8317	Generator	Prime Output	350 KW	to 500		hour	$90.50
8318	Generator	Prime Output	530 KW	to 750		hour	$153.30
8319	Generator	Prime Output	710 KW	to 1000		hour	$222.00
8320	Generator	Prime Output	1100 KW	to 1500	Open	hour	$349.00
8321	Generator	Prime Output	2500 KW	to 3000		hour	$533.75
8322	Generator	Prime Output	1,000 KW	to 1645	Enclosed	hour	$403.30
8323	Generator	Prime Output	1,500 KW	to 2500	Enclosed	hour	$511.22
8324	Generator	Prime Output	1100KW	2500	Enclosed	hour	$495.80
8325	Generator	Prime Output	40KW	60		hour	$14.80
8326	Generator	Prime Output	20KW	40		hour	$13.32
8330	Graders	Moldboard Size	10 Ft	to 110	Includes Rigid and Articulate equipment.	hour	$43.30
8331	Graders	Moldboard Size	12 Ft	to 150	Includes Rigid and Articulate equipment.	hour	$46.50
8332	Graders	Moldboard Size	14 Ft	to 225	Includes Rigid and Articulate equipment.	hour	$67.50
8350	Hose, Discharge	Diameter	3 In		Per 25 foot length. Includes couplings.	hour	$0.15
8351	Hose, Discharge	Diameter	4 In		Per 25 foot length. Includes couplings.	hour	$0.24
8352	Hose, Discharge	Diameter	6 In		Per 25 foot length. Includes couplings.	hour	$0.60
8353	Hose, Discharge	Diameter	8 In		Per 25 foot length. Includes couplings.	hour	$0.60
8354	Hose, Discharge	Diameter	12 In		Per 25 foot length. Includes couplings.	hour	$0.90
8355	Hose, Discharge	Diameter	16 In		Per 25 foot length. Includes couplings.	hour	$1.70
8356	Hose, Suction	Diameter	3 In		Per 25 foot length. Includes couplings.	hour	$0.30
8357	Hose, Suction	Diameter	4 In		Per 25 foot length. Includes couplings.	hour	$0.35
8358	Hose, Suction	Diameter	6 In		Per 25 foot length. Includes couplings.	hour	$1.15
8359	Hose, Suction	Diameter	8 In		Per 25 foot length. Includes couplings.	hour	$1.10
8360	Hose, Suction	Diameter	12 In		Per 25 foot length. Includes couplings.	hour	$1.70
8361	Hose, Suction	Diameter	16 In		Per 25 foot length. Includes couplings.	hour	$3.15
8380	Loader, Crawler	Bucket Capacity	0.5 CY	to 32	Includes bucket.	hour	$14.66

8381	Loader, Crawler	Bucket Capacity	1 CY	to 60	Includes bucket.	hour	$34.30
8382	Loader, Crawler	Bucket Capacity	2 CY	to 118	Includes bucket.	hour	$68.10
8383	Loader, Crawler	Bucket Capacity	3 CY	to 178	Includes bucket.	hour	$101.30
8384	Loader, Crawler	Bucket Capacity	4 CY	to 238	Includes bucket.	hour	$120.00
8390	Loader, Wheel	Bucket Capacity	0.5 CY	to 38		hour	$20.10
8391	Loader, Wheel	Bucket Capacity	1 CY	to 60		hour	$36.90
8392	Loader, Wheel	Bucket Capacity	2 CY	to 105	CAT-926	hour	$35.50
8393	Loader, Wheel	Bucket Capacity	3 CY	to 152		hour	$43.85
8394	Loader, Wheel	Bucket Capacity	4 CY	to 200		hour	$59.30
8395	Loader, Wheel	Bucket Capacity	5 CY	to 250		hour	$64.00
8396	Loader, Wheel	Bucket Capacity	6 CY	to 305		hour	$104.00
8397	Loader, Wheel	Bucket Capacity	7 CY	to 360		hour	$124.50
8398	Loader, Wheel	Bucket Capacity	8 CY	to 530		hour	$171.40
8401	Loader, Tractor, Wheel	Bucket Capacity	0.87 CY	to 80	Case 580 Super L	hour	$33.73
8410	Mixer, Concrete Portable	Batching Capacity	10 Cft			hour	$3.05
8411	Mixer, Concrete Portable	Batching Capacity	12 Cft	11		hour	$4.00
8412	Mixer, Concrete, Trailer Mntd	Batching Capacity	11 Cft	to 10		hour	$12.70
8413	Mixer, Concrete, Trailer Mntd	Batching Capacity	16 Cft	to 25		hour	$19.60
8419	Breaker, Pavement Hand-Held	Weight	25~90 Lbs			hour	$1.10
8420	Breaker, Pavement			to 70		hour	$57.45
8423	Spreader, Chip	Spread Hopper Width	12.5 Ft	to 152		hour	$85.85
8424	Spreader, Chip	Spread Hopper Width	16.5 Ft	to 215		hour	$116.60
8425	Spreader, Chip, Mntd	Hopper Size	8 Ft	to 8	Trailer & truck mounted.	hour	$4.60
8430	Paver, Asphalt, Towed				Does not include Prime Mover.	hour	$12.40
8431	Paver, Asphalt			to 50	Includes wheel and crawler equipment.	hour	$73.76
8432	Paver, Asphalt			to 125	Includes wheel and crawler equipment.	hour	$95.10
8433	Paver, Asphalt			to 175	Includes wheel and crawler equipment.	hour	$126.80
8434	Paver, Asphalt		35,000Lbs & Over	to 250	Includes wheel and crawler equipment.	hour	$209.65
8436	Pick-up, Asphalt			to 110		hour	$96.85
8437	Pick-up, Asphalt			to 150		hour	$135.00
8438	Pick-up, Asphalt			to 200		hour	$93.50
8439	Pick-up, Asphalt			to 275		hour	$204.00
8440	Striper	Paint Capacity	40 Gal	to 22		hour	$16.20
8441	Striper	Paint Capacity	90 Gal	to 60		hour	$22.90
8442	Striper	Paint Capacity	120 Gal	to 122		hour	$42.60
8445	Striper, Truck Mntd	Paint Capacity	120 Gal	to 460		hour	$78.60
8446	Striper, Walk-behind	Paint Capacity	12 Gal			hour	$4.00
8447	Paver accessory -Belt Extension	2002 Leeboy Conveyor Belt Extension			crawler	hour	$32.50
8450	Plow, Snow, Grader Mntd	Width	to 10 Ft		Include Grader for total cost	hour	$28.00
8451	Plow, Snow, Grader Mntd	Width	to 14 Ft		Include Grader for total cost	hour	$32.90
8452	Plow, Truck Mntd	Width	to 15 Ft		Include truck for total cost	hour	$24.35
8453	Plow, Truck Mntd	Width	to 15 Ft		With leveling wing. Include truck for total cost	hour	$40.80
8455	Spreader, Sand	Mounting	Tailgate, Chassis			hour	$7.35
8456	Spreader, Sand	Mounting	Dump Body			hour	$10.45
8457	Spreader, Sand	Mounting	Truck (10yd)			hour	$13.15
8458	Spreader, Chemical	Capacity	5 CY	to 4	Trailer & truck mounted.	hour	$6.00
8469	Pump - Trash Pump	10 MTC	2" Pump	to 7	10,000 gph	hour	$7.25
8470	Pump	Centrifugal, 8M pump	2" - 10,000 gal/hr.	to 4.5	Hoses not included.	hour	$6.10
8471	Pump	Diaphragm pump	2" - 3,000 gal/hr.	to 6	Hoses not included.	hour	$6.75
8472	Pump	Centrifugal, 18M pump	3" - 18,000 gal/hr. pump	to 10	Hoses not included.	hour	$7.99
8473	Pump			to 15	Hoses not included.	hour	$10.30
8474	Pump			to 25	Hoses not included.	hour	$13.60
8475	Pump			to 40	Hoses not included.	hour	$16.65
8476	Pump	4" - 40,000 gal/hr.	4" - 40,000 gal/hr.	to 60	Hoses not included.	hour	$27.10

8477	Pump			to 95	Hoses not included.	hour	$32.00
8478	Pump			to 140	Hoses not included.	hour	$41.50
8479	Pump			to 200	Hoses not included.	hour	$49.90
8480	Pump			to 275	Does not include Hoses.	hour	$66.85
8481	Pump			to 350	Does not include Hoses.	hour	$82.00
8482	Pump			to 425	Does not include Hoses.	hour	$96.60
8483	Pump			to 500	Does not include Hoses.	hour	$114.00
8484	Pump			to 575	Does not include Hoses.	hour	$133.30
8485	Pump			to 650	Does not include Hoses.	hour	$154.70
8486	Aerial Lift, Truck Mntd	Max. Platform Height	40 Ft		Add this rate to truck rate for total lift and truck rate	hour	$11.38
8487	Aerial Lift, Truck Mntd	Max. Platform Height	61 Ft		Add this rate to truck rate for total lift and truck rate	hour	$20.54
8488	Aerial Lift, Truck Mntd	Max. Platform Height	80 Ft		Add this rate to truck rate for total lift and truck rate	hour	$39.00
8489	Aerial Lift, Truck Mntd	Max. Platform Load - 600Lbs	81 Ft -100 Ft. Ht.		Add this rate to truck rate for total lift and truck rate	hour	$39.50
8490	Aerial Lift, Self-Propelled	Max. Platform Height	37 Ft. Ht.	to 15	Articulated, Telescoping, Scissor.	hour	$8.95
8491	Aerial Lift, Self-Propelled	Max. Platform Height	60 Ft. Ht.	to 30	Articulated, Telescoping, Scissor.	hour	$16.10
8492	Aerial Lift, Self-Propelled	Max. Platform Height	70 Ft. Ht.	to 50	Articulated, Telescoping, Scissor.	hour	$29.26
8493	Aerial Lift, Self-Propelled	Max. Platform Height	125 Ft. Ht.	to 85	Articulated and Telescoping.	hour	$55.65
8494	Aerial Lift, Self-Propelled	Max. Platform Height	150 Ft. Ht.	to 130	Articulated and Telescoping.	hour	$70.15
8495	I.C. Aerial Lift, Self-Propelled	Max. Platform Load - 500 Lbs	75"x155", 40Ft Ht.	to 80	2000 Lbs Capacity	hour	$28.95
8496	Crane, Truck Mntd	Max. Lift Capacity	24000 Lbs		Include truck rate for total cost	hour	$14.90
8497	Crane, Truck Mntd	Max. Lift Capacity	36000 Lbs		Include truck rate for total cost	hour	$22.40
8498	Crane, Truck Mntd	Max. Lift Capacity	60000 Lbs		Include truck rate for total cost	hour	$36.50
8499	Pump - Trash-Pump	CPB Rating - 10MTC	10000 gal/Hr	7	Self- Priming Trash Pump	hour	$7.55
8500	Crane	Max. Lift Capacity	8 MT	to 80		hour	$38.70
8501	Crane	Max. Lift Capacity	15 MT	to 150		hour	$66.90
8502	Crane	Max. Lift Capacity	50 MT	to 200		hour	$90.00
8503	Crane	Max. Lift Capacity	70 MT	to 300		hour	$178.60
8504	Crane	Max. Lift Capacity	110 MT	to 350		hour	$243.20
8510	Saw, Concrete	Blade Diameter	14 In	to 14		hour	$7.20
8511	Saw, Concrete	Blade Diameter	26 In	to 35		hour	$12.00
8512	Saw, Concrete	Blade Diameter	48 In	to 65		hour	$25.10
8513	Saw, Rock			to 100		hour	$33.50
8514	Saw, Rock			to 200		hour	$63.00
8517	Jackhammer (Dry)	Weight Class	25-45 Lbs			hour	$1.66
8518	Jackhammer (Wet)	Weight Class	30-55 Lbs			hour	$1.84
8521	Scraper	Scraper Capacity	16 CY	to 250		hour	$107.15
8522	Scraper	Scraper Capacity	23 CY	to 365		hour	$155.50
8523	Scraper	Scraper Capacity	34 CY	to 475		hour	$270.00
8524	Scraper	Scraper Capacity	44 CY	to 600		hour	$265.70
8540	Loader, Skid-Steer	Operating Capacity	1000 Lbs	to 35		hour	$14.15
8541	Loader, Skid-Steer	Operating Capacity	2000 Lbs	to 65		hour	$37.00
8542	Loader, Skid-Steer	Operating Capacity	3000 Lbs	to 85		hour	$36.05
8550	Snow Blower, Truck Mntd	Capacity	600 Tph	to 75	Does not include truck	hour	$34.60
8551	Snow Blower, Truck Mntd	Capacity	1400 Tph	to 200	Does not include truck	hour	$94.00
8552	Snow Blower, Truck Mntd	Capacity	2000 Tph	to 340	Does not include truck	hour	$142.50
8553	Snow Blower, Truck Mntd	Capacity	2500 Tph	to 400	Does not include truck	hour	$154.80
8558	Snow Thrower, Walk Behind	Cutting Width	25 in	to 5		hour	$2.80
8559	Snow Thrower, Walk Behind	Cutting Width	60 in	to 15		hour	$14.10
8560	Snow Blower	Capacity	2,000 Tph	to 400		hour	$234.00
8561	Snow Blower	Capacity	2,500 Tph	to 500		hour	$255.00
8562	Snow Blower	Capacity	3,500 Tph	to 600		hour	$284.00

