TETRA TECH

Contra Costa County

Disaster Debris Management Plan

April 2016

PROMULGATION

County of Contra Costa Disaster Debris Management Plan

PROMULGATION

The County of Contra Costa Disaster Debris Management Plan (DDMP) provides a comprehensive framework for management of debris following a disaster. It addresses the roles and responsibilities of government organizations as well as private firms and non-governmental organizations that might have a role in debris operations.

The County of Contra Costa DDMP ensures consistency with current policy guidance and describes the interrelationship with other levels of government. The plan will continue to evolve, responding to lessons learned from actual disaster and emergency experiences, ongoing planning efforts, training and exercise activities, and federal guidance.

Therefore, in recognition of the role of Contra Costa County in managing debris following a disaster and with the authority vested in me as the *[Position Title*], I hereby promulgate the County of Contra Costa DDMP.

_____

(Name)

(Title), Contra Costa County, California

RECORD OF CHANGES

RECORDS OF CHANGES

The following table documents the revisions made to this plan. This plan should be reviewed and updated annually.

Revision Date	Summary of Major Changes	Revised Sections	Revised By (Name and Organization)

RECORD OF DISTRIBUTION

RECORDS OF DISTRIBUTION

The following table documents when and to whom copies of the plan have been distributed.

Date of Distribution	Plan Version (Date of Plan)	Method of Distribution (Email, Post on Server, Provide Hard Copy, etc.)	Distributed To (Name and Department/Organization)

Contra Costa County

Disaster Debris Management Plan

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1.0 INTRODUCTION

1.1 Debris Management Overview

For the protection of the public health, safety, and welfare of residents and visitors, Contra Costa County recognizes the responsibility to be prepared for a debris-generating incident.

Disasters can produce substantial volumes of debris, creating hazardous conditions that endanger the public and disrupt the essential daily lifestyle and economy of the community.

Disasters will result in large expenditures of labor, equipment, materials, and supplies at substantial cost. It is imperative that Contra Costa County is prepared to provide an early, safe, and quick response to restoring environmentally safe and economically viable conditions to the disaster-affected areas. It is to this end that Contra Costa County developed this Disaster Debris Management Plan (DDMP).

The DDMP addresses how response to a debris-generating incident will be coordinated at the local and regional level. The DDMP does not address routine debris incidents that the County can manage; the operational concepts reflected in this plan focus on potential large-scale disasters that can generate significant volumes of debris requiring an unusual or extraordinary response.

1.2 Purpose

The purpose of this plan is to provide a framework for how disaster debris operations will be managed by the County. The intent of this plan is to:

- Establish coordinated debris management operations, including debris removal, reduction, recycling, haul-out, final disposal, and documentation.
- Provide a debris management organization for the County.
- Identify the roles and responsibilities of departments and agencies with a role in response.
- Describe the resource management strategy for debris operations.

1.3 Background

1.3.1 Debris Planning Process

Contra Costa County developed the DDMP in coordination with a DDMP planning initiative with the Central Contra Costa Solid Waste Authority (CCCSWA) dba RecycleSmart. Representatives from CCCSWA and member agencies initiated the disaster debris planning project by forming the Disaster Debris Planning Team (DDPT). A multijurisdictional DDMP as well as a jurisdiction specific DDMP to each member agency was developed using the planning process outlined in the Federal Emergency Management Agency (FEMA) Comprehensive Planning Guide (CPG) 101 Version 2.

The DDPT included member agency representatives from public works, environmental health, police, fire, emergency management, Republic Services (the solid waste contractors for CCCSWA), and project team members from Tetra Tech, the consulting firm contracted to work with the DDPT to develop the DDMPs.

The DDPT conducted the following planning meetings to engage stakeholders and gain feedback for the development of the plan:

Project Kickoff Meeting

The purpose of the project kickoff meeting was for DDPT members to gain an understanding regarding disaster debris management processes, identify key objectives in planning, discuss the

process and timeline for developing the plan, identify roles and responsibilities among member agencies for disaster debris management, and discuss resources that are available to member agencies in response to a debris-generating incident. Individual meetings were also conducted with each member jurisdiction, including Contra Costa County, to gather data to begin the planning process.

Working Group Meetings

The purpose of the working group meetings was to meet with the DDPT and staff members from each CCCSWA member agency to collect additional information needed for plan development. During these meetings, planners discussed responsibilities, resources, authorities for plan development, as well as environmental and regulatory issues related to disaster debris management operations.

Plan Draft Working Group Meeting

The purpose of conducting the Plan Draft Working Group Meeting was review the draft plan with the DDPT. Input from the DDPT was used to revise and finalize the multijurisdictional and jurisdiction specific DDMPs.

Multijurisdictional DDMP Orientation Workshop

The purpose of the Multijurisdictional DDMP Orientation Workshop was review key elements of the plan and ensure that key personnel had a fundamental understanding of the components of the plan.

1.3.2 Plan Scope

The scope of this plan pertains to disaster debris operations for an incident that causes widespread damage in Contra Costa County.

This plan complies with the principles and requirements found in federal and state laws, regulations and guidelines. This plan also complies with the National Incident Management System (NIMS), National Response Framework, National Disaster Recovery Framework and the Standardized Emergency Management System (SEMS).

1.3.2.1 Member Jurisdictions

For the purpose of this plan, the term “member jurisdictions” refers to the following jurisdictions within CCCSWA:

- Town of Danville
- City of Lafayette
- Town of Moraga
- City of Orinda
- City of Walnut Creek
- Specified areas of unincorporated Contra Costa County, including:
  - Alamo
  - Blackhawk
  - Diablo

1.3.2.2 Population, Demographics and Physical Characteristics[1]

The following information was retrieved from the U.S. Census Bureau and the 2011 Contra Costa County Hazards Mitigation Plan Update as well as U.S. Census data. The County's hazard mitigation plan provides a complete community profile of the population, demographics, and physical characteristics. An abridged version is provided here for the context of the DDMP.

Population and Demographics

As of 2014, Contra Costa County had a population of approximately 1,111,339 people. 33.3% of the population of the County speak a language other English at home. This means that public information regarding set out procedures and the safe handling of debris will need to be accessible in multiple formats.

During disasters, populations with functional and access needs and socio-economic barriers often have less access to resources and support. According to the U.S. Census Bureau, approximately 14.2% of the population of Contra Costa County, or approximately 157,810 people, are at or over the age of 65, and 10.5% of the population is living below the poverty level.

Debris managers must be cognizant of how disaster debris can further impact individuals with disabilities and access and functional needs. Section 2.2.7 of this plan provides a more detailed description of best practices during debris operations to support this population.

Physical Characteristics

Contra Costa County is located in the east bay area of central California. The area is characterized as a series of northwest trending mountains and valleys formed by tectonic plate movement. The soil consists of alluvial soils and terrace deposits.

1.3.2.3 Debris Management Constraints

The debris planning team identified several characteristics of the County that will present challenges during debris management. This plan aims to provide best management practices to address these challenges.

- Difficulty in locating suitable space for temporary debris management sites (TDMS) due to hilly terrain.
- Lack of local jurisdictional resources
- Multiple municipalities in the region using limited resources
  - Debris hauler services
  - Disposal facilities
  - Staging areas
- Evolving communications protocols in the region
- State regulatory requirements

[1] U.S. Census Bureau and the Contra Costa County Hazard Mitigation Plan Update, Volume 1: Planning-Area Wide Elements, 2011

  - Environmental regulations
  - Zero waste initiative
- Citizenry expectations
- Populations with disabilities and functional and access needs

1.4 Incidents and Assumptions

1.4.1 Debris Scenarios

The intent of this plan is to provide guidance for a large-scale disaster that generates significant volumes of debris that will overwhelm Contra Costa County and require contractor and State. Contra Costa County is vulnerable to many disasters that have the potential to generate large volumes of debris including natural and human-caused disasters.

The following section provides the findings of the two debris estimation approaches, which are intended to establish a baseline for planning purposes. During a real disaster, many factors impact the actual amount of debris that is generated. The information in this section is intended for the purposes of planning only and will likely be different from an actual event.

1.4.1.1 Earthquake[2]

Earthquakes are considered a major threat due to the County being in proximity to a number of major earthquake faults including the San Andreas, Hayward, Calaveras, and Green Valley-Concord. Since 1836, there have been five earthquakes in the San Francisco Bay Area with a magnitude of 6.75 or higher. The U.S. Geological Survey (USGS) Working Group on California Earthquake Probabilities has evaluated the probability of one or more earthquakes of Richter magnitude 6.7 or higher occurring in the San Francisco Bay Area within the next 30 years. The result of the evaluation indicated a 70-percent likelihood for such an earthquake event.[3] The chart below shows the locations of earthquakes that have occurred in Contra Costa County from 1976 to 2015[4].

[2] Contra Costa County Hazard Mitigation Plan Update, Volume 1: Planning-Area Wide Elements, 2011

[3] County of Contra Costa Hazard Mitigation Plan Update, 2011, Section 9.3.3 Seismic Features

[4] U.S. Geological Survey Earthquake Archives website, http://earthquake.usgs.gov/earthquakes/search/

Figure 1.1: Locations of Earthquakes in Contra Costa County from 1976 to 2015

A significant earthquake along one of the faults could cause substantial casualties; extensive damage to buildings, roads, and bridges; fires; and other threats to life and property. The effects could be aggravated by aftershocks and by secondary effects such as fire, landslides, and dam failure. A major earthquake could be catastrophic in its effect on the population, and could exceed the response capability of the local communities as well as the State.

Earthquake losses typically include structural damage to private and public structures, such as homes, businesses, roads, and bridges. Structural damage can cause thousands of dollars in losses for residents, business owners, and local jurisdictions. Additionally, earthquakes can create secondary impacts including mudslides, fires and hazardous materials incidents.

1.4.1.2 Severe Weather Incident

A severe weather incident is the second type of debris-generating incident examined under the plan. The four types of severe weather that impact the Contra Costa County are flooding, thunderstorms, damaging winds, and hail storms. Tornadoes can be a threat but there have only been two F0 rated tornadoes recorded in Contra Costa County since 1950.[5] In neither case was there enough damage caused to warrant a state or federal emergency declaration. The chart below summarizes severe weather events in the Contra Costa County since 1970, as recorded by the National Oceanic and Atmospheric Administration (NOAA).

[5] Contra Costa County Hazard Mitigation Plan, 2011, Section 15, Severe Weather

Type of Incident	Type of Incident	Date	Property Damage	Description
Contra Costa County	Hail	4-29-1983	0	Heavy rain and three-quarter inch hail fell for about 15 minutes. A few windows were broken or cracked. Rice crops sustained light damage.
Contra Costa County	Tornado	9-18-1989	0	An F0 tornado .2 miles long and 10 yards wide was reported in Contra Costa County.
48 Counties in Northern California	Severe Storms	1-4-1997	$2 billion	Severe storms resulting in flooding and landslides.
Costa Costa County	Flooding	2-14-2000	$100,000	Widespread rain with 5 inches falling within 24 hours resulting in urban and small stream flooding. Mudslides and downed trees were also reported.
Costra Costa County	Flooding	12-31-2005	$22 million	Extensive rain brought 2 to 4 inches of rain in a 24 hour period resulting in flooding and landslides.
Throughout Contra Costa County	Severe Storms and Debris Flows	3-24-2011	$1.584 million	Throughout Contra Costa County, nearly $16 million worth of damage occurred due to March storms.
Throughout Contra Costa County	Heavy Rain	3-13-2012	$50,000	A series of severe storms resulted in a series of traffic accidents in the County.

El Niño-Southern Oscillation[6]

El Niño-Southern Oscillation (El Niño or ENSO) is a naturally occurring weather pattern that causes changes in the world climate, specifically for areas around the equator. El Niño refers to a group of complex sea surface temperature changes. Southern Oscillation is a varying shift in surface air pressure between the eastern and western halves of the Pacific. El Niños occur irregularly every two to seven years.

El Niño is significant because it creates conditions that make California more susceptible to severe weather like heavy rain and mudslides.

Mud Flow [7]

A mud flow is a mass of rock, earth or debris moving down a slope. The geologic setting of the County is conducive to mud flows that can threaten life and property. Mudslides, rivers of rock, earth, organic matter and other soil materials saturated with water, develop when water rapidly accumulates in the ground as occurs during periods of heavy rainfall. As the water pressure in the soil increases, the strength of the soil decreases and gravity is able to pull the soil, rocks and other debris downhill. A mud flow can be very destructive and can occur with no warning. There have

[6] California Department of Fish and Wildlife, El Nino Information Page, 2015
[7] Contra Costa County Hazard Mitigation Plan, 2011, Section 14, Landslides and Other Mass Movements

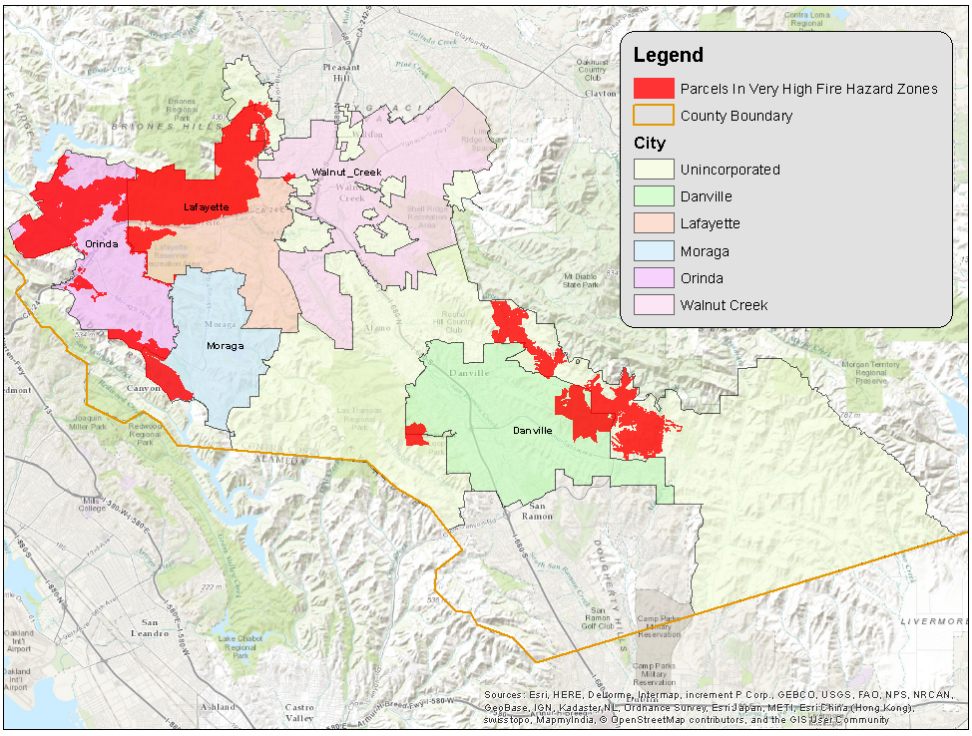
been two recorded mud flow incidents in Contra Costa County since 1960. One incident occurred on April 6, 2006. Another mud flow incident occurred on January 1, 1997. Both incidents were caused by severe storms and flooding and were tied to presidentially declared disasters. The combined damage estimates for both of the mud flow incidents exceeded $20 million.

1.4.1.3 Wildfire

A wildfire is an uncontrolled fire occurring on undeveloped land that requires fire suppression. Wildfire presents a risk to the County due to its extensive open space and a close urban/open space interface. In 1991 the Oakland Hills Firestorm occurred which resulted in 25 deaths, 150 injuries, and displacement of 10,000 individuals. Losses from the fire were estimated to be in excess of $1.5 billion.

Figure 1.2 below illustrates data from the California Department of Forestry and Fire's Fire and Resource Assessment Program (FRAP) showing the areas of central Contra Costa County at highest risk of wildfire.

Figure 1.2: Location of Very High Fire Hazard Severity Zones



1.4.2 Debris Estimates

Estimating the quantities of debris that may be generated by various natural or man-made disasters is a complex analysis. There are endless variables (type of incident, severity, etc.) that can dramatically impact the quantities of debris that may be generated by a disaster and virtually no models that can accurately estimate debris volumes. Estimating the debris generation potential for Contra Costa County should be used as a resource when planning for a debris-generating incident.

Debris estimates are based on a series of assumptions and should not be considered as the actual volumes following a disaster event. The debris estimate models use factors such as household

population and parcel data to forecast the volume and type of potential debris in each disaster management area.

