County of Orange

Disaster Debris Management Plan
Revised 2025

I. Emergency Management Council Letter of Approval

County of Orange Emergency Management Council

November 12, 2025

Members of the Board of Supervisors
County of Orange Department Heads
California Office of Emergency Services

Members:
Orange County Board of Supervisors
Chief Executive Officer
Health Care Agency
John Wayne Airport
OC Community Resources
OC Public Works
OC Waste and Recycling
Orange County Fire Authority
Probation Department
Sheriff-Coroner Department
Social Services Agency

Subject: County of Orange Disaster Debris Management Plan

Dear County of Orange Emergency Response and Recovery Officials:

Enclosed please find the County of Orange Disaster Debris Management Plan. The Emergency Management Council (EMC) approved this Plan on November 12, 2025. This plan is the foundation for the County's response and recovery operations when dealing with post disaster debris.

This Plan continues to build upon previous efforts to enhance the County's response and recovery capabilities and includes: the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), the Incident Command System (ICS), Whole Community planning and response. It addresses the duties and responsibilities of the County in mitigation, prevention, preparedness, emergency response, and recovery.

All County departments concur with the Plan and will follow their responsibilities identified therein. This plan is a compilation of expertise and experience gained over many years by the staff of the Orange County Public Work Department, Orange County Sheriff's Department, Emergency Management Division, the Emergency Management Council Subcommittee, and private partners, all with disaster response interests. It is also complemented by other plans, procedures and hazard-specific annexes developed to meet specific emergencies.

This plan is designed as a reference and guidance document. The successful implementation of this Plan is dependent upon the skills and abilities of County personnel; County departments are directed to conduct or participate in trainings and exercises to ensure their personnel are aware of their responsibilities and capable to perform them. Implementation may also rely upon specialized services and equipment; County departments are directed to support the implementation and maintenance of such services and equipment.

Thank you for your support in the development and implementation of this Plan.

Sincerely,

Board of Supervisors
Chair, Emergency Management Council

Administrative Contact: Orange County Sheriff's Department Emergency Management Division
2644 Santiago Canyon Road, Silverado CA, 92676 Phone: (714) 628-7054 Fax: (714) 628-7154

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II. Record of Changes

Date of Revision	Revision Description	Section/Component	Revision Completed By
October 2025	Full plan review and update	Full plan review and update	Tetra Tech

III. Plan Distribution

The Orange County Sheriff's Department Emergency Management Division (OCSD-EMD) is responsible for developing, maintaining and distributing the Disaster Debris Management Plan (DDMP).

The DDMP will be made available by OCSD-EMD to all County departments, OA jurisdictions, California Office of Emergency Services (Cal OES) and other partner organizations as necessary and upon request. An electronic version is available in PrepareOC. Additionally, hard copies are available at the EOC and OCSD-EMD staff have remote access to all plans and annexes.

IV. Disclosure Exemptions

Portions of this document contain sensitive information pertaining to the deployment mobilization, and operations of the County, OA and OA jurisdictions in response to emergencies. The majority of this document is available for public review; however, portions that include Personal Identifiable Information (PII) or information with significant implications on city, regional, state, or national security are placed in appendices that are exempt from public disclosure under the provisions of the California Public Records Act, including but not limited to, exceptions found in Title 1, Division 10, Part 5 (e.g., §§7929.200 through 7929.215) of the California Government Code.

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Chapter 1 INTRODUCTION

1.1 Purpose

A systematic approach to debris management is critical to efficient response and recovery efforts following a disaster. This lesson was highlighted in January of 2025, when the Palisades and Eaton wildfires burned 47,900 acres in Los Angeles County, destroying more than 16,250 structures and generating roughly 4.5 million tons, or 18,000,000 cubic yards, of debris.[1] Locally, the 2024 Airport Fire destroyed 160 structures, 89 of them in Orange County. This fire burned 23,500 acres, causing over $50 million worth of property damage and 22 injuries. Subsequent to the initial event, the fire has continued to generate debris during significant weather events due to mudflows and land instability from the loss of so many trees. In California, debris management averages 45% of the total cost of any given disaster. Since 2020, disaster debris costs in California have totaled approximately $662.2 million. In Orange County, $3.6 million has been obligated for disaster debris projects since 2000.[2] Debris management is important, as debris removal can significantly increase disaster response costs.

Debris management plans enable communities to be better prepared to address disaster-related debris in a time-efficient manner, expediting the recovery process. The purpose of this plan is to create a debris management program that focuses on the core components of a debris management plan based on Federal Emergency Management Agency (FEMA) guidelines, including:

- Promote planning.
- Create a debris management strategy.
- Coordinate federal, state, local, and private agencies.
- Standardize operational procedures.
- Optimize limited resources.
- Establish environmentally friendly approaches.
- Provide technical assistance regarding regulations, guidelines, and policies.
- Serve as a foundation for training.

1.2 Scope

The Orange County Disaster Debris Management Plan (DDMP) is a large component of emergency response planning by prioritizing access to critical infrastructure via major road arterial routes that may be inundated with debris following a catastrophic event. In addition, it provides the framework for debris management during the recovery phase by identifying temporary debris

[1] NBC4 News Los Angeles, "Here's How Much Waste was Generated by the LA Wildfires," https://www.nbclosangeles.com/news/california-wildfires/la-fires-waste-debris-removal/3625287/

[2] FEMA Open Data: PA Obligations by Category

management sites (TDMS), debris collection plans, volume reduction strategies, contracted services, special considerations, and public information policies.

The DDMP incorporates and complies with the principles and requirements found in state and federal laws, regulations, and guidelines. It is intended to conform to the requirements of California's Standardized Emergency Management System (SEMS) as defined in Government Code Section 8607 (a) and the National Incident Management System (NIMS) as defined by Presidential Executive Orders for managing response to multi-agency and multi-jurisdictional emergencies. SEMS/NIMS incorporate the use of the Incident Command System (ICS), mutual aid, the operational area (OA) concept, multi-agency, and interagency coordination.

This plan addresses Orange County unincorporated public areas, Orange County-owned and maintained roads and facilities, and Orange County Flood Control District flood control facilities.

Cities within the county are responsible for managing disaster debris, maintaining their own disaster debris management plans, and procuring debris management contracts within their respective jurisdiction. If a jurisdiction requires assistance with disaster debris management, it must follow existing mutual aid requirements and request assistance through the OA. A link to the Public Works Mutual Aid Agreement can be found in Appendix 5.8.

As defined by SEMS, the "Operational Area Level" means an intermediate level of the State emergency services organization, consisting of a County and all political subdivisions within the County area. Each County geographic area in California is designated as an OA. An OA is used by the County and the political subdivisions comprising the OA to coordinate emergency activities. The OA serves as a link in the system for communication and coordination between the State's emergency operations center (EOC) and the emergency operation centers of the political subdivisions comprising the OA.

Depending on the severity of an event, Orange County debris management program will be administered by the Orange County (OC) Public Works Department Operations Center (DOC) or the County OA EOC. Based on FEMA standards, the main considerations of the DDMP include:

- Create an operational procedure and assign staff responsibilities
- Create connectivity between local, state, and federal agencies
- Identify potential disaster types for Orange County
- Identify event characteristics
- Estimate quantities and debris types
- Determine critical facilities, roads, and pathways
- Prioritize access to critical facilities via major arterial routes. A list of priority roads for debris clearance can be found in Appendix 5.2 of this plan.
- Determine in-house capabilities to respond to varying magnitudes
- Secure supplemental assistance from local, state, or federal programs and resources
- Pre-qualify contracted resources
- Identify special considerations
- Identify landfill types, capacities, and temporary disposal sites
- Identify disposal alternatives and environmentally friendly practices

- Detail drop-off policies

More information on Orange County's Whole Community Strategy for Disaster Mitigation, Preparedness, Response , and Recovery can be found in the County of Orange and Orange County Operational Area Unified Emergency Operations Plan.

1.3 Situation Overview

The State of California Department of Finance estimates that the Orange County population in 2024 was 3,150,716 people. The estimate for 2025 shows that the population is expected to increase by well over 3,500 people. With a growing population of over 3 million as well as entertainment parks, an international airport, and over 30,000 acres of open space, Orange County is vulnerable to a variety of threats, including flood, wildfire, earthquakes, landslides, civil unrest, tsunami, and terrorism. This plan focuses on natural (versus human-caused) disasters, which often produce large amounts of debris that could block major road arterial routes linking critical facilities, including hospitals, schools, fire services, law enforcement, and parks

During disasters, populations with access and functional needs and socioeconomic barriers often have less access to resources and support. In 2023, the U.S. Census Bureau estimated that about 16.9% of Orange County's population, approximately 529,832 people, were over the age of 65. The U.S. Census Bureau also estimated that the County population living below the poverty level in 2023 was 9.1%.[3] Debris managers must be cognizant of how disaster debris can further impact individuals with socioeconomic barriers and access and functional needs as well as those living with disabilities.

One way to assist those with additional needs following a disaster is by presenting public information regarding procedures and the safe handling of debris in multiple languages and formats, which will help citizens understand the instructions. In 2023, the U.S. Census Bureau estimated that 46.9% of Orange County residents spoke languages other than English at home, higher than the statewide estimate of 45.0% for California.

When considering the physical characteristics of Orange County, the unique geography provides intrinsic value for both visitors and residents of the region. According to the U.S. Census Bureau, the County has a total area of 948 square miles, of which 791 square miles is land and 157 square miles is water. The northwestern part of the County lies on the coastal plain of the Los Angeles Basin, while the southeastern end rises into the foothills of the Santa Ana Mountains. Most of Orange County's population resides in one of two shallow coastal valleys that lie in the basin, the Santa Ana Valley, and the Saddleback Valley. The Santa Ana Mountains lie within the eastern boundaries of the County. The high point is Santiago Peak (5,689 feet) about 20 miles east of Santa Ana. The Peralta Hills extend westward from the Santa Ana Mountains through the communities of Anaheim Hills and Orange.

[3] United States Census Bureau, American Community Survey, https://www.census.gov/programs-surveys/acs.html

The Santa Ana River is the County's principal watercourse, flowing through the middle of the County from northeast to southwest. Its major tributary to the south and east is Santiago Creek. Other major watercourses within the County include Aliso Creek, San Juan Creek, and San Diego Creek. In the North, the San Gabriel River also briefly crosses into Orange County and exits into the Pacific on the Los Angeles-Orange County line between the cities of Long Beach and Seal Beach. Laguna Beach is home to the County's only natural lakes, Laguna Lakes, which are formed by water rising up against an underground fault.

The Santa Ana River roughly divides the County into northwestern and southeastern sectors. Each sector comprises 40 to 60 percent of the County respectively by area. There are significant political, demographic, economic, and cultural distinctions between North and South Orange County, with North Orange County having greater populations of people of color, younger populations, greater percentages of renters, lower median incomes, and higher rates of unemployment.

Although the distinctive geography of Orange County provides many benefits to its residents and visitors, these geographical features have inherent dangers as they continue their natural development, including flood, fire, earthquakes, and tsunamis. Each could create an abundance of debris that would impact the health, safety, and livelihood of Orange County's residents.

1.3.1 Flood

The major flood threat in Orange County is the Santa Ana River. Other areas of the County are also vulnerable to flooding. As shown in the FEMA National Risk Index Maps[4], (Figures 1.1 and 1.2), most of the County is at risk for riverine flooding, particularly along the Santa Ana River, while most coastal areas face relatively low risk of coastal flooding.

[4] Map | National Risk Index

Figure 1.1 FEMA National Risk Index Map - Riverine Flooding Risk

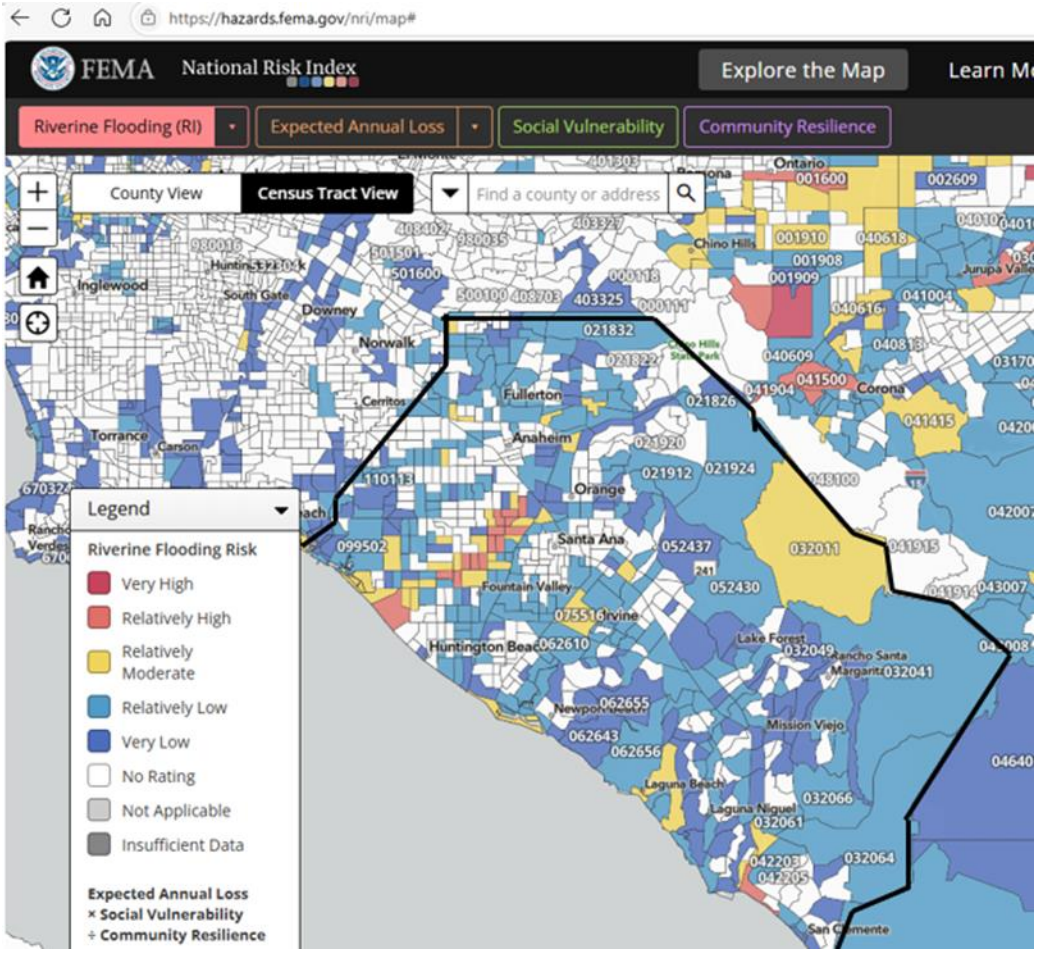
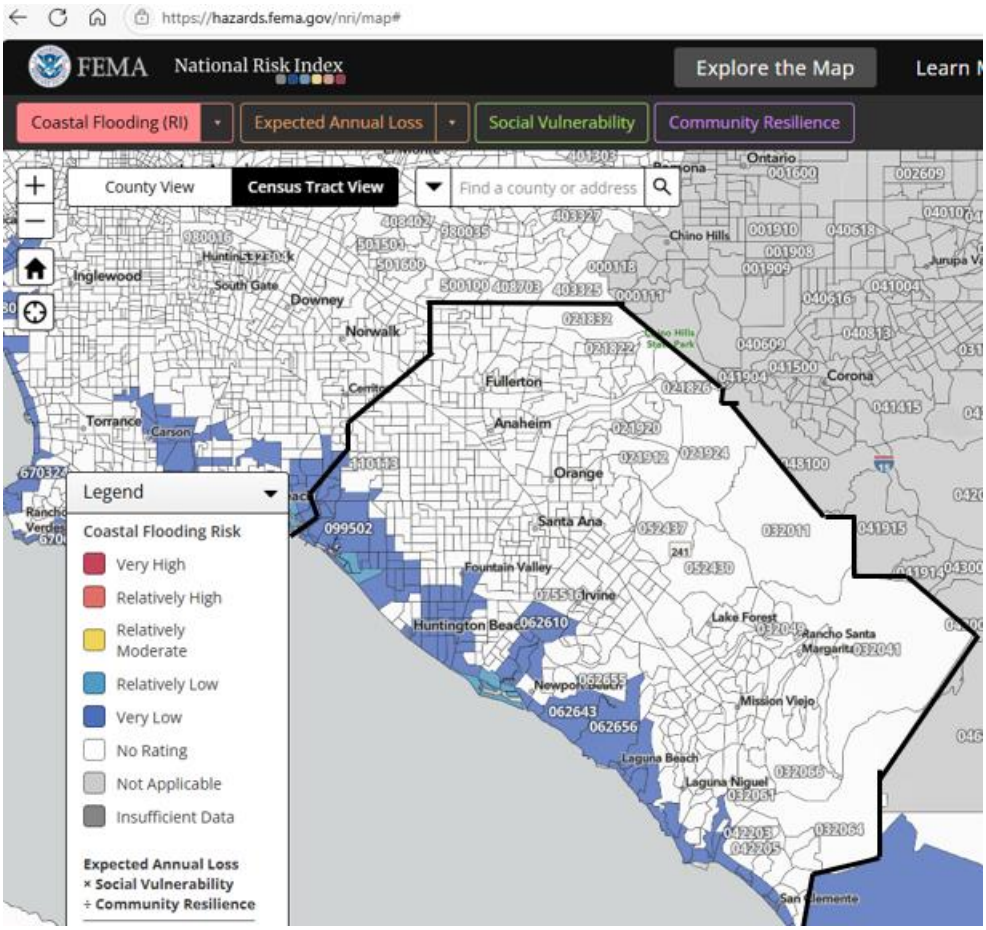


Figure 1.2 FEMA National Risk Index Map - Coastal Flooding Risk



From slow-rising waters to flash floods, storms producing mass flooding are characterized by high velocity flows, inundation of water on roadways, and landslides. Structural damage may occur from flood inundation or high velocity flows with forces from sediment transport. Floods are often the most difficult disasters regarding debris management because floods generate a wide variety of debris, including vegetative, construction and demolition (C&D) debris, vehicles, appliances, mud, hazardous waste, and electronics. Flood waters and debris carried by the flood waters can block roads and hinder response and recovery activities. Because many underground fuel tanks may have been compromised, responders must consider what reliable fuel sources will be available when they arrive on scene or carry their own. Mold and exposure to contaminated debris will also need to be considered by responding agencies.

1.3.2 Fire

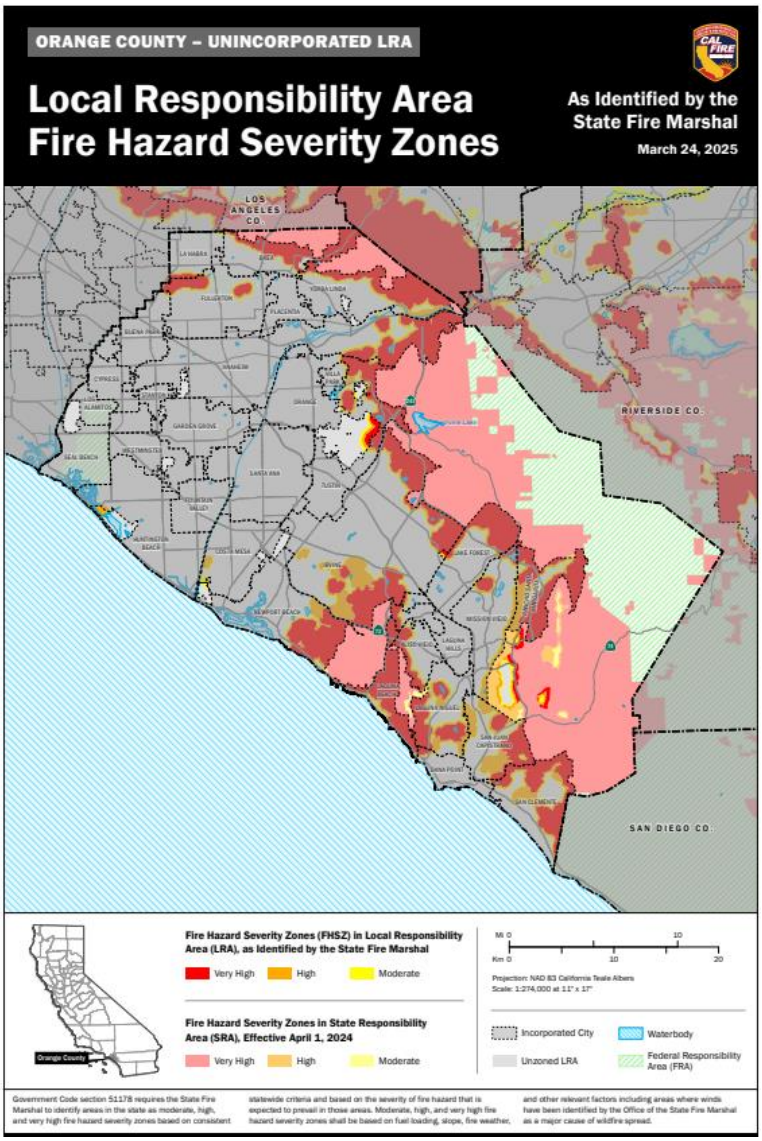
With over 30,000 acres of open space adjacent to housing developments, wildfire is a significant threat to many communities in Orange County. Seasonal weather can enhance this threat as dry, hot Santa Ana winds blow through the region from October to April.

Courtesy of FEMA and CalFire[5], Figures 1.3[6] and 1.4[7] show the areas most vulnerable to wildfires in Orange County.

Fire hazards are assessed in Orange County using a number of criteria, including:

- Vegetation - Vegetation is "fuel" to a wildfire, and it changes over time. Fire hazard considers the potential vegetation over a 50-year time horizon.
- Topography - Fire burns faster on steep slopes.
- Weather - Fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong.
- Crown fire potential - Under extreme conditions, fires burn up into trees and tall brush.
- Ember production and movement - Fire brands are blown ahead of the main fire, spreading the fire and getting into buildings and igniting.
- Likelihood of an area burning - Over a 30–50-year time period.

Figure 1.3 CalFire Wildfire Hazard



Fires in Orange County can produce a significant amount of debris with the increase of urban development near and around woodlands. Damage resulting from fires includes loss of vegetation,

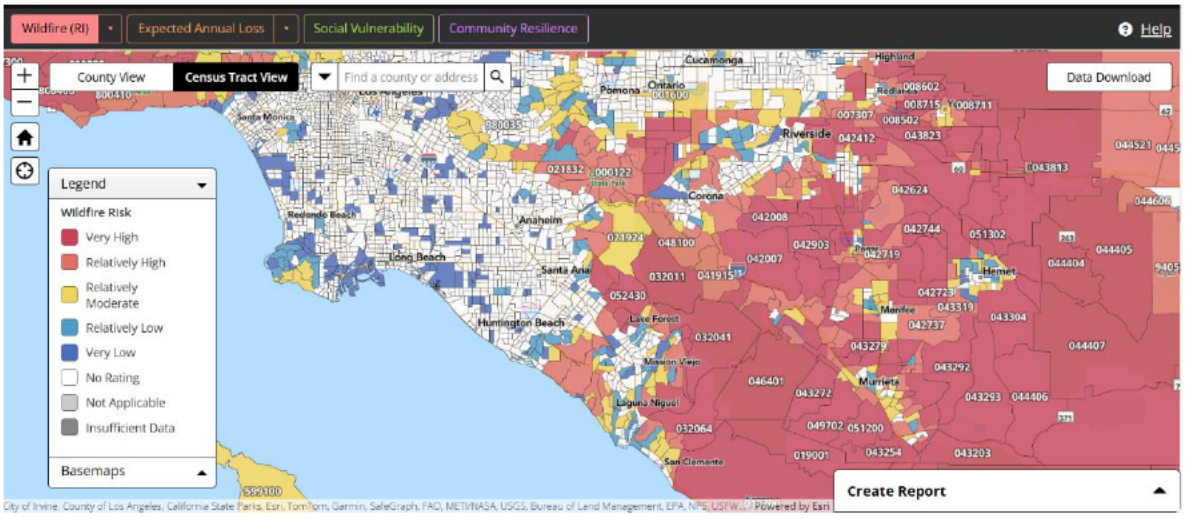
[5] CalFire, Fire Hazard Severity Zones in State Responsibility Area - Orange County

[6] Orange County Development Services website, https://ocds.ocpublicworks.com/sites/ocpwocds/files/2025-04/FHSZ_County_LRA_11x17_OrangeCo.pdf

[7] FEMA, National Risk Index: Wildfire website, https://hazards.fema.gov/nri/wildfire

damaged homes, and buildings. Erosion of barren slopes in post-burn areas can lead to landslides, mudflows, falling trees, and boulders leading to additional threats to homes, roads, and other facilities.

Figure 1.4 FEMA National Risk Index Map - Wildfire Risk



1.3.3 Earthquakes

Due to the proximity of several major faults, earthquakes are considered a major threat to Orange County. The characteristics of earthquakes include shockwaves, movement along fault lines, and aftershocks. Damage to buildings, infrastructure, equipment, and personal property can be expected. Earthquake-induced landslides with large amounts of sediment are also possible in Orange County. As shown in Figure 1.5 and 1.6[8], a significant earthquake in Orange County has the potential to cause fault ruptures, liquefaction, and landslides.

[8] USGS Map U.S. Quaternary Faults

Figure 1.5 FEMA National Risk Index Map - Earthquake Risk[9]

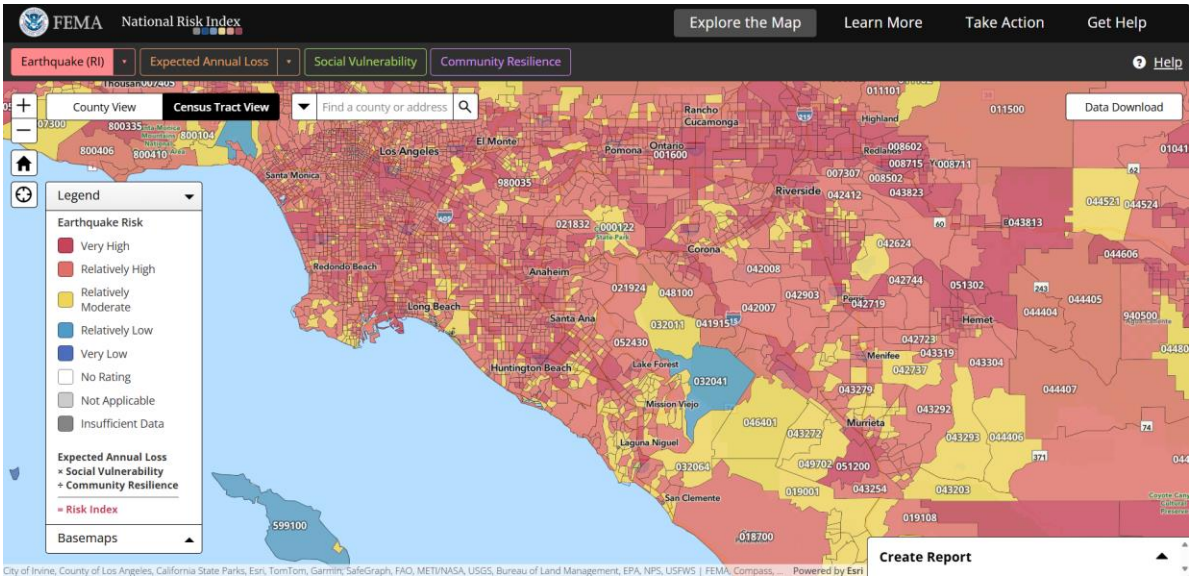
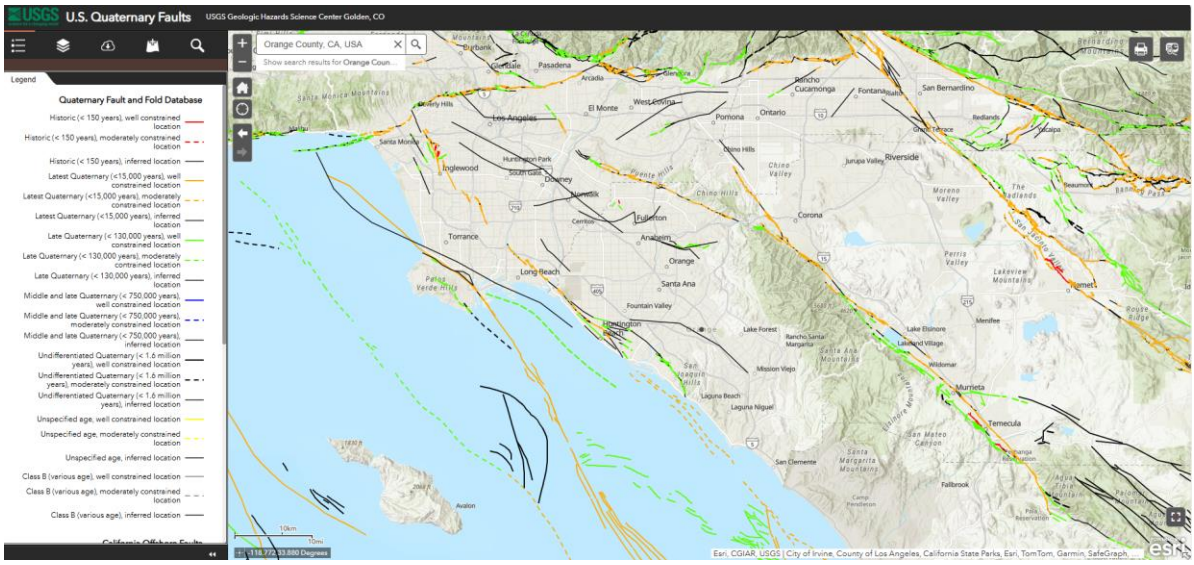


Figure 1.6 USGS - U.S. Quaternary Fault Map[10]



1.3.4 Tsunami

Generated by earthquakes, volcanic eruptions, or submarine landslides, tsunamis have three destructive factors: inundation, wave impact on structures, and erosion. A strong tsunami current

[9] FEMA National Risk Index: Earthquake website, https://hazards.fema.gov/nri/earthquake

[10] USGS Quaternary Faults website, https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

can lead to erosion of foundations and the collapse of bridges and seawalls. Considerable damage is caused by floating debris that becomes dangerous projectiles that crash into buildings; break power lines and start fires. As seen in Figure 1.7 and 1.8, most of coastal Orange County is at risk for tsunami damage.