8569	Dust Control De-Ice Unit	1300-2000 gal	173"Lx98"Wx51"H	5.5	Hydro Pump w/100' 1/2" hose	hour	$3.45
8570	Loader-Backhoe, Wheel	Loader Bucket Capacity	0.5 CY	to 40	Loader and Backhoe Buckets included.	hour	$22.15
8571	Loader-Backhoe, Wheel	Loader Bucket Capacity	1 CY	to 70	Loader and Backhoe Buckets included.	hour	$29.50
8572	Loader-Backhoe, Wheel	Loader Bucket Capacity	1.5 CY	to 95	Loader and Backhoe Buckets included.	hour	$38.60
8573	Loader-Backhoe, Wheel	Loader Bucket Capacity	1.75 CY	to 115	Loader and Backhoe Buckets included.	hour	$47.77
8580	Distributor, Asphalt	Tank Capacity	500 Gal		burners, insulated tank, and circulating spray bar.	hour	$14.76
8581	Distributor, Asphalt	Tank Capacity	1000 Gal		burners, insulated tank, and circulating spray bar. Include	hour	$21.30
8582	Distributor, Asphalt	Tank Capacity	4000 Gal		burners, insulated tank, and circulating spray bar. Include	hour	$30.15
8583	Distributor	ETNYRE Oil Distributor Model - PB348		300		hour	$41.60
8584	Distributor	ETNYRE Quad Chip Spreader		280		hour	$83.20
8590	Trailer, Dump	Capacity	20 CY		Does not include Prime Mover.	hour	$11.36
8591	Trailer, Dump	Capacity	30 CY		Does not include Prime Mover.	hour	$13.10
8600	Trailer, Equipment	Capacity	30 Tons			hour	$14.15
8601	Trailer, Equipment	Capacity	40 Tons			hour	$15.50
8602	Trailer, Equipment	Capacity	60 Tons			hour	$18.85
8603	Trailer, Equipment	Capacity	120 Tons			hour	$28.35
8610	Trailer, Water	Tank Capacity	4000 Gal		with sump and a rear spraybar.	hour	$13.50
8611	Trailer, Water	Tank Capacity	6000 Gal		with sump and a rear spraybar.	hour	$16.55
8612	Trailer, Water	Tank Capacity	10000 Gal		with sump and a rear spraybar.	hour	$19.20
8613	Trailer, Water	Tank Capacity	14000 Gal		with sump and a rear spraybar.	hour	$23.77
8614	Truck- Water Tanker	1000 gal. tank		175		hour	$33.35
8620	Tub Grinder			to 440		hour	$95.35
8621	Tub Grinder			to 630		hour	$143.65
8622	Tub Grinder			to 760		hour	$183.60
8623	Tub Grinder			to 1000		hour	$322.00
8627	Horizontal Grinder	Model HG6000		630		hour	$57.36
8628	Stump Grinder	1988 Vermeer SC-112		102		hour	$47.00
8629	Stump Grinder	24" grinding wheel		110		hour	$45.00
8630	Sprayer, Seed	Working Capacity	750 Gal	to 30	Does not include Prime Mover.	hour	$14.00
8631	Sprayer, Seed	Working Capacity	1250 Gal	to 50	Trailer & truck mounted. Does not include Prime	hour	$19.80
8632	Sprayer, Seed	Working Capacity	3500 Gal	to 115	Does not include Prime Mover.	hour	$29.25
8633	Mulcher, Trailer Mntd	Working Capacity	7 TPH	to 35		hour	$14.10
8634	Mulcher, Trailer Mntd	Working Capacity	10 TPH	to 55		hour	$20.80
8635	Mulcher, Trailer Mntd	Working Capacity	20 TPH	to 120		hour	$29.45
8636	Scraper	Soil Recycler WR 2400	w 317 gal fuel tank	563		hour	$239.85
8637	Trailer CAT	Double Belly Bottom-dump Trailer	26 CY of soil in one dump	330	13 CY of soil each berry	hour	$92.33
8638	Rake	Barber Beach Sand Rake 600HDr, towed				hour	$15.40
8639	Chipper	Wildcat 626 Cougar Trommel Screen chipper w belt		125		hour	$34.30
8640	Trailer, Office	Trailer Size	8' x 24'		Cargo Size 16ft	hour	$1.95
8641	Trailer, Office	Trailer Size	8' x 32'		Cargo Size 24ft	hour	$2.30
8642	Trailer, Office	Trailer Size	10' x 32'		Cargo Size 20ft	hour	$2.65
8643	Trailer	Haz-Mat Equipment trailer	8'x18'			hour	$37.75
8644	Trailer, Covered Utility Trailer	(7' X 16')				hour	$5.65
8645	Trailer, Dodge Ram	8' x 24' shower trailer- 12 showers		101		hour	$29.45
8646	Trailer, Dodge	32' flatbed water				hour	$27.90
8650	Trencher			to 40	Wheel Mounted. Chain and Wheel.	hour	$16.30

8651	Trencher			to 85	Wheel Mounted. Chain and Wheel.	hour	$24.70
8654	Trencher accessories	2008 Griswold Trenchbox				hour	$1.90
8660	Plow, Cable	Plow Depth	24 in	to 30		hour	$12.00
8661	Plow, Cable	Plow Depth	36 in	to 65		hour	$37.45
8662	Plow, Cable	Plow Depth	48 in	to 110		hour	$41.25
8670	Derrick, Hydraulic Digger	Max. Boom Length	60 Ft		alignment attachment. Include truck rate	hour	$34.15
8671	Derrick, Hydraulic Digger	Max. Boom Length	90 Ft		alignment attachment. Include truck rate	hour	$54.66
8680	Truck, Concrete Mixer	Mixer Capacity	13 CY	to 300		hour	$82.35
8684	Truck, Fire	100 Ft Ladder				hour	$100.00
8690	Truck, Fire	Pump Capacity	1000 GPM			hour	$68.00
8691	Truck, Fire	Pump Capacity	1250 GPM			hour	$72.25
8692	Truck, Fire	Pump Capacity	1500 GPM			hour	$78.90
8693	Truck, Fire	Pump Capacity	2000 GPM			hour	$81.40
8694	Truck, Fire Ladder	Ladder length	75 FT			hour	$117.10
8695	Truck, Fire Ladder	Ladder length	150 FT			hour	$142.75
8696	Truck, Fire	No Ladder		330	Rescure Equipment	hour	$93.47
8700	Truck, Flatbed	Maximum Gvw	15000 Lbs	to 200		hour	$20.60
8701	Truck, Flatbed	Maximum Gvw	25000 Lbs	to 275		hour	$35.00
8702	Truck, Flatbed	Maximum Gvw	30000 Lbs	to 300		hour	$27.10
8703	Truck, Flatbed	Maximum Gvw	45000 Lbs	to 380		hour	$44.70
8708	Trailer, semi	48ft to 53ft, flat-bed, freight, two axle	50,000+ gvwr			hour	$8.45
8709	Trailer, semi	enclosed 48 ft to 53 ft, two axles	50,000+ gvwr			hour	$9.50
8710	Trailer, semi	28ft, single axle, freight	25,000 gvwr			hour	$9.70
8711	Flat bed utility trailer	6 ton				hour	$3.10
8712	Cleaner, Sewer/Catch Basin	Hopper Capacity	5 CY		Truck Mounted.	hour	$24.80
8713	Cleaner, Sewer/Catch Basin	Hopper Capacity	14 CY		Truck Mounted.	hour	$31.30
8714	Vactor	800 Gal Spoils/400 Gal Water	500/800 gal	49		hour	$82.75
8715	Truck, Hydro Vac	model LP555DT				hour	$18.00
8716	Leaf Vac	Tow by Truck 22,000 cfm capacity		85	Leaf Vac + Truck Code 8811	hour	$51.25
8717	Truck, Vacuum	60,000 GVW		400		hour	$74.20
8719	Litter Picker	model 2007 Barber			towed by tractor	hour	$9.60
8720	Truck, Dump	Struck Capacity	8 CY	to 220		hour	$48.90
8721	Truck, Dump	Struck Capacity	10 CY	to 320		hour	$60.77
8722	Truck, Dump	Struck Capacity	12 CY	to 400		hour	$67.70
8723	Truck, Dump	Struck Capacity	18 CY	to 400		hour	$75.50
8724	Truck, Dump, Off Highway	Struck Capacity	28 CY	to 450		hour	$121.20
8725	Truck, Dump	Struck Capacity	14 CY	to 400		hour	$77.80
8730	Truck, Garbage	Capacity	25 CY	to 255		hour	$48.50
8731	Truck, Garbage	Capacity	32 CY	to 325		hour	$55.90
8733	E-BAM Services	Environmental Beta Attenuation Air Monitor			Powered by Solar System	hour	$3.00
8734	Attenuator, safety	that can stop a vehicle at 60 mph				hour	$5.50
8735	Truck, Attenuator	2004 Truck Mounted for 60 mph				hour	$3.85
8736	Truck, tow	1987 Chevy Kodiak 70		175		hour	$27.70
8744	Van, Custom	Special Service Canteen Truck		350		hour	$18.00
8745	Van, step	model MT10FD		300		hour	$21.25
8746	Van-up to 15 passenger	light duty, class 1		225-300		hour	$20.00
8747	Van-up to 15 passenger	light duty, class 2		225-300		hour	$20.15
8748	Van-cargo	light duty, class 1		225 - 300		hour	$22.25
8749	Van-cargo	light duty, class 2		225-300		hour	$22.25
8750	Vehicle, Small			to 30		hour	$6.40
8753	Vehicle, Recreational			to 10		hour	$2.80
8755	Golf Cart	Capacity	2 person			hour	$3.75
8761	Vibrator, Concrete			to 4		hour	$1.60
8770	Welder, Portable			to 16	Includes ground cable and lead cable.	hour	$3.10