Earthquake Scenario Assumptions and Debris Estimate

Hazus was used to run three earthquake scenarios for unincorporated Contra Costa County. The scenarios include magnitude 7.0 earthquakes on the Calaveras North Central Fault, the Hayward-Rodgers Creek Fault, and the Concord-Green Valley Fault. These fault lines were chosen for the scenarios from the U.S. Geological Survey data because of their locations in Contra Costa County.

Table 1.4 – Concord-Green Valley Fault Earthquake Debris Estimate

Type 1 debris (brick, wood, and other debris (CY)	Type 2 debris (wrecked reinforced concrete and steel members (CY)	Total (CY)
35,677.73	20,758.70	56,436.43

Table 1.5 – Hayward-Rodgers Creek Fault Earthquake Debris Estimate

Type 1 debris (brick, wood, and other debris (CY)	Type 2 debris (wrecked reinforced concrete and steel members (CY)	Total (CY)
10,557.56	3,511.04	14,068.60

Table 1.6 – Calaveras North Fault Earthquake Debris Estimate

Type 1 debris (brick, wood, and other debris (CY)	Type 2 debris (wrecked reinforced concrete and steel members (CY)	Total (CY)
42,211.99	26,687.60	68,899.59

Severe Weather Event Scenario Assumptions and Debris Estimate

Contra Costa County is susceptible to severe weather including flooding and strong winds. For this reason, the U.S. Army Corps of Engineers (USACE) hurricane debris estimation model was used to determine the type and volume of debris for the Contra Costa County. Though it is unlikely the County will experience a hurricane, a category 1 hurricane was used because it most closely resembled the type of conditions related to wind speed and flooding the County could experience in a severe weather incident.

- USACE formula:

  $$Q=H(C)(V)(B)(S)$$

  Where:

  Q = Cubic Yard (CY) of debris

  H = Number of households in the community

  C = Storm category factor (category 1)

  V = Vegetative characteristic multiplier

  B = Commercial multiplier

  S = Precipitation characteristic multiplier

- Estimated allocation of construction and demolition (C&D) to vegetative debris:

- C&D debris 30%
- Vegetative debris 70%

Table 1.7 – Severe Weather Debris Estimates

	Households	Debris Estimate (CY)	C&D (CY)	Vegetative (CY)
Contra Costa County (subtracting incorporated jurisdictions	60,982	247,342	74,202	173,139

Wildfire Scenario Assumptions and Debris Estimate

A wildfire incident

1.4.3 Debris Planning Assumptions

For the purposes of this plan, the following assumptions are area considered to be facts in order to execute this plan:

- Debris will be managed at the most local level.
- The County has or will develop existing procedures to use local resources to the maximum extent possible to manage debris.
- The County has a diverse population that will have unique needs during debris operations.
- In a catastrophic disaster, communication networks might be inoperable, transportation infrastructure might be severely debilitated and resources will be limited.
- The County may use private sector resources to support debris operations following a catastrophic disaster.
- The County may request additional resources as necessary through established channels (SEMS).
- Catastrophic disasters will require prolonged, sustained debris operations and support activities.
- The California Disaster Assistance Act (CDAA) governs the eligibility rules for disaster debris removal within the state. Jurisdictions must first seek funding through the CDAA prior to requesting funding from FEMA.

1.5 Plan Goal and Objectives

The goal of this plan is to provide a concept of operations to conduct debris operations in Contra Costa County with the following priorities:

- Saving lives
- Preserving the health and safety of responders and the public
- Protecting property and the environment

The plan objectives describe the end result for successful debris operations within the County. These are the broad concepts that must be achieved in order to meet the purpose of this plan. The objectives for the County are as follows:

- Conduct pre-disaster preparedness.

- Facilitate debris removal operations to ensure public health and safety.
- Consider those with disabilities and access and functional needs throughout debris operations.
- Maximize diversion to the greatest extent possible to preserve remaining landfill capacity.
- Establish mechanisms to coordinate with stakeholders to manage debris operations.
- Coordinate public information regarding debris with other affected jurisdictions and the State.
- Utilize internal and private sector networks to manage debris operations.
- Request additional resources if necessary through established channels.
- Comply with applicable local, state, and federal requirements throughout debris operations.
- Forecast debris and resource requirements.

The specific activities required to achieve these objectives are included in Section 2: Mass Debris Management Strategy.

1.6 Authorities and References

1.6.1 Authorities

Local

- Contra Costa County, California Ordinance Code, Title 4, Division 42, Chapter 42-2, Disaster Council and Emergency Services.
- Contra Costa County, California Ordinance Code, Title 4, Division 418 Refuse, Chapter 418-2 Collection.
- Central Contra Costa Solid Waste Authority Joint Exercise of Powers Agreement
- Central Contra Costa Solid Waste Authority Ordinance No. 97-01 Regulating Solid Waste, Green Waste And Recyclable Material Collection, Processing, Disposal And Litter

State

- Debris Removal: Title 19 Public Safety, Division 2. Office of Emergency Services Chapter 6. Disaster Assistance Act, §2925. Debris Removal
- Joint Exercise of Powers Act: Government Code §6500
- Demolition Regulations: Title 19. Public Safety Division 2. Office of Emergency Services Chapter 6. Disaster Assistance Act, §2930. Emergency Protective Measures - Demolition
- Emergency Protection Measures: Title 19. Public Safety, Division 2. Office of Emergency Services Chapter 6. Disaster Assistance Act, §2930. Emergency Protective Measures
- California Disaster Assistance Act (CDAA)
    - Section 2920 – Emergency Work
    - Section 2930 – Emergency Protective Measures
    - Section 2925 – Debris Removal
- California Health & Safety Code 41800
- California Public Resources Code §40000, et seq.

- California Integrated Waste Management Act of 1989
- California Hazardous Waste Control Act, California Health and Safety Code §25100, et seq.
- California Toxic Substances Account Act, California Health and Safety Code §25300, et seq.
- Porter-Cologne Water Quality Control Act, California Water Code §13000, et seq.
- Safe Drinking Water and Toxic Enforcement Act, California Health and Safety Code §25249.5, et seq.
- California Health and Safety Code §25115-25117, 25249.8, 25281, and 25316
- Clean Air Act, 42 U.S.C. §7901, et seq.
- California Water Code §13050

Federal

- Sandy Recovery Improvement Act (SRIA) included as Division B of the Disaster Relief Appropriations Act, PL 113-2, signed into law January 29, 2013
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288
- U.S. Code, Title 23 Highways, Part 125 Emergency Relief Section 1107 Public Law 112-141 Moving Ahead for Progress in the 21st Century Act (MAP-21), July 2012
- Title 2 Code of Federal Regulations, Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200)
- US Code, Title 42, Chapter 103, Comprehensive Environmental Response, Compensation, and Liability (CERCLA) and Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §9601, et seq.
- Resource Conservation and Recovery Act, 42 U.S.C. §69012, et seq.
- Federal Clean Water Act, 33 U.S.C. §1251, et seq.
- Toxic Substances Control Act, 15 U.S.C. §1601, et seq.
- Occupational Safety and Health Act, 29 U.S.C. §651, et seq.
- Hazardous Materials Transportation Act, 49 U.S.C. §1802, et seq.

1.6.2 References

Local

- Contra Costa County Operational Area Catastrophic Earthquake Debris Removal Plan, August 2010.
- Contra Costa County Emergency Operations Plan, 2015
- Contra Costa County Hazard Mitigation Plan Update, 2011

State

- California Office of Emergency Services Debris Management Plan

- California Environmental Protection Agency (CalEPA) Guidance for Conducting Emergency Debris, Waste and Hazardous Material Removal Actions Pursuant to a State and Local Emergency Proclamation, October 2011

Federal

- FEMA Comprehensive Planning Guide 102 Version 2
- FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide 2016
- FEMA 329 Debris Estimating Field Guide, September 2010
- FEMA Public Assistance Alternative Procedures Debris Management Plan Job Aid
- FEMA Public Assistance Alternative Procedures EMMIE Cost Codes for Debris Removal
- FEMA Public Assistance Alternative Procedures FAQ for Debris Removal
- National Response Framework, Department of Homeland Security, March, 2008
- National Disaster Recovery Framework, Department of Homeland Security, September 2011

2.0 ORGANIZATION AND ROLES AND RESPONSIBILITIES

2.1 Organizational structure for debris operations

To mount an effective response to a debris-generating incident, roles and responsibilities must be clearly delineated between the County departments, contractors, state and federal agencies, as well as non-governmental organizations with a role in response. In addition, all of the responding agencies must respond in a coordinated manner to ensure disaster debris operations are conducted as efficiently and as safely as possible.

Achieving an organized and efficient approach is facilitated through utilization of the ICS. ICS was developed in the 1970s in California to help organize response to devastating wildfires in the state. ICS provides a standardized approach to incident management and helps to organize response agencies under a top-down modular organization that is flexible based on the scope of the incident. In addition, under ICS there is a well-defined process for setting response objectives and communicating those objectives throughout the response organization.

Contra Costa County will coordinate response using ICS to effect an organized and timely response to debris operations. In addition, residents and businesses in affected areas will also have an important role to fill in ensuring the success of disaster debris operations. The specific roles and responsibilities of response agencies and those affected by a debris-generating incident are described below.

2.2 Roles and responsibilities

Many stakeholders will be involved in disaster debris operations. Roles and responsibilities must be clearly delineated between County departments and other local agencies. State and federal agencies will also have a role in debris operations as wells as private nonprofit organizations, volunteer organizations and private sector business enterprise. These roles and responsibilities are described below.

2.2.1 Contra Costa County Departments

The Contra Costa County will be responsible for conducting debris operations within their area of control to the greatest extent possible.

The following list provides general roles and responsibilities of Contra Costa County departments prior to and during debris operations.

Department of Conservation and Development:

- Serve as the debris manager for the jurisdiction.
- Activate and implement the jurisdiction’s debris management plan.
- Conduct damage assessments and estimate debris totals.
- Oversee debris operations including internal resources and contracted services.
- Coordinate with state and federal agencies regarding regulatory requirements for debris operations.
- Provide situational updates on debris operations to the County EOC.
- Maintain documentation for federal disaster assistance for debris operations.
- Ensure compliance with federal disaster assistance programs for debris removal.
- Coordinate the preparation, review, and update of the jurisdiction’s debris management plan.

- Ensure compliance with federal assistance programs for debris removal.
- Coordinate with emergency management to review the debris management plan annually.

County Administration

- Make policy-level decisions related to debris operations.
- Provide signature authority for legal documents, including mutual aid agreements with neighboring jurisdictions, inter-local agreements, and notices to proceed with contracted service providers.

Emergency Services

- Implement OA Emergency Response Plan.
- Establish and maintain the Operational Area Emergency Operations Center (OAEOC) to serve the OA.
- Coordinate the utilization of County, other local government, state and federal resources within the OA.
- Support operations conducted by local governments within the County in accordance with SEMS and approved mutual aid and operations plans.
- Submit requests for resources to the REOC as necessary.

Administrative Services

- Understand current state and federal disaster assistance program guidance and regulations related to debris operations.
- Manage documentation for state and/or federal reimbursement for debris operations.
- Coordinate with Public Works to obtain force account labor, equipment, and overtime documentation related to debris removal operations for potential state and/or federal reimbursement.
- Audit purchase orders and documents, general ledger entries, cash receipts, and payroll documents related to debris removal operations.
- Manage and audit contractor invoices for payment.
- Provide support to procure goods and services for debris removal operations.
- Ensure disaster debris services are procured following local, state, and federal procurement regulations.
- Review and update emergency procurement policies as necessary following an emergency.
- Support audit and closeout of debris projects.

Code Enforcement

- Enforce nuisance and abatement codes.
- Document nuisance and abatement cases to support private property debris removal.
- Maintain awareness of TDMSs and operations.

Contra Costa County GIS

- Provide GIS data to appropriate agencies and vendors for debris removal operations, which may include road lists, data on historical properties, and publicly-owned and privately owned lands.

Contra Costa County Environmental Health

- Determine debris that poses an imminent threat to public health and safety.
- Inspect and approve TDMS locations.
- Provide documentation regarding health and safety issues to support debris operations.
- Provide recommendations for health and safety procedures for debris operations.
- Coordinate with health services and public works to review solid waste management sites including administration buildings, recycling centers, landfills, and transfer stations for damage, safety, and health issues.

Contra Costa Public Works

- Assist in conducting damage assessments.
- Use available equipment and staff in coordination with contracted debris haulers to conduct debris clearing activities.
- Use available equipment and staff in coordination with contracted debris haulers and debris monitors to conduct debris removal services in affected areas of the unincorporated county.
- Provide situational updates on debris operations to the county Debris Manager.
- Ensure staff track personnel hours, equipment use and supplies used for debris clearing and removal operations.

Sheriff's Office

- Provide security for debris management sites and other debris removal operations when necessary.
- Lead investigations resulting from a crime scene or terrorism incident.

Coroner's Division

- Investigate and determine medical cause and mode of death.
- Identify the deceased.
- Handle the receipt, examination, documentation, and storage if personal effects.

County Counsel

- Review debris operations procedures for compliance with applicable county, state, and federal regulations.
- Support the jurisdiction with regulatory reviews, audits, and appeals regarding disaster assistance for debris operations.

Public Information Officer

- Coordinate with the Department of Conservation and Development and other jurisdictions to develop public information messages related to debris operations.
- Provide press releases and social media posts related to debris removal operations, set out procedures and citizen debris drop-off locations.

- Provide timely information regarding debris operations in accessible formats.

2.2.2 Other Local Agencies

CCCSWA

- Coordinate garbage pickup in coordination with debris management operations.
- Support recycle operations.

Fire Prevention Districts

- Provide emergency services at TDMSs in the event of a fire.

2.2.3 State Agencies

State agencies provide regulatory guidance and technical assistance for debris operations. The following section provides an overview of the roles and responsibilities of State agencies involved in debris operations.

CalOES

- Implement the California Emergency Services Act.
- Perform executive functions assigned by the Governor to support and enhance all phases of emergency management.
- Coordinate debris clearance and removal operations by other State agencies.
- Approve all mission task orders and manage the requests until the needs have been met.
- Request the deployment of the National Guard to support response activities including damage assessment and debris clearance operations.
- Coordinate with local and state entities in the compilation and dissemination of public information messages.
- Request debris removal resources from other States through the Emergency Management Assistance Compact (EMAC).
- Coordinate requests for assistance and participate with the federal government in operating a Joint Field Office (JFO) when federal assistance is needed.
- Task other state agencies as needed to aid local jurisdictions in debris management operations.
- Oversee the delivery of state and/or federal grant programs.

CalEPA

- Provide guidance on environmental regulations regarding debris operations.
- Provide technical assistance for debris removal of HAZMAT (Department of Toxic Substances Control).
- Provide support and guidance for debris removal operations (CalRecycle) including potential provision of resources.
- Provide approvals for TDMSs and emergency waivers of standards such as permitted capacity, throughput, and acreage for permitted solid waste facilities (CalRecycle).

2.2.4 Federal Agencies

Federal agencies support debris operations by providing disaster assistance funding, regulatory oversight and technical assistance. The following section provides an overview of the roles and responsibilities of federal agencies involved in debris operations.

FEMA

- Provide technical assistance for debris operations
  - Environmental and historical preservation review process
  - Public Assistance grant program reimbursement process
  - Procurement assistance
- Assign federal mission assignments as requested
  - Emergency Support Function #3, Public Works and Engineering
  - Emergency Support Function #10, Oil and Hazardous Material Response
- Administer the FEMA Public Assistance Program for Category A Debris Removal
  - Ensure safety, eligibility, and compliance are maintained

U.S. Army Corps of Engineers

- Primary federal entity for Emergency Support Function (ESF) #3 - Public Works and Engineering
- Provide debris operations for mission assignments
- Remove sunken vessels from navigable waterways under emergency conditions
- Provide strong technical assistance and training support to State and local agencies
- Enable State and local operations to the greatest extent possible

Natural Resources Conservation Service

- Provide technical assistance for debris removal from natural streams and creeks.
- Provide funding for debris operations through the Emergency Watershed and Protection program.

Federal Highway Administration

- Supports repair and reconstruction of federal aid highways and roads on federal lands
- Provide funding for debris operations through the Federal Highway Administration Emergency Relief Program

2.2.5 Private Sector Business Enterprise, Commercial Sector

Private businesses will have a very large role in managing mass debris operations. Jurisdictions do not have enough internal resources to conduct debris operations during a widespread event without the use of contracted service providers. The following provides the roles and responsibilities of private sector business and the commercial sector for debris operations.