Figure 1.7 FEMA National Risk Index Map - Tsunami Risk[11]

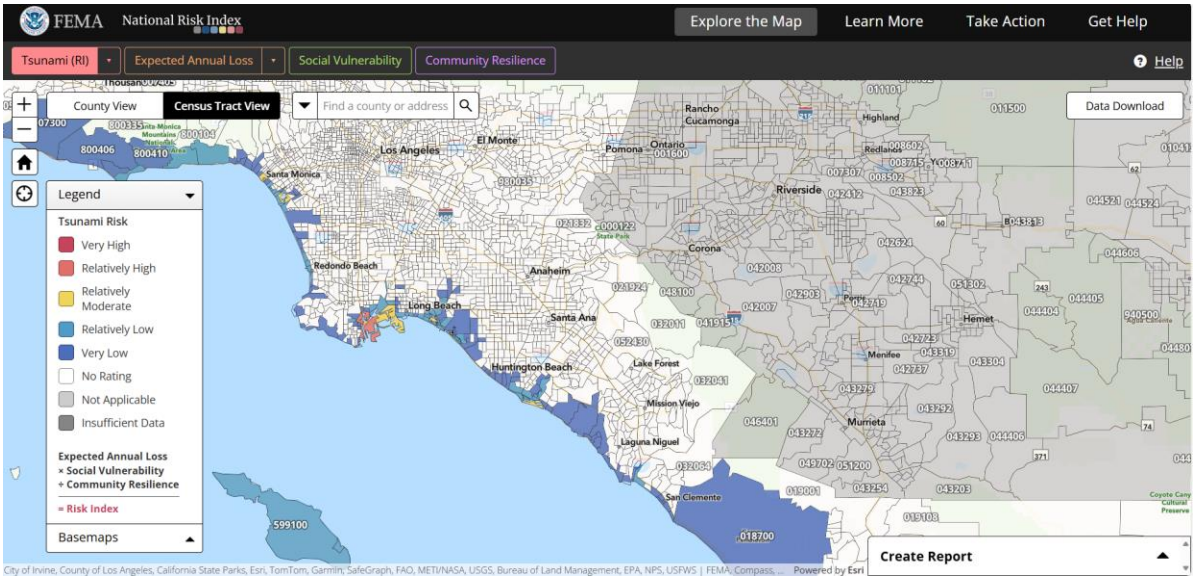
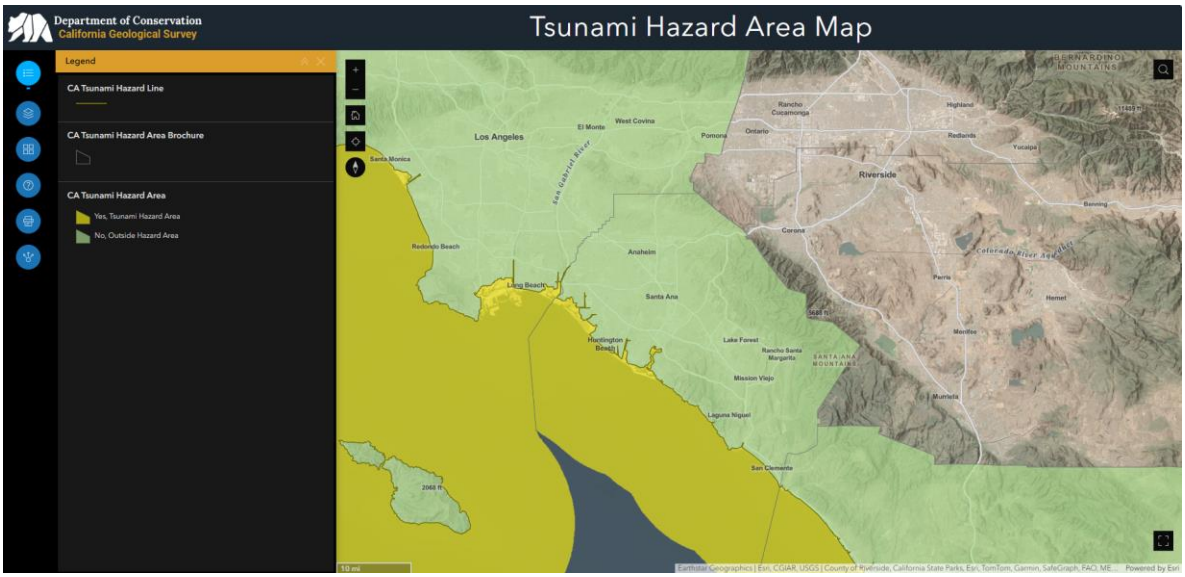


Figure 1.8 California Department of Conservation Tsunami Hazard Area Map[12]



[11] FEMA National Risk Index Tsunami website, https://hazards.fema.gov/nri/tsunami

[12] California Department of Conservation Tsunami Hazard Map, Tsunami Hazard Area

1.3.5 Mud and Debris Flows

Continued land development, fires, earthquakes, and the natural topography of Orange County lead to mud and debris flows on a regular basis. Mud and debris flows are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground during heavy rainfall, changing the earth into a flowing river of mud or "slurry." They can flow rapidly, striking with little or no warning at avalanche speeds. They also can travel several miles from their source, growing in size as they pick up trees, boulders, cars, and other materials.

1.3.6 Invasive Plant Species

Invasive plant species are causing widespread devastation to trees and have changed the way vegetative debris can be managed. The Asian citrus psyllid (ACP) is a pest that acts as a carrier or vector spreading "huanglongbing" (HLB), a devastating disease of citrus trees. This bacterial disease is transmitted to healthy trees by the psyllid after it feeds on infected plant tissue. ACP and HLB have had widespread impacts throughout California, Arizona, and Mexico, killing millions of trees. The California Department of Food and Agriculture has established a quarantine that includes Orange County to reduce the potential for cross-contamination. There is no cure once a tree becomes infected. The diseased tree will decline in health and eventually die. Dying or dead trees can also increase the risk of wildfires.[13]

1.4 Debris Estimates

An integral part of debris management planning is identifying the most probable debris-generating events that can impact the County and forecasting potential debris estimates for planning purposes. However, the final quantities of debris that may be generated will vary depending on the type of incident, severity, and impacted areas. For the purposes of planning, debris estimates have been developed for an earthquake, flood, and wildfire disaster incident scenarios. The estimates were calculated using FEMA Hazus software. HAZUS-MH is a GIS-based risk assessment software program that estimates potential losses resulting from natural disasters.

1.4.1 Earthquake Scenario Assumptions and Debris Estimate

Earthquakes are a major threat to the County due to its proximity to fault lines. A major earthquake could lead to catastrophic damage in the County and could overwhelm local and state resources. To determine the quantity of debris that might be anticipated, Hazus was used to run earthquake scenarios using the faults in the vicinity of Orange County. Table 1.1 shows the estimated quantities of debris that might be anticipated in Orange County from an earthquake.

[13] California Department of Food and Agriculture website: https://www.cdfa.ca.gov/citrus/pests_diseases/hlb/PestProfile.html

Table 1-1 Earthquake Debris Estimates in Cubic Yards (CY)

Area Impacted	San Andreas 7.8 Magnitude Earthquake	Newport Inglewood 7.2 Magnitude Earthquake
Unincorporated Orange County	9,228	180,028
Incorporated areas of Orange County	435,554	6,335,520

1.4.2 Flooding Debris Estimates

The second scenario for the purposes of planning is the estimated volume of debris generated by a flooding event. The County is highly susceptible to flooding events. Over the past century, there have been significant flooding events that have caused Countywide debris and damage. In addition to the numerous creeks and channels that transverse the County, the Santa Ana River poses the greatest threat of flooding as it flows through the middle of the County and out to the Pacific Ocean.

A 100-year flood has a 1% chance of occurring any given year while a 500-year flood has a.02% chance of occurring any given year. Hazus software was used in Table 1.2 below to determine the potential amounts of debris that might be generated from a flood occurring in Orange County based on a 1% and a 0.2% annual chance flooding incident. Debris quantities are stated in CY.

Table 1-2 Flooding Debris Estimates in CY

Area Impacted	1% Annual Chance Flood Including Areas Protected by Levees	1% Annual Chance Flood	0.2% Annual Chance Flood
Unincorporated Orange County	15,282	5,470	32,980
Incorporated areas of Orange County	896,246	117,672	688,936

1.4.3 Wildfire Debris Estimate

Wildfires pose a significant threat to most areas of California due to the adverse weather conditions, inaccessible terrain, limited water supply, and large quantities of combustible material to feed fires. Wildfires have occurred in the County ranging from small, localized fires to widespread catastrophic fires covering thousands of acres.

Using the Fire Hazard Severity Zone (FHSZ) data as well as data from past California wildfire incidents, staff from Tetra Tech have assembled a formula to help estimate debris quantities that takes into consideration the road miles in the fire hazard area, number of parcels in the fire hazard area, average tree density in the area, the average size of the trees, as well as the types of housing structures that might be in the path of the fire. Table 1.3 shows the potential volume of debris that might be seen as a result of a wildfire in Orange County, assuming all of the fire hazard areas are affected.

Table 1-3 Wildfire Debris Estimates

Area Impacted	Estimated Road Miles in the Fire Area	Estimate Parcels in the Fire Area	Estimated CY of Debris
Unincorporated Orange County	42.8	6,252	329,222
Incorporated areas of Orange County	874.8	136,653	7,026,984

1.5 Debris Types

Disasters will generate different types of debris. The County will need to be prepared to manage different types of debris using internal resources, mutual aid resources, and/or contracted services providers. The following table lists the type of debris that is typically generated by different disasters.

Table 1-4 Disaster Debris Type Examples

Disaster Type	Debris Type	
Earthquake	• Ash • Asphalt • Concrete • Construction and Demolition (C&D) debris	• Electronic waste • Household hazardous waste (HHW) • White goods • Vehicles
Flooding	• Asphalt • Concrete • C&D debris • Electronic waste • HHW • Standing water	• Soil, mud, and rock • Vegetative debris • Waterway debris • White goods • Vehicles
Wildfire	• Ash • C&D • Electronic waste • HHW	• Vegetative debris • White goods • Vehicles

1.6 Use of Force Account Resources

Local resources, also known as force account resources, are County-owned resources, including equipment and labor, that the County can use to respond to a debris-generating incident. 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 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 local labor and determine the resources that might be needed to respond. Table 1.5 provides resource requirements for earthquake and severe storm debris events based on the debris estimation models.

Assumptions regarding resource requirements include the following:

- Average debris collection truck capacity is 35 CY.
- Average number of trips per day for each collection truck is six.
- One monitor in place for each loading unit. Note that Disposal Monitors will also be needed at the disposal site and debris management site (DMS) if activated.
- Contractor will use tandem self-loading vehicles—two containers for each loading device.
- Volume of debris that can be staged per acre is based on a 10-foot stack height: 16,117 CY/acre.
- Minimum area for a DMS is 5 acres.
- The number of operational days will vary depending on the scope of the operation.
- Number of trucks will fluctuate throughout the operation. Table 1.5 lists the debris resource requirements over the entire operation.

Table 1-5 Debris Resource Requirements

Type of Incident	Total Debris (CY)	Operational Days	DMS Acres Needed	Tandem Trucks Needed	Collection Monitors Needed
San Andreas 7.8					
• Unincorporated	9,228	5	5	8	4
• Incorporated	435,554	90	27	23	12
Newport Inglewood 7.2					
• Unincorporated	180,028	30	11	28	14
• Incorporated	6,335,520	365	393	82	41
1% Flood Including Areas Protected by Levees					
• Unincorporated	15,282	5	5	14	7
• Incorporated	896,246	120	55	36	18
1% Annual Chance Flood					
• Unincorporated	5,470	3	5	8	4
• Incorporated	117,672	30	7	18	9
0.2% Annual Chance Flood					
• Unincorporated	32,980	10	5	16	8
• Incorporated	688,936	120	43	27	17
Wildfire					
• Unincorporated	329,222	60	20	26	13
• Incorporated	7,026,984	365	436	92	46

1.7 Temporary Debris Management Sites

To efficiently process mass amounts of debris generated by a major event, the County will establish TDMS. A TDMS is a location to temporarily store, reduce, segregate, and/or process debris before it is hauled to its final disposition (landfill). The TDMS is used to increase the operational flexibility when landfill space is limited or when the landfill is not in close proximity to the debris removal area. Common operational uses are:

- Reduction

- Recycling
- Tipping areas (unloading)
- Loading areas for processed debris to go to its final disposition
- Household hazard waste storage
- Monitoring tower locations at both the ingress and egress points
- Equipment, fuel, and water storage

When selecting public or private sites, pre-existing conditions should be considered because the sites will have to be restored upon site closeout. Therefore, a TDMS should not be established in an environmentally or historically sensitive area such as wetlands, critical animal and plant habitats, sole source aquifers, freshwater well fields, historic districts, or archeological sites. The following table lists potential TDMS that may be used following a disaster.

Table 1-6 Potential TDMS

Potential TDMS	Size (Acres)
Olinda Alpha Landfill	22*
Prima Deshecha Landfill	20*
Frank R. Bowerman Landfill	20*
Santiago Canyon (Closed landfill)	28*

* These numbers are based on best estimates at the time of this report and are subject to change.

1.8 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 the best management practices to address these challenges.

- Traffic congestion
- Lack of large open space for TDMS
- Lack of transportation options to haul debris
- Number and complexity of special districts that are responsible for managing debris
    - Multiple municipalities using a single resource
    - Municipal solid waste haulers
    - Disposal facilities
- Staging areas
- Cross-sector and cross-agency data sharing limitations
- State regulatory requirements
- Environmental regulations
- Waste diversion goals and regulations
- Debris on private property
- Resident expectations

- Populations with disabilities and access and functional needs

1.9 Planning Assumptions

The goal of the DDMP is to coordinate the removal, distribution, and disposal of disaster-related debris on County of Orange property, including roads and flood control channels. Debris quantities, types, and locations will vary depending on the nature of each incident.

The primary priority of the DDMP is to clear major arterial routes following a disaster event to provide access to first responders. Secondary efforts will focus on moving roadside debris to temporary disposal sites. The third phase will address the distribution of debris, including recycling, salvaging, and chipping. The final priority will focus on the disposition of debris into County landfills and the rehabilitation of temporary disposal sites. Road and flood control channel debris will be cleared by OC Public Works, whereas curbside collection, recycling, and salvaging will be coordinated by OC Waste and Recycling.

In regard to vehicles classified as debris, coordination with local law enforcement either by way of the EOC if activated, or through the local law agency's dispatch center will occur for removal of vehicles from roadways or private property when life safety such as search and rescue operations are being conducted.

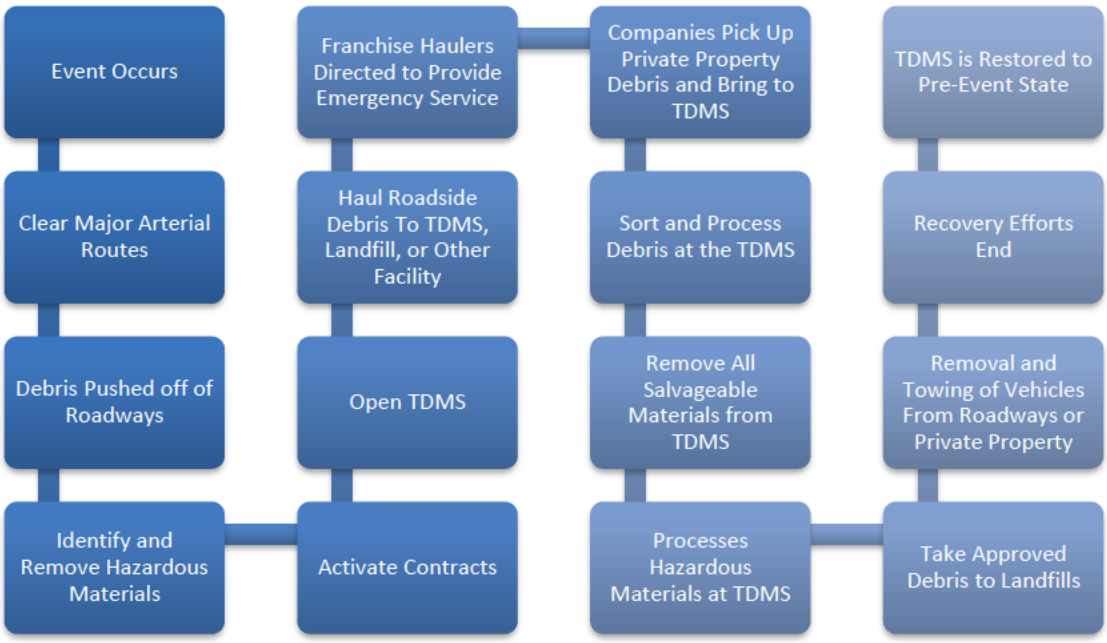
Public Works currently has two debris management removal contracts and two debris removal monitoring contracts in place to oversee recovery efforts. The debris removal monitoring contractor will oversee the debris management removal contractor for FEMA compliance at the pickup sites, debris management/TDMS sites, and final disposal sites. County Debris Managers and/or designees will oversee the contractors to ensure contract and FEMA compliance. These contractors have been used by other counties in California for debris management removal and monitoring during real events between 2017-2019. The names of these contractors are not contained within this plan because they may be subject to change based on the government purchasing renewal requirements. Excerpts of the contracts are contained in Appendix 5.3 to this plan. Complete contracts can be obtained from OC Public Works Operations and Maintenance (O&M) Division.

Working in tandem with OC Health Care Agency, these agencies will oversee TDMS for proper reduction methods prior to final deposition at the OC landfills. As shown in Figure 1.9, the order of DDMP operations includes:

- OC Public Works/Contractors clear major arterial routes for emergency access.
- Debris is pushed off roadways to provide immediate access for first responder vehicles (e.g., fire department, police department, and emergency medical services) and utility restoration service vehicles.
- Identification and removal of hazardous materials in affected areas will be overseen by OC Health Care.
- Activation of disaster debris hauler and debris monitoring contracts (if needed) will be conducted by OC Public Works.

- Temporary debris management sites will be opened by OC Public Works, OC Waste and Recycling, and OC Health Care.
- Coordination with debris hauling contractors to haul roadside debris to TDMS will be conducted by OC Public Works.
- Coordination with debris monitoring contractors to document the collection of debris will be conduct by QC Public Works.
- Direction of franchise haulers to provide emergency services, including the collection of solid waste that threatens public health and safety, in accordance with their Franchise Hauler Agreement will be conducted by OC Waste and Recycling.
- Contract disaster debris hauling companies pick up debris from the right-of-way and bring it to TDMS unless they are directly hauling to a landfill or other facility.
- The contract debris monitoring contractor will provide disposal monitoring services to verify and quantify the loads entering the TDMS.
- Contract disaster debris hauling companies unload debris at the TDMS.
- Contract disaster debris hauling companies remove all reduced and salvageable materials from TDMS.
- The contract monitoring company verifies trucks leaving the TDMS are leaving empty.
- Processing hazardous materials at TDMS will be overseen by OC Health Care.
- Contract disaster debris hauling companies take approved debris to recycling sites, landfills, or other site approved by OC.
- Law enforcement will coordinate the removal and towing of vehicles from roadways or private property during life safety missions.
- Temporary debris management sites close when recovery efforts end.
- Temporary debris management sites are restored to pre-event state.

Figure 1.9 General Order of DDMP Operations



1.10 Whole Community Strategy for Emergency Management

Orange County strives to incorporate the Whole Community perspective in its emergency planning and encourages OA jurisdictions to do the same. Whole Community includes:

- Individuals and families, including those with disabilities or other access and functional needs
- Businesses
- Faith-based, nonprofit, and other community organizations
- Immigrant populations and communities
- Schools and academia
- Media outlets
- All levels of government, including state, local, tribal, territorial, and federal partners

By planning for the Whole Community, complexities in the diversity in Orange County are assimilated into the County planning strategy.

Orange County's definition of disabilities and access and functional needs is as follows:

> "Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence and the ability to perform the activities of daily living, communication, transportation, and medical care.
>
> Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are

> elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who may require transportation assistance."

Orange County is committed to complying with the Americans with Disabilities Act during all phases of disaster response and recovery. As such, Orange County adheres to and encourages OA jurisdictions to follow the principles below:

- Affected individuals will not be excluded from or denied benefits of any sort based on a disability or other access or functional need.
- Work to accommodate people with disabilities or other access and functional needs in the most integrated setting possible.
- During all phases of disaster response, make reasonable modifications to policies, practices, and procedures, if necessary, to ensure programmatic and architectural access to all.
- Provide access to shelters to all affected community members including those with disabilities or other access and functional needs in the most integrated setting possible in order to keep families, friends, and/or neighbors together.

More information on Whole Community planning in Orange County can be found in the Unified County of Orange and Orange County OA Emergency Operations Plan (EOP).

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Chapter 2 CONCEPT OF OPERATIONS

2.1 Authorities

- County of Orange, Code of Ordinance, Title 3, Division 1 (Emergency Services)
- County of Orange, Code of Ordinance, Title 3, Division 13 Property Maintenance (Nuisance and Abatement)
- County of Orange, Code of Ordinance, Title 4, Division 3, Article 2 Solid Waste Management
- County of Orange, Code of Ordinance, Title 6, Division 4, Article 8 Abandoned, Wrecked, Dismantled or Inoperable Vehicles
- County of Orange, Code of Ordinance, Title 7, Division 4, Article 7 Uniform Housing Code
- County of Orange, Code of Ordinance, Title 7, Division 1, Article 2 Buildings and Structures
- County of Orange, Board of Supervisors Resolution 12-036, dated April 17, 2012, adopting the amended membership of Orange County Emergency Management Council and designation of the Director of Emergency Services
- County of Orange, Board of Supervisors Resolution 05-144, adopting the National Incident Management System (NIMS)
- County of Orange, Board of Supervisors Resolution, adopting the California Disaster and Civil Defense Master Mutual Aid Agreement

2.2 Authorized Users

Authorized users of the plan include those identified in the plan with specific responsibilities for managing the clearance, transport and disposal or recycling of debris following and incident or disaster that exceeds the normal capacities of the County to manage.

2.3 Authorized Use

Authorized use of the plan includes those circumstances when the debris quantities from an incident, either natural or man-made, exceed the normal capacities of the County to manage.

2.4 Overview

In the event of a major disaster, the DDMP will provide the framework needed for the coordination of debris removal to facilitate search and rescue efforts, allow access to critical facilities, and prevent flooding.

This Concept of Operations is organized chronologically to demonstrate the activities that will take place during each phase of debris operations, including preparedness, response, and recovery.

2.5 Preparedness

The preparedness phase refers to the period of time when the County is not under any serious immediate threat of a disaster. Disasters can occur at any time, leaving the County constantly

susceptible to debris-generating events. Therefore, the preparedness phase is ongoing and ends when a debris-generating event occurs. This phase includes activities that take place prior to a disaster and includes the following major tasks:

- Conduct pre-disaster debris planning.
- Build capacity and resilience for debris management.
- Establish partnerships.

Figure 2.1 Pre-Disaster Major Tasks

Pre-disaster preparedness enables the County to effectively direct activities and expedite coordinated debris response operations. Pre-disaster plans provide a common platform to guide debris management decisions and activities.

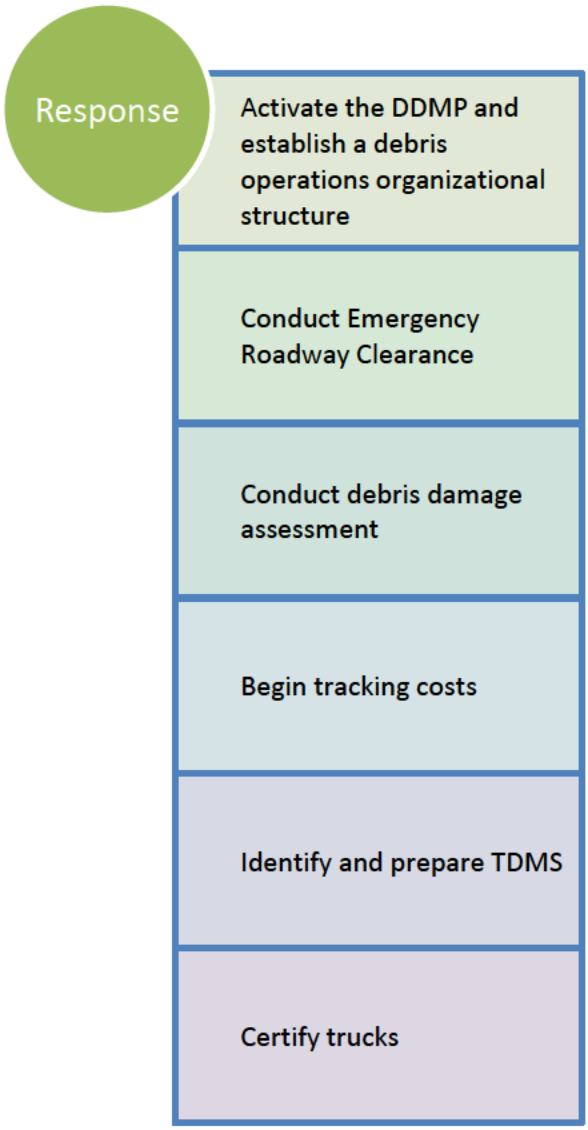
Successful debris preparedness includes practices that minimize the community's risk of hazards and strengthen its ability to withstand and recover from future disasters. These practices constitute a community's resilience. Debris preparedness and planning includes an assessment and understanding of risks and vulnerabilities that might result in a large-scale debris incident. The planning process promotes implementation of a risk management framework to enhance the resilience and protection of critical infrastructure against the effects of future disasters. Resilience incorporates hazard mitigation and land-use planning strategies; critical infrastructure, environmental and cultural resource protection; and sustainability practices to reconstruct the built environment and revitalize the economic, social, and natural environments.

In addition to maintaining and updating the DDMP, the County will also assess its resources to manage debris operations. This includes:

- Establishment of priorities
- Internal force account labor and equipment
- Contracted resources and contract documents
- Mutual aid agreements and procedures to implement mutual aid
- Debris end use (recycling) and final disposal options
- Technology resources to manage debris documentation
- Processes to support people with disabilities and those with access and/or functional needs

Debris management requires collaboration across many sectors, including County departments and divisions, state and federal agencies, volunteer organizations active in disasters (VOAD), and private enterprises. Building partnerships and collaboration during normal operations promotes more successful debris operations during an actual disaster to support the implementation of best management practices. The purpose of this plan is to establish coordinated debris management operations within the County throughout debris removal, reduction, recycling, haul-out, final disposal, and documentation.

Figure 2.2 Response Phase Major Debris Management tasks



2.6 Response

The response phase refers to the period when a threat has been identified and has the potential to impact the County. The response phase includes activities to protect life, property, and the environment. For debris operations, this phase includes the following major tasks:

- Activate the DDMP and establish a debris operations organizational structure.
- Conduct emergency roadway clearance.
- Conduct debris damage assessment.
- Begin tracking costs.
- Identify and prepare TDMS.
- Certify trucks.

2.6.1 Activate the DDMP and Establish a Debris Operations Organizational Structure

The County Department of Public Works Director, or their designee, will make the decision to activate the DDMP and determine the level of activation for the DOC. The Orange County Public Works (OCPW) DOC will serve as the Debris Removal Operations Center (DROC).

Monitoring and allocating resources for debris management will be led by OC Public Works, OC Waste and Recycling, and OC Health Care unless otherwise directed by the OA, EOC. OC Public Works will lead debris management efforts via the DOC during the event, which include the following sections. If there is more than one event occurring or debris operations are not completed from the prior event, a secondary DROC may be established within OCPW O&M building. All events must be tracked, monitored, and documented separately.

Stage 1: Monitoring

Staff with OC Public Works O&M will patrol and inspect all County roads, flood control channels, dams, and basins. Equipment and personnel status boards are prepared in the OC Public Works DOC in anticipation of activation. The OC Public Works, O&M Deputy Director, or his/her designee, will serve as the DOC Director.

Stage 2: DOC Activation

The OC Public Works DOC Director activates the DOC. Critical infrastructure including roads, storm drains, and flood control channels will be cleared of debris with in-house resources to provide access to communities and ample flow of water to the ocean. Debris is hauled to off-site bins, retaining basins, or landfills.

Stage 3: 24-Hour Operations

Activities are similar to those at Stage 2, but at an increased tempo and may include personnel from other OC Public Works service areas and sections. The OC Public Works Incident Commander shall arrange personnel schedules to allow performance of these activities on a 24-hour basis, as required.

When the degree of facility deterioration requires a commitment of OC O&M forces for flood fighting operations, Flood Control Facility Patrols will be reassigned in accordance with field inspection reports and current Automated Local Evaluation in Real Time (ALERT) System data.

In response to extreme weather conditions the OC Public Works - DOC opens to coordinate monitoring and response to threats of flooding, mudslides, and debris flows. During these periods, the ALERT System provides crucial continuous information to the DOC.

Critical infrastructure including roads, storm drains, and flood control channels will be cleared of debris with in-house resources to provide access to communities and ample flow of water to the ocean. Debris is hauled to off-site bins, retaining basins, or landfills.

Stage 4: Mutual Aid

Heavy equipment rentals or mutual aid contracts may be activated to handle Countywide debris issues, including debris flows, blocked roads, and over-topping of flood control channels.

Critical infrastructure including roads, storm drains, and flood control channels will be cleared of debris to provide access to communities and ample flow of water to the ocean. Debris is hauled to off-site bins, retaining basins, or landfills. Temporary debris management sites may be opened to receive debris from roads, flood control channels, and private residents.

Stage 5: Local Emergency

Heavy equipment, mutual aid, debris removal, debris monitoring, and franchise hauling service contracts may be activated to handle Countywide debris issues including debris flows, blocked roads, and over-topping of flood control channels. Critical infrastructure including roads, storm drains, and flood control channels will be cleared of debris to provide access to communities and

ample flow of water to the ocean. Temporary debris management sites will be opened to receive debris from roads, flood control channels, and private residents.

Depending on the event, stages of the DDMP could escalate quickly to Stage 5 or remain at Stage 1 for weeks. Table 2.1 provides a summary of the DDMP stages, which will fluctuate, based on the event and needs of the community.

Table 2-1 Stages of Debris Operations Activation

STAGE	IN-HOUSE	MUTUAL AID	CONTRACT	TDMS
Stage 1: Monitoring	X			
Stage 2: DOC Activation	X			
Stage 3: 24 Hour Operations	X			
Stage 4: Mutual Aid	X	(If needed)	(If needed)	(If needed)
Stage 5: Disaster Declaration	X	X	X	X

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

Specific roles and responsibilities for each of these entities are listed in 2.13.

2.6.2 Establishing Eligibility

According to the Public Assistance Program and Policy Guide (PAPPG), debris removal activities, such as clearance, removal, recycling, and disposal, are eligible under Public Assistance (PA) Category A (debris removal) if the removal is in the public interest, based on whether the work is necessary to:

- Eliminate immediate threats to life, public, and safety; or
- Eliminate immediate threats of significant damage to improved public or private property; or
- Ensure economic recovery of the affected community to the benefit of the community-at-large; or
- Reduce or limit the risk to life and property by removing substantially damaged structures and associated ancillary facilities as needed to convert property acquired using Hazard Mitigation Grant Program (HMGP) funds for uses compatible with open space, recreation, or wetlands management practices.