8771	Welder, Portable			to 34	Includes ground cable and lead cable.	hour	$6.80
8772	Welder, Portable			to 50	Includes ground cable and lead cable.	hour	$10.00
8773	Welder, Portable			to 80	Includes ground cable and lead cable.	hour	$13.76
8780	Truck, Water	Tank Capacity	2500 Gal	to 175	Include pump and rear spray system.	hour	$28.70
8781	Truck, Water	Tank Capacity	4000 Gal	to 250	Include pump and rear spray system.	hour	$50.00
8788	Container & roll off truck	30 yds				hour	$23.05
8789	Truck, Tractor	1997 Freightliner F120		430		hour	$54.90
8790	Truck, Tractor	4 x 2	25000 lbs	to 210		hour	$42.40
8791	Truck, Tractor	4 x 2	35000 lbs	to 330		hour	$46.00
8792	Truck, Tractor	6 x 2	45000 lbs	to 360		hour	$52.75
8794	Truck, freight	Enclosed w/lift gate. Medium duty class 5	gvwr 16000-19500 Lbs			hour	$23.25
8795	Truck, backhoe carrier	Three axle, class 8, heavy duty	over 33000Lbs			hour	$34.50
8796	Truck, freight	Eenclosed w/lift gate. Heavy duty, class	7, 26,001 to 33,000 lbs gvwr			hour	$31.00
8798	Truck	Tilt and roll-back, two axle, class 7 heavy duty,	to 33,000 gvwr			hour	$32.00
8799	Truck,	Tilt and roll back, three axle. class 8 heavy duty	over 33,001+ gvwr			hour	$40.60
8800	Truck, Pickup				When transporting people.	mile	$0.54
8801	Truck, Pickup	1/2-ton Pickup Truck	4x2-Axle	160		hour	$12.30
8802	Truck, Pickup	1-ton Pickup Truck	4x2-Axle	234		hour	$17.65
8803	Truck, Pickup	1 1/4-ton Pickup Truck	4x2-Axle	260		hour	$19.85
8804	Truck, Pickup	1 1/2-ton Pickup Truck	4x2-Axle	300		hour	$22.25
8805	Truck, Pickup	1 3/4-ton Pickup Truck	4x2-Axle	300		hour	$23.10
8806	Truck, Pickup	3/4-ton Pickup Truck	4x2-Axle	165		**hour**	$13.40
8807	Truck, Pickup	3/4-ton Pickup Truck	4x4-Axle	285	Crew	hour	$20.80
8808	Truck, Pickup	1-ton Pickup Truck	4x4-Axle	340	Crew	hour	$22.85
8809	Truck, Pickup	1 1/4-ton Pickup Truck	4x4-Axle	360	Crew	hour	$26.40
8810	Truck, Pickup	1 1/2-ton Pickup Truck	4x4-Axle	362	Crew	hour	$26.75
8811	Truck, Pickup	1 3/4-ton Pickup Truck	4x4-Axle	362	Crew	hour	$27.50
8820	Skidder accessory	2005 JCB Grapple Claw				hour	$1.75
8821	Forklift, accessory	2005 ACS Grapple Bucket				hour	$1.50
8822	Truck, Loader	Debris/Log (Knuckleboom Loader/Truck)		230		hour	$52.26
8823	Chipper- Wood Recycler	Cat 16 engine		700		hour	$115.00
8824	Skidder	model Cat 525B		up to 160		hour	$62.90
8825	Skidder	40K lbs- model Cat 525C		161 and up		hour	$118.77
8840	Truck, service	fuel and lube	up to 26,000 gvwr	215-225		hour	$38.65
8841	Truck, fuel	2009 International 1,800 gal. storage tank		200		hour	$30.50
8842	Mobile Command Trailer	(8' X 28') with 7.5 KW Generator				hour	$14.66
8843	Mobile Response Trailer	(8' X 31') with 4.5 KW Generator?				hour	$13.60
8844	Mobile Command Center	(unified) (RV) Ulitimaster MP-35	43 FT Long with Generator	400		hour	$75.00
8845	Mobile Command Post Vehicle	(RV) (In- Motion)	22-Ft Long	340		hour	$31.00
8846	Mobile Command Post Vehicle	(RV) (Stationary) w/9.6 KW Generator	22-Ft Long	340		hour	$19.25
8847	Mobile Command Center (Trailer)	48'x8' Trailer, Fully Equiped Mobile Command Center	48-Ft Long			hour	$29.45
8848	Mobile Command Center (Trailer)	48'x8' When being Moved w/Truck Tractor		310		hour	$48.90
8849	Mobile Command Center	43'x8.5' x 13.5'H with self 30kw Generator				hour	$52.00
8850	Mobile Command Center	2007-Freightliner MT-55, (RV)		260		hour	$45.50
8851	Mobile Command Van	1990- Ford Econoline-Communication Van		230		hour	$41.00
8852	Mobile Command Center	47.5' X 8.75 Fully Equip' (In motion) (RV)		410		hour	$65.30
8853	Mobile Command Center	47.5' X 8.75 Fully Equip' (Stationary)		410		hour	$45.00

8854	Mobile Command Vehicle	53' X 8.75 Fully Equip		480-550		hour	$96.20
8870	Light Tower	Terex/Amida AL 4000. with (4) 500 watt lights	w/10kw power unit	13.5		hour	$10.68
8871	Light Tower	2004 Allmand				hour	$6.30
8872	SandBagger Machine	(Spider) automatic		4.5		hour	$48.75
8900	Helicopter	OH-58 KIOWA (Military) is the same as "Bell-206B3		420		hour	$474.00
8901	Helicopter	OH-58 KIOWA (Military) is the same as "Bell-206BR		420		hour	$496.00
8902	Helicopter	Model Bell 206-L3 Jet Range Helicopter		650	Jet Range III-Helicopter	hour	$582.00
8903	Helicopter	Model Bell 206L1 Long Ranger		650	Long Ranger	hour	$596.00
8904	Helicopter	Model Bell 206LT Long Range Twinranger		450	Twinranger	hour	$780.00
8905	Helicopter	Model Bell 407 EMS- Ambulance		250		hour	$626.00
8906	Piper-Fixed wing	Model Navajo PA-31		310		hour	$456.00
8907	Piper-Fixed wing	PA-31-350, Navajo Chieftn twin engine		350		hour	$487.00
8908	Sikorsky Helicopter	Model UH-60 (Blackhawk) medium lift	Medium Lift	1890	Fire Fighter Same as S70C	hour	$2,945.00
8909	Helicopter	Model UH-A (Blackhawk) Medium lift	Medium Lift	1890	Fire Fighter	hour	$5,504.00
8910	Boeing Helicopter	Model CH-47 (Chinook) heavy lift	Heavy Lift	2850	Fire Fighter	hour	$10,750.00
8911	Helicopter- light utility	Model Bell 407GX - 7 seater	7-Seaters	675	Passenger Aircraft	hour	$621.00
8912	Helicopter- light utility	Modle Bell 206L- 7 seater	7-Seaters	420	Passenger Aircraft	hour	$596.00
8913	Helicopter	Model Bell-206L4		726		hour	$576.00
8914	King Air 200 Turboprop Aircraft	Blackhawk King Air B200XP61		669		hour	$1,316.00
8915	Turboprops Blackhawk Aircraft	Blackhawk Caravan XP42 A		850		hour	$697.00
8916	Turboprops Blackhawk Aircraft	King Air C90 XP135 A		550		hour	$1,075.00
8917	Aerostar Piston Aircraft	Aerostar 601P		290		hour	$447.00
8943	Wire Puller Machine	Overhead Wire Pulling Machine		30	Overhead/Underground Wire Pulling Machine	hour	$19.85
8944	Wire Tensioning Machine	3000 Lbs			Overhead Wire Tensioning Machine	hour	$14.50
8945	Aerial Lift	model 2008 Genie Scissor Lift				hour	$6.30

U.S. Department of Homeland Security
Washington, DC 20472

FEMA

MEMORANDUM FOR: Record
DATE: March 25, 2019
SUBJECT: Corrections to FEMA 2017 Schedule of Equipment Rates

This memorandum serves as a correction to FEMA Schedule of Equipment Rates costs published in 2017. The following Cost Codes were determined to be incorrectly posted:

- **8702 - Truck, Flatbed** was incorrectly posted at $27.10 per hour. The correct rate is $39.60 per hour.
- **8541 - Loader, Skid-Steer** was incorrectly posted at $37.00 per hour. The correct rate is $35.15 per hour.

Cost Code	Equipment	Specifications	Capacity or Size	HP	Notes	Unit	2017 Rate	2017 Correction	
8700	Truck, Flatbed	Maximum Gvw	15000 Lbs	to 200		hour	$20.60		
8701	Truck, Flatbed	Maximum Gvw	25000 Lbs	to 275		hour	$35.00		
8702	Truck, Flatbed	Maximum Gvw	30000 Lbs	to 300		hour	$27.10	$39.60	Use code 9999
8703	Truck, Flatbed	Maximum Gvw	45000 Lbs	to 380		hour	$44.70		
8540	Loader, Skid-Steer	Operating Capacity	1000 Lbs	to 35		hour	$14.15		
8541	Loader, Skid-Steer	Operating Capacity	2000 Lbs	to 65		hour	$37.00	$35.15	Use code 9999
8542	Loader, Skid-Steer	Operating Capacity	3000 Lbs	to 85		hour	$36.05		

These corrections are retroactive to September 5, 2017, which is the original publication date of 2017 Schedule of Equipment Rates. FEMA will not seek to retroactively adjust any projects that have been obligated using the erroneous rates, in either interim versions or at closeout. However, if an applicant requests an adjustment to the rates, FEMA will make the correction during the final reconciliation of the project.