Republic Services (Garbage Hauler)

- Transfer, transport, process, and divert franchised organic materials within the CCCSWA service area
- Transfer, transport, and dispose of franchised solid waste generated within the CCCSWA service area.
- Coordinate with contract debris haulers in the collection and transport of solid waste and debris following a debris generating disaster in the CCCSWA service area.

Mount Diablo Recycling

- Manage deliver, accept and transfer recyclable materials at the approved trans-load facility and transport recyclable materials from the approved trans-load facility to the approved recyclable materials processing facility or any other facility designated by the contractor and approved by CCCSWA.
- Process and market recyclable materials collected in the service area.
- Dispose or arrange for disposal of residue at the designated disposal facility.

Debris Hauling Firm

In the event the scope of debris collection operations is beyond the capabilities of local force account resources, state, and mutual aid resources, it may be necessary to contract for labor and equipment. A number of debris hauling firms have been identified and are listed in Attachment H of this plan. The debris haulers qualifications including technical experience, equipment/resources, safety record and insurance coverage have been initially vetted by the Houston-Galveston Area Council (HGAC) Buy program. HGACBuy is a nationwide government procurement service. Contra Costa County will use its purchasing policies in coordination with federal contracting guidance, found in Attachment K of this plan, to establish a contract with one or more debris hauling firms to assist with debris collection and disposal. A contracting checklist has been compiled and can be found in Attachment L of this plan. Responsibilities of a debris hauling firm will include the following:

- Clear and remove debris from jurisdiction roadways and waterways to make them passable immediately following a declared disaster.
- Conduct debris removal from the right-of-way.
- Decommission, demolish, and dispose of eligible non- regulated asbestos-containing material (non-RACM) structures on private property
- Manage and operate TDMS locations.
- Conduct debris reduction.
- Haul-Out reduced materials to a final disposal site.
- Remove hazardous leaning trees and hanging limbs.
- Removal of hazardous stumps.
- Remove white goods debris from the right-of-way.
- Coordinate the removal of household hazardous waste from the right-of-way.
- Remove animal carcasses from areas designated by the jurisdiction.
- Build relationships with community emergency managers and other officials to have an active voice in the debris operations.

- Develop, test, and implement debris operations plans. Take into account worker safety and health and potential employee unavailability or attrition due to a disaster.
- Educate and train employees to implement debris operations plans.
- Ensure contracts comply with state and/or federal procurement requirements.
- Communicate status of operations and supply chains as well as challenges and time lines to local officials.
- Research available funding sources and types of funding for debris operations.
- Know, understand, and comply with federal regulations for disaster assistance programs.

Monitoring Firm

Relatively small amount of debris could be monitored by force account labor; however, in an incident resulting in widespread and considerable debris amounts as deemed by local authorities, the decision could be made to employ the services of a debris hauling firm. Debris monitoring responsibilities are described below.

- Perform truck certifications.
- Perform on-site, street-level debris monitoring at all at all collection sites to verify debris eligibility based on contract requirements, and initiate debris removal documentation using load tickets.
- Conduct disposal monitoring to document the disposal of disaster debris at approved TDMSs and at final disposal or end use locations.

2.2.6 Nonprofit Sector

Contra Costa County will partner with nonprofit and volunteer organizations to provide assistance to individuals with disabilities and/or access and functional needs. The County will ask that non-profit sector entities coordinate with the County to ensure their efforts are conducted in coordination with County objectives. In addition, the County will coordinate with non-profit sector entities to ensure response efforts are conducted in a safe manner to minimize the risk of injuries in keeping with the Health and Safety Policy (see Attachment R). These entities will not be asked to conduct tasks that are beyond their member's training or capabilities. The roles and responsibilities for nonprofit organizations in debris operations are listed below.

- Coordinate with the County to identify vulnerable populations and incorporate strategies to assist these populations in local debris management plans.
- Coordinate with jurisdictions and volunteer organizations post-disaster to assist individuals with disabilities and access and functional needs with bringing debris to the public ROW.
- Coordinate with jurisdictions to provide public information regarding debris operations to populations with communication barriers.
- Provide debris services to vulnerable and underserved groups, individuals, and communities as necessary.

2.2.7 Residents

To coordinate effective debris operations, residents play an important role in maximizing the potential for recycling and reuse of disaster-generated debris. The following provides the roles and responsibilities for residents in debris operations.

- Follow instructions from local officials on set out procedures for disaster-related debris.
- Segregate disaster debris from regular household waste.
- Safely bring debris to the public ROW.
- Bring HHW to citizen drop-off locations.
- Use caution when operating equipment and dangerous machinery.
- Help others who may need assistance with debris removal.

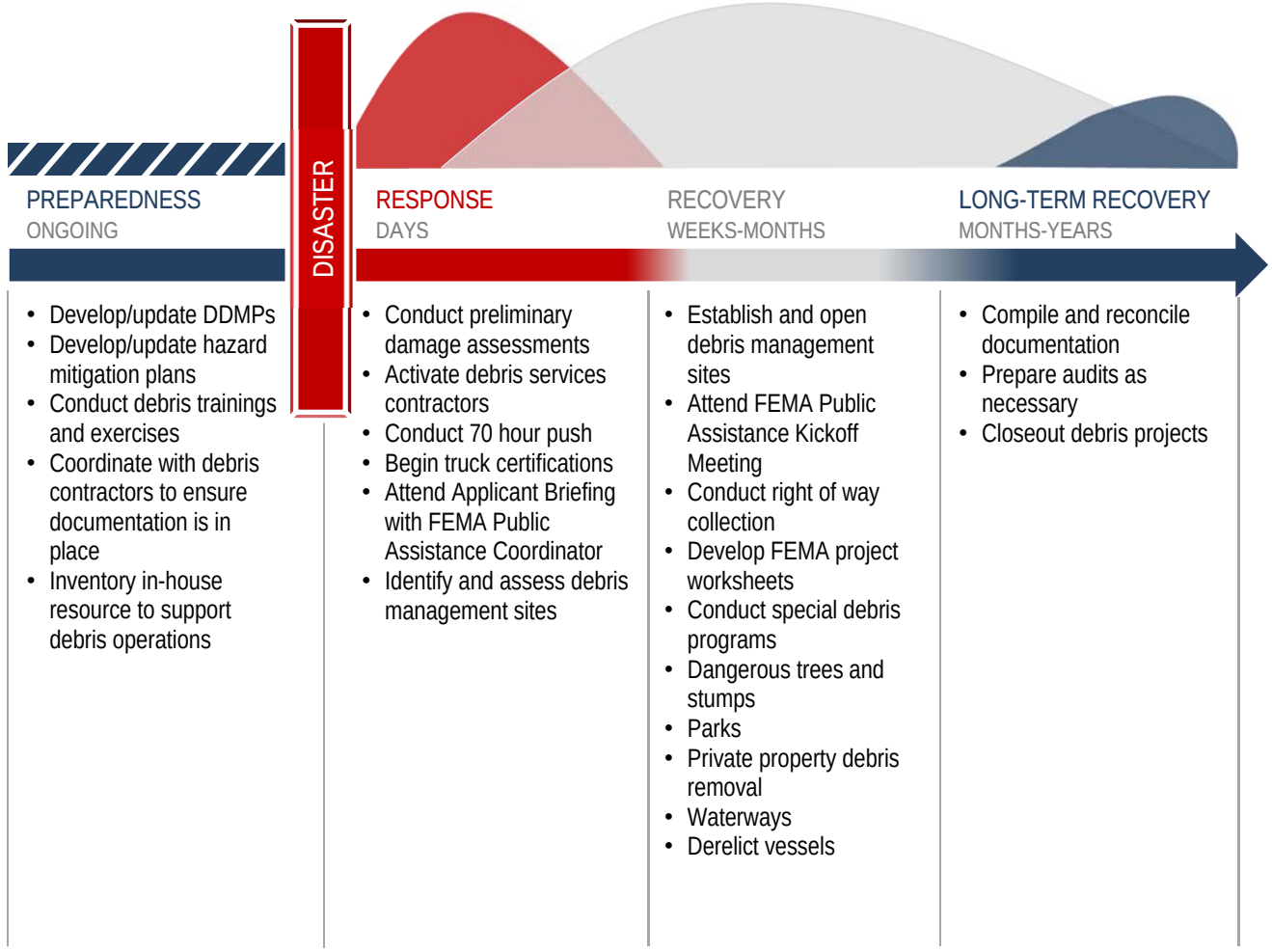
3.0 MASS DEBRIS MANAGEMENT STRATEGY

3.1 Overview

The National Response Framework establishes a set of core capabilities that must be achieved during disasters to save lives, protect property and the environment, and preserve the social, economic, cultural, and political structure. Debris management operations supports several core capabilities, including Critical Transportation, Environmental Response/Health and Safety, Infrastructure Systems, and Public and Private Services and Resources. Depending on the size, scope, and magnitude of the disaster, local jurisdictions will be required to conduct debris operations. In cases where the magnitude of the disaster stretches local resources beyond their capability to respond, local jurisdictions may call upon Contra Costa County, as the Operational Area (OA) to help coordinate resources. Contra Costa County may in turn reach up to the Regional Emergency Operations Center or the State for assistance.

3.1.1 Concept of Operations

The concept of operations describes the processes how to achieve the objectives of the plan. This section is organized chronologically to demonstrate the activities that will take place during each phase of debris operations.



3.1.1.1 Response

Establish Partnerships

Debris management requires collaboration across many departments, sectors, and levels of government. Building partnerships and collaboration during normal operations promotes more successful debris operations during an actual disaster to ensure all of these regulations and best management practices are implemented. The purpose of this plan is to establish coordinated debris management operations among member jurisdictions through debris removal, reduction, recycling, haul-out, final disposal and documentation. Partnerships must be built to successful achieve this purpose.

Section 3 of this plan provides a list of the organizations involved in debris operations from local volunteer organizations to federal regulatory agencies. Jurisdictions must continue to build relationships and establish partnerships during preparedness to foster coordination and collaboration during debris response operations.

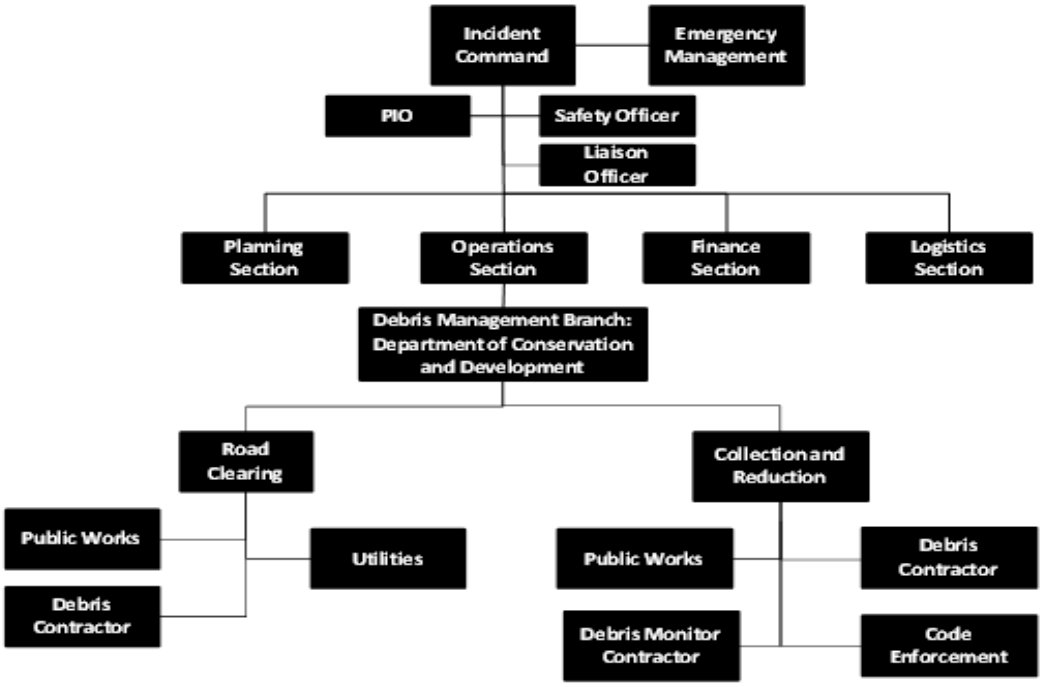
Debris Operations Organizational Structure

The County has identified a debris operations organizational structure that includes a debris management branch under the operations section. A debris liaison position will be assigned within the debris operations branch to coordinate with local, state, and federal authorities to prioritize and coordinate debris operations.

The debris operations organizational structure will have the capability to expand and contract as needed by the situation. Maintaining a cohesive and flexible organizational structure with a clear leader will ensure a coordinated and comprehensive response strategy.

Figure 2.1 below shows how debris management operations could be organized under the Incident Command System (ICS) for the Contra Costa County in response to a debris-generating incident.

Figure 3.1 Debris Management Organization Chart



Emergency Roadway Clearance Priorities

Emergency roadway clearance is the process to clear priority roadways of scattered debris, leaning trees, and other obstructions in order to allow emergency access and transportation. Road clearance priorities are pre-established to allow access to critical public facilities such as fire stations, police stations, hospitals, shelters, and emergency supply centers. Priority roads for clearance are listed in Attachment B of this plan. Priority facilities for clearance are listed in Attachment C of this plan.

Debris Damage Assessment

Damage assessments are necessary to determine the extent and the location of the debris. An initial windshield survey of the impacted area will be conducted to identify critically damaged areas and to assist in prioritizing emergency roadway clearance. If possible, aerial surveys should be conducted to obtain an overview of damaged areas.

Individuals will be designated to serve on a damage assessment team for the County. Members of the damage assessment team should be trained prior to the incident and should be coordinated with utility crews to ensure safety.

Damage assessments should be conducted with consistency throughout all affected jurisdictions to the greatest extent possible. Following completion of the damage assessments, the County will compile the damage assessments for submittal to the State. A thorough and accurate damage process must be implemented to maximize the potential for state and federal disaster assistance.

The Debris Estimating Field Guide FEMA 329, found in Attachment J of this plan, provides specific guidance on how to conduct damage assessments and estimate debris volumes.

TDMS Identification and Preparation

Concurrent to emergency roadway clearance and damage assessments, the County will identify and prepare TDMS locations. The County Environmental Health Department will also have a role in approval of TDMSs for local jurisdictions in accordance with State guidelines.

The purpose of the TDMS is to temporarily store debris and conduct some form of reduction method before the debris is transported to a final disposal facility. Land within transfer stations or solid waste facilities can be utilized as TDMSs. This can be desirable because of their ability to immediately accept debris. There are four such sites that could be utilized for TDMS locations. They include:

- Contra Costa Transfer and Recovery Station located at 951 Waterbird Way, Martinez CA
- Keller Canyon Landfill located at 901 Bailey Road, Pittsburg, CA
- Contra Costa Waste Service Recycling Center and Transfer Station located at 1300 Loveridge Rd., Pittsburg, CA
- Newby Island Resource Recovery Park located at 1601 Dixon Landing Rd, Milpitas, CA

Debris brought to a TDMS 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.

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.

The 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.

The County must also to consider community acceptability when selecting a potential TDMS. The community's acceptance of the TDMS location usually depends on the reduction methods that will be conducted at the site. 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 in the recovery phase.

The following factors should be taken into consideration when identifying a debris management site:

- Current availability
- Duration of availability
- Site ingress/egress
- Geographic location within the jurisdiction
- A minimum of 10 acres of usable land
- Well-drained site with soils suitable for supporting heavy vehicles and equipment
- Easy access to transportation routes
- Strategic placement to minimize debris transportation requirements and travel time to and from loading points; the TDMS should be located as close as possible to the concentrations of disaster debris
- Access to electrical and water utilities for site operations
- Minimum potential for disruption of critical services

Potential locations for a TDMS may include the following:

- Recycling facility
- Landfill
- Transfer station
- Vacant lot
- Corporation yard
- Parks
- Large parking lot
- Right of way
- Jurisdiction owned property
- Private property

Environmental permits and land-use variances may be required during removal operations for TDMS(s). Several agencies may be involved in issuing permits and granting land-use approvals.