In the case of a debris-generating disaster, the local health officer may declare a local health emergency if the debris poses a substantial present or potential hazard to human health or the environment. Declaration of a local health emergency can provide the local health officer with the authority to take preventive measures to protect and preserve public health from any public

hazard during an emergency.[14] Such a declaration can assist in providing justification for debris clearance and removal operations.

2.6.3 County of Orange Priorities

Orange County has outlined priorities within the DDMP as follows:

1. Clearing major arterial routes
2. Moving roadside debris to temporary disposal sites
3. Distribution of debris including recycling
4. Disposition of debris

The lead agency to coordinate debris management will be OCPW. This coordination will occur in accordance with the Unified County of Orange and Orange County OA EOP for the response phase. Concurrently, as described and outlined in Orange County Recovery Plan, activation of the Debris Management Task Force occurs to support ongoing activities including analysis and strategy development as each event is different however the concepts of operation are the same.

2.6.4 Conduct Emergency Roadway Clearance

Emergency roadway clearance is the process to clear priority roadways of scattered debris, leaning trees, and other obstructions to allow access for emergency response vehicles and to open key thoroughfares in the County.

Prior to and immediately following an event, extricating people, and providing access to healthcare facilities is the top priority. Therefore, major arterial routes are given priority for the emergency services staff such as police, fire, and ambulance service. Emergency operations infrastructure, such as the EOC and supply distribution centers, are given the next priority. Other infrastructure, such as water, wastewater, and utilities, are the third priority.

The following are access route considerations:

- Fire, police, and ambulance service routes
- Access routes to trauma centers, hospitals, critical care units, and jails
- Major arterial routes
- Roads and streets to the debris management center and EOC
- Supply routes to emergency supply distribution centers

The County has identified major transportation routes and has pre-identified a network of routes for transporting emergency services and supplies to where they are needed in response to major disasters. These routes will be considered priority during the emergency roadway clearance. A list of these routes can be found in Appendix 5.2. Efforts to clear debris from priority routes will be led by OC O&M using internal resources, mutual aid, or additional contracted services as needed.

[14] State of California Health and Safety Code, Division 101, Part 3, Chapter 2, Article 2, 101080

2.6.5 Begin Tracking Costs

Accurate and complete cost tracking is critical to obtain federal assistance for disaster-related costs. Emergency protective measures and debris operations can be eligible for state and federal disaster assistance. If the incident allows for warning, the County will begin tracking costs once the threat has been identified. If there is no warning, the County will begin tracking costs as soon as possible. The County subscribes to accounting best practices for tracking costs.

The OCPW FEMA Coordinator will be responsible for compiling disaster-related costs for the County and will:

- Use the issued Countywide job code for tracking disaster-related costs for this event.
- 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 applicable local, state, and federal policies and regulations.
- Document administrative costs.
- Begin compiling 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

The County should use these existing systems to capture the information required for potential reimbursement.

2.6.6 Conduct Debris Damage Assessment

Debris damage assessments are necessary to determine the extent and the location of the debris. Initial windshield surveys of the impacted area will be conducted by OC Public Works to identify

critically damaged areas and to assist in prioritizing emergency roadway clearance. If possible, the County will conduct aerial surveys to obtain an overview of damaged areas. The County will train damage assessment teams prior to the incident. The damage assessment teams will coordinate with public safety responders and utility crews to maintain safety. The County can also use its debris service contractors to conduct damage assessments using handheld electronic devices to document damage.

Damage assessments should be conducted consistently throughout the County to the greatest extent possible. The County as the OA will collect and compile the damage assessment data from each public entity into one document to submit to the State of California. A thorough and accurate damage assessment process must be implemented to maximize the potential for state and federal disaster assistance.

The FEMA PAPPG provides specific guidance on how to conduct damage assessments and estimate debris volumes. Additional guidance can be found in the FEMA PAPPG.[15]

The County will strive to understand the extent of the damage, including the volume and type of disaster debris once the damage assessments are compiled. The County will begin the process to determine the length of time it will take to complete debris operations. This is important to determine whether the County can utilize some of the features in the Public Assistance (PA) Alternative Procedures for debris removal.

2.6.7 Certify Trucks

Truck certification is a critical component of debris management operations when using contracted resources. Truck certification is the process to document the capacity of debris removal trucks. Contracted 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. A debris monitoring contract will likely document truck certifications using an Automated Debris Management System (ADMS). An ADMS can be used by the monitoring contractor 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
- Department of Transportation (DOT) safety inspection documentation

[15] FEMA Public Assistance Program and Policy Guide (PAPPG 2025) FP 104-009-02, January 2025, http://www.fema.gov/media-library/assets/documents/111781.

The County can use internal resources, mutual aid resources, or contracted services providers to conduct truck certifications. It is typically part of the debris monitoring function.

2.6.8 Identify and Manage TDMS

Identify Potential TDMS

Concurrent with emergency roadway clearance and damage assessments, the County will review the availability and suitability of potential TDMS.

The purpose of the TDMS is to temporarily store debris and conduct some method of reduction before the debris is transported to a final disposal or end use facility. These areas serve as a more localized interim use holding area for disaster-generated debris. Using a TDMS allows a faster removal process from the public right-of-way (ROW).

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. Green waste can be reduced for reuse purposes. These options may be considered as space, site characteristics, and available resources allow.

The amount of acreage needed for a TDMS is dependent on the quantity of debris that needs to be stored and processed. The site should be large enough to safely accommodate the processing of various debris materials, storing heavy equipment, and maneuvering trucks and large processing equipment.

The topography and soil/substrate conditions should be evaluated to determine the best site layout. When planning site preparation, the designer should consider ways to make site closure and restoration easier. For example, if the local soils are very thin, the topsoil can be scraped to bedrock and stockpiled in perimeter berms. Upon site closeout, the uncontaminated soil can be re-spread to preserve the integrity of the tillable soils. Operations that modify the landscape, such as substrate compaction and over-excavation of soils when loading debris for final disposal, adversely affect landscape restoration.

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, including sites of historic significance.

The County will 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 will be taken into consideration when identifying a DMS:

- Current availability

- Duration of availability
- Site ingress/egress
- Geographic location within the County
- A minimum of 10 acres of usable land or less if 10-acre criteria does not yield potential properties
- 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

Appendix 5.9 of this plan provides a list of solid waste facilities permitted by CalRecycle (Permitted, Registered or Notification permit status) that the County may potentially use as TDMS. The list includes solid waste transfer facilities, closed landfills, and planned facilities.

Manage TDMS

Information gathered during the baseline data collection becomes important to the design of TDMS. Additional concerns, such as site operations and closure criteria, need to be taken into consideration when the site is designed. Many of these issues will be addressed in planning but will be implemented after the debris-generating event occurs.

The efficiency and the overall success of TDMS operations are determined by how the site is designed. In most cases, the operations of any TDMS will be established and monitored by contracted service providers, and County Debris Managers and/or designees will oversee contractors. Debris should be constantly reduced, recycled, and hauled out for final disposal. Significant accumulation of debris should not be allowed to occur at TDMS due to environmental and safety concerns, such as the risk of fire. Moreover, permits for such sites usually impose maximum capacity restrictions. Additional TDMS may be required if the actual debris quantities flowing into the site are greater than the site storage and processing capacity. Reducing and/or recycling disaster-related debris has financial and environmental advantages. These operations can decrease the overall cost of a debris removal operation by reducing the amount of material that is taken to a landfill.

Environmental permits, solid waste facility permit variances, and land-use variances may be required to establish a TDMS. 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 protection permits

- Water quality protection permits
- Biological resource agency permits
- Coastal commission land-use permits
- Household hazardous waste permits
- Fire Department permits
- Tree removal permits from the California and Federal Departments of Fish and Wildlife

During the planning process, the debris management team identified locations that meet minimum criteria for a TDMS. These criteria include:

- Parcels with current use designation as vacant land with a minimum of 10 acres
- Permitted use as a solid waste facility for transfer operations (e.g., limited volume transfer/processing operations, small volume C&D debris processing operations, and composting operations)
- Active and closed landfills that may become available for temporary debris management use (with proper approvals)
- Planned solid waste facilities that may become available for temporary debris management use (with proper approvals)

The use of vacant parcels once a state of emergency has been proclaimed by the Governor pursuant to the California Emergency Services Act is exempt from the California Environmental Quality Act (CEQA). An Emergency Project to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed as a result of a disaster in a disaster-stricken area are statutorily exempt from CEQA pursuant to 14 California Code of Regulations (CCR), Section 15269. The use of closed landfills and planned solid waste facilities would require permission from the local enforcement agency (LEA) for CalRecycle and appropriate local land-use and other jurisdictional agencies.

After a review of the availability and suitability of a TDMS, site preparation can begin. Site preparation should begin as early as possible before ROW collection begins. This will help to streamline operations.

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 required 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, drainage improvements, 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 California Office of Historic Preservation.
- Sample soil and water – If possible and deemed necessary, soil and groundwater samples should be taken before debris reduction activities commence. Samples will help document the site so it can be 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 found the EPA Standard Operating Procedures for Field and Laboratory Environmental Analyses on the EPA's website.[16]
- Site approval – The TDMS may require approval from CalRecycle and permits from the agencies listed above.
- Site Restoration – the TDMS will be returned to their pre-disaster condition upon closeout of the site.

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

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 as compost.

Mulch piles are susceptible to combustion so there are limits to the amount of mulch that can be stored at a TDMS. It is important to begin the haul-out process as early as possible to maintain a constant flow of vegetative debris in and out of the site. The County will coordinate with Fire Services to develop fire safety plans for each TDMS.

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.

Incineration

Although incineration is rarely authorized, there may be circumstances where the County 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

[16] http://www.epa.gov/quality/field-sampling-procedures-region-9

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. Circumstances that allow the possibility of incineration as a reduction method are described in the Environmental Considerations and Other Regulatory Requirements Section.

2.6.9 Site Manager

The site manager is responsible for supervising the overall day-to-day operations, maintaining daily logs, preparing site progress reports, and enforcing safety and permitting requirements during site operations. The site manager is also responsible for scheduling the environmental monitoring and updating the site layout. The site manager has oversight for monitoring the activities of the debris removal contractors and the on-site debris processing contractors to ensure they comply with the terms of their contracts.

Monitors (whether force account or contractors) should be placed at ingress and egress points in order to quantify debris loads, issue load tickets, inspect and validate truck capacities, check loads for hazardous waste, and perform quality control checks. Safety personnel are responsible for traffic control and ensuring site operations comply with state and federal occupational safety regulations.

2.6.10 Truck Certification

Truck certification is a critical component of debris management operations when using contracted resources. Truck certification is the process to document the capacity of debris removal trucks. Contracted 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
- Department of Transportation (DOT) safety inspection documentation

The County can use internal resources, mutual aid resources, or contracted services providers to conduct truck certifications. It is typically part of the debris monitoring function. Contracted debris haulers cannot certify their own equipment. Most often, the debris monitoring contractor will conduct the truck certification because it is a critical piece of their documentation process.The County should document equipment usage with the equipment operator's time. The County has internal systems to track this information. In the event that systems are not available, the County

can use the FEMA Force Account Labor Summary Record and the Force Account Equipment Summary Record. Additional guidance can be found on FEMA's PA Library website.[17]

2.7 Recovery

The recovery phase will focus on collecting remaining debris, reducing, or recycling, and final disposal at permitted Orange County landfills. Recovery operations will begin after emergency access routes are cleared and residents have returned to their homes to begin bringing debris to public rights-of-ways.

During the recovery phase, the County will determine its capacity to conduct debris removal operations internally using force account equipment and labor, using mutual aid, or using contracted services. The County has both a debris monitoring and removal master contract. These are kept on file at the OCPW DOC and the County EOC. Cities within the County should also assess their capacity to conduct special debris programs, as necessary.

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

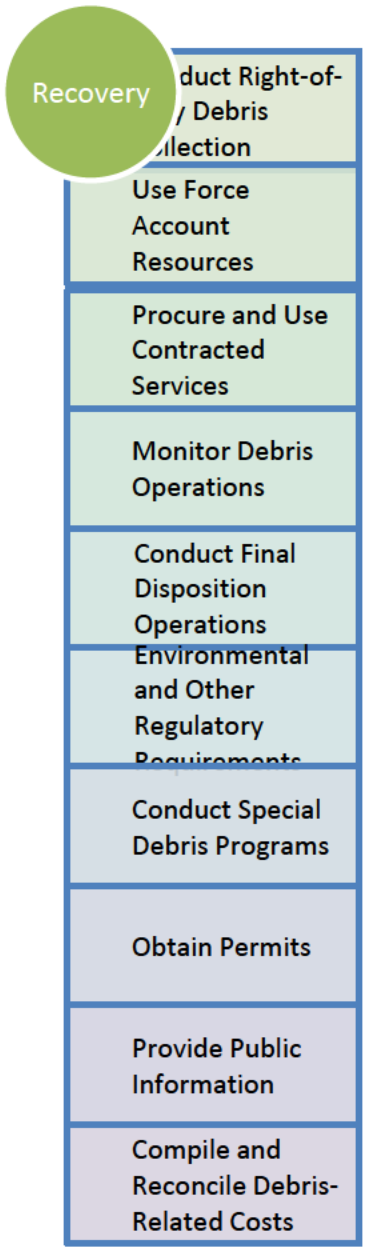
- Conduct ROW debris collection.
- Use force account resources.
- Procure and use contracted services.
- Monitor debris operations.
- Identify and use disposal and end use options.
- Monitor environmental considerations and other regulatory requirements.
- Provide public information.
- Conduct special debris programs.
- Compile and reconcile costs and coordinate reimbursement.

Figure 2.3 Recovery Phase Debris Management Major Tasks

[17] Public Assistance Resource Library | FEMA.gov

2.7.1 Conduct ROW Debris Collection

Road 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 (large appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc.). This will help prevent the contamination of debris loads and expedite the cleanup process. The County will establish debris collection zones and priority areas to conduct an organized and efficient ROW debris collection program.



Working with OCPW, local law enforcement will be contacted for removal of vehicles remaining in the roadway that are blocking emergency vehicle ingress and egress or have been declared abandoned or damaged debris posing a life safety risk. For vehicles unable to be towed and stored under California Vehicle Code (CVC) 22650 et al OCPW will assist with the disposal locations.

Municipal Solid Waste

Municipal solid waste is commonly known as trash or garbage and includes everyday items that are thrown away such as product packaging, grass clippings, food scraps, newspapers, and small appliances. These are items that are not a result of the disaster. It is important to make the distinction between municipal solid waste and disaster debris when communicating with the public. Regular trash collection for municipal solid waste should be a separate collection from disaster debris ROW collection. Residents should keep municipal solid waste separate from disaster debris. A list of County Franchised Haulers can be found in Appendix 5.10.

Vegetative Debris

Vegetative debris includes whole trees, tree stumps, tree trunks, tree branches, 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 include large piles of tree limbs and branches that are piled on the public ROW by residents. Public entities normally limit the number of times the debris is collected; for instance, the County may choose to make two passes throughout the jurisdiction before resuming its normal collection activities. The County will discuss with California Office of Emergency Services (CalOES) and FEMA the number of passes that may be required to complete disaster debris removal.

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. The leftover mulch is either hauled to a final disposal facility or recycled as compost.

A hazardous tree or stump may be collected individually, while downed or fallen debris is collected from the right-of-way or at a designated collection center. 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 (cubic yards).

Orange County is impacted by several invasive species and tree diseases that require additional precautions when handling vegetative disaster debris. Executive Order B-29-15, Continued State of Emergency for Tree Mortality provides information on the emergency situation.

The California Department of Food and Agriculture provides additional guidance regarding diseased trees on their website.[18]

Household Hazardous Waste Debris Removal

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

All 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 are recommended when conducting HHW removal:

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

Debris mixed with HHW will contaminate entire loads, which necessitate special disposal methods such as storage in a particular part of a landfill. Typically, a landfill requires special liners and a more intense permit standard due to the hazardous waste.

Coordination and communications between OCPW and Orange County Waste and Recycling will occur daily following a disaster event, Use of existing hazardous waste removal/disposal contracts in place will be coordinated by the OCPW DOC. OCWR provides free disposal of HHW and electronic waste to County residents at 4 (four) drop-off locations throughout the County. For information can be found at https://oclandfills.com/hazardous-waste.

[18] https://www.cdfa.ca.gov/plant/acp/

The planning staff need to take special care in finding certified recycling centers that are permitted to take white goods.

Electronic Waste

Electronic waste, or e-waste, refers to electronics that contain hazardous materials including a circuit board, electronic chips, or electrical motor. Examples include computer monitors and televisions. Electronic waste is considered HHW and would follow the CalEPA guidelines for disposal listed in the section above.

White Goods Debris Removal

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

White goods debris that contain ozone-depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. All state and federal laws will 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 are recommended to conduct white goods removal:

- Communicate the procedures for white goods removal to residents following an event. It is important that residents separate white goods from other debris so that 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.

To avoid releases of refrigerants or oils, the collection of white goods should be accomplished carefully by manually placing the appliance on trucks or by using lifting equipment that will not damage the elements that contain the refrigerants or oils.

Construction and Demolition Debris

Debris considered C&D can include 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, 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 2.4.6 of this plan provides information from CalEPA on how to manage hazardous debris including materials containing asbestos. Documentation of the debris origin, any processing (reduction or recycling), and the final disposition is required for FEMA PA grant consideration.

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

The County has a system of solid waste facilities that include chipping and grinding operations/facilities, transfer/processing facilities, waste tire sites, and disposal sites that can serve as landfill and end use options for managing disaster debris. Appendix 5.9 provides a list of landfill and end use facilities identified in the County. Some of these sites with restricted use (i.e., Bee Canyon) would require permission for use by others. The disposal of fire debris shall be tested to determine it is non- hazardous and the Class III non-hazardous waste landfill operator contacted to verify acceptance of that waste prior to disposal. Acceptance procedures should also be coordinated with the State designated LEA.

The County is responsible for maintaining situational awareness of the debris operations for shared resources like landfill and end use facilities. If these resources become overwhelmed by the demand of a widespread disaster, the County will coordinate with regional and state partners to identify additional resources. The County might consider out-of-county disposal including rail haul and other options to transport debris to a final disposal facility.

2.7.2 Use of Force Account Resources

It is important for the County to understand the type and quantity of resources required to manage large volumes of debris. Disasters can quickly exhaust internal labor and equipment, and resources are often shared by multiple jurisdictions throughout the region. During normal operations, waste service providers and disposal facilities can meet the needs of multiple entities. Disasters can generate millions of cubic yards of debris that will enter the waste stream. Service providers might not have the capacity to meet the demands during an emergency.

The County will conduct debris assessments to determine the volume and type of debris generated from the disaster. For smaller debris incidents, the County may have the capability to only use internal resources to manage debris. The County will use force account labor to perform field inspections by our field Inspectors and Engineers and will utilize our force account labor equipment operators, haul truck drivers, crew supervisors, laborers, and supervisors to remove the following types of debris: soil, mud, rock, standing water, vegetative debris, asphalt, concrete, C&D debris, and electronic waste. However, in the event the volume of debris exceeds force account labor resources, the County will utilize contract providers to assist with the debris removal and the County's force account labor resources will transition in monitoring responsibilities described in this plan. When the disaster is of catastrophic nature requiring the implementation of both the debris management and monitoring contracts, the County's force account labor resource will transition into a supervisory role overseeing both contracts. Force Labor Account resources will manage changing objectives and priorities as indicated during the event for implementation by the contractors. The County will need to work closely with damage assessment teams to determine whether internal resources, mutual aid resources, and/or contracted services providers are necessary to manage debris operations.

Equipment Resources

The following table outlines the type of resources required for the different types of debris encountered following an event.

Table 2-2 Equipment Requirements by Debris Type

Debris Type	Equipment
Ash	Front end loader
	Water truck
	Dump truck
	Water buffalos
	Street sweeper
Asphalt	Front end loader
	Skid steer loader
	Dump truck
Concrete	Excavator
	Semi-trailer
	Dump trucks
C&D debris	Excavator
	Front end loader
	Cranes
	Grapple truck
	Trailer
	Skid steer loader
	Dump truck
	Trailer
Electronic waste	Grapple truck
	Trailer
HHW	Grapple truck
	Trailer
	Specialized equipment, trained personnel with appropriate personal protective equipment
Soil, mud, and rock	Front end loader
	Excavator
	Street sweeper
	Grapple truck
	Water truck
	Trailer
	Dump truck
Standing water	Vacuum trucks
Vegetative debris	Skid steer loader
	Front end loader
	Bucket truck
	Dump truck
	Log skidder

Debris Type	Equipment
Waterway debris	Barges
	Excavator
	Work boats
	Crane
White goods	Grapple truck
	Trailer

During a widespread event, municipalities within Orange County will rely on the County for support, guidance, and resources. As the OA, the County will also need to assess their internal and external resources to provide support to these municipalities.

The County maintains a fleet of vehicles and equipment that can be used during debris operations. It is critical to accurately document how these resources are used during the response and recovery operations. Often, the use of force account labor and equipment can apply to the County's share for disaster-related costs. Labor and equipment expenses may be eligible for federal reimbursement if documented properly. The link to the equipment inventory can be found in **Appendix 5.4**.

The County should document equipment usage with equipment operator's time. The County has internal systems to track this information. In the event that systems are not available, the County can use the FEMA Force Account Labor Summary Record and Force Account Equipment Summary Record located on FEMA's website.[19] Additional guidance regarding documentation requirements can be found in the PAPPG.[20]

Staffing Resources

The County will use internal resources to the greatest extent possible during debris management operations. Debris management operations typically run every day from sunrise to sunset for several months. The rigorous schedule can cause fatigue. If the County uses internal resources to serve as Debris Monitors, it is important to have sufficient backup personnel available in the event that more Debris Monitors are needed.

In addition to the debris monitoring team, the NIMS Resource Typing Library[21] identifies the following positions and job descriptions for debris operations.

[19] https://www.fema.gov/media-library/assets/documents/26103
[20] http://www.fema.gov/media-library/assets/documents/111781
[21] https://rtlt.preptoolkit.fema.gov/Public/Combined?q=debris

Figure 2.4 Example Debris Operations Positions

Debris Assessment Team NIMS ID 7-508-1233

1. Assesses the amount and types of debris resulting from an incident
2. Calculates the estimated amount of debris to be hauled and disposed of
3. Implements relevant sections of the Authority Having Jurisdiction (AHJ) debris management plan

Debris Monitoring Team NIMS ID 7-508-1234

1. Monitors debris removal operations in the field and at debris sites
2. Measures and certifies truck capacities
3. Ensures that equipment operators and haulers segregate debris
4. Ensures that equipment operators and haulers do not mix hazardous waste with other waste types
5. Ensures that equipment operators and haulers pick up only eligible debris and track debris appropriately
6. Supports recorded observations with digital photography and video recording
7. Reports any irregularities to appropriate personnel
8. Ensures compliance with contractor scope of work
9. Maintains documentation of debris eligible for removal and hauling equipment used

Debris Operations Manager NIMS ID 7-509-1347

1. Activates the debris management plan
2. Oversees the following matters related to debris removal:
    a. Quantities and types of equipment necessary
    b. Temporary debris collection sites
    c. Methods for tracking debris types and quantities
    d. Methods for tracking force account and related costs
    e. Final debris disposal
    f. Relevant public information
    g. Reimbursement

Debris Planning Manager NIMS ID 7-509-1348

1. Quantities and types of equipment necessary
2. Temporary debris collection sites
3. Methods for tracking debris types and quantities
4. Methods for tracking force account and related costs
5. Final debris disposal
6. Relevant public information
7. Reimbursement
8. Debris forecasting

Debris Supervisor NIMS ID 7-509-1098

1. Coordinates the routing of equipment, personnel, and other resources involved in debris removal
2. Collects and maintains appropriate field documentation
3. Ensures that equipment operators/haulers complete debris clearance, removal, and disposal in accordance with applicable regulations and requirements
4. Schedules and deploys Debris Monitors
5. Reports debris field/monitoring progress and issues to the Debris Operations Manager

Debris Technical Specialist NIMS ID 7-509-1460

1. Evaluates types and quantities of disaster-generated debris
2. Provides an estimate of debris types and quantities
3. Supports the AHJ's debris removal operation in the field

2.7.3 Procure and Use Contracted Services

The County may find it necessary to contract for debris removal services if the magnitude of the disaster is beyond the capabilities of its force account resources, state resources, mutual aid agreements, and volunteer labor. Possible contracted services include:

- Collection, including clearance during response phase
- Reduction or recycling
- Hazardous waste handling, processing, and disposal
- Hauling to final disposition
- Activities involving TDMS
- Demolition
- Monitoring
- Environmental studies
- Project management

Orange County currently has multiple contracts in place to supplement in-house resources including debris management, debris monitoring and rental heavy equipment (with and without drivers). A link to the Contract Policy Manual can be found in Appendix 5.5. A link to the County Procurement Construction Procurement Policy Manual can be found in Appendix 5.6. A copy of a

debris hauler contract can be found in Appendix 5.3. Lastly, a link to the County Procurement Ethics Guide can be found in Appendix 5.7.

Contracted services for debris management including removal and monitoring must meet federal procurement requirements to be eligible for potential federal disaster assistance. A copy of these agreements can be obtained electronically in PrepareOC.

For emergency roadway clearance, the County can use time and materials-based contracts. For all other debris programs, contracts must be volume based and meet local, state, and federal procurement requirements including the provisions of Uniform Administrative Requirements, Cost principles, and Audit Requirements for Federal Awards - Title 2, Code of Federal Regulations (CFR) Section 200.317-.326 Procurement.

The following reference materials to support the federal and state requirements above are available electronically in in PrepareOC.

- The County Contract Policy Manual
- The County Design and Construction Policy Manual
- The County Procurement Ethics Guide
- The Public Works Mutual Aid Agreement
- The County Procurement Office Regional Cooperative Agreement Policy

In recent years, millions of dollars in disaster assistance have 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 applicants spend federal funds efficiently, effectively, and in compliance with applicable federal procurement standards.[22]

2.7.4 Monitor Debris Operations

The County will monitor their debris removal operations. This includes documenting disaster-related quantities and reasonable expenses to demonstrate that the work is eligible for federal disaster assistance. These are best practices that should be implemented regardless of whether the County receives a federal disaster declaration.

Monitoring debris removal operations requires the County to employ comprehensive observation and documentation of debris removal work performed from the point of debris collection to final disposal. Monitoring debris removal work involves constant observation of crews to demonstrate that workers are performing eligible work in accordance with FEMA guidelines and all applicable

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

federal, state, and local regulations. Failure to properly monitor debris removal operations may jeopardize state and federal disaster assistance.

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 PA Project Worksheets, 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.

The County will use internal resources, mutual aid resources, or contracted services providers to monitor debris operations. The costs associated with monitoring debris operations are eligible for reimbursement. As described previously, the County will use force account labor resources whenever possible to fill the role of monitoring at pickup sites, temporary sites, and final disposal sites.

2.7.5 Conduct Final Disposition Operations

There are several active landfills in Orange County for final disposition of disaster debris including:

Frank R Bowerman Landfill
Commercial Disposal Only
Irvine, CA

Olinda Alpha Landfill
Commercial and Public Disposal
Brea, CA

Prima Deshecha Landfill
Commercial and Public Disposal
San Juan Capistrano, CA

The County has also identified recycling facilities that can take C&D debris. These recycling facilities are listed in Appendix 5.9.

When the TDMS operations are complete, the property must be restored to its original condition before returning the site to the property owner. Restoration of a site involves removing all traces of the operations and possible remediation of any contamination that may have taken place during the operations. The site, either applicant-owned or leased, must be brought back to its environmental state prior to it being returned to the owner.

The County will divert disaster debris 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:

Figure 2.5 Common Recyclable Material Categories

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.

Policies and procedures are maintained by OCWR that describe the process to conduct final disposal, acceptance, and documentation of disaster debris.

2.7.6 Environmental and Other Regulatory Requirements

It is important to assess and mitigate the environmental impacts associated with disaster debris throughout debris operations. The function of regulatory requirement monitoring is to ensure compliance with local, state, and federal regulations and to implement best management practices that support the environmental initiatives of the County. The County will establish regulatory, historical, and/or tribal monitors as needed to provide oversight and recommendations for environmentally sensitive debris operations and other regulatory requirements.

During the debris removal process and after the material has been removed from each of the debris sites, environmental monitoring will be needed to ensure that no long-term environmental contamination is left on the site. The monitoring will include soil, groundwater, and any other items that need monitoring based on pre-site testing results or issues that arose during operations.

Monitoring of the soil should be conducted to determine whether any of the soils are contaminated by any material including volatile hydrocarbons and/or metals. The contractors may do this if it is determined that hazardous material, such as oil or diesel fuel, was spilled during contractor operations on the site. This phase of the monitoring should be done after the debris is removed from the site.

Monitoring of the groundwater should be done on all TDMSs to determine the probable effects of rainfall leaching through either stockpile areas. The Orange County Health Care Agency (OCHCA)-

Environmental Health Division may assist OCPW and/or contractors with this process using day-to-day processes in place.

Environmental and Historical Considerations

The PA Program awards funds to eligible applicants for debris clearance, removal, and disposal operations. Examples are debris removal from the public ROW to allow the safe passage of emergency vehicles and from public property to eliminate health and safety hazards. In some instances, it includes collection of private property debris placed at the curb. The Environmental and Historical Preservation (EHP) fact sheet/checklist in the next section does not apply to the demolition of privately owned structures.

Although FEMA's statutory exclusions under Section 316 of the Stafford Act exempt most debris removal actions from review by the National Environmental Policy Act, compliance with other laws— such as the Endangered Species Act, National Historic Preservation Act, Clean Air Act, and Clean Water Act—is still required.

Debris Removal Activities: EHP Checklist

The EHP checklist below describes project information that FEMA requires to complete the EHP review of a debris removal project. As part of the PA Debris Removal Program OCPW is responsible for filling out the EHP. Agencies involved will depend on the site and location of the debris. OCPW has a biologist and arborist on staff to assist with the following processes.

Table 2-3: EHP Checklist

Location	State the location of temporary staging or reduction sites and final disposal sites. Include site addresses and latitude/longitude in decimal degrees (e.g., 38.5342° N, -77.0212° W). Identify flood hazard areas, wetlands, and other sensitive areas that should be avoided.
Description of Project Scope of Work	Provide a detailed description of the project scope of work, including potential debris types, such as vegetative, C&D, white goods, or hazardous waste, etc., as well as debris quantities and waste disposal methods (e.g., incineration, chipping, recycling).
Permits	Provide appropriate federal, state, and local permits, including operating permits for temporary staging sites and final disposal sites. Permits are required in certain States for the burning of vegetative debris, and, in some cases, a letter of approval or permit may be required from more than one state agency. Applicants may also need to secure a state permit for the disposal of residual ash. Check with the state EPA to determine which permits are needed.
Photographs and Site Information	Provide floodplain and wetland maps showing temporary staging and/or reduction sites and final disposal site locations in relation to these resources. Include aerial imagery of the sites.