If you have any questions or need additional clarification, please contact Donald Simko (Donald.Simko@fema.dhs.gov) or Anthony Ndum (Anthony.Ndum@fema.dhs.gov).

Attachment 13 – Emeryville Temporary Debris Management SI

ATTACHMENT 14 – DEBRIS LOADING SITE-MONITORING CHECKLIST

(To be used in the event that a contractor is not responsible for DMC responsibilities.)

Date: _____
Arrival Time: _____ Departure Time: _____ Weather Conditions:_____
Loading Site Location: _____
(Street address or nearest intersection)
GPS Location: **N** _____; **W** _____
Loading Site Monitor's Name: _____
(Print Name)
Roving Monitor's Name: _____
(Print Name)

_____
(Signature)

Loading Site

1. Is the Site Monitor filling out the Load Ticket properly? YES or NO
If NO, explain actions taken:

_____

2. Is the Contractor loading eligible debris from the designated ROW (approximately 15' from curb)? YES or NO
If NO, explain actions taken:

_____

3. Is the Contractor loading trucks to capacity? YES or NO
If NO, explain actions taken:

_____

4. Identify Contractor's truck numbers observed while on site:

_____
_____

5. Were photographs taken at the loading site? YES or NO
If YES, list photo log numbers:

_____

General Notes and Comments: (Include observations within the general area as to overall clean-up activities.)

_____
_____

ATTACHMENT 15 – DEBRIS DISPOSAL SITE-MONITORING CHECKLIST

(To be used in the event that a contractor is not responsible for DMC responsibilities.)

Date: _____
Arrival Time: _____Departure Time: _____Weather Conditions:_____
Disposal Site Location: _____
(Street address or nearest intersection)
GPS Location: **N** _____; **W** _____
Disposal Site Monitor's Name: _____
(Print Name)
Roving Monitor's Name: _____
(Print Name)

_____
(Signature)

Disposal Site
1. Is the Disposal Monitor filling out the Load Ticket properly? YES or NO
If NO, explain actions taken:

_____
_____

2. Is the Disposal Monitor attaching a copy of the Weight Ticket to the Load Ticket?
YES or NO
If NO, explain actions taken:

_____
_____

3. Are the Contractor's trucks loaded to capacity? YES or NO

If NO, explain actions taken:

_____
_____

4. Identify Contractor's truck numbers observed while on site:
_____;_____;_____;_____;_____;_____;_____;_____;
_____;_____;_____;_____;_____;_____;_____;

5. Were photographs taken at the loading site? YES or NO
If YES, list photo log numbers:
_____;_____;_____;_____;_____
General Notes and Comments: (Include observations of operations at the landfill)

_____
_____
_____
_____
(Use reverse side if necessary.)

ATTACHMENT 16 – STOCKPILED DEBRIS FIELD SURVEY FORM

(To be used in the event that a contractor is not responsible for DMC responsibilities.)

Type of Material:

Clean Vegetative:___ Mixed:____ C&D:___ Mulch:____ Other:_____

Stockpile Location: _____ Date _____

Average Length of Stockpile: _____Feet

Average Width of Stockpile: _____Feet

Average Height of Stockpile: _____Feet

Total Cubic Feet: _____Cubic Feet

Total Cubic Yards: (Cubic Feet divided by 27) _____Cubic Yards

Contractor's Representative: _____ Date: _____

Government's Representative: _____ Date _____

Remarks: _____

ATTACHMENT 17 – DRAFT REQUEST FOR EMERGENCY WAIVER OF STANDARDS

Local Enforcement Agency (EMD)
Solano County

Subject: Request for an Emergency Waiver of Standards for: _____ (Site)

The recent [insert type of disaster] has resulted in the Governor of California declaring Alameda County a disaster area. Title 14 of the California Code of Regulations, California Integrated Waste Management Board, Chapter 3, Sections 17210 through 17210.9, addresses the process for an Emergency Waiver of Standards (Waiver) for solid waste facility permits. Pursuant to that process, we hereby request a Waiver and provide the information requested in Section 17210.3:

1. We request a waiver of solid waste facility permit tonnage limits for the _____ Site (Site). It is difficult to estimate at this time the amount of disaster-related debris that may come to the Site. The County staff is in the process of surveying the area to estimate the quantity of debris. Our staff will apprise you of unusual increases in tonnages received.

2. Based on the most recent calculations, the approximate remaining disposal capacity is _____million cubic yards of refuse.

3. Site personnel will make every effort to divert flood debris by recycling, composting, and other means.

4. The Site currently has the following recycling, composting, and materials diversion programs in place,

_____

5. (# of) locally approved temporary transfer or processing sites used to store disaster debris for future reuse or recycling have been established to date.

If you have any questions regarding this request for a Waiver, please contact me or _____ at _____or by email at _____

Very truly yours,

[ENTER SIGNATURE]

_____
Public Works Director

ATTACHMENT 18 – EMERGENCY WAIVER OF STANDARDS

Title 14, California Code of Regulations, Division 7, Chapter 3

Section 17210 *Scope and Applicability*

(a) This article informs an operator, who holds a valid solid waste facilities permit, of the process for applying for an emergency waiver of standards (waiver) in the event of a state of emergency or local emergency. The waiver grants an operator temporary relief from specific standards imposed by this Division or specific terms or conditions of a solid waste facilities permit issued pursuant to this Division. This Article implements and makes specific those provisions of Section 43035 of the Public Resources Code relating to the integrated waste management disaster plan.

(b) This Article is not intended to limit the authority of the State or a local agency during a disaster or emergency.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Sections 40001, 40002, 40051, 40052, 40053, 40054, 40055, 40056, 40057, 43020, and 43021, Public Resources Code.

Section 17210.1 *Definitions*

(a) "Agency" means the local agency responsible for compiling the disposal information from haulers and operators. The county is the agency, unless a region is given the responsibility as part of a regional agreement.

(b) "Board" means the California Integrated Waste Management Board.

(c) "Disaster" means a natural catastrophe such as an earthquake, fire, flood, landslide, or volcanic eruption, or, regardless of cause, any explosion, fire, or flood.

(d) "Disaster Debris" means nonhazardous solid waste caused by or directly related to a disaster.

(e) "Diversion" means the directing of solid waste from disposal or transformation by means of recycling, reuse, or composting.

(f) "Emergency Waiver of Standards" means the document signifying approval by an enforcement agency which allows an operator, who holds a valid solid waste facilities permit, the ability to deviate from specified State minimum solid waste standards or terms or conditions of a solid waste facilities permit issued pursuant to this Division. The waiver applies to the origin of waste; the rate of inflow for storage, transfer, or disposal of waste; the type and moisture content of solid waste; the hours of facility operation; and the storage time before transfer or disposal of wastes, at a solid waste facility. This includes the establishment of a

locally approved temporary transfer or processing site, if authorized by the enforcement agency.

(g) "Enforcement Agency" means the agency designated pursuant to the requirements set forth in Public Resources Code, sections 43200 through 43221, or the Executive Director of the Board in the event that the enforcement agency (EA) is incapable of responding due to the nature of the emergency.

(h) "Extent Feasible" is evidenced by the use of maximum efforts to recycle, reuse, or otherwise divert from disposal as much of the debris and other nonhazardous waste received by the solid waste facility as possible, as determined by the operator.

(i) "Jurisdiction of Origin" means the incorporated city or the unincorporated area of the county where the waste originated.

(j) "Local Emergency" means the duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, as described in Government Code section 8558(c), which conditions are or are likely to be beyond the control of the services, personnel, equipment, and facilities of that political subdivision and require the combined forces of other political subdivisions to combat, as stated in the proclamation by the governing body of a county, city and county, or city, or by an official so designated by ordinance adopted by such governing body to issue such proclamation.

(k) "State of Emergency" means the duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the State, as described in Government Code section 8558(b), which conditions, by reason of their magnitude, are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city, and require the combined forces of a mutual aid region or regions to combat, as stated in a proclamation by the Governor.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.2 ***Purpose and Limitation of Emergency Waiver***

(a) An emergency waiver may only be issued when there has been a proclamation of a state of emergency or local emergency, as those terms are defined in this Article.

(b) An EA may approve and issue a waiver for the express purpose of enabling an operator of an existing permitted solid waste facility or a locally-approved temporary transfer or processing site to accept disaster debris and other nonhazardous wastes, in a manner not consistent with the terms and conditions of the relevant solid waste facilities permit, during the recovery phase of a state of emergency or local emergency.

(c) The waiver may apply to specified State minimum solid waste standards or a specific term or condition of a solid waste facilities permit at an existing solid waste facility or a locally-approved temporary transfer or processing site which are related to the following: the origin of waste; the rate of inflow for storage, transfer, processing, or disposal of waste; the type and moisture content of solid waste; the hours of facility operation; and the storage time before transfer, processing, or disposal of nonhazardous waste.

(d) The effective period of an initial waiver, once granted by the EA, shall not exceed 120 days. Upon receipt of the reports required in section 17210.5, the EA may extend the effective period of a waiver, as necessary, to assist in the recovery from an emergency.

(e) All other State minimum standards and permit conditions which are not the subject of the waiver shall remain in effect.

(f) A waiver may be modified, canceled, or revoked by the EA without advance notice should the EA determine that any of the following occurs:

(1) The use of such a waiver will cause or contribute to a public health and safety or environmental problem;

(2) The terms of the waiver are not being used expressly to handle the state of emergency or local emergency and are not in the best interest of the public health and safety;

(3) The waiver is no longer necessary;

(4) The solid waste facility operator is not utilizing disaster debris diversion programs to the extent feasible.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.3 ***Request for an Emergency Waiver***

(a) An operator may apply to an EA for a waiver after a disaster or emergency situation as defined in this Article, has been declared. The waiver shall only be granted with the express approval of the EA following a proclamation of emergency or declaration of disaster at the local or State levels.

(b) To obtain a waiver, a solid waste facility operator shall submit a written request to the EA. The request for a waiver shall include, but not be limited to, the following information:

(1) A listing of the existing solid waste facilities permit terms and conditions to be waived in order to facilitate recovery and disposal of disaster debris in the event of a declared disaster or emergency;

(2) A statement of the remaining disposal capacity of the solid waste disposal facility at the time of the request;

(3) A description of all facility-related diversion programs and on-site recycling facilities; and

(4) A listing of locally approved temporary transfer or processing sites to be used to store disaster debris for future reuse or recycling.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.4 ***Granting an Emergency Waiver***

(a) The EA may grant a waiver during a proclamation of emergency upon making the following findings:

(1) The operator applying for the waiver holds a valid solid waste facilities permit;

(2) The waiver will not pose a threat to public health and safety or the environment;

(3) The operator identifies and implements, to the extent feasible, diversion programs to maximize diversion through reuse, recycling, or composting of disaster-related waste.