Permits may include:

- Waste processing and recycling operations permit
- Temporary land-use permits
- Land-use variances
- Traffic circulation strategies
- Air quality permits
- Water quality permits
- Household hazardous waste (HHW) permits
- Fire department permits

After a review of the availability and suitability of a TDMS, site preparation can begin. As part of the preparation, baseline data should be gathered from the site to document the state of the land before debris is deposited. The following action items are recommended to compile baseline information:

- Photograph the site – Digital photos should be taken to capture the state of the site before debris reduction activities begin. Photos should be updated periodically throughout the project to document the progression of the site.
- Record physical features – Records should be kept detailing the physical layout and features of the site. Items such as existing structures, fences, landscaping, etc., should be documented in detail.
- Historical evaluation – The past use of the site area should be researched and documented. Issues relating to historical or archeological significance of the site should be cleared with the state historical preservation agency.
- Sample soil and water – If possible and deemed necessary, soil, and groundwater samples will be taken before debris reduction activities commence. Samples will help ensure the site is returned to its original state. Typically, soil and groundwater samples should be analyzed for total Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds, and semi-volatile organic compounds using approved U.S. Environmental Protection Agency (EPA) methods.

Site approval – The Contra Costa Environmental Health Department (CCEH), serving as the Local Enforcement Agency (LEA) for the County, will approve TDMS locations in the county.

Once debris is collected from the public ROW, it is transported to a TDMS where it is segregated and reduced. Reduction methods include:

Chipping and Grinding – Using this method, vegetative debris is chipped or ground and typically results in a reduction ratio of up to 4:1. Factors such as debris composition, weather, site conditions, and other factors may impact the reduction ratio. The leftover mulch is either hauled to a final disposal facility or recycled.

Incineration – Although incineration is rarely authorized, there are circumstances where a public entity can request to reduce debris through burning. The burning of vegetative debris typically results in a reduction ratio of up to 20:1. Factors such as debris composition, weather, site conditions and other factors may impact the reduction ratio. The leftover ash may be hauled to a final disposal facility or be incorporated in a land application.

Crushing – The crushing of vegetative debris is the least effective reduction method and results in a reduction ratio of up to 2:1. Crushing is an appropriate reduction method for C&D debris that cannot be recycled. However, if crushing is used to reduce C&D debris, the residual debris must show a reduction in volume.

Truck Certification

Truck certification is a critical component of debris management operations. Truck certification is the process to document the capacity of debris removal trucks. All debris removal trucks hauling debris on a volumetric basis must have their capacity and dimensions measured, sketched, photographed, and documented on a truck certification form. Each debris removal truck must be assigned a unique number for debris tracking and invoice reconciliation purposes. Truck certifications should contain:

- Unique truck number
- Driver name
- Driver phone number
- License number, state issued, and expiration date
- Tag number, state issued, and expiration date
- Vehicle measurements
- Sketch of the vehicle

A sample truck certification and instructions in measuring trucks can be found in Attachment S of this document.

3.1.1.2 Recovery

For debris operations, the recovery phase begins with debris removal from the public ROW and ends when debris operations are complete and all documentation is closed out.

During this phase, the County will determine its capacity to conduct debris removal operations internally using force account equipment and labor, using mutual aid or by using contracted services. The County will also assess its capacity to conduct special debris programs as necessary.

Short-Term Recovery

Once the emergency roadway clearance has been completed, the County will begin debris removal operations. This includes the following tasks.

- Open and approve TDMSs.
- Prioritize roads/areas.
- Issue press release regarding segregation of debris.
- Begin ROW debris removal.
- Begin environmental monitoring program of TDMS.
- Coordinate with external agencies.
- Initiate discussions with state and/or FEMA.
- Obtain FEMA guidance for procurement and special debris programs.

The County as the OA will maintain coordination with local jurisdictions throughout debris operations. During short-term recovery, the County will coordinate with the State and provide guidance to local jurisdictions on any disaster-specific guidance from state and federal agencies. The County will collaborate with agencies at the regional and state level for direction on policies and regulations.

Intermediate Recovery

Intermediate recovery includes activities that that take place after immediate debris needs have been addressed. Intermediate recovery typically occurs two weeks to several months post-disaster. These activities include:

- Maintain and evaluate ROW cleanup.
- Begin ROW stump removal as necessary.
- Open additional TDMSs as necessary.
- Conduct daily meetings with the state and/or FEMA.
- Begin special debris programs.
- Communicate ROW debris removal program closeout to residents via press release.

Long-Term Recovery

Long-term recovery includes activities to closeout debris programs and reconcile documentation. Long-term recovery can take several years depending on the severity of the disaster and the audit processes from regulatory agencies. Long-term activities include:

- Complete all debris recovery activities.
- Identify ineligible debris on ROW.
- Complete the disposal of reduced debris.
- Close out and remediate TDMSs.
- Conduct project closeout meetings with FEMA and external agencies.

3.2 Collection and Removal Strategy

The collection and removal strategy provides details on how Contra Costa County will conduct debris operations to clear, collect, and remove debris.

3.2.1 Emergency Roadway Clearance

Contra Costa County will coordinate resources to conduct emergency roadway clearance through internal sources, mutual aid or contracted services. If necessary, the County may use contractors or request additional resources for emergency road clearance from the REOC.

Emergency roadway clearance will be coordinated with utility crews to ensure safety while conducting debris operations near damaged infrastructure.

Major transportation routes in the County will be considered priority during emergency roadway clearance activities. Key transportation routes in Contra Costa County are listed in Attachment B of this plan.

Critical facilities have also been identified in the County. These are facilities that are critical to government response activities including County facilities, fire stations and hospitals. Following

a disaster, routes to these critical facilities will need to be cleared in order to allow emergency response vehicles to pass. A list of these facilities and their locations are listed in Attachment C of this plan.

Emergency roadway clearance is often referred to as the 70-hour push. This refers to the FEMA Public Assistance grant program requirements to conduct the emergency roadway clearance within 70 working hours. The purpose of this is to expedite the clearing of debris from critical pathways to ensure public health and safety. During this time period, it is critical that all types of equipment and the amount of time the equipment is used are documented with detail and accuracy.

3.2.2 Right-of-Way Collection

The County will establish debris collection zones and priority areas to conduct an organized and efficient ROW debris collection program. Having a debris zone system in place will make it easier to organize and monitor the progress of ROW collection activities. During debris operations the affected area of the County will be divided into sections to aid in coordination of debris operations.

ROW collection entails residents piling their disaster-related debris along the curbside. It is critical that residents segregate their debris in categories such as vegetative, C&D, HHW, and white goods. This will help prevent the contamination of debris loads and expedite the cleanup process. An effective public information campaign is essential to getting the message out to residents regarding the importance of segregating their debris. Sample public information message templates for informing the public regarding disaster debris clean up procedures can be found in Attachment D of this plan.

Vegetative Debris

Vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy material. Depending on the size of the debris, the collection of vegetative debris may require the use of flatbed trucks, dump trucks, and grapple loaders.

Most vegetative debris consists of large piles of tree limbs and branches that are piled on the public ROW by the residents. The County will determine the number of times debris is collected before normal collection activities are resumed.

Vegetative debris is bulky and consumes a significant volume of landfill space if buried. To minimize the use of landfill space, it is prudent to reduce the volume of vegetative debris before burying. Vegetative debris may be reduced by as much as 75 percent of its volume by mulching or grinding and as much as 90 percent of its volume through burning.

A hazardous tree or stump may be collected individually, while downed or fallen debris is collected from rights-of-way or at a designated collection center. FEMA only pays for stumps torn up by wind and does not fund removal of cut or burned stumps. Tree and stump collection prices are typically based on the size of the tree or stump and charged by unit. Other fallen or downed material is usually billed by weight (tons) or volume (CYs).

HHW Debris Removal

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronics, etc.

HHW should be collected separately and disposed of or recycled at a properly permitted facility. Collection of HHW can be conducted internally or contracted using a unit rate basis. The following action items will be taken when conducting HHW removal:

- Communicate to residents the procedures for HHW following a debris-generating incident. It is important that residents separate debris to ensure that HHW does not enter the debris stream at TDMSs.
- Decide whether to contract with an established HHW collection firm to augment or replace HHW drop-off sites. This helps ensure that HHW is properly disposed. Measures should be taken to identify, segregate, and dispose of intermingled HHW at TDMSs.
- Interface with the California Department of Toxic Substances Control (DTSC), CCEH and CalEPA. Describe the HHW collection program and permitted facilities to be used for disposal or recycling.

Electronic Waste

Electronic waste, or e-waste, refers to electronics that contain hazardous materials such as cathode ray tubes. Examples include computer monitors and televisions. Electronic waste is considered HHW and will follow the CalEPA guidelines for disposal listed in section 2.2.6.

White Goods Debris Removal

White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc.

White goods debris that contains ozone-depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. All state and federal laws should be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils. Collection of white goods can be conducted internally or using contracted services on a unit rate basis. The following action items will be conducted in regards to white goods removal:

- Communicate the procedures for white goods to residents in affected areas. It is important that residents separate white goods from other debris to ensure white goods are not mixed with other debris during collection.
- Interface with CalEPA. Describe the white goods collection program and permitted facilities to be used for disposal of recovered refrigerants, mercury, or compressor oils.

C&D Debris

C&D debris can be 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.

Certain types of C&D debris are reusable or recyclable. To conserve landfill space, it is prudent to separate materials for reuse or recycling.

Some C&D debris may be hazardous, such as asbestos roofing and floor tile, and lead pipes. Section 2.2.6 of this plan provides information from CalEPA on how to manage hazardous debris including asbestos containing materials. Documentation of the debris origin, any processing (reduction or recycling), and the final disposition is required for state and/or federal funding.

Typically, removal of construction by-products generated by repairs or rebuilding is covered by insurance policies or included in the overall cost for reconstruction projects; therefore, is not considered disaster-related debris.

3.2.3 Use and Procurement of Contracted Services

If contracted services are to be used for debris management including removal and monitoring, these contracts must meet state and federal procurement requirements to be eligible for potential state and/or federal disaster assistance. Guidance for using contracted services can be found in Attachment K of this plan. A contracting checklist can be found in Attachment L. For additional information see FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide 2016.

In recent years, millions of dollars in disaster assistance has been de-obligated to grant applicants following audits because their procurement procedures did not meet federal contracting requirements. De-obligation of disaster assistance funding has caused economic hardships for many jurisdictions. To remedy this situation, FEMA has established a Procurement Disaster Assistance Team to provide assistance to applicants before they award contracts. This is an effort to reduce procurement violations and help ensure applicants spend federal funds efficiently, effectively and in compliance with applicable federal procurement standards.[8] Contra Costa County will coordinate with the Procurement Disaster Assistance Team in awarding contracts. In addition, the CalOES will serve as a liaison with the FEMA Disaster Procurement Assistance Team to ensure the County and other jurisdictions receive the most accurate information from state and/or federal representatives.

3.2.4 Monitoring of Debris Operations[9]

Monitoring debris removal operations entails observing and documenting debris removal work performed from the point of debris collection to final disposal. It involves constant observation of crews to ensure that workers are performing eligible work in accordance with state and/or federal guidelines and all applicable federal, state, and local regulations. Failure to properly monitor debris removal operations may jeopardize federal disaster assistance.

[8] Department of Homeland Security Office of Inspector General Capping Report: FY 2013 FEMA Public Assistance and Hazard Mitigation Grant and Subgrant Audits

[9] FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide 2016

Accurate documentation of debris removal and disposal operations and eligible associated costs is the outcome of a good debris monitoring program. This documentation serves as the basis for FEMA Public Assistance Project Worksheets (PWs)—the documents that authorize grant reimbursements from FEMA. Debris monitoring documentation is critical to verify that debris operations are eligible for reimbursement, costs are reasonable, contract and procurement processes are appropriate, quantification of the debris is accurate, and the tracking of the debris to its final disposition is recorded and in compliance with all regulatory requirements.

3.2.4.1 Load Site Monitoring

The loading site monitors will perform on-site, street-level debris monitoring at all loading sites to verify debris eligibility based on contract requirements, and initiate debris removal documentation using load tickets. Loading site debris monitors' primary job is to maintain documentation of work performed at the point of debris collection.

3.2.4.2 Disposal Monitoring

The primary function of disposal monitoring is to document the disposal of disaster debris at approved TDMSs and final disposal or end use locations. Monitors perform quality assurance/quality control checks on all load documentation and haul-out documentation to ensure that information captured by loading site monitors is complete. This process includes the following tasks:

- Inspection of truck placards for authenticity and signs of tampering.
- Verification that placard information is documented properly.
- Verification that all required fields on the load ticket have been completed.

The disposal monitor will document the amount of debris collected by making a judgment call on vehicle fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated capacity of the vehicle to determine the amount of debris collected. The disposal monitor's responsibilities include the following:

- Completing and physically controlling load tickets.
- Ensuring debris removal trucks are accurately credited for their loads.
- Ensuring trucks are not artificially loaded.
- Ensuring hazardous waste is not mixed in with loads.
- Ensuring all debris is removed from the debris removal trucks before exiting the TDMS or final disposal site.
- Ensuring only debris specified within the scope of work is collected.

In addition to the responsibilities listed above, final disposal site monitors are also tasked with the following:

- Ensuring all debris is disposed at a properly permitted landfill.
- Matching landfill receipts and/or scale house records to haul-out documentation.

3.2.5 Use of Force Account Resources

3.2.5.1 Public Works Resource Assessment

Force Account Resources are the County-owned resources, including equipment and labor, which Contra Costa County can use to respond to a debris-generating event. For relatively minor incidents, the County can rely on its own resources to respond. For larger scale incidents and disasters, the demand for resources may quickly overwhelm the resources that the County might have available. In that case, the County may look to mutual aid resources through the REOC or may rely upon contracted services to provide the needed staffing, equipment, and expertise to help manage the debris. In the event of a large-scale disaster, the County must assess the force account labor and determine the resources that might be needed to respond.

The matrix below provides the resource requirements for earthquake and severe storm debris events based on the debris estimation models in Section 1.4 of this plan.

Assumptions for resource requirements for earthquake and severe weather event:

- Average debris collection truck capacity: 32 cubic yards (CY)
- Average number of trips per day for each collection truck: 5
- Average truck to loading equipment ratio: 2:1
- Debris Management Sites per jurisdiction: 1 *(This could potentially be reduced by jurisdictions with smaller acreage requirements sharing sites.)*
- Volume of debris that can be staged per acre based on a 15 foot stack height: 24,200 CY/acre
- Estimated collection period: 30 days
- The number of trucks will fluctuate throughout the operation. This table lists the daily average over the entire operation.

Table 3.1 – Debris Resource Requirements

Type of Incident	Total Debris (CY)	DMS Acres Needed	Trucks Needed	Personnel (Debris Monitors)
Earthquake (Concord-Green Valley Fault)	56,436	2	12	6
Earthquake (Hayward-Rodgers Fault)	14,068	1	3	1
Earthquake (Calaveras Fault)	68,899	3	14	7
Severe Weather	247,342	10	52	28
Wildfire	156,750	6	33	16

Contra Costa County will use internal and contract resources during debris operations. In response to a disaster, the County will identify the personnel, equipment and systems that can be used to conduct debris operations.

Force account resources must be accurately documented during the response and recovery operations. Often, the use of force account labor and equipment can apply to the public entity's share for disaster-related costs. Labor and equipment expenses may be eligible for state and/or federal reimbursement if documented properly.

The pre-existing condition of equipment used for debris operations should be documented prior to its use. In addition, all resources including staff, should be categorized using the NIMS Typing Criteria. The NIMS Resource Typing Library identifies the following positions and job descriptions for debris operations:

Debris Removal Manager NIMS ID 7-509-1096

1. Manages and coordinates debris removal activities related to the incident
2. Ensures communication between other members of the disaster management team
3. Ensures communication of project status activity and reporting, and dissemination and implementation of policy directives to debris removal personnel
4. Position may be in a Branch, Division or Group, Strike Team, or Task Force, based upon mission-specific activities and needs

Debris Collection Supervisor NIMS ID 7-509-1097

1. Oversees collection activities prior to arrival at the disposal site
2. Coordinates the routing staffing and filed reporting activities
3. Position may be in a Branch, Division, Group, Strike Team, or Task Force, based upon mission-specific activities and needs

Debris Site Supervisor NIMS ID 7-509-1098

1. Manages a TDMS
2. Responsible for overseeing waste separation and environmental protection concerns
3. Responsible for appropriate paperwork and reporting documentation
4. Position may be in a Branch, Division, Group, Strike Team, or Task Force, based upon mission-specific activities and needs

In the event the County does not have sufficient force account labor and equipment available to use for debris operations, the County will seek external support from mutual aid, contracted resources or by requesting assistance from the REOC.

3.2.6 Environmental Considerations and Other Regulatory Requirements

CalEPA provides guidance for local and state agencies to conduct disaster debris, waste and hazardous material removal activities. The following section includes best management practices from CalEPA to be considered to address the removal of hazardous materials, HHW (HHW), debris, asbestos containing materials (ACM), and air monitoring and sampling from the disaster or incident site.