Agency Coordination	Note any communications with resource agencies, such as the State Historic Preservation Officer, EPA, State Department of Environmental Quality, U.S. Fish and Wildlife Service, or U.S. Army Corps of Engineers and provide copies of correspondence and permits.
Additional Information	Include a Debris Management Plan, if one exists. Also include copies of other available relevant information, such as traffic studies, air quality reports, environmental site assessments and remediation reports, historic property surveys, or archaeological surveys.

EHP Fact Sheet[23]

2.7.7 Orange County Tribal Considerations

Even though Orange County does not have any federally recognized tribal nations within its geographical boundaries, there are two tribes seeking recognition, the Juaneño Band of Mission Indians under the Acjacheman Nation and the Gabrielino-Tongva Band under the San Gabriel Tribal Council. These tribes are recognized by the State of California therefore monitoring of their past territories must be taken into consideration during debris management and removal operations. Known areas where sacred grounds exist include

- Banning Ranch Open Space and Farview Park – Costa Mesa
- Bolsa Chica Wetlands – Huntington Beach
- San Mateo Creek and Campground
- JSerra High School Baseball Field area – San Juan Capistrano

Representatives from these groups will be included in the Debris Management Task Force anytime known locations are impacted from a disaster. If artifacts or human remains are uncovered a tribal monitor will be assigned to the project area if the tribe desires

2.7.8 Hazardous Materials Health and Safety

Guidance is provided by CalEPA for local and state agencies to conduct disaster debris, waste, and hazardous material removal activities. This information can be found in the "Guidance for Conducting Emergency Debris, Waste, and Hazardous Material Removal Actions Pursuant to a State or Local Emergency Proclamation."[24] A list of current hazardous materials contractors for the County can be found in Appendix 5.11.

[23] https://www.fema.gov/sites/default/files/documents/fema_EHP_Fact_Sheet_Debris_Removal_Activities_092021.pdf

[24] Guidance for Conducting Emergency Debris, Waste and Hazardous Material Removal Actions Pursuant to a State or Local Emergency Proclamation

The following sections include best management practices from CalEPA to be considered in addressing the removal of hazardous materials, HHW, asbestos-containing materials, and air monitoring and sampling from the disaster or incident site.

- Given that ash may be present in certain debris and may contain elevated levels of heavy metals and/or asbestos, an exclusion zone may be established around certain sites during debris removal operations. All personnel entering this area will be required to wear personal protective equipment (PPE).
- It is recommended that all on-site cleanup personnel entering the exclusion zone must be 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) trained Under 29 CFR 1910.120, and CCR Title 8, Section 5192, and will be required to wear Level C 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.
- 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 asbestos-containing material removal) and general engineering, demolition, and hazardous substance certifications depending on the tasks to be performed
    - Department of Occupational Safety & Health (DOSH) Asbestos Registration
    - Number (If conducting asbestos-containing material removal)
    - Hazardous Waste Transporter Registration Number – Issued by California DTSC RCRA EPA ID Number – Issued by US Environmental Protection Agency, Region 9
    - U.S. DOT, Pipeline and Hazardous Materials Safety Administration – Hazardous Material Certificate of Registration
    - California Highway Patrol – Hazardous Materials Transportation License
    - U.S. DOT, Federal Motor Carrier Safety Administration – U.S. DOT Identification Number
    - California Department of Motor Vehicles – Motor carrier permit

Lithium-Ion Batteries

The use of lithium-ion batteries has grown dramatically in the last few years due to their compact size and energy storage capacity. They are used in phones, laptops, e-bikes and scooters, cars, homes, as well as large energy storage facilities. However, due to issues with ignitability and reactivity, lithium-ion batteries require special care in disposal.

Recent large fires have necessitated special actions to identify the batteries, ensure they are not energized, monitor the air for any off-gassing of the batteries, package the batteries for transport, de-energize the batteries in a brine solution for 3 to 7 days, shred or crush the batteries, and finally transport the remains of the batteries for final disposal.

The U.S. EPA developed guidance titled "2023 Maui Wildfires Damaged Lithium-Ion Battery Management Guide for Electric Vehicles & Mobility Devices,"[25] to share the processes they used, in coordination with their contractors, to collect, render safe, and dispose of lithium batteries as part of the cleanup and recovery from the 2023 Maui wildfires. Some of the same techniques were used in response to the Los Angeles County wildfire in 2025.

Hazardous Materials and Household Hazardous Waste

Standard operating procedures for conducting hazardous material assessment activities should be followed pursuant to DTSC, DOSH and Occupational Health and Safety Administration (OSHA) HAZWOPER requirements.

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

Explosive material includes firearms and ammunition, black powder, blasting caps, fireworks, and military ordinance. If explosive materials are identified on-site, they should be handled by trained personnel and removed immediately to maintain the safety of the public. If local agencies are unable to address explosive materials through their cleanup contract resources, the local law enforcement authority should be contacted to provide assistance.

Prior to the removal of hazardous materials and HHW, a DOSH-Certified Asbestos Consultant should assess and sample all residential and other affected areas of the site to identify and remove gross asbestos. This is to maintain that any areas identified as containing gross asbestos material will not be disturbed by hazardous materials cleanup personnel. Any asbestos-containing material that is not found on the ground due to natural forces may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) requirement.

Once the removal of easily identifiable gross asbestos has been completed, hazardous material and HHW may be identified, segregated, classified, and properly removed from the site.

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

- Automotive/marine batteries
- Automotive oils and fuel
- Compressed gas cylinders
- Propane tanks
- Herbicides and pesticides
- Solvents

[25] https://nrt.org/sites/175/files/Maui%20Wildfires%20Vehicle%20Lithium%20Ion%20Battery%20Management%20Guide_2023-11-28%20Finalw_SOPs.pdf

- Paint thinners and strippers
- Oil and latex-based paints
- Pool chemicals
- Electronic waste

The following sections are standard procedures recommended by CalEPA for hazardous materials and HHW.

Property Assessment

The property, site, or affected area of the disaster should be assessed for hazardous materials and HHW. The following criteria will be applied:

- A DOSH Certified Asbestos Consultant (CAC) will be utilized to assess the area of each residential or commercial property for easily identifiable and removable pieces of asbestos-containing material. After assessing each property or area, the CAC will consult with a licensed asbestos removal contractor to identify the location and area of asbestos-containing material to be removed.
- A DOSH-certified asbestos removal contractor will be responsible for overseeing the safe removal of asbestos-containing material identified on-site by the CAC.
- All on-site personnel working to remove asbestos-containing material 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 asbestos-containing material that can easily be removed from the site will be adequately wetted prior to being bagged or bulked for removal. The easily identifiable gross asbestos-containing material can be double-bagged and appropriately labeled as asbestos-containing material. (At a minimum, the plastic bags must be of at least 6-mil thickness.)
- If bulk loading of asbestos-containing material 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 poly in such a way that once loaded both layers can be sealed up independently.
- HHW and hazardous materials 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. Hazardous Materials 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 waste generated from a disaster or large-scale event must be coordinated with the LEA and Regional Water Quality Control Board. Emergency waivers and suspension of regulations for disposal of hazardous waste may not be applicable as a result of a disaster.

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 following best management practices should be used for undertaking debris removal activities subject to the Asbestos NESHAP:

- A DOSH CAC will be utilized to assess the area or each residential or commercial property for easily identifiable and removable pieces of asbestos-containing material. After assessing each property or area, the CAC will consult with a licensed asbestos removal contractor to identify the location and area of asbestos-containing material to be removed.
- A DOSH-registered asbestos removal contractor will be responsible for overseeing the safe removal of asbestos-containing material identified on-site by the CAC.
- All on-site personnel working to remove asbestos-containing material must have received the necessary health and safety training for conducting asbestos removal activities pursuant to OSHA 1910.1000, 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 asbestos-containing material that can be easily removed from the ground or structure prior to debris removal activities.
- Request an asbestos consultation from the State of California or South Coast Air Quality Management District (AQMD) for any structure that is not completely destroyed or for any structure with vermiculite insulation, for large components or material that will be broken up upon movement, or for other asbestos issues as identified by the CAC.
- During the 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 asbestos-containing material above NESHAP regulations, and to maintain residual building materials do not contain asbestos that may change the overall waste classification.

- All gross asbestos-containing material 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 asbestos-containing material can be double-bagged and appropriately labeled as asbestos-containing material. (At a minimum, the plastic bags must be of at least 6-mil thickness, and the contents must remain wet.)
- If bulk loading of asbestos-containing material 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 polyethylene 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 asbestos-containing material and debris removal operations to demonstrate the effectiveness of engineering controls to protect cleanup personnel and the surrounding community (see following sections).
- 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 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 be constructed of hard-coated aluminum with brass and stainless steel internal components. Plastic nozzles should not be used. While the cost of metal firefighting nozzles are significantly more than plastic nozzles, metal nozzles only are 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 as not to generate significant run-off. 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 asbestos-containing material 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.
- Procedures for the receiving landfill facility to establish an appropriate site safety plan for the protection of the facility employees to potential asbestos-containing material in the waste stream may be required by DOSH.

- Disposal facility emergency waivers, and suspension of regulations for disposing of waste generated from a disaster or large-scale event, must be coordinated with the LEA and the Regional Water Quality Control Board. Emergency waivers and suspension of regulations for disposal of hazardous waste may not be applicable as a result of a disaster.

2.7.9 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 during 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. On-site air monitoring procedures can be found in Appendix 5.12.

Off-Site Air Monitoring

No off-site migration and/or emission of dust or airborne contaminants is 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. Off-site air monitoring procedures can be found in Appendix 5.12.

2.7.10 Storm Water Controls

One of the most prevalent water pollution threats from debris-generating disasters is the discharge of ash and other burn-related debris from fires 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 for controlling storm water discharge 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.

Efforts 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.

2.7.11 Reduction of Disaster Debris by Burning

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

Health and Safety Code 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.[26]

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

2.7.12 Conduct Special Debris Programs

During recovery and dependent on the type of disaster, FEMA and other federal or state agencies may offer special debris removal programs. For example, following the devastating 2017 California Wildfires impacting many communities in Northern California and Orange County in Southern California, Federal Declaration (DR4344) provided access to the Private Property Debris Removal Program. Under normal circumstances, programs such as these are not automatically available with every disaster under the Robert T. Stafford Act or the California Disaster Assistance Act (CDAA). Federal and State PA Guidance will have variables for these types of programs.

To request access to these programs as part of the County Debris Management Plan, the County is prepared to execute actions to obtain eligibility for the following:

[26] 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

2.7.13 Private Property Debris Removal

Debris on private property does not typically present an immediate health and safety threat to the public. In addition, debris removal from private property is generally the responsibility of individual private property owners, and other sources of funding, such as insurance, are commonly available to property owners to cover the cost of work.

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 been evacuated, public entities 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 limited circumstances, based on the severity of the impact of an incident and whether debris on private property is so widespread that it threatens public health and safety or the economic recovery of the community, It may be determined by FEMA that private property debris removal (PPDR) is eligible under the PA Program. In such cases, FEMA will work with the County to identify areas where PPDR, including private waterways, is eligible. The debris removal must be in the public interest, not merely benefiting an individual or a limited group of individuals.

This section is only applicable to unincorporated County of Orange areas. Municipalities must develop and execute their own Debris Management Plans and PPDR procedures.

Requirements to Implement a PPDR Program

The following Standard Operating Procedures for PPDR will only be implemented during a large-scale disaster when the following indicators are present:

- There is a health and safety threat and the Orange County Health Officer must have declared a local health emergency for the unincorporated county area(s) impacted.
- The County Board of Supervisors must have passed an emergency ordinance temporarily amending the Orange County Codified Ordinance Title 13, Division 13, Article 1, Section 3-13-1 et al. for this emergency event only.[27]

Templates of documents required for PPDR programs are maintained by the Orange County Sheriff's Department Emergency Management Division including:

- PPDR Board Resolution
- Declaration of Local Health Emergency
- Program Guidelines
- Program Application (Right-of-Entry)
- Frequently Asked Questions
- Program Site Sampling Guidelines

[27] Orange County Code of Ordinance webpage, https://library.municode.com/ca/orange_county/codes/code_of_ordinances

- Work Plan Templates
- Draft Debris Management/Removal IAP

Phase 1 - Household Hazardous Waste Removal

In Phase 1, the OCHCA – Environmental Health will be the lead. OCHCA, working with the Orange County Certified Unified Program Agency for hazmat response, will organize teams to inspect properties and remove any hazardous waste that may pose a threat to human health, animals, and the environment, such as batteries, herbicide, pesticide, propane tanks, asbestos siding, paints, and e-waste. State and federal agencies may be requested to assist teams. These may include experts from the California State DTSC, CalEPA, and U.S. EPA.

Phase I is triggered when the above-mentioned indicators are present and includes both residential and commercial properties destroyed by the disaster.

Phase 2 – Debris Removal

Option 1: Government-sponsored Debris Removal Program

In Phase 2, OCPW will be the lead agency. OCPW will coordinate the Debris Task Force and its Debris Management Teams (DMT) to conduct disaster-related debris removal from private property if residents have elected to participate in the program by completing and signing a Right-of-Entry (ROE) Form. OCPW is the lead agency to coordinate the signature and validation of these forms. OCPW is responsible for determining whether the County is beyond its capability and requesting resources to support through the County EOC to the Governor's Office of Emergency Services (Cal OES), state agencies such as CalRecycle, and federal agencies such as FEMA.

Option 2: Private Cleanup Standards

Property owners who do not qualify for, or who choose not to participate in, the Government-sponsored Debris Removal Program must hire properly licensed private contractors and consultants to remove fire debris and clean up their properties.

The private property owner needs to comply with all legal requirements for disposal, best management practices for activities on-site, proper transportation and documentation of waste, and erosion control.

Public Notification and Information

Orange County will communicate with the public using multiple means available including:

- Website
- Social Media
- Media (Press Releases)
- Community meetings

Draft template language for PPDR information is maintained by the Orange County Sheriff's Department Emergency Management Division including:

- Media Advisory
- Website Language
- Fact Sheets

Additional information on public information can be found in the Unified County of Orange and Orange County OA EOP and the Joint Information System Annex.

Documentation Requirements for PPDR

For FEMA to evaluate eligibility of PPDR funding requests, the County must submit written documentation to FEMA identifying the specific properties or areas of properties where PPDR activities occurred. Before FEMA provides PA funding, the County must provide confirmation that it satisfied all legal processes and obtained permission requirements from the property owners (rights-of-entry agreements to indemnify and hold harmless the federal government). Additionally, the County must provide documentation to support that it obtained all necessary permits and complied with EHP requirements. FEMA only approves PA funding for PPDR if the County demonstrates all the following with sufficient documentation:

- Written documentation identifying the specific properties or areas of properties where PPDR occurred;
- A written statement from an authorized County official that:
    - Certifies the County has legal authority and responsibility to remove debris from private property;
    - Cites all applicable sources of authority(law, ordinance, code, contract, etc.); and
    - Identifies the federal government for any claim arising from the debris removal.
- Documentation to show the work is eligible for PA funding.[28]

The County must demonstrate that the PPDR was in the public interest. This includes:

- The basis for the assertion that removing the debris from the private property locations requested was in the public interest. The assertion must be made by the County's public health authority or other public entity that has legal authority to assert that disaster-generated debris on private property constitutes an immediate threat to life, public health, or safety, or to the economic recovery of the County at large.
- The established, specific legal requirements for declaring the existence of a threat to public health and safety.

[28] FEMA Public Assistance Program and Policy Guide, FP 104-009-2, January 2025 (PAPPG 2025). Section XII.F

Pursuant to Orange County Ordinance Number 02-005, § 1, 7-23-02, the County has a responsibility to identify property maintenance standards and establish procedures for the prosecution and abatement of public nuisance conditions identified in this division. A copy of the Ordinance Number 02-005, § 1, 7-23-02[29] can be found on the County codes website.

Public jurisdictions may undertake PPDR and demolition in extreme cases where public health, life, safety, and the economic recovery of the community-at-large are at risk. County shall conduct PPDR pursuant to OC Public Works Policy and Procedures No. 3.1.004 Using County Resources on Private Property and Property of Questionable Ownership and Policy and Procedure No. 5.5.002 Emergency Work on Private Property. Orange County has established this procedure for this type of work in the event this becomes necessary. The planning effort for PPDR and demolition includes the following

- Criteria for implementing PPDR and demolition operations
- Documentation requirements and procedures
- Inspection and demolition procedures
- Condemnation criteria and procedures
- Demolition permitting
- Inspections
- Mobile home park procedures

The process is illustrated in Figure 2.6 below.[30]

Figure 2.6 Private Property Debris Removal Process

[29] Division 13 - PROPERTY MAINTENANCE | Code of Ordinances | Orange County, CA | Municode Library

[30] PAPPG v5 2025, Chapter 7, Section XII Debris Removal

Debris Removal from Private Roads

Private roads are those that are not owned by, operated by, or otherwise the legal responsibility of the County, such as orphan roads, roads in gated communities, or homeowners' association roads.

If the public has unrestricted access (e.g., no locks, gates, or guards) and frequently uses the private road, then removal and disposal of the debris is demonstrably in the public interest. This work includes debris placed at the curbside by residents. The County is generally not required to submit additional documentation demonstrating that the debris removal is in the public interest.

If the public has restricted road access (e.g., behind locks, gates, or guards) or the private roads are unrestricted but rarely used by the public, then the County must demonstrate that such debris removal is in the public interest. FEMA has the authority to determine whether such debris removal is eligible.

Debris removal from private roads does not include debris on private driveways or parking lots. Debris clearance (e.g., push or cut and toss) for emergency access is eligible as Category B work if the extent of damage or blockage makes these areas cut off or isolated, and it meets the criteria under the Emergency Access section in this chapter.

Debris Removal from Private Non-Commercial Property [31]

Non-commercial property is defined by FEMA "a property, structure, or portion of a structure, used by the property owner as their primary residence, such as a house or condominium unit in which the owner resides." Debris removal from private non-commercial property is usually not in the public interest because the debris does not typically represent an immediate threat to public health and safety. If the incident generates debris quantities and/or types of debris on non-commercial property that is so widespread or of such magnitude that it creates an immediate threat to public health and safety, debris removal may be in the public interest. To determine whether removal of debris from private residential property is in the public interest, FEMA evaluates the public health determination and will consider:

- Whether the debris is located in open areas accessible to the public (e.g., in a yard with no fence or barrier next to a public sidewalk), located in maintained areas, or creating a health and safety hazard, such as a rodent infestation;
- Volume of debris;
- Height of debris;
- Number of houses and blocks with large volumes of debris; and
- The extent of the public population affected.

[31] PAPPG 2025 Section XII. F.4

Debris Removal from Private Commercial Property

Debris removal from commercial property is typically ineligible, as commercial businesses are expected to have insurance covering this. The County must obtain written pre-approval from FEMA for any debris removal from commercial properties before starting work.

In rare and exceptional cases, such as when critical facilities are involved, restoration costs for damaged infrastructure in a small area are exceptionally high, or debris is heavily concentrated, the FEMA Regional Administrator may grant an exception. In these cases, the County must meet the stated requirements.

Commercial property owners are not allowed to move or place debris from their properties onto public rights-of-way. Debris on public rights-of-way from the incident itself is eligible for removal, but debris deliberately moved there from commercial properties is not eligible. [32]

Duplication of Benefits in PPDR

During PPDR operations, the County must work with private property owners to pursue and recover insurance proceeds and credit FEMA the federal share of any insurance proceeds received. In some circumstances, FEMA may provide Individual Assistance (IA) to individuals for debris removal; consequently, FEMA PA staff coordinate closely with IA staff to ensure FEMA does not fund the same work under both programs. [33]

2.7.14 Hazardous Trees, Limbs, and Stumps

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 FEMA PA Grant Program requirements for potential federal reimbursement for hazardous tree and stump removal are provided below.

Documentation Requirements for Hazardous Limbs, Trees, and Stumps

In addition to the general documentation required for debris removal operations, the County must provide all of the following documentation to support the eligibility of work to remove tree limbs, branches, stumps, or trees that are still in place:

- Pictures showing the hazard the limb, tree, or stump poses to a public area;
- Quantity removed;
- Quantity, location, and source of material to fill root-ball holes; and
- Description of equipment used to perform the work.

[32] PAPPG 2025 Section XII. F.4

[33] PAPPG 2025, Section XII.F.5

Hazardous Trees and Limbs

A damaged tree is considered hazardous and eligible for PA through the PAPPG if the tree has been damaged to the extent that it poses an immediate threat to the public. Hazardous tree and limb removal is ineligible if the hazard existed prior to the incident or if the vegetative object/debris is in a natural area and does not threaten or extend over improved property or public-use areas, such as trails, sidewalks, or playgrounds. [34]

Contractors typically charge debris removal based on a unit price for volume (cubic yards) or weight (tons). A hazardous tree may be collected individually. When these items are collected individually, contractors often charge a price per tree based on its size. It is preferred by FEMA for the County to procure branch and/or limb removal from trees on a one-time charge per tree basis as opposed to a unit price per limb or branch to facilitate more cost-effective operations.

Bracing a tree is eligible as Category B (emergency) work. The County will work with a registered professional forester, an individual with a Tree Risk Assessment Qualification, or a certified arborist to perform hazard tree assessments to determine those trees that can be saved by bracing without causing a public health and safety concern.

Hazardous Tree Removal

FEMA considers incident-damaged trees to be hazardous and eligible for removal if the tree presents a hazard to the public due to conditions, including but not limited to:

- Deterioration or physical damage to the root system, trunk, stem, or limbs; or
- The direction and lean of the tree per the Occupational Safety and Health Standards.

For hazardous trees that have 50 percent or more of the root-ball exposed, removal of the tree and root-ball and filling the root-ball hole are eligible. For contracted removal of a tree with an exposed root-ball, FEMA will not reimburse two separate unit costs to remove the tree and its root-ball.

For hazardous trees that have less than 50 percent of the root-ball exposed, FEMA only provides PA funding to flush-cut the item at ground level and dispose of the cut portion based on volume or weight. Grinding any residual stump after cutting the tree is ineligible.

The removal of hazardous trees that pose an immediate threat to life, public health and safety, or significant damage to improved public or private property, as assessed by County in coordination with a qualified individual is eligible. [35]

Broken Limb and Branch Removal

Broken limbs and branches are eligible for removal if they pose an immediate threat. An example is a broken limb or branch hanging over improved property or public-use areas such as sidewalks,

[34] PAPPG 2025, Section XII.A.

[35] PAPPG 2025 Section XII.A.2

playgrounds, or trails. Importantly, only the minimum cut necessary to remove the hazard is eligible for reimbursement. In addition, FEMA will not fund the removal of broken limbs or branches on private property unless all the following criteria are met:

- Limbs or branches extend over the public ROW.
- Limbs or branches pose an immediate threat.
- The County can remove the hazard from the public ROW (without entering private property).

Hazardous Tree Stumps

Following initial ROW debris removal efforts, the County and monitoring firm may determine a significant threat remains to the public in the form of hazardous stumps along the ROW. Before ROW stump removal operations commence, all applicable Disaster Specific Guidance (DSG) criteria or PAPPG for eligibility should be reviewed. The stump must pose an immediate threat to public health and safety to be eligible. [36]

For stumps that have 50 percent or more of the root-ball exposed, removal of the stump and filling the root-ball hole are eligible. If grinding a stump in-place is less costly than extraction, grinding the stump in-place is eligible.

Stump removal in areas with known or high potential for archaeological resources requires that FEMA EHP further evaluate and consult with the state historic preservation officer. If the County discovers any potential archeological resources during stump removal, the County must immediately stop work and notify FEMA. For highly sensitive areas, such as cemeteries or Tribal Nation lands, FEMA will determine if a qualified monitor is required.

Contracted Stump Removal

Only contracted costs charged on a per-stump basis are reimbursed by FEMA if extraction is required as part of the removal. The County needs to ensure the price for stump removal includes extraction, transport, disposal, and filling the root-ball hole.

For stumps that have less than 50 percent of the root-ball exposed, FEMA only provides PA funding to flush-cut the item at ground level and dispose of the cut portion. Grinding any residual stump is ineligible.

For stumps that do not require extraction, FEMA only provides PA funding based on volume or weight, as removal of these stumps does not require special equipment.

If the County incurs additional costs in picking up stumps that the contractor did not extract, it should present information or documentation to substantiate the costs as reasonable based on the equipment required to perform the work.

[36] PAPPG 2025 Section XII.A.3

2.7.15 Animal Carcass Removal

The County will coordinate with the Natural Resource Conservation Service (NRCS), the United States Department of Agriculture, the EPA, and the United States Coast Guard (USCG) on animal carcass removal. These agencies have various programs that may be of service depending on the situation of the carcasses.

If none of these agencies provides a program that will meet the needs of the County, and there is an immediate threat to public health or safety, then removal and disposal of animal carcasses may be approved under PA funding for non-small animals if conducted as part of the overall debris removal efforts under Category A work. Smaller animal carcasses (e.g., rodents, skunks, or possums) do not usually pose an immediate threat to public health or safety. Removal and disposal of these carcasses is ineligible unless the public health official determines a threat to public health or safety exists. [37]

2.7.16 Waterways Debris

Due to its coastal nature and inland waterways, Orange County is prone to unique but substantial damage as a result of a significant storm event. Damage can include flood damage, beach erosion, sand displacement, private property devastation (requiring structure demolition and/or vegetative debris removal), and inland waterway disruption in the wake of a large storm.

Debris removal from waterways that is necessary to eliminate an immediate threat to life, public health and safety, or improved property is eligible. Removal of debris in a waterway that does not meet this criterion is ineligible, even if the debris is deposited by the incident.

Certain federal agencies hold specific authority for debris removal in waterways. For effective coordination and to respect their areas of responsibility, agencies like the EPA and USCG should be consulted before debris removal begins. The EPA and USCG have specific authority over the removal of hazardous materials: the EPA handles hazardous material removal in most inland water areas, while the USCG is responsible for coastal waters, navigable lakes, and rivers outside of inland zones. Debris removal from waterways usually requires coordination with the U.S. Army Corps of Engineers (USACE) for the use of a nationwide permit and with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service to ensure compliance with Section 7 of the Endangered Species Act.

- United States Army Corps of Engineers (USACE) – Primary responsibility for debris removal from federally maintained navigable channels and waterways
- EPA – Responsible for the emergency removal of oil, pollutants, hazardous materials, and their containers from inland zones
- USCG – Responsible for the removal of oil discharges and hazardous substance releases that occur in the coastal zone

[37] PAPPG 2025 Section XII.S

- DWR – Responsible for managing California's water resources, systems, and infrastructure and for preventing and responding to floods, droughts, and catastrophic events.

Waterway Debris Removal Assistance Programs[38]

Damage to publicly owned marinas caused by a major disaster can include abandoned sunken boats and other debris that may impede navigation. The procedures used for individual sites may be modified for this situation. County planners should coordinate with USCG, the state marine patrol, local government agencies, legal counsel, marine salvage contractors, commercial divers, and certified surveyors to ensure that navigation hazards are removed safely and efficiently.

It is important for the County to understand the documentation requirements and jurisdictional boundaries prior to conducting debris removal from waterways because of the different state and federal agencies involved. This section provides an overview of the assistance programs and eligibility requirements for waterway debris removal.

Navigable Waterways

If the County has legal responsibility for maintenance of a navigable waterway, removal and disposal of debris that obstructs the passage of vessels is eligible to a maximum depth of 2 feet below the low-tide draft of the largest vessel that utilized the waterway prior to the incident. Any debris below this zone is not eligible unless it is necessary in order to remove debris extending upward into an eligible zone.

If a tree is still rooted to an embankment and is floating or submerged, the cost to cut the tree at the water's edge is eligible.

Debris removal from federally maintained navigable waterways is ineligible. The USCG and the USACE have specific authorities for removal of hazardous substances, vessels, and other obstructions from federally maintained navigable waterways.

Non-navigable Waterways, Including Flood Control Works, and Natural Waterways

Debris deposited by the incident may obstruct a natural waterway (that is, a waterway that is not improved or maintained) or a constructed channel, including flood control works. In these cases, removal of the debris from the channel is eligible if the debris poses an immediate threat, such as when the debris:

- Obstructs, or could obstruct, intake structures;
- Could cause damage to structures, such as bridges and culverts; or
- Is causing or could cause flooding to improved public or private property during the occurrence of a 5-year flood.

[38] PAPPG 2025 Section XII.B

Removal of the obstruction is eligible even in streams where debris removal would also be eligible under the NRCS Emergency Watershed Protection Program unless NRCS provides assistance for the debris removal. However, debris removal from flood control works that are under the specific authority of NRCS is not eligible for FEMA PA funding, even if NRCS does not have sufficient funding or does not provide assistance. Additional information on the NRCS Emergency Watershed Protection Program website.[39]

For flood control works that are eligible for the USACE Rehabilitation and Inspection Program, debris removal is eligible for FEMA PA funding. USACE does not reimburse public entities for debris removal but conducts this activity directly when necessary.

Debris operations in waterways may require 404 permits from USACE, 401 water quality certifications from the Regional Water Quality Control Board, and Emergency Notification to the California Department of Fish and Wildlife within 14 days of the work. The County may also be required to replace trees at multiple ratios. Debris removal can also be hindered during nesting season, which can begin as early as February 1 and last until mid-September.

Identifying Debris Impact Locations

The County is responsible for identifying debris deposited by the incident that poses an immediate threat. Random surveys to look for debris, including surveys performed using side scan sonar, are not eligible. However, if the County identifies an area of debris impacts and demonstrates the need for a survey to identify specific immediate threat, FEMA may provide PA funding for the survey in that location, including the use of side scan sonar.

Documentation

For FEMA to determine that debris removal from waterways is eligible, the County must provide documentation that:

- Establishes legal responsibility;
- Includes the basis of the immediate threat determination;
- Identifies locations, types, and quantities of debris; and
- Demonstrates the debris claimed was deposited by the incident and was not pre-existing.

2.7.17 Environmental and Historic Preservation Compliance Considerations

Although debris removal is generally statutorily excluded from the National Environmental Policy Act and the CEQA, FEMA must verify compliance with other federal laws and regulations prior to funding the work. Accordingly, FEMA must confirm that the County's debris removal operations avoid impacts to floodplains, wetlands, federally listed threatened and endangered species and their critical habitats, and historic properties (including maritime or underwater archeological resources if waterways are impacted).

[39] Emergency Watershed Protection | Natural Resources Conservation Service

2.7.18 Wildland Fire and Severe Drought

The 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

Assistance programs are provided for fire disasters by FEMA. Regional FEMA Administrators have the authority to issue Fire Management Assistance Grant (FMAG) declarations for wildfires that threaten such destruction that would constitute a major disaster. The FMAG Program is separate and distinct from the FEMA PA Grant Program. FMAG declaration criteria, eligibility, and other program information is available in Title 44 of the CFR Part 204, FMAG Program, and in FEMA's FMAG Program Guide (FEMA P-954).