(b) Within 7 days of receipt of the solid waste facility operator's request for a waiver, the EA shall notify the solid waste facility operator in writing whether or not the request for waiver has been granted. If the proposed waiver is not granted, the EA's notification shall contain reasons for the denial. The solid waste facility operator may reapply for the waiver at a later date or submit necessary documentation to receive the waiver immediately.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.5 ***Reporting Requirements for a Solid Waste Facility Operator***

(a) The solid waste facility operator shall submit a written report to the EA and the local county agency (agency) within 90 days of activation of the waiver and every 90 days thereafter for the effective period of the activated waiver.

(b) The written report shall include the following information:

(1) The daily amount of disaster debris received, diverted, and disposed at the facility;

(2) The jurisdiction of origin for the disaster debris received at the facility;

(3) The increase in tonnage or volume of waste received per day during the effective period of the activated waiver; and

(4) The facilities used to process the disaster debris.

(c) If pursuant to section 17210.2 (d) of this Article, the waiver is extended beyond 120 days, the operator shall submit a report, as described in subparagraph (b), to the EA and agency. The report shall be submitted once every 90 days until the end of the effective period of the waiver.

(d) After the activated waiver expires, the solid waste facility operator shall continue to submit the information requested in item (b) above to the EA and agency, every 90 days, until there is no longer any discernible disaster related waste being processed or stored at the facility.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.6 ***Reporting Requirements for an Enforcement Agency***

(a) The EA shall transmit a copy of the approved waiver to the Board within 15 days of its issuance.

(b) The EA shall submit a copy of the operator's written reports to the Board within 30 days of the receipt of the reports.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.7 ***Selection of a Solid Waste Facility for Emergency Disposal and Diversion***

(a) In the event of a state of emergency or local emergency, the EA shall do the following:

(1) Assist the local government within its jurisdiction by providing a list of solid waste disposal facilities which have been granted a waiver. The list shall include site capacity for acceptance of waste, hours of operation, daily tonnage limits during the emergency, and on-site recycling and diversion for disaster-related debris.

(2) Survey the solid waste facilities within its jurisdiction and determine the diversion programs available at the facilities. Diversion information will be made available by the EA to an affected local jurisdiction and to the public during a declared emergency.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

Section 17210.8 ***Authority of an Enforcement Agency***

(a) An EA may approve waivers of minimum standards and specific terms or conditions of a solid waste facilities permit, as needed, to respond to a disaster or emergency situation, as defined in section 17210.1.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40001, 40002, 40051, 40052, 40053, 40054, 40055, 40056, 40057, 43020, and 43021, Public Resources Code.

Section 17210.9 ***Executive Director's Powers and Duties Relative to the Emergency Waiver***

(a) Once the waiver is issued, the Executive Director of the Board shall review all EA waiver approvals. The Executive Director may condition, limit, suspend, or terminate an operator's use of a waiver, if it is determined that use of the waiver would cause harm to public health and safety, or the environment.

(b) The Executive Director may condition, limit, suspend, or terminate an operator's use of a waiver if it is found that the operator has not utilized reasonably available waste diversion programs as identified in its waiver documentation.

(c) The Executive Director shall report to the Board at a regularly scheduled meeting any granting of a waiver, and all determinations made concerning the waiver.

Note: Authority cited: Sections 40502 and 43035, Public Resources Code.

Reference: Section 40002, 43020, 43021 and 43035, Public Resources Code.

(Please note that the above regulations are an unofficial version of the regulations. The authoritative regulations are found in Barclays Official California Code of Regulations published by Barclays Law Publishers)

ATTACHMENT 19 – FEMA DEBRIS-MONITORING CHECKLIST

DISASTER ASSISTANCE DIRECTORATE FACT SHEET - DAP9580.203

DEBRIS MONITORING

Entity	Responsibilities	Tasks
Debris Removal Contractor	Conduct debris removal operations per the terms of the contract.	▪ Monitor its own day-to-day operations to ensure its contractual obligations are being met.
Public Assistance Applicant Monitoring Contractor	Works for Applicant to monitor debris contractor's day-to-day operations to ensure the applicants expectations and contractual requirements are being met.	▪ Provide debris monitoring personnel who are trained in eligibility. ▪ Monitor operations in accordance with the contract requirements. ▪ Provide all monitoring documents as required in the monitoring contract.
Public Assistance Applicant (subgrantee)	Provide oversight and quality assurance of both the debris removal contract and the monitoring contract (if applicable). Request PA funds for eligible work. Ensure performance measures are met and eligible work is documented. Understand eligibility requirements and ensure work performed under the contract meets these requirements.	▪ Designate project manager. *If debris removal is performed by force account labor:* ▪ Provide documentation to substantiate eligible debris quantities. ▪ Ensure compliance with subgrant requirements. *If debris removal is performed under contract:* ▪ Ensure that debris removal contractors and monitoring contractors (if applicable) understand eligibility requirements for the debris removal operations. ▪ Ensure that only eligible debris quantities are being claimed for Public Assistance. ▪ Resolve issues or discrepancies associated with the contract.
State (Grantee)	Ensure grant requirements outlined in the 44 CFR are being met and that PA applicants are receiving funds for eligible costs. Responsible for monitoring the grant and subgrant to ensure compliance with Federal, State and local laws and regulations.	▪ Monitor the grant and subgrant requirements. ▪ Ensure that the applicant is sufficiently monitoring the debris removal operation (FEMA\Grantee effort). ▪ Conduct random monitoring at load sites and disposal sites to ensure compliance with grant requirements (FEMA\Grantee effort). ▪ Notify subgrantee of compliance issues and outline corrective actions (FEMA\Grantee effort).
FEMA	Ensure grant requirements outlined in 44 CFR are being met. Fund eligible work. Responsible for the preparation of large project worksheets, development of the scope of work and the obligation of funds. Responsible for monitoring the grant to ensure compliance with Federal, State and local laws and regulations.	▪ Develop large project worksheets in coordination with the Grantee and subgrantee. ▪ Utilize monitors to ensure that the applicant is sufficiently monitoring the debris removal operation. (FEMA\Grantee effort) ▪ Conduct random monitoring at load sites and disposal sites to ensure compliance with grant requirements. (FEMA\Grantee effort). ▪ Notify Grantee/subgrantee of compliance issues and outline corrective actions (FEMA\Grantee effort). ▪ Increase or decrease monitoring efforts as necessary to ensure corrective actions are in place and operations are being effectively monitored.

DISASTER ASSISTANCE DIRECTORATE FACT SHEET - DAP9580.203

DEBRIS MONITORING

The specific responsibilities and duties of individual debris monitors in the field are the same for both force account and contracted debris monitoring operations. They are:

- Report issues to their direct supervisor which require action (such as safety concerns, contractor non-compliance and equipment use)
- Accurately measure and certify truck capacities (recertify on a regular basis)
- Properly and accurately complete and physically control load tickets (in tower and field)
- Ensure that trucks are accurately credited for their load
- Ensure that trucks are not artificially loaded (ex: debris is wetted, debris is fluffed—not compacted)
- Validate hazardous trees, including hangers, leaners, and stumps
- Ensure that hazardous wastes are not mixed in loads
- Ensure that all debris is removed from trucks at Debris Management Sites (DMS)
- Report if improper equipment is mobilized and used
- Report if contractor personnel safety standards are not followed
- Report if general public safety standards are not followed
- Report if completion schedules are not on target
- Ensure that only debris specified in the contract is collected (and is identified as eligible or ineligible)
- Assure that force account labor and/or debris contractor work is within the assigned scope of work
- Monitor site development and restoration of DMSs
- Report to supervisor if debris removal work does not comply with all local ordinances as well as State and Federal regulations (i.e., proper disposal of hazardous wastes)
- Record the types of equipment used (Time & Materials contract)
- Record the hours equipment was used, include downtime of each piece of equipment by day (Time & Materials contract)

Applicants may request FEMA/State assistance with debris monitoring or monitor training.

Only FEMA has the authority to make eligibility decisions; contractors cannot make eligibility determinations. Information on eligibility can be found in the Public Assistance Debris Management Guide FEMA 325, the Public Assistance Policy Digest FEMA 321, the Public Assistance Applicant Handbook FEMA 323, and the Public Assistance Guide FEMA 322.

Unlike other categories of work eligible for Public Assistance grants, initial debris removal project worksheets typically do not have a defined scope of work, since precise quantities of debris are difficult to attain. Therefore, unit price contracts which pay by debris volume or weight removed are typically implemented. Unit price contracts require extensive monitoring to determine accurate quantities of eligible debris removed and disposed. As load tickets are compiled and accurate quantities are determined through monitoring, the scope of work for the project worksheet, or version, is established.

DISASTER ASSISTANCE DIRECTORATE FACT SHEET - DAP9580.203

DEBRIS MONITORING

In some cases, time and materials contracts may be more cost effective and appropriate for the amount and type of eligible work to be performed. For both time and materials and lump sum contracts, debris monitors must still document and quantify eligible debris amounts in order to determine reasonableness of costs.

The table below includes a breakdown of monitoring requirements by contract type.

Type of Contract	Project Worksheet Scope of Work	Subgrantee Monitoring Required					Comments
		Crew Efficiency	Load site	DMSs	Disposal sites	Fraud	
Lump Sum	Defined debris quantities and reasonable costs. Estimate is basis for contract costs.		√		√		Quantities are still required to determine reasonable costs.
Unit Price - CY	Based on eligible debris listed on load tickets	√	√	√	√	√	
Unit Price - Ton	Based on actual weight measurements of eligible debris listed on load tickets.		√		√	√	
Time and Materials	Based on labor, equipment and materials records. Reasonable costs evaluated by determining costs per unit.	√	√		√	√	Typically used for road clearance. If used for debris removal, quantities are still required to determine reasonable costs. Eligible costs are restricted to up to 70 hours.

Monitoring Contracts

The request for proposal (RFP) for debris monitoring contracts should outline the qualification of debris monitors. The qualifications should be appropriate for the individual responsibilities and duties listed above, and debris monitors should have experience working on construction sites and be familiar with safety regulations. It is not necessary to have professional engineers and other certified professionals perform these duties. Debris monitors primarily should have the ability to estimate debris quantities, differentiate between debris types, properly fill out load tickets, and follow all site safety procedures.

The RFP should also outline possible locations to be monitored and reporting requirements to document eligible debris quantities.

ATTACHMENT 20 – EXAMPLE PUBLIC INFORMATION NOTICE

Important information for Emeryville Residents!

Emeryville residents are asked to avoid contaminating curbside recyclables by placing:

- Non-container glass (e.g., window glass, serving glass/dishware, mirrors, etc.) in the garbage; and
- Inorganic, non-compostable materials (e.g., bricks, concrete, and rocks) in the garbage.

Contamination of the recycling or composting streams can result in damage to processing equipment, lower the quality of the compost and/or recycled products, and may also unfortunately result in landfill disposal of otherwise recyclable or compostable materials.

Please visit https://www.wm.com/location/california/bay_area/emeryville/index.jsp for more detailed information on what is accepted in your recycling cart and your organics cart.