Health and Safety

- Given that ash may contain elevated levels of heavy metals and/or asbestos, an exclusion zone will be established around each site containing ash during debris removal operations. All personnel entering this area will be required to wear level C protective attire.

- It is recommended that all on-site cleanup personnel entering the exclusion zone must be 40-hour HAZWOPER trained Under 29 CFR 1910.120, and CCR Title 8, Section 5192, and will be required to wear Level C personal protective equipment (PPE).
- A full-time health and safety officer will be assigned to the project. It is recommended that the health and safety officer be a certified industrial hygienist (CIH).
- Depending on the task and activity, all cleanup contractors' working on-site must have the following certifications and licenses:
  - State Contractor's License – Must include an asbestos certification component (if conducting ACM removal), and general engineering, demolition and hazardous substance certifications depending on the task performed
  - Department of Occupational Safety & Health Asbestos Registration
  - Number (If conducting ACM removal)
  - Hazardous Waste Transporter Registration Number – Issued by California Department of Toxic Substances Control RCRA EPA ID Number – Issued by US Environmental Protection Agency, Region 9
  - US Department of Transportation, Pipeline and Hazardous Materials Safety Administration – Hazardous Material Certificate of Registration
  - California Highway Patrol – Hazardous Materials Transportation License
  - US Department of Transportation, Federal Motor Carrier Safety Administration – US Department of Transportation Identification Number
  - California Department of Motor Vehicles – Motor carrier permit
- See the Health and Safety Plan in Attachment R of this plan for additional health and safety guidelines.

HAZMAT and HHW

Standard operating procedures for conducting hazardous material (HAZMAT) assessment activities should be followed pursuant to CalOSHA and OSHA HAZWOPER requirements.

Prior to commencing debris removal activities, all areas are to be cleared of HAZMAT, including the removal of easily identifiable (visible) gross asbestos, radioactive, and explosive materials.

Explosive material includes firearms and ammunition, black powder, blasting caps, some fireworks, and military ordinance. If explosive materials are identified on-site, they should be handled by trained personnel and removed immediately to ensure safety of the public.

Prior to the removal of HAZMAT and HHW a California Division of Occupational Safety and Health (DOSH) Certified Asbestos Consultant (CAC) should assess and sample all residential and other affected areas of the site to identify and remove gross asbestos. This is to ensure that any areas identified as containing gross asbestos material will not be disturbed by HAZMAT cleanup personnel. Any ACM that is not found on the ground due to natural forces may be subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements.

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.

Initial hazmat assessment activities must include screening for radioactivity and ensuring that a flammable atmosphere does not exist. Typical HAZMAT includes HHW such as:

- Automotive/marine batteries
- Automotive oils and fuel
- Compressed gas cylinders
- Propane tanks
- Herbicides and pesticides
- Solvents
- Paint thinners and strippers
- Oil and latex-based paints
- Pool chemicals

The following standard procedures are recommended by CalEPA:

- The property, site, or affected area of the disaster should be assessed for HAZMAT and HHW.
- A Cal/OSHA CAC will be utilized to assess the area or each residential or commercial property for easily identifiable and removable pieces of ACM. After assessing each property or area, the CAC will consult with a licensed asbestos removal contractor to identify the location and area of ACM to be removed.
- A Cal/OSHA certified Asbestos Removal Contractor will be responsible for overseeing the safe removal of ACM identified on-site by the CAC.
- All on-site personnel working to remove ACM must have received the necessary health and safety training for conducting asbestos removal activities pursuant to OSHA 1910.100, and CCR Title 8, Section 5192, and will be required to wear Level C PPE when working in the exclusion zone.
- All gross ACM that can easily be removed from the site will be adequately wetted prior to being bagged or bulked for removal. The easily identifiable gross ACM can be double-bagged and appropriately labeled as ACM. (At a minimum, the plastic bags must be of at least 6-mil thickness.)
- If bulk loading of ACM is utilized, the bin or container used for transport (e.g. end-dump trailer or roll-off box) shall be double-lined with 10-mil ploy in such a way that once loaded both layers can be sealed up independently.
- HHW and HAZMAT identified on-site will be characterized, segregated, staged, consolidated, and packaged for transport and disposal by a licensed environmental contractor.
- As noted in Sub-Section a. Health and Safety (above), all on-site cleanup personnel must be 40-hour HAZWOPER trained Under 29 CFR 1910.120, and CCR Title 8, Section 5192.
- All hazardous waste and HHW removed from the site will be manifested and transported to a permitted treatment, storage, and disposal facility in good standing with local, state, and federal agencies.
- Disposal facility emergency waivers and suspension of regulations for disposing of hazardous wastes generated from a disaster or large-scale event must be coordinated with the LEA and Regional Water Quality Control Board.

Debris and Asbestos Containing Material

If burn ash or building material on the ground is from structures completely destroyed by natural forces (as opposed to structures demolished in whole or in part by human activity), this material is not subject to the Asbestos NESHAP as it relates to the demolition and renovation, transport and disposal requirements.

If the building material and debris is not completely destroyed and requires further demolition, it may be subject to the Asbestos NESHAP.

At a minimum, the flowing best management practices should be used for undertaking debris removal activities:

- California DOSH CAC will be utilized to assess the area or each residential or commercial property for easily identifiable and removable pieces of ACM. After assessing each property or area, the CAC will consult with a licensed asbestos removal contractor to identify the location and area of ACM to be removed.
- A Cal/OSHA registered Asbestos Removal Contractor will be responsible for overseeing the safe removal of ACM identified on-site by the CAC.
- All on-site personnel working to remove ACM must have received the necessary health and safety training for conducting asbestos removal activities pursuant to OSHA 1910.100, and CCR Title 8, Section 5192, and will be required to wear Level C PPE when working in the exclusion zone.
- As noted in Sub-Section a. Health and Safety (above), all on-site cleanup personnel must be 40-hour HAZWOPER trained Under 29 CFR 1910.120, and CCR Title 8, Section 5192.
- The affected disaster or incident area (commercial, residential, or rural properties) will be screened by a CAC to identify all gross ACM that can be easily removed from the ground or structure prior to debris removal activities.
- Request an asbestos consultation from the state or local Air Quality Management District (AQMD) for any structure that is not completely destroyed or for any structure with vermiculite insulation, for large — facility components or material that will be broken up upon movement, or for other asbestos issues as identified by the CAC. Note: Current field definition of destroyed means the structure does not have a roof or any load bearing walls.
- During asbestos screening process, it is recommended that bulk samples be collected from 10 to 20 percent of the representative structures that have not been destroyed to determine the presence of ACM above NESHAP regulations, and to ensure residual building materials do not contain asbestos that may change the overall waste classification.
- All gross ACM that can be safely and easily removed from the site will be adequately wetted prior to being bagged or burrito wrapped to meet the NESHAP leak-tight requirement for removal. The easily identifiable gross ACM can be double-bagged and appropriately labeled as ACM. (At a minimum the plastic bags must be of at least 6-mil thickness, and the contents must remain wet.)
- If bulk loading of ACM is utilized, the bin or container used for transport (e.g. end-dump trailer or roll-off box) shall be double-lined with 10-mil ploy in such a way that once loaded both layers can be sealed up independently.
- Conduct on-site and off-site air monitoring and sampling for asbestos and heavy metals during all ACM and debris removal operations to demonstrate the effectiveness of engineering controls to protect cleanup personnel and the surrounding community.

- Engineering controls must be utilized to maintain dust and fiber control during removal activities. A water fog must be used during debris handling, bulking/bagging, and waste loading operations. It is recommended that cleanup contractors will use fire grade firefighting nozzles with shut off valves for dust control. The fire nozzle shall have sufficient water pressure to generate a high mist fog stream. The fire nozzle should have an adjustable flow rate, preferably 20 to 60 gallons per minute, and constructed of hard coated aluminum with brass and stainless steel internal components. Plastic nozzles should not be used. While the costs of metal firefighting nozzles are significantly more than plastic nozzles, metal nozzles are only able to generate a sufficient fog to control dust.
- All burn ash and debris must be sufficiently wetted 48 to 72 hours in advance of initiating removal of the material. The water shall be applied in a manner so not to generate significant runoff. Engineering controls for storm water discharges must be in place prior to dust control operations.
- All waste material that is not loaded out at the end of each workday should be stockpiled, sufficiently wetted, and/or covered to prevent the off-site migration of contaminants.
- All waste haulers who observe loading operations outside of the vehicle cab, and/or covering (e.g. tarping) the trailer or container must wear Level C PPE.
- All approved landfill operators that may come in contact with the waste during off-loading operations should follow their facilities protocols for wearing PPE and respiratory protection.
- All ACM and debris removed from the property, site or area must be manifested and transported for disposal to a permitted treatment, storage, and disposal facility in good standing with local, state, and federal agencies.
- Cal/OSHA may require procedures for the receiving landfill facility to establish an appropriate site safety plan for the protection of the facility employees to potential ACM in the waste stream.
- Disposal facility emergency waivers, and suspension of regulations for disposing of wastes generated from a disaster or large-scale event, must be coordinated with the LEA and the Regional Water Quality Control Board.

Air Monitoring and Sampling

To demonstrate the effectiveness of best management practices and the engineering controls used during emergency debris removal actions, air monitoring and sampling activities should be conducted in the exclusion zone (on-site) and along the perimeter of the site (community-based) during removal activities, as well as non-work hours to establish relevant background air pollution levels.

On-site Air Monitoring

An on-site (industrial hygiene) air monitoring program is defined as one conducted within the immediate debris removal area with the objective of protecting occupational health and quantifying dust mitigation practices.

- Document on-site air monitoring activities in a site-specific Health and Safety Plan (HASP).
- All personnel entering the immediate removal area should be required to wear Level C PPE, as defined in CCR Title 8 Section 5192; this level of PPE may be downgraded based on results of industrial hygiene air sampling.

- Sample/monitor for dust, heavy metals, and asbestos. Particulate matter monitoring shall be done by direct reading instruments for real-time analysis. Heavy metal sampling can be conducted via cartridge or filter analysis using National Institute for Occupational Safety and Health (NIOSH) Method 7300 (metal scan). Asbestos samples should be collected with a 50mm antistatic cowel on a 25mm Mixed Cellulose Ester Filters (MCEF) cassette and analyzed by transmission electron microscopy (TEM) NIOSH Method 7402 (high volume).
- Collect at least one upwind and two downwind dust samples from the immediate debris removal area in a triangular configuration.
- Personal air sampling collected in the breathing zone of site cleanup workers should be conducted for dust, heavy metals, and asbestos; Sampling can be representative rather than comprehensive so long as monitored personnel represent of various on-site operators, laborers, and supervisors.
- The on-site air monitoring program shall include steps to modify debris removal operations to reduce the potential for exposures above the NIOSH Recommended Exposure Limits, the Threshold Limit Values published by the American Conference of Governmental Industrial Hygienists (ACGIH), or other protective occupational health guidance used in the site-specific HASP.
- It is recommended that a full-time safety officer be assigned to the removal operations, preferably a CIH.
- At the conclusion of the debris removal project, a summary of air monitoring activities and any resulting health and safety issues should be provided to the project manager or Operations Chief.

Off-site Air Monitoring

No off-site migration and/or emission of dust or airborne contaminants are expected from disaster debris removal operations when appropriate dust mitigation controls are in place. However, a community-based air monitoring program may be established to monitor off-site migration of airborne contaminants, especially if adjacent neighborhoods are reoccupied.

Sampling or monitoring can also target sensitive population centers or locations such as schools and hospitals. While community monitoring is not required during disaster recovery efforts, increased community sensitivity following a disaster may justify a monitoring program.

- Coordinate any monitoring and sampling efforts with County environmental health departments and local AQMDs. Additional state and federal resources are available if local resources are unavailable or exhausted. The favored approach is an interagency effort with either the Air District or local health department as the lead agency.
- Develop a Sampling Plan and document community monitoring activities in a Community HASP.
- Monitoring may be for particulate matter alone or in combination with asbestos or other suspected contaminants. Particulate matter can serve as a proxy for the migration of other particulate-type airborne contaminants, but not gases and aerosols, which need separate monitoring.
- Direct read or near real-time dust measurement instrumentation such as a data ram is preferred and allows immediate feedback to removal operations and to impacted communities.

- If instituted, community monitoring should be conducted in both upwind and downwind locations relative to debris removal operations and/or the immediate impacted area.
- Occupational health recommendations cannot be used in determining risk to public health. Only public health guidance values can be used to interpret community monitoring data.
- Twenty-four hour average particulate matter concentrations (PM2.5 or PM10) should be equal to or less than 35 µg/m3; 8-hr. averages should be equal to or less than 50 µg/m3; and, 3 hr. averages should be equal to or less than 88 µg/m.
- Public health guidance values for other airborne contaminants are available from the Office of Environmental Health Hazard Assessment (http://oehha.ca.gov/air/allrels.html) or from the U.S. EPA provisional advisory levels.
    - (http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=500613.

Storm Water Controls

One of the most prevalent water pollution threats from burn sites is the discharge of ash and other burn related debris into storm drains or natural receiving waters. Sites where debris and ash have been removed are often graded and have soils prepared similar to those of construction projects.

Debris removal and site clearing activities increase the exposure of soils to wind, rain, and concentrated flows that cause erosion and adversely impact storm water quality with high levels of total suspended solids and many other pollutants, which subsequently impacts surface waters.

The main objective is to provide best management practices that stabilize disturbed soil and reduce sediment transport caused by erosion from entering a storm drain system or receiving water body during debris removal after a disaster. Best management practices for storm water controls may include the use of fiber rolls, silt fences, erosion control blankets, hydro seeding, soil binders, and other devices to reduce sediments.

Effort should be made to preserve existing vegetation, if practicable. Once the removal has been completed, operation and maintenance of storm water control measures must be maintained by the property owner or the local government.

Reduction of Disaster Debris by Burning

The California Health & Safety Code (HSC) 41800 prohibits individual persons from using fire to dispose of waste. This applies to individual property owners and tenants.

HSC 41800 has rarely been waived by a Governor's Proclamation of Emergency. However, the code does establish specific authority for any public officer, including the Governor, to set or permit fires for the following purposes[10]

- The prevention of a fire hazard which cannot be abated by any other means
- The instruction of public employees in the methods of fighting fire

[10] Remediation of Disaster Debris by Burning Recommendations from the California Air Resources Board – Office of Emergency Response for Emergency Response and Recovery Actions, November 18, 2011

- The instruction of employees in methods of fighting fire, when such fire is set, pursuant to permit, on property used for industrial purposes
- The setting of backfires necessary to save life or valuable property pursuant to Section 4426 of the Public Resources Code
- The abatement of fire hazards pursuant to Section 13055
- Disease or pest prevention, where there is an immediate need for and no reasonable alternative to burning
- The remediation of an oil spill pursuant to Section 8670.7 of the Government Code

Burning debris should be coordinated with the California Air Resources Board. Guidance for burning disaster debris can be found on the California OES Debris Management web page at http://www.caloes.ca.gov/cal-oes-divisions/recovery/disaster-mitigation-technical-support/technical-assistance/debris-management.

Historical Considerations

There are a number of historical properties in Contra Costa County. The county will ensure that guidelines in accordance with the California Environmental Quality Act (CEQA) are adhered to in regards to those properties. In addition, in the event a project funded by FEMA has the potential to affect one of these historical properties, FEMA is required to conduct a Section 106 consultation. Section 106 of the National Historic Preservation Act (NHPA), requires federal agencies to enter a 4-step consultation process if historic properties may be affected by a federal undertaking. The four steps are listed below:

- FEMA initiates the Section 106 consultation process
- Historic properties are identified and evaluated – FEMA will assess the significance of the properties and consult with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO)
- Adverse effects are assessed – FEMA will consult with the SHPO and THPO to determine if there will be any adverse effects to the properties. If it is determined there will be no adverse effects, the project may proceed.

Adverse effects are resolved – If it is determined there would be adverse effects, FEMA will consult with affected parties to determine ways to minimize the adverse effects on the properties.