Under debris management, it is important to recognize a FMAG as a special program as it covers Category A – Debris Removal and Category B – Emergency Protective Measures. The DDMP will be applied when there is an FMAG issued for a fire incident. If significant damage occurs as a result of one or more FMAG fire incidents, the Governor may subsequently request a major disaster declaration for the fire incident(s). Such requests will be evaluated by FEMA based on damage and costs not covered under the FMAG Program, such as public infrastructure damage or what is known as permanent work. If the President declares a major disaster and authorizes the FEMA PA Grant Program, FEMA generally funds all of the costs related to those fire incidents under the FEMA PA Grant Program for efficiency in administration of assistance and to avoid a duplication of benefits between programs.

Fire-Damaged Residential Structures

Ash and debris from residential structures burned by fires can contain concentrated amounts of heavy metals, such as antimony, arsenic, cadmium, copper, lead, and zinc as discussed in the "Assessment of Burn Debris - 2007 Wildfires San Bernardino and San Diego Counties, California".[40]

Residual materials such as stucco, roofing, floor tile, linoleum, fireplaces, furnaces, vinyl tiles and mastic, sheetrock and joint compound, asbestos cement pipe, exterior home siding, thermal system insulation and other building materials commonly used in homes built before 1984 may also contain other chemicals of concern such as asbestos.

The type and number of hazards will depend on each site's specific conditions such as how much of the structure is remaining, the age of the structure, and the building materials used. If only ash

[40] http://www.calepa.ca.gov/Disaster/Fire/

and debris are present, a home site can be expected to contain elevated levels of heavy metals and possibly asbestos.

Fire-Damaged Trees

It can be necessary for a certified arborist to perform an assessment of all trees in the fire-impacted area and identify those trees that pose a hazard and must be removed. The objectives of the tree assessment and inventory should include:

- Identification of all trees damaged by the incident
- Assessment of the damage and survivability of each tree
- Assessment of each tree against established indicators of hazardous tree criterion
- Determination of which trees should be removed during recovery efforts

Due to the subjective nature of tree survivability assessments and working with different federal and state partners, it is important to coordinate closely with FEMA, Federal Highway Administration (FHWA), CalOES, and California Department of Fish and Wildlife during this process in order to properly identify and document fire-damaged trees.

Erosion Control

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 soil 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 impact surface waters.

The main objective of erosion control is to 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. Efforts 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.

The County as the OA will serve as a liaison with state and federal representatives for disaster assistance options, environmental considerations, and technical assistance. The OA will provide technical assistance and coordinate resources for debris operations following a fire to impacted public entities as requested.

2.8 Crime Scene Debris

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

2.8.1 Public and Responder Safety

Public safety and responder safety are 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.

2.8.2 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 from 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.

2.8.3 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.

2.8.4 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 always wearing appropriate PPE.
- 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 at 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 secured by law enforcement continuously.

2.9 Obtain Permits

The County must comply with all local, state, and federal regulations when conducting debris operations. The County will make every effort to obtain permits in advance of a disaster. During catastrophic incidents, emergency waivers might be granted by state and federal agencies to expedite debris operations. However, the County should assume all regulatory requirements will remain as normal procedures. This includes obtaining the following permits:

- Waste processing and recycling operations permit
- Temporary land-use permits
- Land-use variances
- Traffic circulation strategies
- Air quality permits

- Water quality permits
- Coastal commission land-use permits
- HHW permits
- Fire department permits
- Establishment and operations planning
- Environmental permits and land-use variances required to establish a TDMS

2.10 Provide Public Information

After a disaster, residents want answers regarding recovery operations. The goal of the public information strategy is to ensure residents are given accurate and timely information for their use and own individual planning purposes. The information should include the parameters, rules, and guidelines of debris operations so residents can begin their personal recovery activities. The staff responsible for developing and writing the information must present the information in a clear, direct, and organized manner. The language used must be simple and easy for all residents to understand as well as be presented in multiple languages representative of the languages spoken in the affected communities. Sample public information messages and debris separation graphics in English and Spanish can be found in Appendix 5.13.

The Public Information Officer will distribute information and educate citizens about debris operations. Planning includes use of different types of media to disseminate information (social media, print, television, radio, internet). Pre-scripted information will be distributed concerning topics, such as:

- Health and safety information
- Debris pick-up schedules
- Public information announcements
- Disposal methods
- Ongoing actions to comply with federal, state, and local environmental regulations
- Disposal procedures for self-help and independent contractors
- Restrictions and penalties for creating illegal dumps
- Curbside debris segregation instructions
- Public drop-off locations for all debris types
- Process for answering the public's questions concerning debris removal

The following is a list of topics that should be included within the campaign:

2.10.1 Collection

If curbside collection:

- Will the County employees or a contractor collect the debris?
- What are the schedules and the routes for collection?
- What is the final collection date for streets, sectors, or subdivisions?
- What type of debris will be collected?

2.10.2 Collection Centers

- Where are the collection centers?
- What are the daily collection center hours?
- Is debris to be segregated at the collection centers?
- What types of debris will be accepted at the centers?
- How long will the collection centers accept disaster-related debris?

2.10.3 TDMS

A collection center and a TDMS may be the same site. If so, the same information for the collection centers above applies to the TDMS, along with:

- Where can a resident find a site map of the TDMS for public debris drop-off of HHW, C&D debris, etc.?
- Are these areas segregated and well-marked for vehicular traffic?
- Will residents be charged a fee to use the TDMS?
- Will residents be restricted as to how much disaster-related debris can be dropped off at the TDMS?
- Will the TDMS have burning, chipping, or grinding operations? If so, during which hours will these activities take place? Address any environmental concerns the public may have as well.
- How long will residents be able to bring their disaster-related debris to the TDMS?
- How long will the TDMS be open to process (reduce/recycle) debris?
- Are there traffic changes that will impact the general public due to the location or operation of the TDMS site?

2.10.4 Distribution Strategy

The public information strategy should include its methods to disseminate the prepared information to the public. This can be accomplished in several ways. The following are suggested vehicles for distributing the information:

- Media – Social media, local television, radio, newspapers, or community newsletters
- Internet Site – Applicant website and debris information flyers for printing
- Public Forums – Interactive meetings at town hall or shopping mall kiosks
- Direct Mail Products – Door hangers, direct mail, fact sheets, flyers within billings, and billboards
- Local Assistance Centers
- Public Agency Facilities

The public information staff must take advantage of every information vehicle available if power, utilities, and other infrastructure have been damaged. Many times, the best carriers of information are the responders in the field.

Orange County and Orange County OA Joint Information Systems Annex will be implemented to support the public information needs for debris management.

2.11 Compile and Reconcile Debris-Related Costs

The County has internal systems used to account for internal labor hours and equipment use. The County should use these existing systems to capture the information required for potential reimbursement. The County will also need to compile invoices from contracted service providers. Debris monitoring contractors commonly use ADMS for documenting load tickets, disposal logs, and for compiling collection data.

This information should include:

- Contract solicitations and agreements
- Load ticket information
    - Ticket time/date
    - Applicant
    - Disaster
    - Contractor
    - Truck number
    - Capacity
    - Driver
- Collection information
    - Global positioning system (GPS) (latitude, longitude)
    - Address
    - Debris type
    - Loading date/time
    - Monitor name/ID
- Disposal information
    - Ticket date/time
    - GPS (latitude, longitude)
    - Disposal site
    - Load call
    - Disposal date/time
    - Scale ticket number (if applicable)
    - Weight (in tons if applicable)
    - Monitor name/ID
- Quantity, rate, and total for each load
- TDMS locations
- Disposal site locations
- Photos
- Retainage

- Administrative costs.

2.12 Assisting People with Disabilities and Those with Access and/or Functional Needs

Some residents will be unable to bring their debris to the ROW for collection. The County will coordinate assistance to residents who are unable to bring their debris to the road ROW or TDMS locations with the Orange County Collaborating Organizations Active in Disasters (COAD) group. The COAD has a debris management sector with nonprofit organizations identified to assist with this need and resource is accordance with the County Recovery Plan, COAD Emergency Management Plan and using the collaboration of the Recovery Debris Management Task Force.

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, the County will identify and support populations with access and functional needs during debris management in the following areas.

2.12.1 Emergency Roadway Clearance

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

2.12.2 ROW Collection

Collection on the ROW 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. Public entities can coordinate with COAD to identify potential vulnerable populations and coordinate services to assist with debris removal for residents needing assistance.

The Cal OES Office of Access and Functional Needs as well as Assembly Bill 2311 Planning Guidance provides information on how to support individuals with access and functional needs during disasters. More information on ways to assist and engage the Access and Functional Needs community can be found on the California Access and Functional Needs Library website.[41]

2.12.3 Debris Reduction by Incineration

Rarely, debris can be reduced at TDMS 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

[41] AFN Library | California Governor's Office of Emergency Services

individuals with health and respiratory challenges that might be exacerbated by this reduction process.

2.12.4 Resident Compliance

Code Enforcement in collaboration with other agencies with enforcement powers such as Orange County Fire Authority will enforce nuisance and abatement codes for residents who are unwilling to bring their debris to the road ROW for collection or unwilling to dispose of their debris properly.

2.13 Organization and Assignment of Responsibilities

2.13.1 Roles and Responsibilities

The County Debris Management Operations will be overseen by the Debris Project Manager and administered by five sections: Operations; Logistics; Planning and Intelligence; Finance and Administration; and Management. Each will report to their OA, EOC counterpart. The following table describes the roles and responsibilities for each entity involved in disaster debris operations.

Table 2-4 Organizational Roles and Responsibilities

Department	Roles and Responsibilities for Debris Operations
County Departments	
County Executive Office (CEO)	• 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. • Provide support to implement staff augmentation plans, reassign staff to emergency roles, and provide resources to impacted staff. • Review debris operations procedures for compliance with applicable local, state, and federal regulations. • Provide assistance with regulatory reviews, audits, and appeals regarding disaster assistance for debris operations.
Orange County Sheriff's Department (OCSD), Emergency Management Division	• Implement County of Orange and the OA EOP. • Establish and maintain the County EOC/OA 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 the SEMS and approved mutual aid and operations plans.
OCPW	• Serve as the Debris Project Manager for the County. • Activate and implement the DDMP. • Conduct damage assessments and estimate debris totals. • Oversee debris operations including internal resources, mutual aid resources, and contracted services providers. • Coordinate with local, state, and federal agencies regarding regulatory requirements for debris operations. • Coordinate with special districts for information and resources. • Obtain approval from regulatory agencies for TDMS.

Department	Roles and Responsibilities for Debris Operations
	• Provide situational updates on debris operations to the County Emergency Operations Center (CEOC). • Maintain documentation for federal disaster assistance for debris operations. • Maintain compliance with federal disaster assistance programs for debris removal. • Coordinate with the OCSD, Emergency Management Division to review the County DDMP.
Waste and Recycling (OCWR)	• Provide support to OCPW for debris operations as requested. • Provide support for temporary staging and reduction of debris. • Identify potential end use options for disaster debris. • Provide for final disposition of disaster debris at OC landfills.
Parks	• Conduct debris removal from County parks. • Provide support for debris operations as requested.
Health Care Agency	• Provide justification for debris removal operations if debris poses a public health threat to affected populations. (Health Officer) • Provide public health-related guidance and oversight for debris operations. • Coordinate with state and federal agencies for guidance on environmental regulations. • Serve as the LEA.
OCPW Accounting/County Finance Office	• Understand current federal disaster assistance program guidance and regulations related to debris operations. • Manage documentation for federal reimbursement for debris operations. • Coordinate with OCPW and Procurement to obtain force account labor, equipment, and overtime documentation related to debris removal operations for potential federal reimbursement. • Monitor and review purchase orders and documents, general ledger entries, cash receipts, and payroll documents related to debris removal operations. • Manage and review contractor invoices for payment.
Orange County Fire Authority	• Enforce nuisance and abatement codes. • Document nuisance and abatement cases to support PPDR. • Maintain awareness of TDMS and operations.

Department	Roles and Responsibilities for Debris Operations
	• Provide emergency services at TDMS in the event of a fire.
Sheriff's Department	• Provide support to secure TDMSs and other debris operations facilities. • Provide law enforcement for illegal dumping.
County Counsel	• Review debris operations procedures for compliance with applicable local, state, and federal regulations. • Support the jurisdiction with regulatory reviews, audits, and appeals regarding disaster assistance for debris operations.
Public Information • OCPW (Lead) • OCWR • CEO • OCHCA • OCSD	• Coordinate with appropriate agencies and departments in the County to develop public information messages related to debris operations. • Provide press releases related to debris removal operations, set-out procedures, and resident debris drop-off locations. • Provide timely information regarding debris operations in accessible formats.
Procurement (All impacted County Agencies with Debris Removal Projects)	• Provide support to procure goods and services for debris removal operations. • Coordinate with Procurement to ensure that disaster debris services are procured following local, state, and federal procurement regulations. • Review and update emergency procurement policies as necessary following an emergency. • Assist with the documentation of debris operations for potential federal reimbursement. • Support audit and closeout of debris projects.
CEO Office of Risk Management	• Provide recommendations for health and safety procedures for debris operations. • Coordinate with the OCHCA, OCWR and OCPW to review solid waste management sites, including administration buildings, recycling centers, landfills, and transfer stations for damage, safety, and health issues.
State Agencies	
California Coastal Commission	• Provide regulatory guidance and oversight on debris removal from waterways.
California Department of Fish and Wildlife	• Provide disaster-specific guidance on regulations for debris operations regarding endangered or protected species and habitats.

Department	Roles and Responsibilities for Debris Operations
	• Provide guidance on regulations for debris operations within streams and lakes. • Provide support to public entities for debris removal in natural habitats.
California Department of Food and Agriculture	• Provide guidance on regulations and best practices for debris management of diseased trees and vegetation.
California Department of Public Health	• Provide disaster-specific guidance on environmental regulations for debris operations. • Provide support to public entities for potential debris management site review and approval.
CalEPA	• Provide guidance on environmental regulations regarding debris operations. • Provide technical assistance for debris removal of hazardous materials. (DTSC). • Provide support and guidance for debris removal operations including potential provision of resources. (CalRecycle). • Provide approvals for TDMS and emergency waivers of standards such as permitted capacity, throughput, and acreage for permitted solid waste facilities. (CalRecycle).
California Highway Patrol	• Provide support to address derelict vehicles and other transportation related debris. • Provide traffic control and security for debris clearance from state-maintained roadways.
CalOES	• Serve as a liaison between state and federal agencies. • Provide industry standards and best practices for debris operations. • Serve as the administrator of disaster grants for debris operations. • Provide guidance on documentation requirements for disaster assistance for debris operations.
California Department of Transportation (CalTrans)	• Provide guidance on debris operations from the ROW. • Conduct debris removal from state-maintained roadways. • Provide guidance for state and federal disaster assistance programs.
South Coast AQMD	• Provide regulatory guidance and oversight regarding air quality and debris operations.
Water Quality Control Boards (Santa Anna and San Diego)	• Provide regulatory guidance and oversight on debris removal within state waters and at landfills.

Department	Roles and Responsibilities for Debris Operations
Federal Agencies	

FEMA	• Provide technical assistance for debris operations.
	  ○ EHP review process
	  ○ FEMA PA Grant Program reimbursement process
	  ○ Procurement assistance
	• Assign federal mission assignments as requested.
	  ○ Emergency Support Function (ESF) #3 - Public Works and Engineering
	  ○ ESF #10 - Oil and Hazardous Material Response
	• Administer the FEMA PA Grant Program for Category A Debris Removal.
	  ○ Maintain safety, eligibility, and compliance.
	• Coordinate with other federal agencies as necessary to support debris operations.

FHWA	• Support repair and reconstruction of federal aid highways and roads on federal lands. • Provide funding for debris operations through the FHWA - Emergency Relief program.
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.
U.S. Army Corps of Engineers	• Serve as primary federal entity for 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. • Coordinate with other federal agencies including U.S. Fish and Wildlife and NMFSs, as necessary.
U.S. Department of Homeland Security	• Provide technical assistance for debris operations following terrorism incidents.
Other	
Water Districts	• Coordinate with the County to provide disaster debris damage following a disaster.

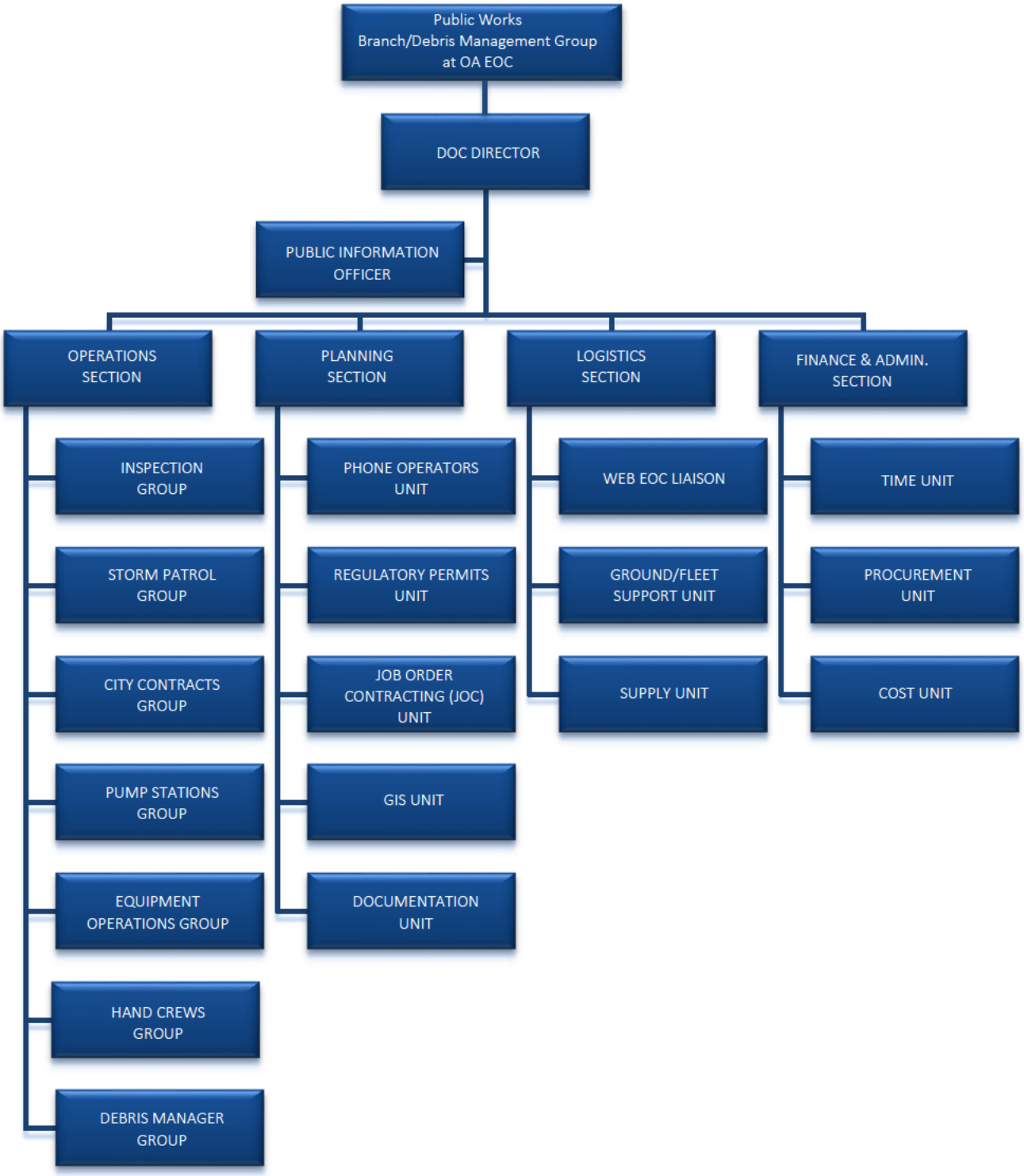
Department	Roles and Responsibilities for Debris Operations
	• Provide status updates and information on debris management operations.
Private Sector	• Build relationships with community emergency managers and other officials to have an active voice in the debris operations. • Develop, test, and implement 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. • Maintain contracts that comply with federal procurement requirements. • Communicate status of operations and supply chains as well as challenges and timelines 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.
Nonprofit Sector	• Coordinate with public entities to identify underserved populations and incorporate strategies to assist these populations in local debris management plans. • Coordinate with public entities and volunteer organizations post-disaster to assist individuals with disabilities and those with access and/or functional needs with bringing debris to the public ROW. • Coordinate with public entities 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. • Provide debris removal from a public ROW to allow the safe passage of emergency vehicles, and from public and private property to eliminate health and safety hazards. • Provide debris removal from a public ROW to allow the safe passage of emergency vehicles, and from public and private property to eliminate health and safety hazards.
Residents	• 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 resident drop-off locations.

Department	Roles and Responsibilities for Debris Operations
	• Recycle debris to the greatest extent possible. • Use caution when operating equipment and dangerous machinery. • Help others who may need assistance with debris removal.

2.14 Direction, Control, and Coordination

The coordination of debris management services will be led by OC Public Works unless otherwise directed by the County Director of Emergency Services. The **Error! Reference source not found.** d epicts the DOC/DDMP Staffing Organizational Chart (staffing is determined on an as needed basis).

Figure 2.7 OC Public Works DDMP DOC Organization Chart



2.15 Administration, Finance, and Logistics

2.15.1 Finance

Debris is typically an uninsured loss leaving the County with few options to cover the costs. Specialized equipment, personnel, and other resources are required to manage large debris events. The federal government provides several assistance programs through various agencies to support debris operations. However, these programs have extensive documentation requirements that public entities need to understand before a disaster occurs.

Additionally, the policy guidance for these assistance programs changes and adapts with lessons learned from each disaster across the United States. It is important for the County to maintain awareness of current federal assistance program guidance and regulations related to disaster debris federal funding programs as the change frequently. Each county agency involved with debris management is a part of Orange County Recovery Plan and has processed in place to track costs for personnel, equipment, and projects as they related to this plan. Additionally, the OCPW PA Applicant Agent for both state and federal programs should be contacted before any work if there is a question pertaining to any debris management project.

2.15.2 California Disaster Assistance Act

The State can provide assistance through the CDAA.[42] The CDAA was created to assist the State in managing 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.

2.15.3 Federal Emergency Management Agency PA Program

The mission of the FEMA PA Grant Program is to provide assistance to state and local governments and certain private nonprofit 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 FEMA PA Grant Program.[43] The FEMA PA Grant Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

[42] California Disaster Assistance Act | California Governor's Office of Emergency Services

[43] Assistance for Governments and Private Non-Profits After a Disaster | FEMA.gov

2.15.4 Logistics

The County has identified internal resources, including personnel, equipment, supplies, and technology that will be available during a disaster to support debris operations. In addition, the County maintains mutual aid agreements that can be activated if additional resources are needed to manage debris. The process to request mutual aid can be found in the County and OA EOP.

The County also has secured contracted service providers that can be activated to support disaster debris operations.

If the County does not have the capability required to respond to a presidentially declared disaster, a request for Technical or Direct Federal Assistance may be made. The approved request is called a Mission Assignment and can only be requested by the State. A Mission Assignment is a work order issued by FEMA to another federal agency directing completion of a specific assignment in anticipation of, or response to, a Presidential declaration of a major disaster or emergency.

The County through the EOC will mission task resources and mission needs using the standard request process to the CalOES Southern Regional EOC. Below is a reference guide to assist debris management mission requests with the ESFs at the federal level.

There are three ESFs that perform debris-related activities under FEMA Mission Assignments:

- ESF #3 – Public Works and Engineering is responsible for infrastructure protection, emergency repair, and restoration. This group provides engineering services and construction management and serves as a critical infrastructure liaison. The USACE is the lead agency for ESF #3.
- ESF #10 – Oil and Hazardous Material Response is responsible for responding to oil and hazardous material issues, environmental safety, and short- and long-term cleanup. The two most commonly deployed agencies that deal with these debris-related activities are the U.S. EPA and the USCG.
- ESF #11 – Animal and Plant Disease and Pest Response is responsible for coordinating an integrated federal, state, tribal, and local response to an outbreak of a highly contagious or economically devastating zoonotic (transmissible from animal to human) disease, an outbreak of a highly infective exotic plant disease, or an economically devastating plant pest infestation. This ESF is coordinated by the United States Department of Agriculture.

All mission assignments have the following requirements:

- The community must demonstrate that required disaster-related efforts exceed state and local resources.
- The scope of work must include specific quantifiable measurable tasks.
- The Mission Assignment is issued by FEMA.

Chapter 3 PLAN DEVELOPMENT AND MAINTENANCE

3.1 Overview

The development of the DDMP is a cooperative effort among all County and OA agencies and jurisdictions that have an emergency response and recovery role. The planning process is designed to: ensure a commitment to the tenets contained in the plan, consider the needs of the community, incorporate the various supporting agencies' capabilities and limitations, and maximize resources. Each department and stakeholder is equally engaged in the development of this DDMP. They are solicited for input, best practices, and lessons learned. Each comment or recommendation is carefully considered and, if appropriate, and then the DDMP is submitted to the Emergency Management Council[44] and Operational Area Executive Board[45] for approval.

3.2 Plan Maintenance

The OCSD-EMD maintains a revision process and schedule for all plans, annexes, and supporting documents, including the DDMP. OCPW is tasked with maintaining the DDMP with support from the OCSD-EMD.

The DDMP will be reviewed and updated bi-annually in accordance with CPG 101v3.1, or as necessary following an actual or training event, to ensure that the plan elements are valid and current. The OCPW will lead the responsible jurisdictions, agencies and departments in reviewing and updating their portions of the plan as required based on identified deficiencies experienced in drills, exercises or actual occurrences. The OCPW is responsible for making revisions to the DDMP that will enhance the conduct of response operations and will prepare, coordinate, and publish any necessary changes to the DDMP to all entities described in Record of Distribution section

3.3 Training and Exercises

The OCSD-EMD, in collaboration with other County agencies and local jurisdictions, develops and implements a multi-year Integrated Preparedness Plan (IPP). The UPP documents the cycle of planning training, and exercises on all plans, annexes, and supporting documents, including the DDMP.

A well-developed training and exercise program is vital to ensuring overall readiness and preparedness. Training ensures personnel are prepared for their roles and responsibilities. Exercises test the capabilities, resources, and working relationships of responding agencies.

[44] The Emergency Management Council is responsible for developing and recommending emergency and mutual aid plans, agreements, ordinances, resolutions, rules and regulations for adoption by the Orange County Board of Supervisors.

[45] The Operational Area Executive Board is responsible for developing and recommending emergency and mutual aid plans, agreements, resolutions for adoption in accordance with the Operational Area Agreement.

Each jurisdiction within the OC OA is responsible for its own planning, training and exercises, as well as involvement in Operational Area planning, training and exercises as required by the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) and described in the County of Orange and Orange County Operational Area Unified Emergency Operations Plan.

Additional training recommendation for County employees involved with debris operations includes the following.

3.3.1 General

- Public entities should train new personnel 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 public entity or a qualified designee.
- Personnel with responsibility for preparing documentation for reimbursement will receive training on the FEMA PA Program.
- All personnel involved in response to a debris-generating incident will participate in a briefing on safety policies and procedures.

3.3.2 Debris Managers

- Debris managers should be trained in the regulatory requirements for debris operations including:
  - Health and safety
  - EHP
  - Procurement
  - Federal disaster grant programs
  - Considerations for individuals with disabilities and access and functional needs
  - Damage assessment for debris

FEMA provides additional training related to debris operations that can be found at the following links:

3.3.3 Classroom Training

- E202 Debris Management Planning for State, Tribal, and Local Officials
  - http://training.fema.gov/emicourses/crsdetail.aspx?cid=E202&ctype=R

3.3.4 Independent Study Courses

- IS-1000: Public Assistance Program and Eligibility
  - https://training.fema.gov/is/courseoverview.aspx?code=IS-1000&lang=en
- IS-556: Damage Assessment for Public Works
  - http://www.training.fema.gov/is/courseoverview.aspx?code=IS-556
- IS 559: Local Damage Assessments
  - http://www.training.fema.gov/is/courseoverview.aspx?code=IS-559
- IS-558 Public Works & Disaster Recovery
  - http://www.training.fema.gov/is/courseoverview.aspx?code=IS-558
- IS-5.a: An Introduction to Hazardous Materials
  - http://www.training.fema.gov/is/courseoverview.aspx?code=IS-5.a
- IS-552: The Public Works Role in Emergency
  - https://training.fema.gov/is/courseoverview.aspx?code=IS-552&lang=en
- IS-1190: The National Oil & Hazardous Substances Pollution Contingency Plan and the National Response System Independent Study Course
  - https://training.fema.gov/is/courseoverview.aspx?code=IS-1190&lang=en

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Chapter 4 AUTHORITIES AND REFERENCES

The following Authorities and References related to this DDMP are listed below:

This section provides the legal basis for emergency operations and activities. This section of the plan includes:

- Lists of laws, statutes, ordinances, executive orders, regulations, and formal agreements relevant to emergencies (e.g., MAAs)
- Specification of the extent and limits of the emergency authorities granted to the senior official, including the conditions under which these authorities become effective and when they would be terminated
- Pre-delegation of emergency authorities (i.e., enabling measures sufficient to ensure that specific emergency-related authorities can be exercised by the elected or appointed leadership or their designated successors)

Provisions for COOP and COG (e.g., the succession of decision-making authority and operational control) to ensure that critical emergency functions can be performed.

** The following is a pick list from the Unified County and OA EOP and existing Annexes to serve as a starting point. You should add and subtract as resources and authorities for your project area need to be added.

4.1 Federal

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, Public Law 93-288
- Sandy Recovery Improvement Act included as Division B of the Disaster Relief Appropriations Act, Public Law 113-2, signed into law January 29, 2013
- Disaster Recovery Reform Act of 2018
- U.S. Code, Title 23 Highways, Part 668 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 (CFR), Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200)
- U.S. Code, Title 42, Chapter 103, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6901, et seq.
- Federal Clean Water Act, 33 U.S.C. §1251, et seq.
- Toxic Substances Control Act, 15 U.S.C. §2601, et seq.
- Occupational Safety and Health Act, 29 U.S.C. §651, et seq.

- Hazardous Materials Transportation Act, 49 U.S.C. §5101, et seq.
- Clean Air Act, 42 U.S.C. §7401, et seq.
- FEMA Comprehensive Planning Guide (CPG) 101, Version 3.1, May 2025
- FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide, 2025
- FEMA Preliminary Damage Assessment Guide, July 2025
- FEMA 329 Debris Estimating Field Guide, September 2010
- National Response Framework, Department of Homeland Security, Fourth Edition, October 2019
- National Disaster Recovery Framework, Department of Homeland Security, 2nd Edition, June 2024
- Environmental Protection Agency, Planning for Natural Disaster Debris, June 2025, EPA 530-R-25-013

4.2 State

- Short-Lived Climate Pollutants: Title 14 Natural Resources, Division 7 Department of Resources Recycling and Recovery, Chapter 12
- 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 et seq.
- 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
- California Health & Safety Code Prohibited Acts §41800
- California Public Resources Code §40000, et seq.
- 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 §§25115-25117.14, 25249.8, 25281
- California Water Code §13050

- California Office of Emergency Services (CalOES) 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
- California Vehicle Code 22650 et al.