Household Hazardous Waste (HHW) in general: Most HHW information is available online at: http://www.stopwaste.org/at-home/household-hazardous-waste. For home-generated HHW, residents may drop off material at one of the four Countywide HHW facilities.

[If additional drop sites are set up include the following]

Residents are able to drop off any HHW or e-waste at emergency community collection drop-box locations in the designated areas only.

[Enter Public Information Officer Contact Info]

ATTACHMENT 21 – PUBLIC ASSISTANCE ALTERNATIVE PROCEDURES PILOT PROGRAM FOR DEBRIS REMOVAL ACKNOWLEDGEMENT FORM

Public Assistance Alternative Procedures Pilot Program for Debris Removal Acknowledgement

In accordance with the Sandy Recovery Improvement Act of 2013, the Federal Emergency Management Agency (FEMA) is implementing alternative procedures for the Public Assistance (PA) Program through a pilot program.

As a representative of the subrecipient, we elect to participate in the following:

- ☐ One-time incentive for a FEMA-accepted debris management plan and identification of at least one pre-qualified contractor
- ☐ Reimbursement of straight time force account labor costs for debris removal

1. The pilot is voluntary and the subrecipient must apply the selected alternative procedures to all of its debris removal subawards.
2. The subrecipient acknowledges that FEMA may request joint quantity evaluations and details regarding subrecipient operations necessary to assess the pilot program procedures.
3. All contracts must comply with local, state, and federal requirements for procurement, including provisions of 2 CFR Part 200.
4. The subrecipient must comply with all federal, state and local environmental and historic preservation laws, regulations, and ordinances.
5. The Office of Inspector General may audit any subrecipient and/or subaward.

Signature of Subrecipient's Authorized Representative	Date
Printed Name and Title	
Subrecipient Name	PA ID Number

ATTACHMENT 22 – GOVERNOR'S OFFICE OF EMERGENCY SERVICES (CAL OES) FACT SHEETS

The following fact sheets are included to assist in guiding the City of Emeryville immediately following a disaster. Information in this attachment was provided by Cal OES, to provide knowledge and experience in maximizing disaster funding and speed recovery in affected areas.

The following pages include fact sheets on:

- Debris management resources
- Debris monitoring
- Debris management assistance
- Temporary Debris Management Sites (TDMS)
- Debris removal contracts
- Debris forecasting
- Debris estimating

Debris Management Resources

Local governments have many state and federal resources available when developing their debris management plan and/or a disaster debris removal operation. To assist in these endeavors, state and federal resources are available for technical assistance, guidance and advice.

The following is a summary of some examples of assigned responsibilities. This list is provided to identify types of state agencies typically available to provide various debris management tasks.

State Debris Management Resources

Agency/Company	Responsibility/Assistance
Air Resources Board, California	Promotes and protects public health, welfare and ecological resources through the effective and efficient reduction of air pollutants while recognizing and considering the effects on the economy of the State.
Boating & Waterways, Department of	Provides boating education, safety, law enforcement, consumer protection, environmental, and aquatic weed control programs for the benefit of the boating community.
California Conservation Corps (CCC)	Protects and restores California's environment and responds to disasters.
Conservation, Department of	Provides services and information that promote environmental health, economic vitality, informed land-use decisions and sound management of our State's natural resources.
California Environmental Protection Agency (CalEPA)	Provides technical assistance and oversight on State environmental issues.
Fish and Game, Department of (DFG)	Maintains native fish, wildlife, plant species and natural communities.
Forestry & Fire Protection, Department of (CalFire)	Protects the property and resources of California.
California Highway Patrol (CHP)	Promotes the safe and efficient movement of people and goods throughout California, and minimizes exposure of the public to unsafe conditions resulting from emergency incidents and highway impediments.
Insurance, Department of	Regulates the rates and practices of insurance companies, agents, and brokers in the State.
California Resources Recycling and Recovery, Department of (Cal Recycle)	Provides technical assistance and oversight on State landfill sites and recycling of debris.
Office of Environmental Health Hazard Assessment	Protects and enhances public health and the environment by scientific evaluation of risks posed by hazardous substances.
California Natural Resources Agency	Protects and manages the State's natural, historical and cultural resources.
Transportation, Department of (Caltrans)	Clears debris from key transportation routes in the State.
Toxic Substances Control, Department of	Protects the public health and the environment from hazardous materials.
Water Resources, Department of (DWR)	Manages the water resources of California in cooperation with other agencies.
State Water Resources Control Board	Develops and enforces water quality objectives and implementation plans that will best protect the State's waters.

Remember that any regulatory compliance requirements must be considered when creating a debris management plan or planning a debris removal operation. This is very important as non-compliance with regulations will have a serious impact on a debris removal operation.

Consider the following when beginning such a task:

- What is the process for coordinating with local, state and federal regulatory agencies?
- Who do you contact?
- What type of waivers might be needed?
- Who can assist you with these waivers?
- What can you do before a disaster happens?
- Who is in charge of checking for regulatory compliance?

Continued on next page

Debris Management Resources

In addition to the State resources previously mentioned, the following is a list of Federal agencies typically available to provide various debris management tasks.

Federal Debris Management Resources

Agency/Company	Responsibility/Assistance
Federal Emergency Management Agency (FEMA)	Provides funding for and debris management teams to assist with debris removal operations.
Federal Highway Administration (FHWA)	Provides funding to Caltrans and local governments for debris removal on federal aid routes.
Natural Resources Conservation Service (NRCS)	Provides expertise in soil science and leadership for soil surveys.
U.S. Environmental Protection Agency (US EPA)	Provides technical assistance regarding debris removal operations.
U.S. Army Corps of Engineers (USACE)	Provides technical assistance and/or staff regarding debris removal operations. Can conduct and/or contract debris removal operations upon authorization from FEMA.
U.S. Coast Guard (USCG)	Contains and cleans up debris and hazardous materials in coastal zones.

Additional Resources

- CalOES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracts Flyer
- Debris Forecasting Flyer
- Debris Estimating Flyer
- Temporary Debris Storage Site Flyer
- Debris Management Plan Flyer
- CalOES Debris Training Manual

Do You Have A Debris Plan?

- Local and state emergency managers are encouraged to develop a debris management plan for their communities in anticipation of potential disaster events.
- The primary purpose of the plan is to define roles of essential agencies and personnel necessary to execute debris clearance, removal and disposal activities.
- The plan provides a process to assess the magnitude and type of debris resulting from an event.
- It is also essential that debris management planning activities become an integral part of other emergency planning activities within the jurisdiction.

Did You Know?

Successful debris planning efforts will result in more efficient use of limited resources, timely access to critical infrastructure and environmentally safe solutions to debris issues.

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.arb.ca.gov
www.calepa.ca.gov
www.dtsc.ca.gov
www.dot.ca.gov
www.fema.gov
www.epa.gov
www.spk.usace.army.mil
www.noaa.gov

Want More Information?

Contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email:
Melinda.Stehr@caloes.ca.gov

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

Regulations: *CDAA Section 2915*
44 CFR, Section 206.224

February 2015 (Rev.)

Debris Monitoring

Effective debris management requires monitoring of debris removal operations. Monitoring debris removal operations requires comprehensive observation and documentation by the Public Assistance applicant for debris removal work performed from the point of debris collection to final disposal.

Inadequate monitoring of debris activities often results in disputes between an applicant and the contractor, the State and/or Federal Emergency Management Agency (FEMA) regarding reimbursement for debris removal, reduction and disposal. These disputes can lead to a loss of funding.

Trained Debris Monitors can assist in resolving issues in the field so that funding for debris removal operations is not jeopardized.

Debris Monitoring Responsibilities

Applicant Responsibility

The applicant must use full-time debris monitors to account for all debris management activities. In addition, the applicant will:

- Provide debris monitors who are trained in eligibility.
- Monitor operations in accordance with contract requirements.
- Prepare a daily report of activities completed.
- Provide sufficient documentation to support that the scope of work performed meets eligibility requirements.
- Resolve or correct issues or discrepancies that may arise.

State Responsibility

Cal OES has the authority to monitor an applicant's debris removal operations, whether performed by the applicant or a contractor.
The state will:

- Monitor applicant's debris removal operation.
- Make periodic site visits, depending on magnitude and complexity of the operations, to ensure compliance with eligibility requirements.
- Assess the operation's compliance with terms of the scope of work, contract and applicant's debris management and monitoring plans.
- Review field notes and/or reports prepared by Debris Monitors.
- Prepare a summary report of observations, issues and resolutions.
- Notify applicant of compliance issues and outline possible solutions.
- Provide Training to Debris Field Monitors.

Federal Responsibility

FEMA has the authority to monitor an applicant's debris removal operations, whether performed by the applicant or a contractor. In addition, FEMA will:

- Use FEMA Monitors to ensure that the applicant is sufficiently monitoring the debris removal operation.
- Monitor at load and disposal sites to ensure compliance with eligibility requirements.
- Notify State of compliance issues and outline corrective actions.

Debris Field Monitors

Debris Field Monitors are responsible for monitoring of the specific day-to-day field activities. Debris Field Monitors should:

- Have a good understanding of eligible debris.
- Understand any time limits imposed on pickup of specific types of debris.
- Monitor specific activities at loading and/or disposal sites.
- Prepare daily reports of activities completed.
- Identify issues that need resolution.
- Report safety issues.
- Ensure ineligible debris is not picked up.
- Ensure that hazardous waste is property separated.
- Ensure trucks loaded correctly and credited for their load.
- Report if completion dates are not on schedule.

Continued on next page

Debris Monitoring

A debris monitoring program observes and documents the work being done at two locations, minimum – point of collection and disposal (temporary and final). Some items to document at the various monitoring points include:

Debris Loading Area

- Eligible debris is being picked up from contract area.
- If debris types are separated at the curbside, check that the contractor keeps it separated.
- Truck loads are full.
- Tailgates are in-place.
- Sideboards are in place.
- Time of pickup.
- Load is reasonably compact – large obstructions are not restricting placement of material. Note that if the loads are not properly loaded or compacted, debris monitors should reduce the rated volume of the truck accordingly.

Debris Unloading Area

- Truck size is as reported on the load ticket.
- Determine proper debris quantities.
- Check time of collection for reasonable turnaround.
- Assure appropriate materials are properly segregated, such as Household Hazardous Waste (HHW).

Debris Management Site

- Record inactive times of contract equipment.
- If air curtain incinerators are used, assure proper procedures.
- Assure HHW is properly segregated.
- Assure safety of personnel around equipment.
- At a minimum, an elevated inspection station should be used to enable the monitor to look down into the truck to verify both the contents and the load amount.
- Monitoring should also be performed at the exit point of the Debris Management Site to ensure the load has been sufficiently dumped.
- If the contract is by weight, then there should be a monitor at the certified scales.
- One of the best methods of monitoring is to use a load ticket system.