3.2.7 Individuals with Disabilities and Access and Functional Needs

3.2.7.1 Description[11]

The term "individuals with disabilities and access and functional needs" is defined as populations whose members may have additional needs before, during, and after an incident in functional areas. Individuals with additional response assistance may include those who:

- Live in institutionalized settings
- Are elderly

[11] Contra Costa County Emergency Operations Plan 2015, Section VI – Supporting Elements, A

- Are unaccompanied children
- Are from diverse cultures
- Have limited English proficiency or are non-English speaking
- Are transportation disadvantaged
- Have no access to any communications devices
- Have no access to a shelter and/or may need to be assigned a Functional Access Service Team (FAST) member
- Have disabilities – temporary and/or lifelong
- Have sight or hearing impairments
- May require medical care
- May require supervision
- Other situations that would ensure maintaining independence

Debris management strategies will include actions to meet the needs of access and functional needs individuals. This might include linking them with organizations to assist them in getting debris to the ROW, ensuring public information messages can be received and be understood, and making sure individuals with disabilities and others with access and functional needs can access sidewalks and public transportation resources.

3.2.7.2 Debris Planning Considerations

Disasters create new physical barriers and eliminate and/or lessen services available to everyone. For people with access and functional needs, this may take away their ability to perform certain functions that were previously possible, and/or their capacity to live independently, and/or navigate the available response and recovery systems effectively. To the greatest extent possible, populations with disabilities and functional and access must be identified and prioritized during debris operations.

Public Information

Information before, during, and after an emergency allow individuals with disabilities and access and functional needs better respond to disasters. Ensuring that preparedness and emergency information is accessible and available in multiple formats and provides content that addresses access and functional needs is critical.

Emergency Roadway Clearance

Emergency roadway clearance creates challenges for individuals with limited mobility. During the emergency roadway clearance, debris is pushed out of the road onto the ROW. This allows emergency response vehicles to pass but it obstructs sidewalks. Public entities can coordinate with volunteer organization to identify vulnerable populations and prioritize those areas for ROW debris removal. This will expedite removal from sidewalks and other critical pathways for individuals with mobility challenges.

ROW Collection

ROW collection can create challenges for individuals with disabilities and access and functional needs. Bringing debris to the ROW will be difficult for individuals with mobility challenges.

Jurisdictions can coordinate with volunteer organizations active in disasters to identify potential vulnerable populations and coordinate services to assist with debris removal services.

Debris Reduction by Incineration

In rare cases, debris may be reduced at TDMSs by open burning or using an air curtain incinerator. In these cases, debris managers need to be cognizant of nearby residents and mitigate situations for individuals with health and respiratory challenges that might be exacerbated by this reduction process.

3.2.8 Public Information

Public information following a disaster will be a coordinated effort in accordance with the principles of the NIMS. Public information messages will be coordinated by the designated Public Information Officer (PIO). The PIO will serve as the primary point of contact between the Emergency Operations Center (EOC), the media and the public. The PIO will coordinate public information messages within the County departments as well as with other affected jurisdictions to ensure an accurate, consistent, and timely message is communicated to target populations. This collaborative effort could involve the establishment of a Joint Information Center as required. The PIO will lead efforts to verify information, monitor media reports as well as social media posts in regards to debris management operations. The PIO will also coordinate the development and dissemination of messages with the Incident Commander for the County. This section describes the type of information that needs to be communicated to the public related to debris operations. A template providing sample messages for each phase of debris management operations can be found in Attachment D of this plan.

3.2.8.1 Health and Safety Public Information

Disaster-related accidents and deaths are frequently attributed to mishandling of debris and debris equipment by residents. It is critical that public information officers provide consistent messaging on health and safety when handling debris. Sample health and safety public information messages are provided in Attachment D.

Lead in Damaged Materials or Debris

Homes built before 1978 are likely to contain lead-based paint, which may flake after being soaked by floodwater. Lead is a toxic metal that causes many negative health effects, especially in children. Disturbing materials containing lead-based paint may release lead dust into the air. The public will be encouraged to seek help from public health authorities or specially trained contractors if they suspect that debris in their home is contaminated with such paint.

Contaminant Sediment

The sediment left behind by receding floodwater often contains a wide variety of pollutants. They can include fuel oils, gasoline, human and animal waste, metals, and other material. Individuals will be encouraged to avoid contact with sediment. The public will be advised to wash any exposed skin with soap and water and change into clean clothing if they do come in contact with contaminated sediment.

Asbestos in Debris

Pipes, insulation, ceiling tiles, exterior siding, roof shingles, and sprayed-on soundproofing in older structures may contain asbestos. The public should be advised to contact health authorities it they suspect their home contains asbestos or ACM will be disturbed during cleanup.

HHW

The public will be encouraged to be alert for leaking containers and household chemicals, such as caustic drain cleaners and chlorine bleach when returning to flood-damaged homes and buildings. The public will also be warned to keep children and pets away from leaking or spilled chemicals; not to combine chemicals to avoid dangerous or violent reactions; not to dump chemicals down storm sewers, drains, or toilets; and to mark and set aside unbroken containers until they can be properly disposed of.

Use of Chainsaw to Clear Debris

Over 35,000 people are injured by chainsaws yearly in the United States. The public should be cautioned to understand how to use the equipment and follow the instructions while using these tools for debris operations.

- Read your owner's manual.
- Wear proper safety gear, including eye and hearing protection, heavy work gloves, and work boots.
- Check controls, chain tension, and all bolts and handles to ensure they are functioning properly.
- Fuel your saw at least 10 feet from sources of ignition.
- Clear debris that may interfere with cutting.
- Keep hands on the handles, and secure footing.
- Do not cut directly overhead or overreach with the saw.
- Be prepared for kickback.

The public will be encouraged to make sure someone is nearby to help in case of an emergency and to understand that emergency responders are addressing issues related to the disaster so response times might be delayed.

3.2.8.2 Debris Segregation and Set Out Procedures

Residents will want to remove debris quickly and they will use their normal municipal solid waste procedures for debris handling unless directed otherwise. Communication with the public early and often on proper set out procedures is critical. These procedures might be different for different jurisdictions depending on the type of equipment used for ROW collection. Make sure residents understand the procedures in their area to avoid having to duplicate segregation and removal efforts.

3.3 Debris Disposal Locations and Debris Management Sites

3.3.1 Temporary Debris Management Site Criteria

Following a debris-generating incident, the County will need to identify land that can be used as TDMSs. In Section 3.1.1.1 TDMS Identification and Preparation, a number of potential TDMS locations were identified. Attachment N provides a form to use in assessing TDMSs.

An Emergency Waiver of Standards grants a landfill operator temporary relief from specific standards such as permitted capacity, throughput, and acreage. Existing operations may pursue such a waiver with the LEA for CalRecycle in accordance with the California Code of Regulations

Title 14, Section 17210. The use of closed landfills and planned solid waste facilities will require permission from CCEH and appropriate local land use and other jurisdictional agencies.

3.3.2 Landfill and End Use Options Assessment

Disaster debris should be diverted from landfills to the greatest extent possible through reduction, recycling and reuse.

Common recyclable materials that are a result of a debris-generating event include wood waste, metals, and concrete. The following are potential uses for each of these materials:

Wood Waste – Vegetative debris that is reduced through chipping or grinding results in leftover mulch. The remaining mulch can be used for agricultural purposes or fuel for industrial heating. For the mulch to be viable in agricultural purposes, the end user typically has a size requirement and quality requirements that the mulch be as clean as possible of plastics and dirt.

Metals – Metal debris such as white goods, aluminum screened porches, etc., that may result from a debris-generating event can be recycled. Certain metals, such as aluminum and copper, are highly valuable to scrap metal dealers.

Concrete – Concrete, asphalt, and other masonry products that may become debris as a result of a debris-generating event can be crushed and potentially used for road construction projects or as trench backfill.

In Contra Costa County, there are solid waste facilities that conduct composting operations, transfer/processing operations, waste tire and disposal operations that can serve as landfill and end use options for managing disaster debris. Attachment O provides maps and a list of landfill and end use facilities in the County.

Contra Costa County will assess end use options based on the disposal requirements for the debris scenario estimates listed in section 2.2.5.

3.4 Special Debris Programs[12]

3.4.1 Private Property Debris Removal

When large-scale disaster events cause mass destruction and generate large quantities of debris over vast areas, debris on private property may sometimes pose health and safety threats to the public-at-large. If private property owners are not available because they have evacuated, the County may need to enter private property to remove debris considered to be an immediate threat to the lives, health, and safety of its residents. In such situations, Cal OES and FEMA are authorized to approve the provision of Public Assistance for the removal of debris from private property when it is considered to be in the public interest.

The County must get prior approval from the state and/or FEMA to determine eligibility for reimbursement. The following procedures are required for potential state and/or federal assistance and are best practices for conducting debris removal from private property regardless of potential reimbursement.

[12] FEMA Public Assistance Program and Policy Guide, FP 104-009-2, January 2016, Chapter 2, Section VI, A

The public entity must obtain documentation from the public health authority stating that disaster-generated debris on private property in the designated area constitutes an immediate threat to life, public health, and safety.

The County may obtain documentation stating that the debris poses an immediate threat to improved property and that its removal is cost-effective. The cost to remove the debris should be less than the cost of the potential damage to the improved property.

The County must demonstrate its authority and legal responsibility to enter private property to remove debris. The legal basis for this responsibility must be established by law, ordinance, or code at the time of the disaster and must be relevant to the post-disaster condition representing an immediate threat to life, public health, and safety, and not merely define the public entity's uniform level of services. Typically, solid waste disposal ordinances are considered part of an applicant's uniform level of services.

3.4.2 Hazardous Trees

Determining removal of hazardous trees and stumps is challenging. FEMA has established criteria to assist in making these determinations, using objective information that can be collected in the field. The following procedures align with the FEMA Public Assistance Program eligibility requirements for potential state and/or federal reimbursement.

Hazardous Trees

Removing a hazardous tree may be eligible for Public Assistance grant funding. A tree is considered hazardous if its condition was caused by the disaster; it is an immediate threat to lives, public health and safety, or improved property; it has a diameter breast height of six inches or greater; and one or more of the following criteria are met:

- Has a split trunk;
- Has a broken canopy; or
- Is leaning at an angle greater than 30 degrees.

Trees determined to be hazardous and that have less than 50 percent of the root-ball exposed should be cut flush at the ground level. Grinding of the resulting stump after the tree has been cut flush at the ground level is not eligible work. The cut portion of the tree is included with regular vegetative debris. The County should make an effort to cut the tree trunk as close to the ground as possible.

The eligible scope of work for a hazardous tree may include removing the leaning portion and cutting the stump at ground level. An example of an ineligible costing method for such work would be removing the tree and stump for two separate unit costs.

The Public Assistance Program may reimburse straightening and bracing if they are less costly than removal and disposal. Straightening and bracing are emergency protective measures if they eliminate an immediate threat to lives, public health and safety, or improved property. If the County chooses to straighten and brace a tree in lieu of removal, the tree would not be eligible for removal if it dies.

Hazardous Limb Removal

Removing hanging limbs may be eligible for Public Assistance grant assistance. Limbs must be:

- The limbs or branches extend over the public right-of-way (ROW);
- The limbs or branches pose an immediate threat;

- Greater than two inches in diameter at the point of breakage; and
- The Applicant removes the hazard from the public ROW (without entering private property).

Only the minimum amount of work necessary to remove the hazard is eligible. Pruning, maintenance trimming, and landscaping are not eligible. Work should be executed in an efficient manner. For example, all hazardous limbs in a tree should be cut at the same time, not in passes for particular sizes. Work to remove hanging limbs from a tree that has been determined to be a hazard and is scheduled for removal is not eligible. If this work is contracted out, it is typically done on a per tree basis.

An eligible scope of work may be to cut the branch at the closest main branch junction. Removing the entire branch back to the trunk may not be eligible.

If the canopy of a tree located on private property extends over a public ROW such as a sidewalk, removal of hazardous limbs on the tree that extend over the public ROW and meet the above criteria may be eligible. Limbs on the tree that do not extend over the public ROW are not eligible.

- Documentation required for Public Assistance grant consideration:
- Describe the immediate threat, e.g. photos of hanging limbs or leaning trees;
- Clearly define the scope of work to remove the immediate threat;
- Specify the improved public property location by recording the nearest building address and/or GPS location; and
- Denote date, labor (force account or contract), and equipment used to perform the work.

Hazardous Tree Stumps

A stump may be determined to be hazardous and eligible for Public Assistance grant funding as a per-unit cost for stump removal if it meets all of the following criteria:

- It has 50 percent or more of the root-ball exposed (less than 50 percent of the root-ball exposed should be flush cut);
- It is greater than 2 feet in diameter, as measured 2 feet above the ground;
- It is on improved public property or a public ROW; and
- It poses an immediate threat to life, and public health and safety.

If an uprooted stump must be removed prior to state and/or federal approval, the public entity must submit the following information for Public Assistance grant consideration:

- Photographs and GPS coordinates that establish the location on public property;
- Specifics of the threat;
- Diameter of the stump 24 inches from the ground; and
- Quantity of material needed to fill the resultant hole.

The State and/or FEMA may reimburse the reasonable cost may reimburse a reasonable cost to remove, transport, dispose of, and fill the hole from a stump of more than 2 feet in diameter if:

- The County and State agree the tree or stump is hazardous according to the above definition;
- Generally, if the removal was approved in advance; and
- A Hazardous Stump Worksheet is completed and submitted for FEMA approval.

A copy of the Hazardous Stump Worksheet may be found in Attachment I of this plan.

In some instances, grinding of an uprooted stump and filling the resulting cavity may cost less than a complete extraction. In these cases, the County should present the cost comparison documentation to the state and/or FEMA for consideration; however, the stump must have already been determined eligible for removal according to the above criteria.

Stumps measuring 2 feet in diameter or less do not require special equipment for removal; therefore, reimbursement will be based on the reasonable unit cost per CY, using the Stump Conversion Table found Attachment I. The unit price for stump removal includes the extraction, transport, and disposal of the stump as well as filling the cavity that remains.

FEMA will reimburse the public entity at the unit cost rate (usually CYs) for normal debris removal for all stumps, regardless of size, placed on the public rights-of-way by others, i.e., contractors did not extract them from public property or property of eligible private nonprofit organizations. In such instances, public entities do not incur additional costs to remove these stumps; the same equipment used to pick up vegetative debris can be used to pick up these stumps.

See FEMA FP 104-009-2 for more information on hazardous stumps.

3.4.3 Human Remains

The California Office of Emergency Services DDMP provides a detailed approach to management of human remains. The following section mirrors the guidance provided in the State's plan and provides the responsibility of jurisdictions regarding recovery and disposition of human remains.

During catastrophic disasters, many individuals are unaccounted for and might be trapped in rubble. Human remains should be recovered at the incident site to the maximum extent possible. However, remains are sometimes discovered during debris management operations at collection, reduction, and final disposal.

There is no direct risk of contagion or infectious disease from being near human remains for people who are not directly involved in recovery or other efforts that require handling of dead bodies. If human remains are discovered during debris operations, the field supervisor should contact law enforcement officials by calling 9-1-1 to report the situation. Law enforcement will conduct an investigation and coordinate removal with the Coroner's Office.

Human remains do present health hazards if directly contacted. Do not handle or move the body. Obstruct the view of the body from the public and employees, if possible and wait for emergency services to arrive.

3.4.4 Crime Scene Debris

The California Office of Emergency Services DDMP provides a detailed approach to debris removal from a crime scene. The following section mirrors the guidance provided in the State's plan and highlights the responsibility of jurisdictions regarding recovery and disposition of human remains.

3.4.4.1 Public and Responder Safety

Public safety and responder safety is prioritized before securing or collecting evidence. If debris poses an immediate threat to public or responder safety, mitigate the threat and then implement measures to manage evidence.

3.4.4.2 Weapons of Mass Destruction/Acts of Terrorism

Following a weapons of mass destruction (WMD) or terrorism incident, the lead law enforcement agency will likely assume the role of incident command. Typically, debris operations will run concurrently with rescue and recovery operations. Investigation of the debris and evidence collection will need to happen as quickly as possible. This type of incident will have many complex and competing priorities beyond debris operations. The incident commander is responsible for managing these priorities and determining the response and recovery objectives. Debris management will be conducted as directed by the incident commander.

Debris operations for a WMD/terrorism incident will be much different that disaster debris management for a natural disaster. Law enforcement agencies will have a much larger role in debris operations from a WMD/terrorism incident. Debris is considered evidence until the lead law enforcement agency has declared it clear of evidentiary possibilities. As such, debris must be securely handled, monitored, transported, and processed.

Securing Debris as Evidence

Typically, local law enforcement agency responsibilities will include establishing and securing a perimeter, controlling access to the site, escorting transported debris and assisting in the collection, preservation, and documentation of evidence. The Federal Bureau of Investigation (FBI) may engage the services of internal response assets to assist in evidence collection and management including laboratory analysis of evidence collected from the debris.