4.3 County

- County of Orange, Code of Ordinance, Title 3, Division 1 (Emergency Services)
- County of Orange, Code of Ordinance, Title 3, Division 13 Property Maintenance (Nuisance and Abatement)
- County of Orange, Code of Ordinance, Title 4, Division 3, Article 2 Solid Waste Management
- County of Orange, Code of Ordinance, Title 6, Division 4, Article 8 Abandoned, Wrecked, Dismantled or Inoperable Vehicles
- County of Orange, Code of Ordinance, Title 7, Division 4, Article 7 Uniform Housing Code
- County of Orange, Code of Ordinance, Title 7, Division 1, Article 2 Buildings and Structures
- County of Orange, Board of Supervisors Resolution 12-036, dated April 17, 2012, adopting the amended membership of Orange County Emergency Management Council and designation of the Director of Emergency Services
- County of Orange, Board of Supervisors Resolution 05-144, adopting the National Incident Management System (NIMS)
- County of Orange Board of Supervisors Resolution, adopting the California Disaster and Civil Defense Master Mutual Aid Agreement
- Orange County Operational Area (OA) Agreement
- Orange County Law Enforcement Mutual Aid Contract
- Orange County Fire Services Mutual Aid Plan
- Orange County Public Works Mutual Aid Plan
- Orange County Operational Area Building Damage Safety Assessment Mutual Aid Agreement
- Orange County Operational Area CERT Mutual Aid Plan (CMAP)
- Unified County of Orange and Orange County Emergency Operations Plan
- County of Orange Hazard Mitigation Plan
- County of Orange San Onofre Nuclear Generating Station (SONGS) Emergency Operations Plan

- County of Orange Waste and Recycling Policy and Procedure, Acceptance and Documentation of Disaster Debris
- County of Orange Procurement Office Regional Cooperative Agreement Policy
- County of Orange County Board of Supervisors, Contract Policy Manual
- County of Orange Tree Preservation Ordinance Sec7-9-69 Orange Zoning Code

4.4 Relationship to Other Plans/References

This County and OA DDMP is the primary document used by the County and OA to describe how debris will be managed following a disaster which generates a large quantity of debris. The plan describes the strategy to manage debris primarily in unincorporated areas of the county. OA jurisdictions are encouraged to have plans for managing disaster debris in their respective jurisdictions.

The DDMP contributes to the recovery of the County following a disaster by describing how disaster debris management activities will be conducted within the County of Orange. The DDMP also describes the roles and responsibilities of County departments as well as the roles of contractors and State and Federal agencies.

If the DDMP is activated in response to a disaster, it is likely other County response and recovery plans will also be activated to respond to the issues that the disaster has brought to bear in the County. So, while the DDMP discusses activities specific to disaster debris management activities, it must also be in concert with other County and Operational Area Plans and Annexes that might be activated in response to a disaster. This DDMP will frequently support/complement other County of Orange and Orange County Operational Area Plans and Annexes including:

- Unified County of Orange and Orange County Operational Area Emergency Operations Plan, November 2021
- County of Orange and Operational Area Aircraft Accident Annex, November 2022
- County of Orange and Operational Area Alert & Warning Plan (including Emergency Alert System Plan), November 2022
- County of Orange and Operational Area Alternate Emergency Operations Center Plan, February 2022
- County of Orange and Operational Area Emergency Public Information Annex, February 2023
- County of Orange and Operational Area Excessive Temperature Annex, May 2021
- County of Orange and Operational Area Flood Annex (including Dam and Reservoir Failure), February 2023
- County of Orange Hazard Mitigation Plan, December 2021
- County of Orange and Operational Area Mass Care and Shelter Annex, November 2022
- County of Orange and Operational Area Mass Evacuation Annex, May 2018

- County of Orange and Operational Area Mass Fatalities Plan, November 2022
- County of Orange and Operational Area Power Outage Annex (including Public Safety Power Shutoff), November 2022
- County of Orange and Operational Area Rail Accident Annex, May 2022
- County of Orange and Operational Area Recovery Annex, May 2015
- County of Orange and Operational Area Terrorism Annex, May 2019
- County of Orange and Operational Area Tsunami Annex, August 2022
- County of Orange and Operational Area Volunteer and Donations Management Annex (including Community Emergency Response Team Mutual Aid Program, and Collaborative Organizations Active in Disasters), November 2021
- Orange County San Onofre Nuclear Generating Station Emergency Operations Plan, May 2021
- Orange County Fire Authority's Hazardous Materials Area Plans
- Orange County Fire Service Operational Area Mutual Aid Plan, December 1997
- Orange County Law Enforcement Mutual Aid, January 2010
- Orange County Tactical Interoperability Communications Plan (TICP), May 2010
- Operational Area Jurisdictions Emergency Plans and Procedures

4.5 Standard Operating Procedures and Guidelines (SOPs or SOGs)

Departments, agencies, and organizations that have responsibilities in this plan should have prepared organizational and/or position-specific SOPs or SOGs detailing personnel assignments, policies, notification rosters, resource lists, and specific steps for accomplishing the functions assigned in this Annex or Plan.

Supporting plans, operating procedures, and checklists developed in concert with this plan will be reviewed periodically by the EMC Sub-Committee under the direction of the Emergency Management Council and OCEMO under the direction of the OA Executive Board.

Chapter 5 APPENDICES

- Acronym List
- County Road Index
- Disaster Debris Contract Services
- OCPW County Maintained Equipment Inventory
- Contract Policy Manual
- Design and Construction Policy Manual
- County Procurement Ethics Guide
- Public Works Mutual Aid Agreement
- Solid Waste Recycling Facilities
- County Franchised Haulers
- Air Monitoring Standards
- Sample Public Information Messages

5.1 Acronyms List

ACP	Asian citrus psyllid
ADMS	Automated Debris Management System
AFN	Access and Functional Needs
AHJ	Authority Having Jurisdiction
ALERT	Automated Local Evaluation in Real Time
AQMD	Air Quality Management District
CAC	Certified Asbestos Consultant
C&D	Construction and Demolition
CalOES	California Office of Emergency Services
CalEPA	California Environmental Protection Agency
CalTrans	California Department of Transportation
CCR	California Code of Regulations
CDAA	California Disaster Assistance Act
CEO	County Executive Office
CEOC	County Emergency Operations Center
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMAP	CERT Mutual Aid Plan
COAD	Collaborative Organizations Active in Disasters
CPG	Comprehensive Planning Guide
CVC	California Vehicle Code
CY	Cubic Yards
DDMP	Disaster Debris Management Plan
DMS	Debris Management Site
DMT	Debris Management Team
DOC	Department Operations Center
DOSH	Department of Occupational Safety & Health

DOT	Department of Transportation
DROC	Debris Removal Operations Center
DSG	Disaster Specific Guidance
DTSC	Department of Toxic Substances Control
EHP	Environmental and Historical Preservation
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESF	Emergency Support Function
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMAG	Fire Management Assistance Grant
HAZWOPER	Hazardous Waste Operations and Emergency Response
HHW	Household Hazardous Waste
HLB	Huanglongbing
HMGP	Hazard Mitigation Grant Program
IA	Individual Assistance
ICS	Incident Command System
LEA	Local Enforcement Agency
MCEF	Mixed Cellulose Ester Filter
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIMS	Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
O&M	Operations and Maintenance
OA	Operational Area
OAEOC	Operational Area Emergency Operations Center

OC	Orange County
OCHCA	Orange County Health Care Agency
OCPW	Orange County Public Works
OCSD	Orange County Sheriff's Department
OSHA	Occupational Health and Safety Administration
PA	Public Assistance
PAPPG	Proposal and Award Policies and Procedures Guide
PPDR	Private Property Debris Removal
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
ROE	Right of Entry
ROW	Right-of-Way
SARA	Superfund Amendments and Reauthorization Act
SEMS	Standardized Emergency Management System
SONGS	San Onofre Nuclear Generating Station
SWIS	Solid Waste Information System
TDMS	Temporary Debris Management Sites
TDSR	Temporary Debris Staging and Reduction
US EPA	U.S. Environmental Protection Agency
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
VOAD	Volunteer Organizations Active in Disasters
WMD	Weapons of Mass Destruction

5.2 County Road Index

The following table provides a list of Major, Primary, and Secondary Arterials. This information is in the process of being converted to an electronic file with the County's GIS department.

Table 5-1: Major Arterial Road List

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	ADAMS AVE BRIDGE	0.03 W/ TO 0.03 E/ SANTA	0.03 W/ TO 0.03 E/ SANTA ANA RIVER	600	SA RIVER BRIDGES	2
COUNTY	ALTON PARKWAY	250' NE/ TO 2173' NE/O IR	250' NE/ TO 2173' NE/O IRVINE BLVD.	15580	NORTH IRVINE	3
COUNTY	ANTONIO PARKWAY	0.08 SW/ DEERPATH TO ORTE	0.08 SW/ DEERPATH TO ORTEGA HIGHWAY	17403	LADERA RANCH	5
COUNTY	ANTONIO PARKWAY	OSO PKWY. TO 0.68 S/ TIJ	OSO PKWY. TO 0.68 S/ TIJERAS CREEK RD.	17407	LAS FLORES	5
COUNTY	ANTONIO PARKWAY (E1/2)	0.01 SW/ TO 0.08 SW/O DEE	0.01 SW/ TO 0.08 SW/O DEERPATH	17404	LAS FLORES	5
COUNTY	ANTONIO PARKWAY (E1/2)	OSO PKWY. TO 0.01 S/O DEE	OSO PKWY. TO 0.01 S/O DEERPATH	17406	LAS FLORES	5
COUNTY	ANTONIO PARKWAY (W1/2)	OSO PKWY. TO 0.08 S/O DEE	OSO PKWY. TO 0.08 S/O DEERPATH	17405	LAS FLORES	5
COUNTY	BOLSA AVENUE	0.25 W/ TO 0.06 W/ BEACH	0.25 W/ TO 0.06 W/ BEACH BLVD.	32600	MIDWAY CITY	1
COUNTY	BOLSA AVENUE	209' E/O BEACH BLVD. TO 1	209' E/O BEACH BLVD. TO 115' W/O WILSON ST.	32601	MIDWAY CITY	1
COUNTY	BOLSA AVENUE	NEWLAND ST. TO PURDY ST.	NEWLAND ST. TO PURDY ST.	32603	MIDWAY CITY	1
COUNTY	BOLSA AVENUE (N1/2)	0.02 W/ WILSON ST. TO NEW	0.02 W/ WILSON ST. TO NEWLAND ST.	32602	MIDWAY CITY	1
COUNTY	BOLSA AVENUE (N1/2)	PURDY ST. TO 0.08 E/	PURDY ST. TO 0.08 E/	32604	MIDWAY CITY	1
COUNTY	BROOKHURST STREET (W1/2)	0.02 N/ TO 0.03 S/O STONY	0.02 N/ TO 0.03 S/O STONYBROOK DR.	38475	ANAHEIM ISLANDS	4
COUNTY	BROOKHURST STREET (W1/4)	BROADWAY TO 473' S	BROADWAY TO 473' S	38480	ANAHEIM ISLANDS	4
COUNTY	CAMPUS DRIVE (NW1/2)	BRISTOL ST. TO MACARTHUR	BRISTOL ST. TO MACARTHUR BLVD.	49475	SANTA ANA HEIGHTS	2
COUNTY	CHAPMAN AVENUE	ESPLANADE ST. TO EARLHAM	ESPLANADE ST. TO EARLHAM ST.	58035	EL MODENA	3
COUNTY	CHAPMAN AVENUE	0.08 W/ TO ORANGE PARK BL	0.08 W/ TO ORANGE PARK BLVD.	58055	ORANGE PARK ACRES	3
COUNTY	CHAPMAN AVENUE	ORANGE PARK BLVD. TO 0.12	ORANGE PARK BLVD. TO 0.12 E/	58056	ORANGE PARK ACRES	3
COUNTY	CHAPMAN AVENUE (N1/2)	0.25 W/ TO 0.08 W/ ORANGE	0.25 W/ TO 0.08 W/ ORANGE PARK BLVD.	58054	ORANGE PARK ACRES	3
COUNTY	CHAPMAN AVENUE (S1/8)	CRAWFORD CANYON RD. TO 49	CRAWFORD CANYON RD. TO 495' E/	58065	PANORAMA HEIGHTS	3
COUNTY	CROWN VALLEY PARKWAY	144' E/JARDINES TO 156' W	144' E/JARDINES TO 156' W/CECIL PASTURE RD.	68581	NORTH LADERA RANCH	5

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	CROWN VALLEY PARKWAY (N1/2)	156' W/CECIL PASTURE TO 6	156' W/CECIL PASTURE TO 61' W/ANTONIO	68582	NORTH LADERA RANCH	5
COUNTY	CROWN VALLEY PARKWAY (N1/2)	60' E/O ANTONIO PKWY. TO	60' E/O ANTONIO PKWY. TO 210' E/O APEX DR.	68585	NORTH LADERA RANCH	5
COUNTY	CROWN VALLEY PARKWAY (S1/2)	282'W/ CECIL PASTURE TO 1	282'W/ CECIL PASTURE TO 127'W/ O'NEILL	68305	NORTH LADERA RANCH	5
COUNTY	CROWN VALLEY PARKWAY (S1/2)	ANTONIO PARKWAY TO SIENNA	ANTONIO PARKWAY TO SIENNA PARKWAY	68306	NORTH LADERA RANCH	5
COUNTY	CROWN VALLEY PARKWAY (S1/2)	127' W/O O'NEILL DR. TO	127' W/O O'NEILL DR. TO SIENNA PARKWAY	68307	NORTH LADERA RANCH	5
COUNTY	CROWN VALLEY PARKWAY (S1/2)	106' E/O ANTONIO PKWY. TO	106' E/O ANTONIO PKWY. TO 941'E	68590	NORTH LADERA RANCH	5
COUNTY	EL TORO ROAD	1232.59' NE/O GLENN RANCH	1232.59' NE/O GLENN RANCH RD. TO 1153' SW/ RIDGELINE RD	85050	HIDDEN RANCH	3
COUNTY	ESPERANZA ROAD	IMPERIAL HWY. TO 0.57 E/	IMPERIAL HWY. TO 0.57 E/	87800	YORBA LINDA ISLANDS	3
COUNTY	HARBOR BOULEVARD	0.15 S/ TO EDINGER AVE.	0.15 S/ TO EDINGER AVE.	107677	FOUNTAIN VALLEY ISLANDS	1
COUNTY	HARBOR BOULEVARD BRIDGE	0.05 S/ TO 0.05 N/ SANTA	0.05 S/ TO 0.05 N/ SANTA ANA RIVER CENTERLINE	107675	SA RIVER BRIDGES	1
COUNTY	IRVINE BOULEVARD	BROWNING AVE. TO RED HILL	BROWNING AVE. TO RED HILL AVE.	117660	EAST TUSTIN	3
COUNTY	IRVINE BOULEVARD (NE1/2)	0.02 SE/ RANCHWOOD RD. TO	0.02 SE/ RANCHWOOD RD. TO BROWNING AVE.	117659	EAST TUSTIN	3
COUNTY	IRVINE BOULEVARD (NE1/2)	0.06 NW/ TO 0.21 NW/ RED	0.06 NW/ TO 0.21 NW/ RED HILL AVE.	117678	EAST TUSTIN	3
COUNTY	KATELLA AVENUE	0.10 W/ TO 0.05 W/ MAGNOL	0.10 W/ TO 0.05 W/ MAGNOLIA ST.	122600	MAC ISLANDS	2
COUNTY	KATELLA AVENUE	MAGNOLIA ST. TO 0.15 E/	MAGNOLIA ST. TO 0.15 E/	122700	MAC ISLANDS	2
COUNTY	KATELLA AVENUE	0.03 W/ BERRY AVE. TO GIL	0.03 W/ BERRY AVE. TO GILBERT ST.	122800	ANAHEIM ISLANDS	4
COUNTY	KATELLA AVENUE (N1/2)	GILBERT ST. TO 0.03 E/O J	GILBERT ST. TO 0.03 E/O JEAN ST.	122803	ANAHEIM ISLANDS	4
COUNTY	KATELLA AVENUE (S1/2)	GILBERT ST. TO 0.03 E/O J	GILBERT ST. TO 0.03 E/O JEAN ST.	122801	ANAHEIM ISLANDS	4
COUNTY	LA PATA AVENUE	160' S/ TO ORTEGA HWY	160' S/ TO ORTEGA HWY	131000	SAN JUAN CAPISTRANO ISLE	5
COUNTY	LAMBERT ROAD	0.50 E/O KRAEMER BLVD. TO	0.50 E/O KRAEMER BLVD. TO 30' W/O VALENCIA AVE.	134085	BREA	4
COUNTY	LINCOLN AVENUE (N1/2)	SANTA ANA RIVER TO 0.05 E	SANTA ANA RIVER TO 0.05 E	141100	OLIVE HEIGHTS	3
COUNTY	LINCOLN AVENUE (N1/2)	0.05 E/ SANTA ANA RIVER T	0.05 E/ SANTA ANA RIVER TO BATAVIA ST.	141101	OLIVE HEIGHTS	3
COUNTY	LINCOLN AVENUE (N4/5)	BATAVIA ST. TO 0.34 E	BATAVIA ST. TO 0.34 E	141102	OLIVE HEIGHTS	3

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	MACARTHUR BOULEVARD	0.13 SE/ TO 55 FWY.	0.13 SE/ TO 55 FWY.	146675	IRVINE ISLAND	1
COUNTY	MACARTHUR BOULEVARD (W1/8)	CAMPUS DR. TO I-405	CAMPUS DR. TO I-405	146670	SANTA ANA HEIGHTS	2
COUNTY	MAIN STREET	0.13 SE/O REDHILL AVE TO	0.13 SE/O REDHILL AVE TO 0.01 NW/O SKY PARK SOUTH	148800	SANTA ANA HEIGHTS	2
COUNTY	OSO PARKWAY	0.57 W/ TO ANTONIO PKWY.	0.57 W/ TO ANTONIO PKWY.	179400	LAS FLORES	5
COUNTY	OSO PARKWAY	ANTONIO PKWY. TO SH 241	ANTONIO PKWY. TO SH 241	179401	LAS FLORES	5
COUNTY	SEVENTEENTH STREET	DEODAR ST. TO 55 FWY.	DEODAR ST. TO 55 FWY.	214297	SANTA ANA ISLAND	1
COUNTY	SEVENTEENTH STREET	PROSPECT AVE. TO HOLT AVE	PROSPECT AVE. TO HOLT AVE.	214499	NORTHWEST TUSTIN	3
COUNTY	SEVENTEENTH STREET	HOLT AVE. TO HEWES AVE.	HOLT AVE. TO HEWES AVE.	214500	NORTHWEST TUSTIN	3
COUNTY	SEVENTEENTH STREET	HEWES AVE. TO NEWPORT AVE	HEWES AVE. TO NEWPORT AVE.	214600	NORTHWEST TUSTIN	3
COUNTY	SEVENTEENTH STREET (N1/4)	TUSTIN AVE. TO 0.05 E	TUSTIN AVE. TO 0.05 E	214295	SANTA ANA ISLAND	1
COUNTY	TUSTIN AVENUE	17th ST. TO 0.12 N/	17th ST. TO 0.12 N/	237255	SANTA ANA ISLAND	1
COUNTY	VILLA PARK ROAD	LEMON ST. TO 0.24 W/ LIND	LEMON ST. TO 0.24 W/ LINDA VISTA ST.	238130	EL MODENA	3
COUNTY	VILLA PARK ROAD	0.24 W/ TO LINDA VISTA ST	0.24 W/ TO LINDA VISTA ST.	238131	EL MODENA	3
COUNTY	WARNER AVENUE	0.03 W/ TO 0.04 E/ SANTA	0.03 W/ TO 0.04 E/ SANTA ANA RIVER	238500	SA RIVER BRIDGES	2
COUNTY	YORBA LINDA BOULEVARD (N1/2)	171' W/O MCCORMACK LN TO	171' W/O MCCORMACK LN TO 1109' W	239571	PLACENTIA ISLAND	4
COUNTY	YORBA LINDA BOULEVARD (S1/2)	1092' W/ TO 11' W/ MCCORM	1092' W/ TO 11' W/ MCCORMACK LN.	239570	PLACENTIA ISLAND	4
COUNTY	YORBA LINDA BOULEVARD (S1/4)	32' E/O CLUB TERRACE DR.	32' E/O CLUB TERRACE DR. TO 125' W/O KELLOGG DR.	239575	YORBA LINDA ISLANDS	3
COUNTY	BALL ROAD	GILBERT ST. TO 0.25 E/	GILBERT ST. TO 0.25 E/	22400	ANAHEIM ISLANDS	4
COUNTY	BALL ROAD (S1/4)	454' W/ TO 1320' W/O BRO	454' W/ TO 1320' W/O BROOKHURST ST.	22600	ANAHEIM ISLANDS	4
COUNTY	BREA BOULEVARD	1403' SW/ TO 3194' NE/O T	1403' SW/ TO 3194' NE/O TONNER CANYON RD.	35340	BREA	4
COUNTY	BREA BOULEVARD	2059' NE/O STATE COLLEGE	2059' NE/O STATE COLLEGE BLVD TO 2515' W/O TONNER CANYON RD.	35350	BREA	4
COUNTY	BRISTOL STREET NORTH	IRVINE AVE. TO 1380' SE/O	IRVINE AVE. TO 1380' SE/O SANTA ANA AVE.	37392	SANTA ANA HEIGHTS	2
COUNTY	BRISTOL STREET SOUTH	1380' SE/O SANTA ANA AVE.	1380' SE/O SANTA ANA AVE. TO IRVINE AVE.	37400	SANTA ANA HEIGHTS	2

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	DANA POINT HARBOR DRIVE	233' SW/O COVE RD. TO 138	233' SW/O COVE RD. TO 138' SW/O ST/ GOLDEN LANTERN	71650	DANA POINT HARBOR	5
COUNTY	EDINGER AVENUE (N1/2)	WEST TO EAST SIDE OF SANT	WEST TO EAST SIDE OF SANTA ANA RIVER	81005	SA RIVER BRIDGES	1
COUNTY	EDINGER AVENUE (S1/2)	HARBOR BLVD. TO 0.02 W/ S	HARBOR BLVD. TO 0.02 W/ SANTA ANA RIVER	81000	FOUNTAIN VALLEY ISLANDS	1
COUNTY	GLASSELL STREET	SANTA ANA RIVER TO 0.03 S	SANTA ANA RIVER TO 0.03 SE/ FRONTERA ST.	102545	OLIVE HEIGHTS	3
COUNTY	IRVINE AVENUE	UNIVERSITY DR. TO MESA DR	UNIVERSITY DR. TO MESA DR.	117564	SANTA ANA HEIGHTS	2
COUNTY	IRVINE AVENUE (NW1/2)	317' S/ MONTE VISTA AVE.	317' S/ MONTE VISTA AVE. TO UNIVERSITY DR.	117563	SANTA ANA HEIGHTS	2
COUNTY	IRVINE AVENUE (W1/2)	0.06 SW/ TO MONTE VISTA A	0.06 SW/ TO MONTE VISTA AVE.	117562	SANTA ANA HEIGHTS	2
COUNTY	LA PATA AVENUE	8247' S/ TO 160' S/O ORTE	8247' S/ TO 160' S/O ORTEGA HWY	131200	SAN JUAN CAPISTRANO ISLE	5
COUNTY	MAGNOLIA STREET	0.12 N/ TO 0.17 N/ KATELL	0.12 N/ TO 0.17 N/ KATELLA AVE.	147800	MAC ISLANDS	2
COUNTY	MAGNOLIA STREET (E1/2)	KATELLA AVE. TO 0.05 N	KATELLA AVE. TO 0.05 N	147750	MAC ISLANDS	2
COUNTY	NEWPORT AVENUE	0.04 SW/ TO LA COLINA DR.	0.04 SW/ TO LA COLINA DR.	167603	EAST TUSTIN	3
COUNTY	NEWPORT AVENUE	LA COLINA TO VANDERLIP AV	LA COLINA TO VANDERLIP AVE.	167604	EAST TUSTIN	3
COUNTY	NEWPORT AVENUE	VANDERLIP AVE. TO SE SKYL	VANDERLIP AVE. TO SE SKYLINE DR.	167606	EAST TUSTIN	3
COUNTY	NEWPORT AVENUE	S.E. SKYLINE DR. TO SEVEN	S.E. SKYLINE DR. TO SEVENTEENTH ST.	167609	EAST TUSTIN	3
COUNTY	NEWPORT AVENUE	17th ST. TO LA LOMA DR.	17th ST. TO LA LOMA DR.	167611	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	LA LOMA DR. TO DODGE AVE.	LA LOMA DR. TO DODGE AVE.	167613	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	DODGE AVE. TO FOOTHILL BL	DODGE AVE. TO FOOTHILL BLVD.	167614	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	FOOTHILL BLVD. TO 0.16 N/	FOOTHILL BLVD. TO 0.16 N/	167750	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	0.16 N/ FOOTHILL BLVD. TO	0.16 N/ FOOTHILL BLVD. TO LA LIMONAR RD.	167800	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	LA LIMONAR RD. TO HYDE PA	LA LIMONAR RD. TO HYDE PARK DR.	167900	NORTHEAST TUSTIN	3
COUNTY	NEWPORT AVENUE	HYDE PARK DR. TO CRAWFORD	HYDE PARK DR. TO CRAWFORD CANYON RD.	168000	PANORAMA HEIGHTS	3
COUNTY	NEWPORT AVENUE (SE1/2)	0.01 SW/O WASS ST. TO WAR	0.01 SW/O WASS ST. TO WARREN AVE.	167600	EAST TUSTIN	3
COUNTY	NEWPORT AVENUE (SE1/2)	WARREN AVE. TO 0.04 NE	WARREN AVE. TO 0.04 NE	167601	EAST TUSTIN	3

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	NEWPORT AVENUE (SE1/2)	0.04 NE/WARREN AVE. TO 0.	0.04 NE/WARREN AVE. TO 0.04 SW/LA COLINA AVE.	167602	EAST TUSTIN	3
COUNTY	NEWPORT BOULEVARD	CRAWFORD CANYON RD. TO 0.	CRAWFORD CANYON RD. TO 0.11 NE/	168200	PANORAMA HEIGHTS	3
COUNTY	NEWPORT BOULEVARD	0.11 NE/ CRAWFORD CANYON	0.11 NE/ CRAWFORD CANYON RD. TO COWAN HEIGHTS DR.	168300	COWAN HEIGHTS	3
COUNTY	NEWPORT BOULEVARD	COWAN HEIGHTS DR. TO BRIE	COWAN HEIGHTS DR. TO BRIER LN.	168400	COWAN HEIGHTS	3
COUNTY	NEWPORT BOULEVARD	BRIER LN. TO 0.02 NE/ GRE	BRIER LN. TO 0.02 NE/ GREENBRIER RD.	168500	COWAN HEIGHTS	3
COUNTY	NEWPORT BOULEVARD	0.02 NE/ GREENBRIER RD. T	0.02 NE/ GREENBRIER RD. TO 0.26 NE/HIGHCLIFF DR.	168550	COWAN HEIGHTS	3
COUNTY	ORTEGA HIGHWAY (S1/5)	CHRISTIANITOS RD. TO 0.27	CHRISTIANITOS RD. TO 0.27 E	179301	SAN JUAN CAPSTRNO ISLN	5
COUNTY	PLANO TRABUCO ROAD	228' SE/ TO 116' NW/O DOV	228' SE/ TO 116' NW/O DOVE CANYON RD	190100	RANCHO SANTA MARGARITA	5
COUNTY	PORTOLA PARKWAY	478' NW/O SH 241 TO END	478' NW/O SH 241 TO END	191400	NORTH IRVINE	3
COUNTY	RED HILL AVENUE (E1/2)	0.15 SW/ TO IRVINE BLVD.	0.15 SW/ TO IRVINE BLVD.	196702	EAST TUSTIN	3
COUNTY	SANTIAGO CANYON ROAD	966' W/LIVE OAK CANYON RD	966' W/LIVE OAK CANYON RD. TO 1005' NW/RIDGELINE RD.	210460	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	310' S/GERTNER ESTATE TO	310' S/GERTNER ESTATE TO MODJESKA CANYON RD.	210500	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	MODJESKA CANYON RD. TO 0.	MODJESKA CANYON RD. TO 0.43 S/ WILLIAMS CANYON RD.	210510	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.43 S/ TO WILLIAMS CANYO	0.43 S/ TO WILLIAMS CANYON RD.	210520	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	WILLIAMS CANYON RD. TO 0.	WILLIAMS CANYON RD. TO 0.47 S/ SILVERADO CANYON RD.	210600	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.47 S/ TO 0.09 S/ SILVER	0.47 S/ TO 0.09 S/ SILVERADO CANYON RD.	210650	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.09 S/ TO SILVERADO CANY	0.09 S/ TO SILVERADO CANYON RD.	210651	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	SILVERADO CANYON RD. TO 0	SILVERADO CANYON RD. TO 0.71 N/	210700	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.71 N/ TO 1.18 N/ SILVER	0.71 N/ TO 1.18 N/ SILVERADO CANYON RD.	210800	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	1.18 N/ TO 1.33 N/ SILVER	1.18 N/ TO 1.33 N/ SILVERADO CANYON RD.	210900	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	1.33 N/ TO 1.67 N/ SILVER	1.33 N/ TO 1.67 N/ SILVERADO CANYON RD.	211200	SANTIAGO CANYON	3

	Major Arterials	Reach	Reach	Unit ID	SVC. Area	District
COUNTY	SANTIAGO CANYON ROAD	1.67 N/SILVERADO CANYON R	1.67 N/SILVERADO CANYON RD. TO 0.72 S/SANTIAGO RESERVOIR	211300	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.72 S/ TO 0.53 S/ SANTIA	0.72 S/ TO 0.53 S/ SANTIAGO RESERVOIR	211302	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	0.53 S/ TO SANTIAGO RESER	0.53 S/ TO SANTIAGO RESERVOIR	211400	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	SANTIAGO RESERVOIR TO 0.7	SANTIAGO RESERVOIR TO 0.75 N/	211450	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	3960' N/O SANTIAGO RES TO	3960' N/O SANTIAGO RES TO 133' SE/O SH241 BRIDGE	211500	SANTIAGO CANYON	3
COUNTY	SANTIAGO CANYON ROAD	MEADS AVE. TO ORANGE PARK	MEADS AVE. TO ORANGE PARK BLVD.	211700	ORANGE PARK ACRES	3
COUNTY	SANTIAGO CANYON ROAD	ORANGE PARK BLVD. TO 0.08	ORANGE PARK BLVD. TO 0.08 W/	211725	ORANGE PARK ACRES	3
COUNTY	TALBERT AVENUE BRIDGE	0.04 W/ TO 0.04 E/ SANTA	0.04 W/ TO 0.04 E/ SANTA ANA RIVER	231800	SA RIVER BRIDGES	2
COUNTY	TONNER CANYON ROAD	0.09 S/ TO 0.05 S/O SR 57	0.09 S/ TO 0.05 S/O SR 57	235182	BREA	4
COUNTY	TONNER CANYON ROAD	264' S TO 477' N/O SR 57	264' S TO 477' N/O SR 57	235183	BREA	4
COUNTY	TONNER CANYON ROAD	560' S TO BREA BLVD.	560' S TO BREA BLVD.	235185	BREA	4
COUNTY	UNIVERSITY DRIVE	SANTA ANA AVE. TO IRVINE	SANTA ANA AVE. TO IRVINE AVE.	237375	SANTA ANA HEIGHTS	2
COUNTY	VICTORIA STREET BRIDGE	0.03 W/ TO 0.03 E/ SANTA	0.03 W/ TO 0.03 E/ SANTA ANA RIVER	238120	SA RIVER BRIDGES	2