Additional Resources

- Cal OES Debris Training Manual
- Debris Removal Flyer
- Debris Estimating Flyer
- Debris Forecasting Flyer
- Debris Monitoring Guide, FEMA

Web Sites

www.caloes.ca.gov
www.fema.gov

Remember

Don't forget to document all aspects of your debris removal operation.

For more information on debris monitoring, contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email:
Melinda.Stehr@caloes.ca.gov
Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

Regulations: *Title 19, Section 2900*
44 CFR, Section 206.224.

February 2015 (Rev.)

Debris Managment Assistance

DISASTER RELIEF

Debris removal is eligible under most types of emergency declarations. Below is a table showing the circumstances and the associated cost-share amount for local governments when debris management funding is available.

	Cal OES Agency Secretary's Concurrence/Local Proclamation	Governor's Proclamation/State of Emergency	Presidential Emergency Declaration	Presidential Major Disaster Declaration
Debris Removal Eligible	No	Yes	Yes (if Cat. A included in Declaration)	Yes
Local Cost Share	N/A	Yes - 25%	Yes - 6.25%	Yes - 6.25%
Debris Management Plan Required for Event	N/A	Yes	Yes	Yes
Direct Federal Assistance	N/A	No	Yes	Yes

Remember the following information when seeking debris management assistance:

Debris removal shall be considered necessary when removal will:

- Eliminate immediate threats to life, public health, and safety;
- Eliminate immediate threats of significant damage to improved public or private property; or,
- Be necessary for the permanent repair, restoration, or reconstruction of damaged public facilities.

Debris Removal from Public Right-of-Way

- Local government must create a debris management plan for the disaster.
- Disaster debris removed from the public right-of-way or from bins placed in the public right-of-way is, for the most part, eligible whether funded by the State or FEMA.
- Debris must be disaster related and is generally separated by type.
- Monitors are needed for this process to ensure the public is complying and that there is no illegal dumping.

Debris Removal from Private Property

- To be eligible for funding, local government must have State and FEMA approval for a private property debris removal program before removing the debris.
- Local government must demonstrate an immediate threat to the public health and safety from the debris.
- Local official must state that removal of debris from private property is necessary to remove and/or reduce the immediate threat to the public health and safety.
- Local government must create a private property debris management plan for the disaster.
- Local government must monitor debris removal operations.
- Local government must pursue insurance recovery from property owners.
- Local governments must ensure that property owners that do not participate in private property debris removal operations remove debris from private property in a timely manner.

Continued on next page

Debris Removal

Debris Types

Debris removal is the clearance, removal and/or disposal of debris following a disaster. The resulting debris may be comprised of one or more of the following types:

Construction & Demolition materials	Electronic debris - (computers, TVs, etc.)
Sediments	Sandbags
Vegetative debris	White Metals - (washer, refrigerators, etc.)
Metals - (awnings, etc.)	Personal Property
Animal Carcasses	Hazardous Household Waste

Ineligible Debris

- Debris that does not pose a threat
- Vehicles (i.e. cars, boats, RVs, etc.)
- Foundations (may be eligible under CDAA)
- Swimming pools
- Old tires, batteries or equipment

DEBRIS MANAGEMENT PLAN

- A good debris management plan can save time and money.
- A debris management plan will address both short term and long term goals and actions.
- A debris management plan is essential for a quick and effective response to and preparation for debris from the next major disaster.
- Local emergency plans should be coordinated with solid waste planning to include debris management strategies, reuse and recycling opportunities, quantity estimations, landfill capacities, landfill class/type and potential temporary storage sites.
- The debris plan must be approved by the implementing agencies and departments, and adopted according to city/county requirements
- Remember, a good debris plan will result in more efficient use of limited resources, timely access to critical infrastructure and environmentally safe solutions to debris issues.

Additional Resources

- Cal OES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracting Flyer
- Debris Estimating Flyer
- Debris Forecasting Flyer
- Debris Management Plan Flyer
- Debris Training Flyer
- Cal OES Debris Training Manual

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.fema.gov

Want more information on debris management?
Contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email:
Melinda.Stehr@caloes.ca.gov

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

Regulations: *Title 19, Section 2900*
44 CFR, Section 206.224.
Stafford Act, Sections 403 & 407

February 2015 (Rev.)

Temporary Debris Storage Sites

Temporary Debris Management Site

A temporary Debris Management Site (TDMS) is designed to receive incoming disaster generated debris from point of origin debris loading operations. These areas serve as a more localized interim use holding area for disaster generated debris.

Debris dumped at a debris management site is sorted to remove recyclable materials and materials not suitable for reuse. The materials not suitable for reuse are taken to a landfill. Ideally, all concrete rubble would be processed at the TDMS into reusable aggregate. This option may be considered if space, site characteristics, and available resources allow.

Size

The size of the site is dependent on the quantity of debris that needs to be stored and processed. The site should be large enough to safely accommodate processing of various debris materials, storing heavy equipment, and maneuvering trucks and large processing equipment. Historic disasters have shown that it takes 100 acres of land to process one million cubic yards of debris. The U.S. Army Corps of Engineers has found that approximately 60 percent of the area will be used for roads, buffers, burn pits, household hazardous waste disposal areas, etc.

Location

TDMS should be established in an area that does not impede the flow of traffic along major transportation corridors, disrupt local business operations, or cause dangerous conditions in residential neighborhoods or schools. Whenever possible, avoid locating a TDMS near residential areas, schools, churches, hospitals, and other such sensitive areas.

TDMS requires good ingress/egress to accommodate heavy truck traffic. The planning staff should consider adjusting traffic signals to accommodate projected truck traffic on critical haul routes. TDMS selection criteria should consider access to major routes to allow for trucks to transport material to final disposition locations.

The planning staff needs to consider public acceptability when selecting a potential TDMS. It is largely dependent upon the activities planned for the site. Smoke from burning, around-the-clock light and noise from equipment operation, dust, and traffic are generally tolerated early in a disaster recovery operation, but may have to be curtailed later. The planning staff is strongly encouraged to notify citizens early about planned site activities and possible ramifications.

Point of Origin Debris Processing Crew

A Point of Origin Debris Processing (DPC) crew is composed of equipment and a labor crew that is structured to provide portable collection, sorting, and processing of disaster generated debris at the original location of disaster debris. Taking advantage of the available labor resources in the affected area, this method of managing the disaster debris from a large event provides excellent opportunity to employ many locals in the disaster recovery operation.

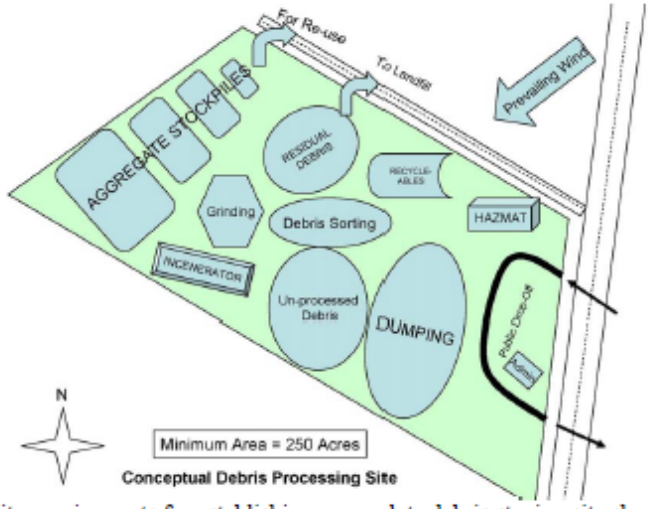
Consider the density of structures, narrow streets, heavy traffic, and other limiting factors; the concept of processing disaster debris at the point of origin facilitates a faster, safer, and more efficient recovery operation. Important to the effectiveness of this methodology for debris processing is being able to use the crushed concrete rubble on site or at a nearby site. Recyclable materials, if not already removed, may be transported to a debris processing site for ultimate sale or beneficial reuse. Residual debris and trash may be transported to the debris processing site for incineration or transported directly to a landfill.

In addition, a DPC can be used as an emergency strike team or "hot spot crew" that can be dispatched quickly to deal with debris trouble spots requiring prompt attention.

Example of a TDMS layout:

Continued on next page

Temporary Debris Management Sites



Conceptual Debris Processing Site

Site requirements for establishing a complete debris staging site should provide for:

1. A minimum of 10 acres of usable land.
2. A well drained site with soils suitable for supporting vehicles and equipment.
3. Easy access to transportation routes.
4. Strategic placement to facilitate minimizing debris transportation requirements and travel time to and from loading points. The debris staging sites should be located as close as possible to the concentrations of disaster debris.
5. Access to, or provisions for, utilities for site operation (electrical, water, etc.)
6. Minimum potential for conflicting uses such as adjacent residential land use, nearby schools, hospitals, etc.

Permits

Environmental permits and land-use variances may be required to establish a temporary DMS. Several agencies may be involved in issuing permits and granting land-use approvals. The planning process should identify the potential permits that will be required to establish a facility. A listing of the permits should be part of the debris management plan and may include:

- Waste processing and recycling operations permit
- Temporary land-use permits
- Land-use variances
- Traffic circulation strategies
- Air quality permits
- Water quality permits
- Coastal commission land-use permits
- HHW permits
- Fire department permits

Additional Resources

- CalOES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracting Flyer
- Debris Estimating Flyer
- Debris Forecasting Flyer
- Debris Management Plan Flyer
- Debris Training Flyer
- CalEMA Debris Training Manual

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.fema.gov

Got Questions?

Contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email:
Melinda.Stehr@caloes.ca.gov

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

February 2015 *(Rev.)*

Debris Removal Contracts

As a result of a major disaster, local governments may need the assistance of contractors for debris removal operations. After large events, many communities can become overwhelmed by the enormous amounts of debris generated, and may need assistance to comply with proper procurement requirements.

Communities that fail to comply with proper contracting procedures or that enter into inappropriate contracts, may experience severe financial consequences, such as:

- Paying a contractor for work that was not originally part of the contract
- The period of performance may become excessive such that the work is not completed in a timely manner to meet the needs of the community.
- Lawsuits may result by the community (residents), the contractor, or both.
- If there is a state or federal disaster declaration:
  - The community may not be reimbursed for all costs incurred, even if payment must be made to the contractor.
  - There may be delays in funding pending the results of audits, collection of documentation, justification of costs, etc.

Regulations

State
CDAA, Section 2915

Applicants receiving federal disaster assistance funds must comply with applicable federal contracting and procurement requirements contained in 44, Code of Federal Regulations (CFR), Part 13.

Funds withdrawn by the federal government, due to non-compliance with the applicable federal contracting and procurement requirements shall result in a loss or reduction of state cost-sharing assistance. The state shall not provide additional funding to an applicant to substitute for federal funding withdrawn as a result of noncompliance with federal regulations.

Any work performed by a state agency, at the request of a local agency, shall be agreed upon in writing and subject to the state Public Contracts Code. Work performed by a local agency shall be subject to the laws governing the performance of such work by the local agency and any other applicable state or federal laws.