Managing the Integrity of the Crime Scene

Initial site security is initiated by the local response. A perimeter is established in the course of protecting the public and giving adequate space for response workers, equipment, and vehicles. This original perimeter will be maintained or possibly expanded by local law enforcement with regard to protecting the outer limits of the crime scene. Planning must begin early to strengthen this perimeter with physically durable materials such as chain link or other fencing.

Perimeter Establishment and Enforcement

For a crime scene of this magnitude, an inner and outer perimeter must be established and secured by local law enforcement agencies. Some initial sites may have adequate space to allow for evidence (debris) processing sites within the inner perimeter. In most cases, this is not possible and arrangements must be made to transport evidence (debris) to an off-site location for processing. In this event, both inner and outer perimeters must also be established for any remote work sites associated with evidence processing and recovery.

Inner Perimeter Security Requirements:

- Identify a Site Safety Officer on-scene
- Develop a site-specific health and safety plan
- Ensure all responders including debris management personnel are wearing appropriate PPE at all times
- Establish a control point for logging name, date, time of entry and vehicle
- Establish an accountability system for inner perimeter responder safety

Site Access and Credentialing:

- Establish appropriate resources to provide for on-scene credentialing for all personnel.
- Establish a credentialing point outside of the outer perimeter.
- Ensure debris personnel have appropriate badging and credentials prior to arrival at the incident site.
- Establish secure points of ingress and egress for debris haulers and other vehicles.

Evidence Collection and Preservation

- Establish a process for chain of command of debris including
  - Removal from site
  - Transport
  - Arrival at site for processing
  - Transport to disposal
  - Arrival at disposal site
- Documentation of debris chain of command must include:
  - Name of equipment
  - Name of equipment operator
  - Date, time and work zone
- Debris that is transported should be accompanied by or monitored by a law enforcement officer until it has arrived to a remote secure site.
- Establish a receiving point to secure large quantities and varying sizes of debris such as an off-site warehouse or storage containers that can be secure by law enforcement continuously.

3.4.5 Wildland Fires, Drought and Other Special Debris Events

Contra Costa County is susceptible to the impacts of severe drought and wildland fires. Prolonged periods of drought can affect crops, water availability and quality, and increase potential for natural fuels. These affects combined with high winds increase the risk of wildland fire. While fires leave less debris than other types of disasters, they still generate waste including:

- Destroyed homes
- Burned cars and other metal objects
- Ash and charred wood waste
- Hazardous trees

There are strategies that public entities can implement to mitigate the impact of drought and wildland fires including:

- Implement Xeriscape and public education programs to conserve water.
- Conduct wildfire training for response and recovery staff.
- Develop a wildland urban interface plan.
- Educate homeowners on the importance of water conservation and the effects of wildfires.
- Create defensible space around structures through the removal of flammable vegetation.

- Use non-combustible building envelope assemblies, ignition resistant materials, and proper retrofit techniques of new and existing structures.
- Reduce hazardous fuels by vegetation management, vegetation thinning, or reduction of flammable materials to protect life and property beyond defensible space parameters, but proximate to at-risk structures.

A specific health and safety plan should be developed and daily health and safety briefings should be conducted when conducting debris operations following a fire.

4.0 FINANCE, ADMINISTRATION AND LOGISTICS

4.1 Finance

All departments and agencies will maintain records of personnel, equipment, and material resources used to comply with this plan. Such documentation will then be used to support reimbursement from any state or federal assistance that may be requested or required. Attachment M of this plan contains the forms needed to track use of equipment and employee time during debris operations.

Funding Sources for Disaster Debris Operations

The federal government provides several assistance programs through various agencies to support debris operations. However, these programs have extensive documentation requirements that must be adhered to. Additionally, the policy guidance for these assistance programs changes and adapts with lessons learned from each disaster across the United States. It will be important for the County to maintain awareness of current federal assistance program guidance and regulations related to disaster debris federal funding programs.

4.1.1.1 California Disaster Assistance Act

The State can provide assistance through the California Disaster Assistance Act (CDAA). The CDAA was created to assist the State manage regularity and administrative issues related to disasters. CDAA governs the eligibility rules for disaster debris removal within the State. The CDAA provides regulatory guidance for three components of disaster finance and administration: emergency work, emergency protective measures, and debris removal.

California Disaster Assistance Act Eligibility Rules

- CDAA, Section 2920 – Emergency Work. Emergency work to saves lives, protect public health and safety and to protect property in an area proclaimed to be in a state of emergency.
- CDAA, Section 2930 – Emergency Protective Measures. Actions taken to remove and/or reduce immediate threats to public property, or to private property when in the public interest.
- CDAA, Section 2925 – Debris Removal. General eligibility:
  - Debris removal from publicly and privately owned lands and waters, undertaken in response to a state of emergency proclamation by the Governor is eligible for State financial assistance; and;
  - For purposes of this program, the removal of debris from private property shall be reimbursed only when there is an immediate threat to public health and safety. In a case where reimbursement for debris removal from private property is authorized by the director, the following requirements shall apply, unless waived in part or full by the director:
    - The property owner must remove all disaster-related debris from the property to the curb or public ROW, giving the local agency the right of entry and absolving the local agency and the State of any liability relative to removal.
    - 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,
    - The local agency must have signed a statement from the property owner.
  - Criteria: 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.

- Examples of Eligible Work
  - Removing debris such as pieces of destroyed buildings, structures, signs, or broken utility poles;
  - Removing loose or broken sidewalks and driveways; or,
  - Removing fallen trees.

4.1.1.2 FEMA Public Assistance Program

The mission of the FEMA Public Assistance (PA) Grant Program is to provide assistance to State and local governments and certain private nonprofit (PNP) organizations to quickly respond to and recover from disasters or emergencies declared by the President. FEMA provides supplemental federal disaster grant assistance for debris removal, emergency protective measures and repair, replacement or restoration of disaster-damaged facilities through the PA Program. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

The FEMA PA Program is a cost-sharing program. Cost share refers to the portion of disaster-related costs the federal government is responsible for funding. Per the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), the federal cost share of assistance is not less than 75% of the eligible cost for emergency measures and permanent restoration. The remaining 25% is the responsibility of the State and local governments. The State serves as the grant administrator or the grantee. The grantee determines how the non-federal share is funded.

Recent Changes to the PA Program

The Stafford Act constitutes the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and FEMA programs.

The Stafford Act was recently amended by the SRIA of 2013. The President signed the SRIA into law in January 2013 to improve and streamline disaster assistance for Hurricane Sandy and for future disasters. As a result of this Act, the Stafford Act was amended, including alternative procedures for the FEMA PA Program.

The purpose of the SRIA is to:

- Reduce the cost of federal government assistance.
- Increase the administrative flexibility of the FEMA PA Program.
- Expedite the process of providing and using the assistance.
- Create incentives for applicants to complete projects in a timely and cost-effective manner.

The law authorizes several significant changes to the way FEMA may deliver disaster assistance under a variety of programs. This includes the following procedures:

- PA alternative procedures
  - Permanent work alternative procedures

  - Debris removal work alternative procedures
- Hazard mitigation
- Dispute resolution
- Federal assistance to individuals and households
- Unified federal review
- Small project threshold review
- Essential assistance
- Individual assistance factors
- Recommendations for reducing costs of future disasters

It is the responsibility of the applicant to understand the eligibility requirements and provisions of the Stafford Act and the SRIA. FEMA will make every effort to provide reliable information through field personnel following a disaster. However, it is ultimately the responsibility of the applicant to understand what is allowed under the law.

It is critical that local officials and local managers implementing federal programs fully understand applicable local, State, and federal laws related to disaster assistance.

The consequence of non-compliance with these provisions is fraud and can result in the following:

- Temporarily withhold payment or take more severe enforcement action.
- Disallow all or part of the cost of the activity or action not in compliance.
- Wholly or partly suspend or terminate the applicant's current award.
- Withhold future awards.
- Take other remedies that may be legally available.

Debris managers will need to understand how these policies impact debris operations. The following is an overview of the FEMA PA Grant Program process with a flow chart at the end of the section.

FEMA PA Grant Program Process Overview[13]

Preliminary Damage Assessment

The preliminary damage assessment (PDA) is a joint assessment used to determine the magnitude and impact of an event's damage. A team of representatives from FEMA, the State and the local jurisdiction will visit local sites and view the damage first-hand to assess the scope of damage and estimate repair costs. The State uses the results of the PDA to determine if the situation is beyond the combined capabilities of the State and local resources and to verify the need for supplemental federal assistance. The PDA also identifies any unmet needs that may require immediate attention.

Governor's Request

The Stafford Act requires that: "All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State."

[13] FEMA Public Assistance Program and Policy Guide, FP 104-009-2, January 2016

The Governor's request is made through the regional FEMA office. State and federal officials conduct a PDA to estimate the extent of the disaster and its impact on individuals and public facilities. This information is included in the Governor's request to show that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the local governments and that federal assistance is necessary. Normally, the PDA is completed prior to the submission of the Governor's request. However, when an obviously severe or catastrophic event occurs, the Governor's request may be submitted prior to the PDA. Nonetheless, the Governor must still make the request.

As part of the request, the Governor must take appropriate action under State law and direct execution of the State's emergency plan. The Governor will provide the following information:

- Information on the nature and amount of State and local resources that have been or will be committed to alleviating the results of the disaster
- An estimate of the amount and severity of damage and the impact on the private and public sector
- An estimate of the type and amount of assistance needed under the Stafford Act

In addition, the Governor will need to certify that, for the current disaster, State and local government obligations and expenditures (of which State commitments must be a significant proportion) will comply with all applicable cost-sharing requirements.

Disaster Declaration and Initiation of Federal Programs

Based on the Governor's request, the President may declare that a major disaster or emergency exists, thus activating an array of federal programs to assist in the response and recovery effort. Not all programs, however, are activated for every disaster. The determination of which programs are activated is based on the needs found during damage assessment and any subsequent information that may be discovered.

Some declarations will provide only FEMA Individual Assistance or only PA Hazard mitigation opportunities are assessed in most situations.

Applicants' Briefing

The Applicants' Briefing is a meeting conducted by the State to inform prospective applicants of available assistance and eligibility requirements for obtaining federal assistance under the declared event. The meeting is held as soon as practicable following the President's declaration.

During the briefing, the State will present the incident period and a description of the declared event. Applicant, work, and cost eligibility will be reviewed and the project formulation process will be introduced. The State will also discuss funding options, record keeping and documentation requirements, and special consideration issues.

Typically, applicants will prepare and submit their Requests for PA form during the briefing.

Request for PA

The Request for PA is FEMA's official application form that public and PNP organizations use to apply for disaster assistance. It is a simple, short form with self-contained instructions. "The Request" (FEMA Form 90-49) asks for general information which identifies the applicant, starts the grant process and opens the Case Management File, which contains general claim information as well as records of meetings, conversations, phone messages and any special issues or concerns that may affect funding.

The request must be submitted to the regional administrator within 30 days after designation of the area where the damage occurred. The form may be delivered in person at the Applicants' Briefing, sent by mail, or faxed.

Kickoff Meeting

The first meeting between the applicant, the State Public Assistance Coordinator (PAC) and State Applicant Liaison is called the kickoff meeting. A kickoff meeting is held with each applicant to assess the applicant's individual needs, discuss disaster-related damage, and set forth a plan of action for repair of the applicant's facilities. The liaison will provide the State specific details on documentation and reporting requirements. Both the PAC and Liaison help in identifying special considerations.

Project Formulation and Cost Estimating

Project formulation is the process of documenting the damage to a facility, identifying the eligible scope of work and estimating the costs associated with that scope of work for each of the applicant's projects.

Project formulation allows applicants to administratively consolidate multiple work items into single projects in order to expedite approval and funding, and to facilitate project management. A project is a logical method of performing work required as a result of the declared event. More than one damage site may be included in a project.

Project information is collected in a form called a PW, which is used to document the disaster damage and develop the scope of work for repair.

Project Review and Validation

The purpose of validation is to confirm the eligibility, compliance, accuracy, and reasonableness of small projects formulated by an applicant, and to ensure that the applicant receives the maximum amount of assistance available under the law.

The validation process reviews approximately 20% of the small projects formulated by the applicant. This 20% sampling applies to all small projects, including emergency work, permanent work, and small projects with special considerations. All aspects of the projects are reviewed including the sites, estimating methods, and documentation related to the project.

The process of approval, as outlined above, begins with the PAC's review of PWs for completeness. Once the PWs are reviewed and processed through validation and special considerations review as appropriate, the PWs are ready for approval and funding.

The PAC has the authority to approve projects up to $100,000. Therefore, any project below this threshold will be approved by the PAC and forwarded for funding. Projects over this threshold will be forwarded by the PAC to the FEMA Public Assistance Officer (PAO) with a recommendation for approval. Once the PAO has approved the PW, it will then be forwarded for funding.

Obligation of Federal Funds and Disbursement to Subgrantees

FEMA and the grantee share responsibility for making PA Program funds available to the subgrantees. FEMA is responsible for approving projects and making the federal share of the approved amount available to the grantee through a process called obligation.

Through obligation, FEMA notifies the grantee that the federal funds are available but reside in a federal account until the grantee is ready to award grants to the appropriate subgrantees. The

grantee is responsible for providing the grantee portion of the non-federal share of the grant amount and for notifying the subgrantee that funds are available.

Payment for small projects is made on the basis of the estimate prepared at the time of project approval. The grantee is required to make payment of the federal share to the subgrantee as soon as practicable after FEMA has obligated the funds.

Large projects are funded on documented actual costs. Because of the nature of most large projects, work typically is not complete at the time of project approval; therefore, FEMA will obligate grants based on an estimated cost. Such monies may not be immediately drawn down by the grantee. Instead, progress payments are made to the applicant as actual costs are documented.

Upon completion of a large project, an applicant must submit documentation to account for all incurred costs to the grantee. The grantee is responsible for ensuring that all incurred costs are associated with the approved scope of work and for certifying that work has been completed in accordance with FEMA standards and policies. The grantee then submits documentation of project costs to FEMA for review. FEMA may conduct a final inspection as part of this review. Once the review is complete, FEMA determines whether funds should be obligated or deobligated for the project.

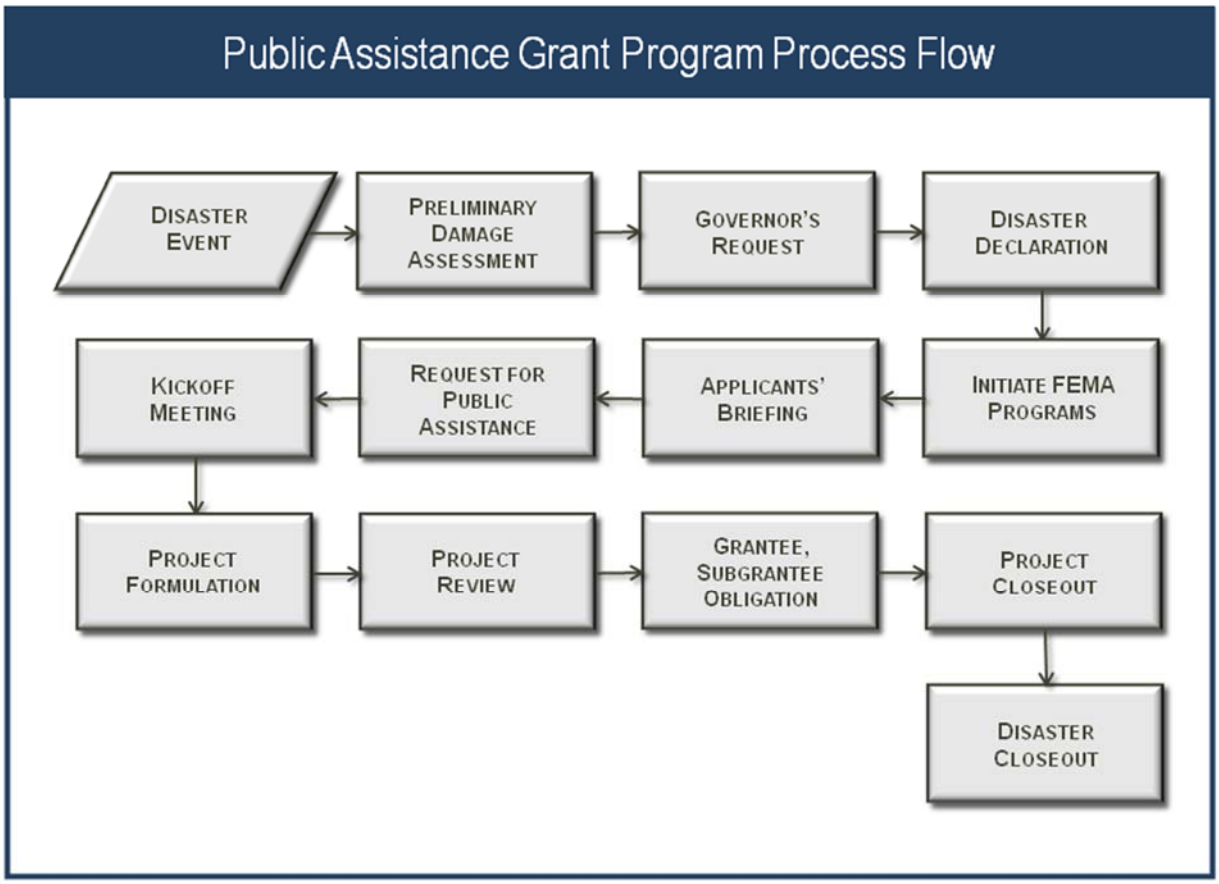
Appeals and Closeout

The appeals process is the opportunity for applicants to request reconsideration of decisions regarding the provision of assistance. There are two levels of appeal. The first level appeal is to the FEMA Regional Director. The second level appeal is to the Assistant Director at FEMA Headquarters. The applicant must file an appeal with the grantee within 60 days of receipt of a notice of the action that is being appealed. The applicant must provide documentation to support the appeal. This documentation should explain why the applicant believes the original determination is wrong and the amount of adjustment being requested.