Table 5.2: List of Secondary Arterial Roads

	SECONDARY ARTERIAL	REACH	REACH	UNIT ID	SVC. AREA	DISTRICT
COUNTY	BLACK STAR CANYON ROAD	1.14 N/ TO 9.25 N/ SILVER	1.14 N/ TO 9.25 N/ SILVERADO CANYON RD.	30315	SILVERADO CANYON	3
COUNTY	BOND AVENUE	0.12 W/ TO HEWES ST.	0.12 W/ TO HEWES ST.	33600	EL MODENA	3
COUNTY	BROADWAY (S3/4)	GREENWICH ST. TO BROOKHUR	GREENWICH ST. TO BROOKHURST ST.	37900	ANAHEIM ISLANDS	4
COUNTY	BROWNING AVENUE (W1/2)	0.25 SW/ TO IRVINE BLVD.	0.25 SW/ TO IRVINE BLVD.	39901	EAST TUSTIN	3
COUNTY	BROWNING AVENUE (W2/3)	0.07 NE/O BRYAN AVE. TO 0	0.07 NE/O BRYAN AVE. TO 0.25 SW/IRVINE BLVD.	39900	EAST TUSTIN	3
COUNTY	CERRITOS AVENUE	GILBERT ST. TO BROOKHURST	GILBERT ST. TO BROOKHURST ST.	56200	ANAHEIM ISLANDS	4
COUNTY	CRAWFORD CANYON ROAD	NEWPORT AVE. TO BARRETT L	NEWPORT AVE. TO BARRETT LN.	67157	PANORAMA HEIGHTS	3
COUNTY	CRAWFORD CANYON ROAD	BARRETT LN. TO STOLLER LN	BARRETT LN. TO STOLLER LN.	67160	PANORAMA HEIGHTS	3

	SECONDARY ARTERIAL	REACH	REACH	UNIT ID	SVC. AREA	DISTRICT
COUNTY	CRAWFORD CANYON ROAD (E1/2)	STOLLER LN. TO CHAPMAN AV	STOLLER LN. TO CHAPMAN AVE.	67161	PANORAMA HEIGHTS	3
COUNTY	DALE STREET	0.10 N/ CHAPMAN AVE. TO O	0.10 N/ CHAPMAN AVE. TO ORANGEWOOD AVE.	71100	GARDEN GROVE ISLAND	2
COUNTY	DODGE AVENUE	ESPLANADE AVE. TO HEWES A	ESPLANADE AVE. TO HEWES AVE.	76600	NORTHWEST TUSTIN	3
COUNTY	DODGE AVENUE	HEWES AVE. TO NEWPORT AVE	HEWES AVE. TO NEWPORT AVE.	76700	NORTHWEST TUSTIN	3
COUNTY	EDWARDS STREET (W1/2)	20' N/O ELLIS AVE. TO 180	20' N/O ELLIS AVE. TO 180' S/O TALBERT AVE.	81400	HUNTINGTON BEACH	2
COUNTY	ESPLANADE AVENUE	17th ST. TO GRAMERCY DR.	17th ST. TO GRAMERCY DR.	87900	NORTHWEST TUSTIN	3
COUNTY	ESPLANADE AVENUE	GRAMERCY DR. TO FAIRHAVEN	GRAMERCY DR. TO FAIRHAVEN AVE.	88100	NORTHWEST TUSTIN	3
COUNTY	FAIRHAVEN AVENUE	YORBA ST. TO HEWES AVE.	YORBA ST. TO HEWES AVE.	90900	NORTHWEST TUSTIN	3
COUNTY	FOOTHILL BOULEVARD	NEWPORT AVE. TO ORANGE KN	NEWPORT AVE. TO ORANGE KNOLL DR.	96415	NORTHWEST TUSTIN	3
COUNTY	FOOTHILL BOULEVARD	ORANGE KNOLL DR. TO OLD F	ORANGE KNOLL DR. TO OLD FOOTHILL BLVD.	96420	NORTHWEST TUSTIN	3
COUNTY	FOOTHILL BOULEVARD	OLD FOOTHILL BLVD. TO HEW	OLD FOOTHILL BLVD. TO HEWES AVE.	96425	NORTHWEST TUSTIN	3
COUNTY	GILBERT STREET	KATELLA AVE. TO 0.01 N/ P	KATELLA AVE. TO 0.01 N/ PACIFIC PL.	101600	ANAHEIM ISLANDS	4
COUNTY	GILBERT STREET	0.06 N/ PACIFIC PL. TO 0.	0.06 N/ PACIFIC PL. TO 0.03 S/ GUINIDA LN.	101602	ANAHEIM ISLANDS	4
COUNTY	GILBERT STREET (E2/3)	0.01 N/ TO 0.06 N/ PACIFI	0.01 N/ TO 0.06 N/ PACIFIC PL.	101601	ANAHEIM ISLANDS	4
COUNTY	GILBERT STREET (E2/3)	0.03 S/ GUINIDA LN. TO BA	0.03 S/ GUINIDA LN. TO BALL RD.	101603	ANAHEIM ISLANDS	4
COUNTY	HAZARD AVENUE (S1/8)	490' E/O BEACH BLVD.TO 16	490' E/O BEACH BLVD.TO 160' W/O COLONIAL AVE	110300	MIDWAY CITY	1
COUNTY	HEWES AVENUE	FOOTHILL BLVD. TO 0.14 S/	FOOTHILL BLVD. TO 0.14 S/ FAIRHAVEN AVE.	111602	NORTHWEST TUSTIN	3
COUNTY	HEWES AVENUE	0.14 S/ TO 0.10 S/ FAIRHA	0.14 S/ TO 0.10 S/ FAIRHAVEN AVE.	111603	NORTHWEST TUSTIN	3
COUNTY	HEWES AVENUE	0.10 S/ TO FAIRHAVEN AVE.	0.10 S/ TO FAIRHAVEN AVE.	111604	NORTHWEST TUSTIN	3
COUNTY	HEWES AVENUE	FAIRHAVEN AVE. TO OLD FOO	FAIRHAVEN AVE. TO OLD FOOTHILL BLVD.	111605	NORTHWEST TUSTIN	3
COUNTY	HEWES AVENUE	OLD FOOTHILL BLVD. TO FOW	OLD FOOTHILL BLVD. TO FOWLER AVE.	111608	PANORAMA HEIGHTS	3
COUNTY	HEWES STREET	PEARL ST. TO SPRING ST.	PEARL ST. TO SPRING ST.	111610	EL MODENA	3
COUNTY	HEWES STREET	WALNUT AVE. TO 0.13 N/	WALNUT AVE. TO 0.13 N/	111613	EL MODENA	3
COUNTY	HEWES STREET	0.13 N/ WALNUT AVE. TO BO	0.13 N/ WALNUT AVE. TO BOND AVE.	111614	EL MODENA	3
COUNTY	HEWES STREET	0.14 S/ TO VILLA PARK RD.	0.14 S/ TO VILLA PARK RD.	111615	EL MODENA	3
COUNTY	HEWES STREET (E1/2)	SPRING ST. TO 0.06 N/	SPRING ST. TO 0.06 N/	111611	EL MODENA	3

	SECONDARY ARTERIAL	REACH	REACH	UNIT ID	SVC. AREA	DISTRICT
COUNTY	HEWES STREET (E1/2)	0.09 N/ SPRING ST. TO 0.0	0.09 N/ SPRING ST. TO 0.01 N/ SYCAMORE AVE.	111612	EL MODENA	3
COUNTY	HOLT AVENUE	0.01 S/ BIGELOW PARK TO W	0.01 S/ BIGELOW PARK TO WELLINGTON AVE.	114506	NORTHWEST TUSTIN	3
COUNTY	HOLT AVENUE	WELLINGTON AVE. TO SEVENT	WELLINGTON AVE. TO SEVENTEENTH ST.	114600	NORTHWEST TUSTIN	3
COUNTY	HOLT AVENUE (W1/2)	0.03 N/ IRVINE BLVD. TO 0	0.03 N/ IRVINE BLVD. TO 0.05 S/ LEON WAY	114500	NORTHWEST TUSTIN	3
COUNTY	HOLT AVENUE (W1/2)	0.05 S/ TO 0.01 N/ LEON W	0.05 S/ TO 0.01 N/ LEON WAY	114503	NORTHWEST TUSTIN	3
COUNTY	HOLT AVENUE (W1/2)	0.01 N/ LEON WAY TO WARRE	0.01 N/ LEON WAY TO WARREN AVE.	114504	NORTHWEST TUSTIN	3
COUNTY	HOLT AVENUE (W1/2)	WARREN AVE. TO 0.01 S/ BI	WARREN AVE. TO 0.01 S/ BIGELOW PARK	114505	NORTHWEST TUSTIN	3
COUNTY	KELLOGG DRIVE	0.04 S/ TO 0.02 N/ CLUB V	0.04 S/ TO 0.02 N/ CLUB VIEW DR.	123950	YORBA LINDA ISLANDS	3
COUNTY	KELLOGG DRIVE	0.02 N/ TO 0.07 N/ CLUB V	0.02 N/ TO 0.07 N/ CLUB VIEW DR.	123960	YORBA LINDA ISLANDS	3
COUNTY	KELLOGG DRIVE	0.07 N/ TO 0.20 N/ CLUB V	0.07 N/ TO 0.20 N/ CLUB VIEW DR.	123970	YORBA LINDA ISLANDS	3
COUNTY	KELLOGG DRIVE	0.20 N/ CLUB VIEW DR. TO	0.20 N/ CLUB VIEW DR. TO 0.03 N/ SHADOW HILL	123980	YORBA LINDA ISLANDS	3
COUNTY	MACY STREET	0.05 N/ TO 0.06 N/ WHITTI	0.05 N/ TO 0.06 N/ WHITTIER BLVD.	147201	LA HABRA ISLANDS	4
COUNTY	MACY STREET	0.08 N/ WHITTIER BLVD. TO	0.08 N/ WHITTIER BLVD. TO GORDON AVE.	147203	LA HABRA ISLANDS	4
COUNTY	MACY STREET (E1/2)	WHITTIER BLVD. TO 0.05 N	WHITTIER BLVD. TO 0.05 N	147200	LA HABRA ISLANDS	4
COUNTY	MACY STREET (E1/2)	0.06 N/ TO 0.08 N/ WHITTI	0.06 N/ TO 0.08 N/ WHITTIER BLVD.	147202	LA HABRA ISLANDS	4
COUNTY	MACY STREET (E1/2)	GORDON AVE. TO RUSSELL ST	GORDON AVE. TO RUSSELL ST.	147205	LA HABRA ISLANDS	4
COUNTY	MCFADDEN AVENUE	0.02 W/ CEDARWOOD AVE. TO	0.02 W/ CEDARWOOD AVE. TO BEACH BLVD.	154800	MIDWAY CITY	1
COUNTY	MCFADDEN AVENUE	JACKSON ST. TO VAN BUREN	JACKSON ST. TO VAN BUREN ST.	154900	MIDWAY CITY	1
COUNTY	MCFADDEN AVENUE (S1/2)	0.03 E/O MONROE ST. TO 0.	0.03 E/O MONROE ST. TO 0.03 E/O WILSON ST.	155102	MIDWAY CITY	1
COUNTY	NEWLAND STREET	BOLSA AVE. TO HAZARD AVE.	BOLSA AVE. TO HAZARD AVE.	167000	MIDWAY CITY	1
COUNTY	ORANGE OLIVE ROAD	LINCOLN AVE. TO 0.19 N/	LINCOLN AVE. TO 0.19 N/	176400	OLIVE HEIGHTS	3
COUNTY	ORANGEWOOD AVENUE	0.25 W/ TO DALE ST.	0.25 W/ TO DALE ST.	177700	GARDEN GROVE ISLAND	2
COUNTY	OSO PARKWAY	SH 241 TO COTO DE CAZA DR	SH 241 TO COTO DE CAZA DR.	179402	WAGON WHEEL	5
COUNTY	PALM DRIVE (N1/2)	0.04 SE/ TO 0.07 NW/ CEDA	0.04 SE/ TO 0.07 NW/ CEDARLAWN DR.	182200	PLACENTIA ISLAND	4
COUNTY	PROSPECT AVENUE	0.24 N/ 17th ST. TO SANTA	0.24 N/ 17th ST. TO SANTA CLARA AVE.	191702	NORTHWEST TUSTIN	3

	SECONDARY ARTERIAL	REACH	REACH	UNIT ID	SVC. AREA	DISTRICT
COUNTY	PROSPECT AVENUE	SANTA CLARA AVE. TO FAIRH	SANTA CLARA AVE. TO FAIRHAVEN AVE.	191710	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	0.24 N/ TO 0.27 N/ IRVINE	0.24 N/ TO 0.27 N/ IRVINE BLVD.	191609	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	0.27 N/ IRVINE BLVD. TO 0	0.27 N/ IRVINE BLVD. TO 0.12 S/ 17th ST.	191610	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	0.12 S/ TO 0.11 S/ 17th S	0.12 S/ TO 0.11 S/ 17th ST.	191611	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	17th ST. TO 0.09 N	17th ST. TO 0.09 N	191698	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	0.09 N/ TO 0.12 N/ 17th S	0.09 N/ TO 0.12 N/ 17th ST.	191700	NORTHWEST TUSTIN	3
COUNTY	PROSPECT AVENUE (E1/2)	0.12 N/ TO 0.24 N/ 17th S	0.12 N/ TO 0.24 N/ 17th ST.	191701	NORTHWEST TUSTIN	3
COUNTY	RUSSELL STREET (S1/2)	0.11 E/VALLEY HOME AVE TO	0.11 E/VALLEY HOME AVE TO 0.04 W/MACY ST	205200	LA HABRA ISLANDS	4
COUNTY	SANTA ANA AVENUE	MESA DR. TO 0.09 SW/O BRI	MESA DR. TO 0.09 SW/O BRISTOL ST.	208800	SANTA ANA HEIGHTS	2
COUNTY	SANTA ANA AVENUE	0.12 NE/ TO 0.13 NE/ UNIV	0.12 NE/ TO 0.13 NE/ UNIVERSITY DR.	208810	SANTA ANA HEIGHTS	2
COUNTY	SANTA ANA AVENUE	228' NE/ TO 348' NE/O UN	228' NE/ TO 348' NE/O UNIVERSITY AVE.	208850	SANTA ANA HEIGHTS	2
COUNTY	SANTA CLARA AVENUE	FAIRMONT WAY TO PROSPECT	FAIRMONT WAY TO PROSPECT AVE.	209600	NORTHWEST TUSTIN	3
COUNTY	SANTA CLARA AVENUE	PROSPECT AVE. TO 0.05 E/	PROSPECT AVE. TO 0.05 E/ BLUE RIDGE DR.	209700	NORTHWEST TUSTIN	3
COUNTY	SANTA CLARA AVENUE	0.05 E/ BLUE RIDGE DR. TO	0.05 E/ BLUE RIDGE DR. TO ESPLANADE AVE.	209800	NORTHWEST TUSTIN	3
COUNTY	SANTA CLARA AVENUE (N1/2)	0.01 W/ ETHELBEE WAY TO F	0.01 W/ ETHELBEE WAY TO FAIRMONT WAY	209500	NORTHWEST TUSTIN	3
COUNTY	SANTIAGO BOULEVARD	SANTIAGO CANYON RD. TO EN	SANTIAGO CANYON RD. TO END	210100	EL MODENA	3
COUNTY	SLATER/SEGERSTROM BRIDGE	0.03 SE/ TO 0.03 NW/O SAN	0.03 SE/ TO 0.03 NW/O SANTA ANA RIVER	221710	SA RIVER BRIDGES	2
COUNTY	SPRING STREET	ESPLANADE ST. TO EARLHAM	ESPLANADE ST. TO EARLHAM ST.	222800	EL MODENA	3
COUNTY	SPRING STREET (S1/2)	EARLHAM ST. TO HEWES ST.	EARLHAM ST. TO HEWES ST.	222900	EL MODENA	3
COUNTY	YORBA STREET	LEAFWOOD LN. TO SANTA CLA	LEAFWOOD LN. TO SANTA CLARA AVE.	239581	NORTHWEST TUSTIN	3
COUNTY	YORBA STREET	SANTA CLARA AVE. TO FAIRH	SANTA CLARA AVE. TO FAIRHAVEN AVE.	239582	NORTHWEST TUSTIN	3

5.3 Disaster Debris Contract Services

Orange County currently maintains Debris Management Contracts with four companies. Two for debris removal and two for debris monitoring. Each contract also has subcontractors listed within their contract scope of work.

Table 5.3– Contracted Service Providers

Contract Service	Contract Number	Contract Holder
Master Contracts:		
Debris removal/hauling	954-725-6992	Ashbritt Inc.
Debris removal/hauling	504-415-7945	DRC Pacific
Debris monitoring	601-658-9598	Debris Tech
Debris monitoring	321-441-8518	Tetra Tech
Subcontractors:		
Hazardous waste removal	909-546-1354	Filter Recycling, Inc
Forestry Services	562-533-2179	Cecil Logging, Inc.
Tree maintenance	360-875-1334	AA High Climbers, LLC
Hazardous material abatement and demolition	925-969-9200	Janus Corporation

The County's debris removal contract, monitoring contract, debris hauling contract, bid solicitation information, and selection process is located at the following link and locations

- OCPW Shared Drive Network
  - S:\CITY CONTRACTS\FEMA\Debris Removal and Debris Monitoring Contracts
- WebEOC – PrepareOC
  - https://webeoc.ocsd.org/eoc7/PrepareOC/Programs/Debris Management
- County and OA Emergency Operations Center Shared Drive Network
  - G:\Plans and Hazards Information\Debris Management Plan\Debris Removal and Monitoring Contracts

Below is the Scope of Work from the Debris Management Contract:

5.3.1 General Requirements

The purpose of this Contract is to provide disaster-related debris management services for Orange County, California, for the collection, processing and disposal of debris resulting from natural or man- made disaster events including but not limited to earthquakes, fires, and floods. This

Contract may be activated for County, State and Federally declared disaster events. The Scope of Work includes the following:

- Debris clearance operations as directed by the County's Debris Management Coordinator.
- Obtaining all necessary local, state, and federal permits.
- The collection and removal of debris from public rights-of-way, streets, roads, flood control facilities, ditches, and other public properties.
- The processing of debris, including but not limited to screening, sorting, grinding, mulching, and recycling in accordance with all federal, state, and local environmental protection agencies and health departments.
- The disposal of debris.
- The establishment and operations of temporary debris storage and reduction (TDSR) sites.
- The collection and disposal of yard waste, white goods, e-waste, small motorized equipment, hazardous waste, tires, animal carcasses, propane tanks, petroleum products, and other special waste.
- The restoration of TDSR sites.
- Performing debris by-product recycling programs.
- Hauling non-recycled debris and debris reduction byproducts to an authorized disposal facility.
- Providing traffic control during debris loading operations on public rights-of-way.
- The provision of community relations support during all phases of disaster recovery work as directed by the County's Debris Management Coordinator.
- Validating loads, materials and equipment with contracted debris monitoring services.
- Creating, maintaining, and updating relevant paperwork for relevant state and federal reimbursement programs.

Other disaster response and recovery work may be added, such as screening sand for beach replenishment, and any requirements or rates not covered by this proposal will be negotiated.

The Contractor shall furnish all necessary personnel, material, equipment, labor, supervision, facilities, and shall provide all services necessary for, or incidental to, the performance of all work as defined in the Scope of Work. The Contractor will supervise and direct all work, workers, and equipment. The Contractor is solely responsible for the means, methods, techniques, sequences, and safety procedures used.

The Contractor must be duly licensed to perform the work in accordance with all federal, state, and local requirements. The Contractor shall coordinate with the County and District to obtain all permits necessary to complete the work. The Contractor shall be responsible for and in compliance with any additional permits necessary to perform under the Contract, but at minimum must hold a California Class A General Engineering Contractor license with (or a list of subcontractors with) an ASB (Asbestos) Certification and/or a HAZ (Hazardous Substance Removal) Certification. Copies of all permits and licenses shall be submitted to the County and District as soon as available.

As this is a usage contract, the quantity of work required is not known at this time. Payment will be made at the negotiated contracted rates specified in Attachment B. The output will be verified

by the County and District in the daily operational report. All rates are to include all related costs, inclusive of the cost of personal protective clothing (to include hardhats, gloves, eye protection and steel-toed boots), fringe benefits, hand tools, supervision, transportation, traffic control and any other costs.

5.3.2 Debris Management

This Contract for debris collection, processing and disposal will be on a usage basis for the purpose of having Contractor immediately available and committed to assisting the County and District in the aftermath of a major disaster. Contractor under this Contract will serve as a general contractor for the purpose of debris collection, processing, and disposal operations, and will be able to use its own subcontractor resources to meet the obligations of this Contract. Contractor will work in conjunction with an independent contracted debris monitoring service per state and federal guidelines. To prevent conflict of interest, monitoring services must not have financial interest in the debris removal contract or contractor.

The Contractor shall disclose present and future debris management contractual obligations throughout the term of this Contract and shall provide reasonable assurance to the County and District that such obligations will not preclude the Contractor from performing the required work and meeting its obligations under the Contract. Such disclosure shall be provided to the County and District in the proposal.

The Contractor shall, to the extent practical, give priority to utilizing resources in Orange County and the surrounding areas, including but not limited to procuring supplies and equipment, awarding sub-contracts, and employing workers.

5.3.3 Mobilization

Mobilization shall consist of all preparatory work and operations, including those necessary for movement of personnel, equipment, supplies and incidentals to and from the project sites, installing and maintaining temporary roads and drainage structures needed to access the project sites, the costs of required insurance and all other pre and post construction expenses necessary to perform this work. It shall be duly noted that such expenses are the sole responsibility of the Contractor.

When a major disaster occurs or is imminent, the County and District will contact the Contractor to

advise it of the County and District's intent to request services. The Contractor will employ and maintain a qualified and accessible Operations Manager who shall have the full authority to act on behalf of the Contractor. All communications given to the supervisor in writing by the County and District shall be binding. The Contractor shall report to the County Project Manager within 24 hours of the Notice to Proceed for each work order directive issued.

The Contractor shall assign and provide an Operations Manager to the County's Debris Management Center to serve as the principal liaison between the County's Debris Management Coordinator, Debris Monitoring Service, and the Contractor's forces. The assigned Operations Manager must be knowledgeable of all facts of the Contractor's operations and have authority in

writing to commit the Contractor. The Operations Manager shall be on call 24 hours per day, seven days per week, and shall have electronic linkage capability for transmitting and receiving relevant contractual information and make arrangements for on-site accommodations. This linkage shall provide immediate contact via cell phone, fax machine, and have internet capabilities. The Operations Manager will participate in daily meetings and disaster exercises, functioning as a source to provide essential element information. The Operations Manager will report to the County's Debris Management Coordinator. This position will not require a constant presence on-site; however, the Operations Manager will be required to be physically capable of responding to the County's Debris Management Coordinator within one hour of notification.

The County and District, at its sole discretion, will issue task orders to the Contractor. All factors will be considered in determining which tasks will be assigned to Contractor. Debris removal will generally be limited to debris in, upon, or brought to the public streets and roads, rights-of-way, municipal properties and facilities, and other public sites. The Contractor will be responsible for determining the method and manner of debris collection, processing, and lawful disposal operations, consistent with the Scope of Work. The Contractor will be responsible for the lawful disposal of all debris and debris reduction by-products generated at all TDSR sites.

5.3.4 Classification of Debris

Debris shall be classified as follows:

Vegetative Debris: Vegetative debris includes but is not limited to damaged and disturbed trees; broken, partially broken and severed tree limbs; tree stumps; tree trunks; bushes and shrubs; brush; and other leafy material.

Construction and Demolition (C&D) Debris: C&D debris includes but is not limited to lumber, metal products, sheet rock, non-asbestos roofing, and concrete.

Non C&D Debris: Non C&D debris includes but is not limited to asbestos roofing, carpeting, plastic, glass, rubber products, cloth items and treated wood building materials.

White Goods: White Goods are large household appliances such as refrigerators, freezers, air conditioners, stoves, ovens, washing machines, dryers, water heaters, etc. The Contractor should expect to encounter white goods, such as household appliances. The Contractor shall collect all white goods from public rights-of-way and shall dispose of white goods in accordance with applicable federal, state, and local laws. Any white goods that may contain Freon, such as refrigerators, freezers, or air conditioners, shall have the Freon removed by the Contractor in accordance with applicable regulatory requirements. No additional payment will be made for the handling of white goods, as this cost shall be included in the cost price for white goods removal and disposal.

Household Hazardous Waste (HHW): HHW is waste with properties that make it potentially harmful to human health or the environment such as but not limited to paint products, pesticides, fertilizers, and other debris requiring special removal, handling and disposal processing, and known or suspected hazardous material such as asbestos, lead-based paint, lithium batteries, and electrical transformers. Coordination of hazardous debris removal is the responsibility of the

County and District. Known or suspected HHW that mistakenly enters the waste stream shall be placed in an appropriate storage area for proper disposal.

Soil, Mud and Sand: Earthquakes, floods and storm surges often deposit soil, mud, and sand on improved public property and public rights-of way. Facilities commonly impacted by this type of debris may include streets, sidewalks, drainage facilities, culverts, and pipes. The Contractor shall remove storm deposited soil, mud and sand debris from public property and rights-of-way as directed by the County and District.

Dead Animals: The Contractor shall collect, remove, transport, and dispose of dead livestock, fowl, large animals, and domestic pets from public rights-of-way and other public properties, as identified by the County and District, in accordance with health and regulatory requirements.

Ash: When handling ash, the Contractor will be required to "wet down" the ash to prevent dust problems.

Chips and Mulch: Chips and mulch are the end products of chipping and grinding clean woody debris. Proper disposal of chips and mulch (non-landfill disposal) is an environmentally sound use of the material.

Other Debris: Other debris includes but is not limited to tires, small motorized equipment, electronic waste, propane tanks, and petroleum products.

Residents will be advised to separate all waste and debris, to the extent practicable, into the above categories. Failure by the residents to perform this separation does not relieve the Contractor of its curbside separation responsibilities, to the extent practicable.

5.3.5 Debris Collection and Removal Services

The Contractor shall provide for the removal of debris from various areas within Orange County as designated by the County's Debris Management Coordinator. Debris removal shall be limited to County streets, roads, County and District flood control channels and other rights-of-way, all County of Orange municipal property, and other municipal facilities and sites as directed, and may include property debris from private residences that is brought to the edge of the rights-of-way by residents. The Contractor is responsible for determining the method and manner of all debris removal and will be monitored per state and federal regulations.

Independent debris monitoring services will be utilized to evaluate disaster response and recovery measures by providing the following services:

- Debris removal monitoring services per FEMA Public Assistance policy and procedures, including determining the eligibility (or ineligibility) of debris, mandated special considerations, site development and restoration, certification of hauling vehicles, compliance with state and federal regulations, site safety, verification of contracted removal services, hazardous trees, and map locations.
- Load capacities, load quantities, debris management, site operations, public and site safety, collection locations, debris types and amounts.
- Load tickets (in towers and in the field).
- Ensure hazardous waste is not mixed in with loads.

- Ensure that all debris is removed from trucks at the TDSR site(s).
- Ensure that only debris specified in the scope of work is collected.
- Ensure daily loads meet permit requirements.
- Assure that debris contractor work is within the assigned scope of work.
- Identify work for potential eligibility (or ineligibility) per FEMA guidelines.
- Validate hazardous trees including hangers, leaners, and stumps.
- Monitor site development and restoration of TDSR site(s).
- Ensure that work stops immediately in an area where human remains or potential archeological deposits are discovered.
- Immediately report to County Debris Management Coordinator or designee if debris removal work does not comply with all local ordinances as well as state and federal regulations.
- Immediately report to County Debris Management Coordinator or designee if contractor personnel or public safety standards are not being followed.
- Immediately report to County Debris Management Coordinator or designee if improper equipment is utilized, equipment is misused or contractor noncompliance.
- Immediately report to County Debris Management Coordinator or designee if completion schedules are not on task.
- Accurately measure and certify hauling vehicle capacities.
- Certify hauling vehicles on a regular basis.
- Ensure accurate credit for haul loads.
- Ensure that hauling vehicles are not artificially loaded or enhanced to maximize reimbursement.

The Contractor shall be responsible for properly and adequately securing debris on each piece of equipment utilized to haul debris. Prior to leaving the loading site, the Contractor shall ensure that each load is secure and trimmed so that no debris extends horizontally beyond the bed of the equipment in any direction. All loose debris shall be compacted during loading and secured during transport. Tarps or other coverings shall be provided by the Contractor to prevent reduction by-products and other materials from being blown from the bed during hauls to disposal landfills.

The general concept of disaster-related debris removal operations includes multiple scheduled passes of each site, location or rights-of way as directed by the County and District. It is the intent that the Contractor will make as many passes as the County and District may direct to complete the removal and lawful disposal of all disaster-generated debris. The debris shall be hauled to the TDSR sites or disposal sites as directed by the County and District.

All activities associated with the collection and loading of eligible debris shall be performed during working hours, seven (7) days a week, including holidays, unless otherwise directed by the County and District.

The Contractor shall mitigate the impact of its operation on local traffic to the fullest extent practical. The Contractor is responsible for establishing and maintaining appropriate traffic controls in all work areas. The Contractor shall provide sufficient signing, flagging, and barricading to ensure the safety of vehicular and pedestrian traffic in all work areas. All work shall be

performed in conformance with all federal, state, and local laws, regulations and ordinances governing personnel, equipment, and workplace.

The Contractor shall provide all labor and materials necessary to operate and maintain all equipment under this Contract. The Contractor shall provide sufficient management, administration, supervision, and safety quality controls to assure the safety, quality, completeness, and timely progress of the work. The Contractor shall provide its own personnel to provide management, administration, supervision, and safety quality controls. The Prime Contractor and all subcontractors must utilize applicable prevailing wage rates.. The Contractor shall not move from one designated work area to another designated work area without prior approval and release from the County's Debris Management Coordinator. The Contractor shall remove all dirt, mud and debris from the roadways resulting from its operations. The Contractor shall notify the Debris Management Coordinator's office by 2 p.m. each day of the number of crews that will be working the following day, as well as a preliminary 7-day schedule for the purpose of scheduling County and District personnel assigned to the Contractor's crews.