Federal Regulations
Title 44 of the Code of Federal Regulations, Part 13

Covers grant administration, including procurement and contracting criteria Normal State and local procurement requirements must still be followed, but such regulations must be at least stringent as the Federal procurement regulations (Part 13).

To be eligible for FEMA assistance, competitive bidding must be used except for initial emergency situations.

DEBRIS REMOVAL CONTRACTS

- The definition of "emergency" in contracting procedures is NOT the same as FEMA's definition of "emergency work".
- Contracts for "emergency work" do not mean that contracts can be awarded without competitive bidding.
- CalOES & FEMA will only reimburse for reasonable costs.
- All activities in the contract must be required for debris removal and are eligible for reimbursement.

No contractor has the authority to make determinations on eligibility, acceptable emergency contracts or definitions of emergency work.

Continued on next page

Debris Removal Contracts

Debris Removal Contract Issues

Contract Activities:

- ☑ Debris management planning
  - o Not eligible is done prior to a disaster
- ☑ Clearance, removal & hauling
  - o Separate contracts maybe used
- ☑ Demolition
- ☑ Debris management sites
  - o Overall operations or specific activities
- ☑ Recycling or volume reduction activities
- ☑ Removal & disposal of household hazardous waste, asbestos, etc.
- ☑ Final disposition
- ☑ Monitoring
- ☑ Overall project management
  - o Reimbursement depends on magnitude of event & impact to community, costs, etc.

Contract Requirements

- ☑ Must follow local, state and federal procurement procedures
- ☑ Must use competitive bidding
- ☑ Scope-of-work must be well-defined
- ☑ Require detailed documentation
- ☑ Include termination for convenience clause
- ☑ Specify a reasonable period of performance
- ☑ Make own debris estimate
- ☑ Fully document debris removal process

Contract Types

- ☑ Time and Materials
  - o Used during first 70 hours of the emergency
  - o Cannot exceed 70 hours without waiver
  - o Must have a dollar amount cap on contract
  - o Requires detailed documentation & full time monitors
- ☑ Unit Price
  - o Requires full-time trained third-party contract monitors
  - o Requires all trucks to be accurately measured & numbered
  - o Requires all truckloads to be documented.
- ☑ Lump Sum
  - o Area Method:
    - Contractor shoulders most of the risk
    - Requires clear, definable scope of work
  - o Pass Method:
    - Scope of work more definitive
    - Minimum labor required for management

Additional Resources

- CalOES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracting Flyer
- Debris Estimating Flyer
- Debris Forecasting Flyer
- Debris Management Plan Flyer
- Debris Training Flyer
- CalOES Debris Training Manual

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.fema.gov

FOR MORE INFORMATION ON DEBRIS MANAGEMENT CONTACT:

Melinda Stehr
Debris Coordinator
Desk: (916) 845-8274
Cell: (916) 265-8205
Email:
Melinda.Stehr@caloes.ca.gov

Or

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

Regulations: *CDAA Section 2915 & 2925*
44 CFR, Section 206.224.
Stafford Act, Sections 403 & 407

February 2015 (Rev.)

Debris Forecasting

Debris forecasting is normally a pre-disaster technique used to predict debris quantities. Debris Forecasting can also be used to determine the type and number of stand-by contracts required to remove and dispose of the predicted debris.

However, certain planning assumptions must be made concerning the type and magnitude of debris generating events. For instance, a debris management plan would assume that a specific type of event, such as a major earthquake in a heavily populated area, would affect the area with large quantities of primarily construction and demolition debris. Or, the plan may assume a range of debris generating events from small floods and tornados to catastrophic similar events.

Debris Forecasting Techniques

There are three basic techniques that are used for debris forecasting:

- An analysis of prior debris generating events can be conducted for your community or a similar community. With this analysis completed it may be possible to plan for effective response to similar type events. However, because the event may have been limited in scope or experienced debris staff is no longer available, this method has severe limitations.
- More commonly, a community-based risk analysis is completed to determine the types and quantities of debris generated by various events. This analysis is then used as a critical component of the debris management plan.
- Computers can be used for both of the first two techniques to perform calculations and present the analysis. However, there are a range of computer-based prediction models available to perform some of the more routine calculations, use a community's Geographical Information System (GIS) and plan for any number of event scenarios.

When these three techniques are combined a very effective analysis can be completed.

Historical Analysis

In order to complete an historical analysis of prior debris events, some basic information should be gathered:

- Prior event(s) should be selected from your community or from communities who have experienced the type of disaster you have forecasted for your community.
- Key staff members responsible for debris activities should be interviewed to determine procedures that were effective and those that were not.

Continued on next page

Debris Forecasting

A simple method can be used to systematically forecast the type and quantity of debris for a community.

Obtain detailed maps of your community and highlight them with an indication of the type of land use in each area, such as urban, industrial, rural and mixed. This area separation will make your analysis easier as similar land use areas can be assumed to have similar debris types.

- For instance: parks, orchards, groves, nurseries and tree-lined streets will have similar debris quantities based on an acreage or mileage basis.
- Commercial and Industrial areas tend to have heavy amounts of construction and demolition type debris.
- Residential areas can be a combination of vegetative, construction and demolition debris.

Develop a representative sample of the debris in each area.

Debris quantities can be estimated using the guidelines provided:

- One story house = Volume in cubic yards (cy) times 0.33
- Personal property from flooded home without basement = 25-30 cy
- Single wide mobile home = 290 cy
- Double wide mobile home = 415 cy

Regarding vegetation, the terms light, medium and heavy are somewhat subjective, but the general guide is:

- Light - covering the house, yard or driveway
- Heavy - canopy of trees covering the house
- Medium - used for everything else

Third, project the sampling of debris for each area and provide a total of the amount and type of debris for each area. The grand total of all these calculations will provide you with an estimate useful for planning purposes.

Computerized modeling programs have been developed to provide reasonable debris predictions for communities under various disaster types. Types of these interactive models are:

- USACE
- Private Industry
- HAZUS

Please note that this type of debris forecasting is not an exact science. Broad assumptions and wide-scale projections must be made throughout the process. However, even with its inaccuracies, the resulting quantity estimate can be very useful in completing the next phases of the planning process, such as selecting Debris Management Sites or developing contracts.

Additional Resources

- Cal OES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracting Flyer
- Debris Estimating Flyer
- Debris Management Plan Flyer
- Cal OES Debris Training Manual

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.fema.gov

Got Questions?

Contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email: Melinda.Stehr@caloes.ca.gov

Or

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email: Judith.Fredericks@caloes.ca.gov

February 2015 (Rev.)

Debris Estimating

The determination of the quantity and type of debris is critical to debris management. Debris contracting, the management of Debris Management Sites and the possible need for State and Federal Resources will require a reasonably accurate estimate of debris quantities.

Debris estimating is normally used in a post-disaster situation to establish a reasonable estimate of the actual debris quantities and type. These estimates will be used to determine a community's actual capability to handle the situation. In addition, debris estimates will be used to determine the actual need for Debris Management Sites, contracts and landfill space requirements.

Estimating Debris Piles

There are many things to consider when estimating debris. The first consideration is the type of debris, for example:

- vegetative
- construction and demolition
- mobile homes
- a mix of different things

You will need to identify handling requirements, for example, if you will need to separate the debris.

Ensure that necessary equipment is available, including:

- Digital (preferred) or Polaroid camera
- 100-foot tape or roll-off wheel
- Calculator, notepad, sketchpad
- Maps of area
- Aerial photographs (preferably before and after the disaster)
- Dedicated vehicle and mobile communications

Debris estimating can be expedited by dividing the community into sectors based on any of the following:

- Type of debris: woody, mixed or construction material
- Location of debris: residential, commercial, or industrial
- Land use: rural or urban

Remember that however you define your area, you must be consistent with your system and keep detailed notes on how, where and what method you used for your estimates. These notes must be well documented and maintained for future reference. For Presidentially declared disasters, this information will be incorporated on the Project Worksheet.

Reminders

The following reminders may be of assistance when performing debris estimates:

- Look beyond the curb into side and backyards and at condition of the homes. Most debris in these areas will eventually move to the curb.
- Wet storms will produce more personal property debris (household furnishings, clothing, rugs, etc.) if roofs are blown away
- Look for hanging debris such as broken limbs after an ice storm
- Flood-deposited sediment may be compacted in place. Volume may increase as debris is picked up and moved.
- Using aerial photographs in combination with ground measurements will help determine if there are any voids in the middle of large debris piles
- Treat debris pile as a cube, not a cone, when performing estimates

Continued on next page

Debris Estimating

Estimating Formulas

Buildings

The following information will assist you in determining the amount of debris from destroyed buildings, homes and debris piles:

One-story building formula:
L'xW'xH' = ___ CY x .33 = ___ CY
27

One-story house formula:
L'xW'x8' = ____ CY x 0.33 = ___ CY of debris
27

Note: The 0.33 factor accounts for the "air space" in the house or building.

Outbuildings
L'xW'xH'x.033 = ___CY of debris
27'

Mobile homes formula:
L'xW'xH' = ___CY
27

Length =L, Width = W, and Height = H. All measurements are in "feet".

Note: The 0.33 factor is not applied to mobile home calculations due to their compact construction. The 27 factor is the conversion factor from cubic feet to cubic yards.

Mobile Homes

Typical quantities for mobile homes:

- Single wide mobile home = 290 cy of debris
- Double wide mobile home = 415 cy of debris

Participants typically have a difficult time accepting these numbers because they are larger than the standard stick-built homes. This has to do with the wasted air space in the average stick-built home. In mobile homes there is very little wasted air space – every inch of the unit is used in storage; the walls are narrower, etc.

Note: These numbers were verified during Hurricane Floyd. The State of North Carolina demolished approximately 2,000 mobile homes following that flood.

Debris piles

L'xW'xH' = ___ CY
27

Additional Resources

- Cal OES Concept of Operations
- Debris Removal Flyer
- Private Property Debris Removal
- Debris Contracting Flyer
- Debris Forecasting Flyer
- Debris Management Plan Flyer
- Cal OES Debris Training Manual

Web Sites

www.caloes.ca.gov
www.calrecycle.ca.gov
www.fema.gov

Got Questions?
Contact:

Melinda Stehr
Debris Coordinator
Desk: 916.845.8274
Cell: 916.265.8205
Email:
Melinda.Stehr@caloes.ca.gov

Or

Judy Fredericks
Debris Specialist
Desk: 916.845.8148
Cell: 916.804.0767
Email:
Judith.Fredericks@caloes.ca.gov

Regulations: *Title 19, Section 2900*
44 CFR, Section 206.224.
Stafford Act, Sections 403 & 407

February 2015
(Rev.)

ATTACHMENT 23 – PRE-QUALIFIED DISASTER-REMOVAL AND -DISPOSAL CONTRACTORS AND DISASTER-DEBRIS-MONITORING CONTRACTORS

Disaster-Removal and -Disposal Contractors

To be included after competitive bid process is completed by City.

Disaster-Debris-Monitoring Contractors

To be included after competitive bid process is completed by City.