The purpose of closeout is to certify that all recovery work has been completed, appeals have been resolved, and all eligible costs have been reimbursed. Closeout is an important last step in the PA Program process. This step can take months or years to complete. It is important to keep well-organized records and documentation throughout the closeout process.

The following flow diagram provides a graphical representation of the FEMA PA Grant Program.

Figure 4.1 – PA Grant Program Process Flow



4.1.1.3 Other Funding Options

Public entities may be eligible for other federal assistance programs for disaster debris management including:

- Federal Highway Administration Emergency Relief Program
- Natural Resources Conservation Commission Emergency Watershed Protection Program
- US Department of Agriculture Farm Services Agency Emergency Programs

Each disaster assistance program has different documentation requirements. For additional information on cost tracking and documentation requirements, a complete list of federal disaster assistance programs with links to the program guidance can be found in Attachment N.

4.2 Documentation

Accurate and complete cost tracking is critical to obtain assistance for disaster-related costs. Emergency protective measures can be eligible for reimbursement. If the incident allows for warning, public entities should begin tracking costs once the threat has been identified. If there is no warning, public entities should begin tracking costs as soon as possible. Accounting best practices for tracking costs includes the following:

- Identify a person that will be responsible for compiling disaster-related costs for the jurisdiction.

- Establish a cost code for disaster-related costs.
- Establish a file structure for each site where recovery work has been or will be performed.
- Maintain accurate disbursement and accounting records to document the work performed and the cost incurred.
- Obtain and review applicable local, state, and federal policies and regulations.
- Document administrative costs.
- Begin compiling recovery project documentation, including:
  - Executed contracts, bids, periods of performance, and locations worked
  - Property insurance
  - Donated resources (labor, equipment and materials)
  - Mutual aid
  - Force account labor
  - Force account equipment
  - Equipment rental agreements
  - Fuel logs
  - Materials including meals and gas purchases
  - Description of damage
  - Scope of work to be completed
  - Photos of damage
  - Copies of estimates
  - Maintenance records
  - Site inspection records
  - Special considerations

Coordinate with state and federal agencies to obtain disaster-specific cost tracking spreadsheets and templates.

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5.0 OPERATIONAL COMMUNICATION AND COORDINATION

5.1 Situational Awareness

It is important for debris managers to have a thorough understanding of the status of debris operations throughout the County. County staff in field operations will need to provide situational updates to the debris task force leader in the OAEOC on debris operations. Some of the information that should be documented includes:

- Status of current conditions
- Damage assessments for debris
- Imminent threats to public health and safety
- Resource needs to provide the following:
  - Emergency road clearance
  - Assistance to individuals with disabilities and access and functional needs
  - ROW collection
  - Special debris programs
  - Reduction, transport, and disposal of debris
  - Public information
- TDMS status and critical needs
- Environmental and historical preservation concerns
- Reduction and disposal strategy
- Health and safety strategy

5.2 Communication

The Department of Conservation and Development will communicate debris management status to the OAEOC at agreed upon intervals.

The OA debris operations task force leader will communicate with state and federal agency representatives to obtain accurate information and guidance regarding debris operations. The OA debris task force leader will communicate this information to the cities.

Jurisdictions will communicate and coordinate directly with state and federal representatives regarding federal disaster assistance.

Jurisdictions will also communicate directly with the OAEOC to request resources to support debris operations.

5.3 Coordination of Resources

Contra Costa County will conduct debris operations within areas under its authority to the greatest extent possible using internal resources, mutual aid, or contracted services. In the event that the County needs additional resources to conduct debris operations, the County can request assistance from the REOC. The County will provide support for debris operations to public entities within the OA in accordance with SEMS and approved mutual aid and operations plans.

The County is responsible for prioritizing resources for debris operations in support of the following goals:

- Saving lives
- Preserving the health and safety of responders and the public
- Protecting property and the environment

The County will monitor the status of debris operations throughout the County to assist in providing resources in support of these goals. The County will prioritize resources based on critical need to the greatest extent possible to support a responsible distribution of resources.

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6.0 PLAN MAINTENANCE STRATEGY

6.1 Plan Maintenance

For this plan to maintain viability, the document will be updated annually and personnel should be trained on the content prior to a disaster. This section provides guidance on maintaining this plan to ensure it is current and relevant. FEMA updates debris operations program guidance throughout the year based on lessons learned from recent disasters. It is important for this plan to include the most current program guidance.

6.1.1 Plan Review

Contra Costa County will facilitate an annual review of the DDMP with the debris planning team. In addition, the DDMP planning team will conduct an annual review of the CCCSWA DDMP. Each of the plans will be updated based on organizational changes, new policies and guidance, and lessons learned from actual debris events. Changes made to the plan will be noted on a plan changes log as needed.

6.1.2 CalOES and/or FEMA Debris Plan Approval

FEMA currently provides incentives to public entities for having an approved DDMP. Contra Costa County will submit the DDMP to the State for review and comment following the finalization of the initial version of the plan and following any major plan revisions. The State will submit the plan to FEMA for review and approval. It is not necessary to submit the plan to the State for approval each year.

6.2 Training for Personnel

Personnel must be trained on debris policies and procedures to maintain a viable plan. The following list provides recommendations for debris operations training.

General

- Personnel should be trained in their specific job duties related to debris operations.
- Personnel with response responsibilities must maintain competence in SEMS as prescribed in Government Code §8607(c).
- Personnel operating equipment must be trained to operate any equipment they are responsible for competently and safely.
- Personnel performing debris monitoring tasks will be trained by the jurisdiction or a qualified designee.
- Personnel with responsibility for preparing documentation for reimbursement will receive training on State and/or Federal programs.
- All personnel involved in response to a debris-generating incident will participate in a briefing on safety policies and procedures. See Attachment R for the Health and Safety Plan.

Debris Managers

- Individuals identified as debris managers should be trained in the regulatory requirements for debris operations including:

  - Health and safety
  - Environmental and historical preservation
  - Procurement
  - Federal disaster grant programs
  - Considerations for individuals with disabilities and access and functional needs
  - Damage assessment for debris
- Training options include the following:
  - FEMA E0202: Debris Management Planning for State, Tribal and Local Officials. This is a 4 day class designed to provide an overview of issues and recommended actions necessary to plan for, respond to, and recover from a major debris-generating event with emphasis on state, local and tribal responsibilities.
  - FEMA IS – 0634 Introduction to FEMA's Public Assistance Program. This is a 4 hour online course designed to familiarize participants with the Public Assistance (PA) Program and the steps in the PA process, as well as the documentation requirements.
  - FEMA IS – 0632.a Introduction to Debris Operations. This is a 2 hour online course designed to familiarize participants with general debris removal operations and identify critical debris operations issues.
  - See the FEMA training website for additional information at https://training.fema.gov/.

Finance and Administration

- Finance and administration staff responsible for documenting and tracking costs and activities should be trained in regulatory requirements for debris operations including:
  - Procurement
  - Federal disaster grant programs
  - Documentation
- Training options include the following:
  - FEMA IS – 0634 Introduction to FEMA's Public Assistance Program. This is a 4 hour online course designed to familiarize participants with the Public Assistance (PA) Program and the steps in the PA process, as well as the documentation requirements.
  - FEMA IS – 0632.a Introduction to Debris Operations. This is a 2 hour online course designed to familiarize participants with general debris removal operations and identify critical debris operations issues.
  - See the FEMA training website for additional information at https://training.fema.gov/.

6.2.1 Exercises

Exercises are essential to maintaining readiness and in determining the effectiveness of plans, personnel, and resources in responding to a debris-generating event. Workshops and exercises will be conducted periodically to test the ability of Contra Costa County to conduct debris operations.

Following exercises, an after action report will be developed to document strengths and areas needing improvement. An improvement plan will be developed to list corrective actions, identify individuals or agencies responsible for completing the corrective actions, as well as indicating a timeline for completion.

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ACRONYMS AND DEFINITIONS

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ACM	Asbestos Containing Materials
AQMD	Air Quality Management District
C&D	Construction and Demolition
CA	California
CAC	Certified Asbestos Consultant
CalEPA	California Environmental Protection Agency
CalOES	California Office of Emergency Services
CDAA	California Disaster Assistance Act
CCEH	Contra Costa Environmental Health
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CPG	Comprehensive Planning Guide
CY	Cubic Yards
DDMP	Disaster Debris Management Plan
DDPT	Disaster Debris Planning Team
DOSH	State of California Division of Occupational Safety & Health
DSG	Disaster-Specific Guidance
DTSC	Department of Toxic Substances Control
EMAC	Emergency Management Assistance Compact
EMMIE	Emergency Management Mission Integrated Environment
ENSO	El Niño-Southern Oscillation
EPA	Environmental Protection Agency

ESF	Emergency Support Function
FAST	Functional Access Service Team
FBI	Federal Bureau of Investigations
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning System
HASP	Hazard and Security Plan
HAZMAT	Hazardous Materials
HSC	Health & Safety Code
ICS	Incident Command System
JFO	Joint Field Office
LEA	Local Enforcement Agency
MCEF	Mixed Cellulose Ester Filters
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
OA	Operational Area
OAEOC	Operational Area Emergency Operations Center
OSHA	Occupational Health and Safety Administration
PA	Public Assistance
PAC	Public Assistance Coordinator
PAO	Public Assistance Officer
PDA	Preliminary Damage Assessment
PNP	Private Nonprofit
PPE	Personal Protective Equipment
PWs	Project Worksheets

RCRA	Resource Conservation and Recovery Act
REOC	Region Emergency Operations Center
ROW	Right of Way
SARA	Superfund Amendments and Reauthorization Act
SCEC	Southern California Earthquake Center
SEMS	Standardized Emergency Management System
SRIA	Sandy Recovery Improvement Act
TDS	Temporary Disposal Site
TDMS	Temporary Debris Management Site
TEM	Transmission Electron Microscopy
US	United States
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey

Definitions

Applicant – State agency, local government or eligible private nonprofit organization that intends on applying for FEMA PA grants.

Code of Federal Regulations: Title 44 – Emergency Management and Assistance – The Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR) provide procedural requirements for the PA Program operations. These regulations are designed to implement a statute based upon FEMA's interpretation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). They govern the PA Program and outline program procedures, eligibility, and funding

Construction and Demolition Debris – FEMA Publication 104-009-2 defines C&D debris as damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and floor coverings, window coverings, plastic pipe, concrete, fully cured asphalt, heating, ventilation and air conditioning systems and their components, light fixtures, small consumer appliances, equipment, furnishings and fixtures. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible applicant's improved property or ROW;
- Debris removal must be the legal responsibility of the applicant; and
- Debris must be a result of the major disaster event.

Debris Removal Contractor – The debris removal contractor is contracted by the Contra Costa County to remove and dispose of debris that is a result of a severe debris-generating event.

Disaster-Specific Guidance – Disaster-Specific Guidance (DSG) is a policy statement issued in response to a specific post-event situation or need in a state or region. Each DSG is issued a number and is generally referred to along with their numerical identification.

FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide – Combines all Public Assistance policy into a single volume and provides an overview of the PA Program implementation process with links to other publications and documents that provide additional process details. It provides a general overview of the FEMA PA Program protocol immediately following a disaster. The PA Program provides the basis for the federal/local cost-sharing program. This document specifically describes the entities eligible for reimbursement under the PA Program, the documentation necessary to ensure reimbursement and any special considerations that local governments should be aware of to maximize eligible activities.

Force Account Labor – The use of the County's own personnel and equipment.

Hazardous Limb– A limb is hazardous if it poses a significant threat to the public. The current eligibility requirements for hazardous limbs according to FEMA Publication FP 104-009-2 are:

- The limb is greater than two inches in diameter;
- The limb is still hanging in a tree and threatening a public-use area; and
- The limb is located on improved public property.

Hazardous Stump – A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met:

- The stump has 50 percent or more of the root-ball exposed;
- The stump is greater than 2 feet in diameter when measured 2 feet from the ground;
- The stump is located on a public ROW; and
- The stump poses an immediate threat to public health and safety.

Hazardous Tree – A tree is considered hazardous when the tree's present state is caused by a disaster, the tree poses a significant threat to the public and the tree is six inches in diameter or greater, measured 4.5 feet from the ground. The current eligibility requirements for leaning trees according to FEMA Publication 104-009-2 are:

- The tree has a broken canopy;
- The tree has a split trunk;
- The tree is leaning at an angle greater than 30 degrees.

HHW – The RCRA defines hazardous wastes as materials that are ignitable, reactive, toxic or corrosive. Examples of HHW include items such as paints, cleaners, pesticides, etc. Due to the nature of hazardous waste certified technicians must be used to handle, capture, recycle, reuse and dispose of hazardous waste. The eligibility criteria for HHW are as follows:

- HHW must be located within a designated disaster area and be removed from an eligible applicant's improved property or ROW;

- HHW removal must be the legal responsibility of the applicant; and
- HHW must be a result of the major disaster event.

Monitoring Firm – The monitoring firm is an organization under contract with the County to monitor debris removal operations. The monitoring firm ensures the debris removal contractor is working within the scope of work contracted by the County and documents debris removal operations.

Robert T. Stafford Disaster Relief and Emergency Assistance Act – Provides the authorization of the PA Program. The fundamental provisions of this act are as follows:

- Assigns FEMA the authority to administer federal disaster assistance;
- Defines the extent of coverage and eligibility criteria of the major disaster assistance programs;
- Authorizes grants to the states; and
- Defines the minimum federal cost-sharing levels.

SRIA of 2013 – The law authorizes changes to the way FEMA may deliver federal disaster assistance to survivors**.** Key provisions of the act are as follows:

- Provides substantially greater flexibility in use of federal funds and less administration burden if applicants accept grants based on fixed capped estimates, which may be provided by applicants' licensed engineer and validated by independent expert panel
- Offers a package of cost share adjustments, reimbursement for force account, and retention of program from recycling to speed debris removal and encourage pre-disaster debris planning
- Allows PA applicants for all disasters declared on or after October 30, 2012 an option to request binding arbitration for certain projects with an amount in dispute of over $1 million after first appeal, instead of pursuing a second appeal under the FEMA PA Program

Vegetative Debris – As outlined in FEMA Publication 104-009-2, vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks and other leafy material. Vegetative debris will largely consist of mounds of tree limbs and branches piled along the public ROW by residents and volunteers. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible applicant's improved property or ROW;
- Debris removal must be the legal responsibility of the applicant; and
- Debris must be a result of a presidentially declared major disaster event.

White Goods – As outlined in FEMA Publication 104-009-2, white goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters. White goods can contain ozone-depleting refrigerants, mercury or compressor oils that the federal Clean Air Act prohibits from being released into the atmosphere. The Clean Air Act specifies that only certified technicians can extract refrigerants from white goods before they can be recycled. The eligibility criteria for white goods are as follows:

- White goods must be located within a designated disaster area and be removed from an eligible applicant's improved property or ROW;
- White goods removal must be the legal responsibility of the applicant; and

WHITE GOODS MUST BE A RESULT OF THE MAJOR DISASTER EVENT