5.3.6 Debris Removal from Public Rights-of-Way

The Contractor shall pick up, remove from public rights-of-way, and haul all eligible debris to the TDSR sites or disposal sites as directed by the County and District.

At the time of collection, the Contractor shall segregate debris at the curb, to the maximum extent possible; according to the categories specified under Classifications of Debris (see Section 7.2.4). Unless otherwise directed by the County and District, mixed loads (vegetation mixed with C&D, for example) are prohibited. Vegetation or C&D mixed with minimal quantities of another type of debris will be classified by the predominant type of debris.

Clean, woody debris and other natural material that can be chipped, mulched, and disposed of in some other similar manner shall be handled separately from other debris. The Contractor, with the approval of the County and District, shall determine the method of vegetative debris reduction. Unless otherwise directed by the County and District, mixed loads are prohibited. The Contractor shall segregate debris at the curb, when necessary.

The Contractor should expect to encounter white goods, such as household appliances. The Contractor shall pick up and remove all white goods from public rights-of way and shall dispose of white goods in accordance with applicable federal, state, and local laws. Any white goods that may contain Freon, such as refrigerators, freezers, or air conditioners, shall have the Freon removed by the Contractor in accordance with applicable regulatory requirements. No additional payment will be made for handling of white goods, as this cost shall be included in the cost price for white goods removal and disposal.

5.3.7 Removal of Obstructions from Drainage Canals and Roadside Ditches

The Contractor shall be responsible for the removal of obstructions from the County and District's natural drainage courses, flood control facilities and channels, rights-of-way, and roadside ditches. These obstructions include but are not limited to tree limbs, tree trunks, stumps, C&D, non-C&D,

and soil, mud, and sand. Long-reach equipment may be required to remove debris from the drainage channels. Care should be taken so as not to damage the infrastructure of the channels or ditches.

5.3.8 Removal of Hazardous Trees and Hanging Limbs from County Rights-of-Way and Public Properties

If directed by the County's Debris Management Coordinator, the Contractor shall team with debris monitoring services to remove hazardous trees that have more than 50 percent of the root-ball exposed or that pose an immediate threat to life, public health and safety, or significant damage to improved public or private property, as assessed by the County. The Contractor is cautioned that ingress and egress is the sole responsibility of the Contractor, and many sites may be accessible for climbers only, and removal of tree debris may be possible by manual labor only. All hazardous trees to be removed shall be cut flush at the lowest possible height above the ground. All measurements of flush cuts are subject to inspection and approval by the County and District. In accordance with the PA policy, approved debris removal contractual rates and County financial procedures. The line-item costs are all-inclusive and shall compensate the Contractor for the cost to flush out, remove, load, transport, and dispose of the hazardous trees. The method of reduction and disposal will be at the discretion of the Contractor subject to County and District approval.

5.3.9 Hazardous Stump Removal

The Contractor is responsible for extraction of eligible partially uprooted hazardous stumps as directed by the County and District. If directed by the County and District, the Contractor shall team with debris monitoring services to remove and haul partially hazardous tree stumps. For stumps that have 50 percent or more of the root-ball exposed, removal of the stump and filling the root-ball hole are eligible for reimbursement under the public assistance program. If grinding a stump in-place is less costly than extraction, grinding the stump in-place is eligible. Each stump shall be inspected by the County and District and the Contractor and documented to ensure eligibility. Prior to the removal of hazardous stumps, the Contractor shall notify any required local utilities in accordance with each agency's required pre-notification time schedule for pre-marking of utilities in the work area.

Stump holes shall be backfilled with clean native topsoil to match the existing grade. Note that stump holes include all cavities associated with the stump extraction. The Contractor may be required to grind some stumps if large equipment cannot access the work area. Any damage to sidewalks, driveways, walkways or other public or private property caused by the Contractor's removal or grinding of stumps shall be repaired by the Contractor.

For stumps that have less than 50 percent of the root-ball exposed, FEMA only provides public assistance program funding to flush cut the item at ground level and dispose of the cut portion.

Stump removal cost will be all-inclusive and shall compensate the Contractor for the cost to extract, grind, and backfill all holes associated with the stump extraction, as well as load, transport, and dispose of the stump. The method of reduction and disposal will be at the discretion of the Contractor, subject to County and District approval.

5.3.10 Debris Removal from Private Property

The Contractor shall remove debris from private property under extenuating circumstances, as directed by the County and District. A sample ROE agreement form will be provided by the County and District.

5.3.11 Load Tickets

In conjunction with the debris monitoring contractor, load tickets will be used for recording volumes of debris removal. The Contractor shall provide an automated debris management ticketing and accounting process for debris management projects. Each ticket will be a five-part carbon copy ticket, and or electronic duplicates which shall contain the following information:

- Ticket Number
- Contractor's Name
- Crew Number
- Truck Number
- Date
- Debris Removal (Pickup) Location
- Debris Removal (Pickup) Location Departure Time
- TDSR or Disposal Site Location
- TDSR or Disposal Arrival Time
- Debris Classification
- Debris Quantity
- Signed by a County representative

Debris quantity and load tickets will be determined by contracted debris monitoring personnel or the County and District at the TDSR and/or disposal site. Based on predetermined truck bed measurements, trucks with less than full capacity will be adjusted downward by visual inspections. Truck bed measurements will not be adjusted upward. Load tickets will be issued by contracted debris monitoring personnel or the County and District and issued to vehicle operators upon completion of collection at the collection site. Five copies of load tickets will be issued to the County (1) and Contractor (4) to remain with Contractor's records and TDSR or disposal sites.

5.3.12 Debris Removal Equipment

All trucks and other equipment must be in compliance with all applicable federal, state, and local rules and regulations. Debris monitoring services will frequently certify Contractor trucks and equipment. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a rigid tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity (i.e., the tailgate must be able to hold a compressed load); and measured and marked for its load capacity. All vehicles shall comply with California regulations and licensing requirements, and with applicable local ordinances governing weight and size for the streets that must be traveled.

Sideboards or other extensions to the bed are allowable, provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions.

Prior to commencing debris removal operations, the Contractor shall present all trucks or trailers that will be used for hauling debris for the purpose of determining hauling capacity to County and District and debris monitoring representatives. The hauling capacity will be based on the interior dimensions of the truck's metal dump bed. Hauling capacity will be rounded down to the nearest half cubic yard and will be recorded and marked on both sides of each truck or trailer on a white placard with black permanent markings. The Contractor is responsible for supplying the placards. The placard should clearly display the Contractor's company name. Each truck or trailer will also be numbered for identification with a permanent marking. Trucks or equipment which are designated for use under this Contract shall not be used for any other work during the working hours of this Contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this Contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this Contract.

5.3.13 Debris Removal Reports

The Contractor shall prepare daily reports, in accordance with CalEMA/FEMA guidelines, to detail the progress of the debris removal services to the County and District. Each report shall contain, at a minimum, the following information:

- Reporting date
- Location of work (street names and address blocks)
- Contractor's name performing work at each location
- Number of passes performed at each location
- Daily and cumulative totals of debris removed by category
- Itemized Load Ticket Information
- Any problems encountered or anticipated

Discrepancies between the daily report and the corresponding load tickets shall be reconciled with the Debris Management Coordinator no later than 11:00 a.m. the following workday.

5.3.14 Damages

The Contractor shall repair all roadways, sidewalks, utilities, fences, driveways, roofs, drainage structures and other features which are damaged by Contractor operations, including same damages to adjacent public and private properties. This will include the re-sloping of damaged surfaces to original grade and filling of all ruts caused by equipment and trucks. The Contractor shall respond to damage claims within seven (7) calendar days upon receipt of the same by the homeowner or County Debris Management Coordinator and shall settle valid claims within thirty (30) calendar days. The Contractor shall provide the County's Debris Management Coordinator a weekly spreadsheet listing the name, address and telephone number of all residents claiming damage, a summary of the claims, and a status report of the resolutions.

5.3.15 Debris Processing and Disposal

The County and District will identify TDSR sites for the temporary staging and reduction of vegetative and woody debris. In conjunction with contracted debris monitoring services, the Contractor will operate the TDSR sites. Contractor, debris monitoring representatives, and others specifically authorized by the County and District will be allowed to use the sites. The County and District may also establish designated homeowner drop-off sites. The Contractor will be responsible for removing all debris from those sites daily. The Contractor shall use only TDSR sites designated by the County and District.

In tandem with debris monitoring representatives, the TDSR site foreman, appointed by the Contractor, shall direct all dumping operations, and shall coordinate removal of debris and reduction of byproducts to the County authorized landfill locations for subsequent disposal or to recycling processors selected by the Contractor and approved by the County and District.

The Contractor shall provide all management, supervision, labor, machines, tools, and equipment necessary to accept, process, and dispose of disaster-related debris. The Contractor may be asked to pay for all water and electrical services at the sites. The Contractor may be asked to provide all necessary connections for such services. The debris to be processed consists primarily of vegetative debris; however, the Contractor and/or the County and District may choose to process other types of debris as well. The Contractor shall be required to segregate the debris into various categories.

The Contractor shall coordinate with the County and District to obtain the necessary permits to perform all site activities. The disposal cost for the processed material, all byproducts and waste materials shall be the responsibility of the Contractor.

The Contractor shall be responsible for sorting and stockpiling of debris at the site.

Household hazardous waste must be handled, stored, processed, and disposed of in conformance with all applicable local, state, and federal rules and regulations. The Contractor will set up a lined containment area and separate any HHW delivered to or stored at a TDSR site.

Commercial and industrial hazardous waste such as chemicals, gas containers, transformers, and any other form of hazardous or toxic matter will be set aside for collection and disposal by a hazardous materials removal and disposal contractor who will be selected under a separate contract with the County and District.

The Contractor shall establish sufficiently impervious temporary storage areas for HHW, fuel and other materials that may contaminate soils, run-off, or groundwater. The Contractor shall establish sufficiently impervious secondary containment under all tanks in accordance with all federal, state, and local rules and regulations. The Contractor shall establish temporary storage and processing areas for HHW that protects the site from contamination.

Vegetative waste and wood chips shall be stockpiled in a manner that will prevent combustion, wind drift and run-off into streets, the storm drainage system, and adjacent properties.

The Contractor is solely responsible for worker safety, including its subcontractors and suppliers, in accordance with all federal, state, and local laws and regulations.

The Contractor shall be responsible for traffic control, dust control, erosion control, fire protection, on- site roadway maintenance and safety measures at the TDSR site. The Contractor shall direct traffic entering and leaving the site and shall direct all loading and unloading operations at the site.

Upon completion of the debris reduction process, the Contractor shall clear the sites of all debris and restore the sites to their original condition and to the satisfaction of the County and District.

All equipment must be in compliance with all applicable federal, state, and local rules and regulations. All equipment and operator qualifications must meet all federal, state, and local safety and health requirements. The Contractor, using applicable forms, will inspect equipment prior to its use. The completed forms will be provided to the County and District, if requested.

Prior to commencing debris reduction and disposal operations, the Contractor shall present to the County and District's representative a detailed description and operational specifications of all equipment to be used for debris handling, sorting, processing, loading, and hauling; stating brand name, model, and horsepower. Equipment which is designated for use under this Contract shall not be used for any other work during the working hours of this Contract.

The Contractor shall not solicit work from private citizens or others who are not a party to this Contract or to a subordinate contract that arises out of this Contract. Under no circumstances will the Contractor mix debris hauled or processed for others with debris hauled or processed under this Contract.

If the Contractor chooses to use chipping and/or grinding as a method of debris reduction, it is the Contractor's responsibility to dispose of the chips or mulch in compliance with all federal, state, and local rules and regulations at no additional cost to the County and District. Beneficial reuse of the chips is strongly encouraged.

5.3.16 TDSR Site Requirements

The Contractor will provide a site operations plan for review by the County and District and debris monitoring contractor prior to beginning work. At a minimum, the plan will address the following:

- Access to the site
- Traffic control procedures
- Site management, to include point-of-contact, organizational chart, etc.
- Site security
- Site safety
- Site layout/segregation plan
- Hazardous waste materials plan
- Environmental mitigation plan, including considerations for smoke, dust, noise, traffic, buffer zones, storm water run-off, archeology, historic preservation, wetlands, and endangered species, as appropriate

The Contractor shall be responsible for preparing the site(s) to accept the debris. This preparation shall include clearing, erosion control, grading, construction and maintenance of haul roads and entrances. The Contractor shall water all roads to control dust. The Contractor shall provide utility

clearances and sanitation facilities, if needed. The Contractor shall protect existing structures at the site(s) and repair any damage caused by its operations at no additional cost to the County and District.

The Contractor shall be responsible for installing site security measures and maintaining security for its operations at this site. The Contractor shall manage the site to minimize the risk of fire.

The Contractor shall provide an inspection tower at each TDSR site if a site has separate entrances and exits, the Contractor shall provide a tower at both the entrance and the exit. This tower shall be constructed such that the County and debris monitoring representatives can see the bed when empty to fully view the entirety of the debris load (at least 10 feet above the existing ground surface) for the purpose of establishing the load volume. The inspection tower shall be constructed to meet all local, state, and federal safety requirements. The tower shall be constructed using pressure-treated wood. The floor area shall be 8 feet by 8 feet, constructed of 2-inch by 8-inch joists, 16 inches O.C. with ¾-inch plywood supported by four 6 feet by 8 feet posts. The perimeter of the floor area shall be protected by a 4-foot-high wall constructed of 2-inch by 4-inch studs and ½ inch plywood. The floor area shall be covered with a corrugated tin roof. The roof shall provide a minimum of 6 feet, 8 inches of headroom below the support beams. Access shall be provided by wooden steps with a handrail. The tower shall include a writing surface area. The tower must be securely anchored to the ground. The Contractor may provide a mechanical lift or suitable metal scaffolding to be used in place of the constructed tower. Mechanical lifts are acceptable only on a temporary basis for use while constructing inspection towers. The metal scaffolding is not recommended due to potential threat of lightning. The Contractor shall remove and dispose of the inspection towers following completion of the debris removal at the direction of the County Debris Management Coordinator.

The Contractor shall provide portable restroom facilities at all TDSR sites. The portable restroom facilities must be serviced and maintained in a clean and sanitary condition.

The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment, and other devices necessary to meet federal, state, and local requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of this Contract. As a minimum, one flag person shall be posted at each entrance to direct traffic at the site.

The Contractor is responsible for the proper disposal of all debris, residuals, and waste products from the site.

The Contractor shall receive approval from the County and District as to the final acceptance of a site closure.

5.3.17 Household Hazardous Waste (HHW)

The Contractor may be required to construct a containment area at the TDSR site(s) for HHW. This containment area shall be sufficiently impervious to contain spills.

This material shall be segregated from the remaining debris using a method that will allow the remaining non-HHW debris to be processed. All HHW debris will be moved and placed in the designated HHW containment area.

The Contractor will be responsible for reporting to the County and District and cleaning up all HHW spills caused by the Contractor's operations at no additional cost to the County and District. Immediate containment actions shall be taken as necessary to minimize the effect of any spill or leak. Cleanup shall be in accordance with applicable federal, state, and local laws and regulations. Spills shall be reported in accordance with federal, state, and local regulations.

5.3.18 Debris Processing and Disposal Reports

The Contractor shall prepare daily reports, in accordance with Cal EOS/FEMA guidelines, to detail the progress of the debris reduction and disposal services to the County and District. Each report shall contain, at a minimum, the following information by site and the total for all sites:

- Reporting date
- Daily and cumulative totals of debris processed, by method
- Daily and cumulative totals of debris disposed of by location
- Daily and cumulative totals of HHW debris segregated
- Any problems encountered or anticipated

In conjunction with contracted debris monitoring representatives, the Contractor will be required to assist the County and District with the preparation and submittal of Debris Site Management Reports.

5.3.19 Damage Claims

In regard to damage claims resulting from contractor operations as set out in Section 5.3.14, the Contractor shall submit a weekly report to the Debris Management Coordinator on an Excel Spreadsheet summarizing the current status of all damage claims. The weekly report shall include the name, access and phone number of the claims, a summary of the claim, and the status or the resolution.

5.3.20 Additional Required Equipment

The Contractor shall have available additional equipment including, but not limited to, backhoes, bulldozers, etc., for the County and District's use as requested by the County and District.

5.3.21 Training and Pre-Event Workshops

The Contractor shall conduct annual training and pre-event planning workshops at no cost to the County and District. Topics should range from, but not be limited to, mobilization and operational considerations including:

- Temporary debris site selection and evaluation;
- Emergency facility and route designation and priorities;
- Review of debris management plans;
- Environmental and historical structure considerations;

- Local subcontractor participation (with accompanying training workshops);
- Recovery systems training (i.e. – Debris Management System (DIMS));
- GIS assets and systems;
- Billing protocols;
- Technical assistance administration; and
- Other area-specific operational considerations and caveats.

5.4 OCPW County Maintained Equipment Inventory

The County maintained inventory list of internal resources that can be used to support debris operations is located at the following link:

- OCPW Shared Drive Network
    - Vehicle Assignments by Section | Powered by Box

5.5 Contract Policy Manual

The County's Contract Policy Manual is located at the following links and locations:

- OCPW Shared Drive Network
  https://ocgov.sharepoint.com/sites/intraOCPW/ProcurementServices/_layouts/15/viewer.aspx?sourcedoc={67143c16-18b7-4712-ac95-ea07d567d423}

5.6 Design and Construction Policy Manual

The County's Design and Construction Policy Manual is located at the following links and locations:

- OCPW Shared Drive Network
  - Debris Management Plan | Powered by Box

5.7 County Procurement Ethics Guide

Procurement Ethics Guide is located at the following links and locations:

- OCPW Shared Drive Network
  https://ocgov.sharepoint.com/sites/intraOCPW/ProcurementServices/_layouts/15/viewer.aspx?sourcedoc={67143c16-18b7-4712-ac95-ea07d567d423}

5.8 Public Works Mutual Aid Agreement

A hard copy binder of the signed Orange County Public Works Mutual Aid Agreements is maintained online at the Box link below:

Mutual Aid Agreements | Powered by Box

5.9 Solid Waste Recycling Facilities

Since businesses available for these services change frequently, refer to the Solid Waste Information System (SWIS) facility database maintained by CalRecycle.

The most up to date list can be found at https://www2.calrecycle.ca.gov/SolidWaste/Site/Search below is a listing current as of 9/12/25.

Table 5.4: List of Solid Waste Recycling and Facilities

SWIS Number	Name	Activity	Regulatory Status	Operational Status
30-AB-0013	**Stanton Recycling and Transfer Facility**	**Large Volume Transfer/Processing Facility**	Permitted	Active
30-AB-0019	**Prima Deshecha Landfill**	**Solid Waste Landfill**	Permitted	Active
30-AB-0035	**Olinda Alpha Landfill**	Solid Waste Landfill	Permitted	Active
30-AB-0099	Rainbow Transfer/Recycling Company, Inc.	Chipping and Grinding Facility/Operation	Permitted	Active
30-AB-0099	**Rainbow Transfer/Recycling Company, Inc.**	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0335	**CVT Regional Material Recovery and TS**	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0335	**CVT Regional Material Recovery and TS**	Chipping and Grinding Facility/Operation	Permitted	Active
30-AB-0336	**Sunset Envir Inc TS/Resource Rec Fac**	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0360	**Frank R. Bowerman Landfill**	**Solid Waste Landfill**	Permitted	Active
30-AB-0361	**City Of Newport Beach Transfer Station**	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0363	**Waste Management of Orange**	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0364	**La Pata Avenue Greenwaste Facility**	**Green Material Composting Facility**	Permitted	Active
30-AB-0378	**Golden Rain Foundation Composting Op.**	**Green Material Composting Operation**	Notification	Active

SWIS Number	Name	Activity	Regulatory Status	Operational Status
30-AB-0386	Madison Materials, Inc.	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0390	Baker Canyon Green Recycling	Green Material Composting Operation	Notification	Active
30-AB-0395	CR&R South County MRF	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0402	City of Stanton Public Works Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0403	Tierra Verde Industries EcoCentre	Composting Facility (Mixed)	Permitted	Active
30-AB-0403	Tierra Verde Industries EcoCentre	Large Volume Transfer/Processing Facility	Permitted	Active
30-AB-0404	Waste Mgt. of Orange LVTS	Limited Volume Transfer Operation	Notification	Active
30-AB-0405	Serrano Creek Ranch Composting Op.	Agricultural Material Composting Operation	Notification	Active
30-AB-0407	City of Brea Service Center LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0408	City of Costa Mesa Corporation Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0409	City of Laguna Beach Corporation Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0410	City of Fullerton Basque Yard	Medium Volume Transfer/Processing Facility	Permitted	Active
30-AB-0411	City of Cypress Maintenance Yard LVTSOp	Limited Volume Transfer Operation	Notification	Active
30-AB-0412	City of La Habra Public Work Dept.	Limited Volume Transfer Operation	Notification	Active
30-AB-0413	City of Santa Ana Corporate Yard	Medium Volume Transfer/Processing Facility	Permitted	Active
30-AB-0414	City of San Clemente LVTS	Limited Volume Transfer Operation	Notification	Active
30-AB-0416	Municipal Service Center LVTS Op.	Limited Volume Transfer Operation	Notification	Active
30-AB-0417	City of Orange Corporate Yard LVTS Op.	Limited Volume Transfer Operation	Notification	Active

SWIS Number	Name	Activity	Regulatory Status	Operational Status
30-AB-0418	City of Huntington Beach, P.W.Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0419	City of Villa Park LVT Operation	Limited Volume Transfer Operation	Notification	Active
30-AB-0420	City of Seal Beach Public Works Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0421	Fountain Valley City Yard	Limited Volume Transfer Operation	Notification	Active
30-AB-0422	City of Yorba Linda LVTOp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0423	City of San Juan Capistrano LVTOp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0428	City of Huntington Beach # 2-LVTOp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0429	City of Irvine Op.Support Fac. LVT Op.	Limited Volume Transfer Operation	Notification	Active
30-AB-0430	Caballero Yard - LVT Op.	Limited Volume Transfer Operation	Notification	Active
30-AB-0432	Placentia Street Sweeper TransferStation	Limited Volume Transfer Operation	Notification	Active
30-AB-0433	Vermont Street Sweeper Transfer Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0434	Pinney Street Sweeper Transfer Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0435	City of Westminster Maintenance LVT Op.	Limited Volume Transfer Operation	Notification	Active
30-AB-0436	Crescent Street Sweeper Transfer Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0437	City of Tustin Maintenance Yard - LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0439	Western Street Sweeper Transfer Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0440	Bellis Park Yard - LVT Op.	Limited Volume Transfer Operation	Notification	Active

SWIS Number	Name	Activity	Regulatory Status	Operational Status
30-AB-0441	City of La Palma Corp.Yard LVTOp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0443	City of Placentia Corp. Yard - LVTOp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0448	Rancho Mission Viejo Compost Facility	Green Material Composting Operation	Notification	Active
30-AB-0450	OC Public Works Portola Yard LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0451	OC Public Works Capistrano Yard LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0452	Cal Trans Brea Maintenance Station LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0453	CalTrans Bolsa Chica Maintenance Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0454	CalTrans Stanton Maintenance Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0455	CalTrans Santa Ana Decanting Site LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0456	CalTrans Costa Mesa Maintenance Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0457	CalTrans Orange Maintenance Station LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0458	CalTrans Toll Road Maintenance Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0459	CalTrans San Juan Capistrano LVTO	Limited Volume Transfer Operation	Notification	Active
30-AB-0461	R&S Soil Products, Inc.	Green Material Composting Operation	Notification	Active
30-AB-0462	Stanton C&D Recycling Facility	Medium Volume C&D Wood Debris Chipping and Grinding Facility	Permitted	Active
30-AB-0463	Stanton Green Materials Recycling Fac.	Chipping and Grinding Facility/Operation	Permitted	Active
30-AB-0464	Orange County Sanitation District	Limited Volume Transfer Operation	Notification	Active
30-AB-0465	CalTrans Marine Way Decanting Site	Limited Volume Transfer Operation	Notification	Active

SWIS Number	Name	Activity	Regulatory Status	Operational Status
30-AB-0466	City of Los Alamitos Transfer Station	Limited Volume Transfer Operation	Notification	Active
30-AB-0468	Capistrano Greenery	Green Material Composting Facility	Permitted	Active
30-AB-0469	Bee Canyon Greenery	Composting Facility (Mixed)	Permitted	Active
30-AB-0470	Valencia Greenery	Composting Facility (Other)	Permitted	Active
30-AB-0472	Rio Santiago	Solid Waste Landfill	Unpermitted	Active
30-AB-0476	Blue Ribbon Nursery & Landscape Supplies	Chipping and Grinding Facility/Operation	Notification	Active
30-AB-0477	Organix Environmental Services, Inc.	Chipping and Grinding Facility/Operation	Notification	Active
30-AB-0479	City of Newport - Corporate Yard (Greenwaste Operations)	Chipping and Grinding Facility/Operation	Notification	Active
30-AB-0480	City of Newport Beach Corporate Yard (Street Sweeping Operations)	Limited Volume Transfer Operation	Notification	Active
30-AB-0481	Capistrano Greenery - Chip & Grind	Chipping and Grinding Facility/Operation	Permitted	Active
30-AB-0482	JP Service and Hauling Corp.	Limited Volume Transfer Operation	Notification	Active
30-AB-0483	Greenwaste Management at the Great Park	Green Material Composting Facility	Notification	Active
30-AB-0484	OC Parks - South Coastal Operations	Limited Volume Transfer Operation	Notification	Active
30-AB-0485	Patriot Wastewater - Orange Facility	Limited Volume Transfer Operation	Notification	Active
30-AB-0486	Tony's Organic Recycling	Chipping and Grinding Facility/Operation	Notification	Active
30-AB-0487	Organix Environmental Services Small Volume CDI	Small Volume CDI Debris Processing Operation	Notification	Active

5.10 County Franchised Haulers

The most up to date list of County Franchised Haulers can be found at http://www.oclandfills.com/about/faq/residential below is a listing current as of 9/12/25.

Table 5.5: County Franchised Hauler List

CITY * = Unincorporated	HAULER	PHONE #	City Contact
Aliso Viejo	CR&R	(877) 728-0446	Rae Beimer [redacted]
Anaheim	Republic Services Anaheim	(714) 238-3300	Dora Ovenshire [redacted]
Anaheim Islands*	Republic Services Garden Grove	(714) 238-3300	NA
Balboa/Balboa Island (Part of Newport Beach)	CR&R	(877) 728-0446	Charles Springer [redacted]
Brea	Republic Services Brea	(714) 238-3300	Francesca Vivanti [redacted]
Buena Park	Park Disposal	(714) 522-3577	Laurie Aubuchon [redacted]
Buena Park Island*	Republic	(714) 238-3300	NA
Canyons (Modjeska and Silverado)*	Waste Management	(949) 642-1191	NA
Corona Del Mar (Part of Newport Beach)	CR&R	(877) 728-0446	Charles Springer [redacted]
Costa Mesa	CR&R	(877) 728-0446	Kevin Gaxiola [redacted]
Coto De Caza*	Waste Management of OC	(949) 642-1191	
Cowan Heights *	Waste Management of OC	(949) 642-1191	
Cypress	Valley Vista Services	(714) 380-5450	Elizabeth Camarena [redacted]
Dana Point	CR&R	(877) 728-0446	Jennifer Anderson [redacted]
Emerald Bay*	Waste Management	(949) 642-1191	
El Modena *	CR&R	(877) 728-0446	

CITY * = Unincorporated	HAULER	PHONE #	City Contact
Fountain Valley	Republic Services HB	(714) 847-3581	Lia Gountoumas [redacted]
Fountain Valley Island*	Republic Services HB	(714) 847-3581	
Fullerton	MG Disposal/Republic Services	(714) 238-3300	Michelle Duron [redacted]
Garden Grove	Republic Services Garden Grove	(714) 238-3300	Mark Ladney [redacted]
Huntington Beach	Republic Services HB	(714) 847-3581	Debra Jubinsky [redacted]
Irvine	Waste Management of OC	(949) 642-1191	Ryan Tenney [redacted]
Ladera Ranch *	Waste Management of OC	(949) 642-1191	
Laguna Beach	CR&R	(877) 728-0446	Ashley Moran [redacted]
Laguna Hills	CR&R	(877) 728-0446	Matt Durham [redacted]
Laguna Niguel	CR&R	(877) 728-0446	Kevin O'Connor [redacted]
Laguna Woods	CR&R	(949) 625-6735	Nadia Cook [redacted]
Lake Forest	CR&R	(877) 728-0446	Christine Groves [redacted]
La Habra	CR&R	(877) 728-0446	Jeff Henderson [redacted]
La Palma	EDCO Disposal (Park Disposal)	(714) 522-3577	Julie Herrera [redacted]
Lemon Heights *	Waste Management of OC	(949) 642-1191	
Los Alamitos	Universal Waste Systems	(562) 941-4900	Britney Ramirez [redacted]
Midway City *	Midway City Sanitary District	(714) 893-3553	
Mission Viejo	Waste Management of OC	(949) 642-1191	Hazel McIntosh [redacted]
Newport Beach	CR&R	(877) 728-0446	Charles Springer [redacted]

CITY * = Unincorporated	HAULER	PHONE #	City Contact
Newport Coast*	CR&R	(877) 728-0446	
North Tustin *	Waste Management of OC	(949) 642-1191	
Olive *	Waste Management of OC	(949) 642-1191	
Orange	CR&R	(877) 728-0446	Matt Lorenzen [redacted]
Orange Island*	CR&R	(877) 728-0446	
Orange Park Acres *	Waste Management of OC	(949) 642-1191	
Placentia	Republic Services Placentia	(714) 238-3300	Cheryl Miller [redacted]
Placentia Island*	Republic Services Placentia	(714) 238-3300	
Rancho Mission Viejo*	CR&R	(877) 728-0446	
Rancho Santa Margarita	CR&R	(877) 728-0446	Andrea Howhannesian [redacted]
Rossmoor *	CR&R	(877) 728-0446	
San Clemente	CR&R	(877) 728-0446	Danna McIntosh [redacted]
San Juan Capistrano	CR&R	(877) 728-0446	Natalia Chávez [redacted]
Santa Ana	Republic Services	(877) 328-2074	Stephanie Martinez [redacted]
Santa Ana Heights *	CR&R	(877) 728-0446	
Seal Beach	Republic Services Seal Beach	(800) 299-4898	Lauren Barich [redacted]
Silverado *	Waste Management of OC	(949) 642-1191	
Stanton	CR&R	(877) 728-0446	Cesar Rangel [redacted]
Stanton Islands*	Republic Services Garden Grove	(714) 238-3300	
Trabuco Canyon *	Waste Management of OC	(949) 642-1191	

CITY * = Unincorporated	HAULER	PHONE #	City Contact
Tustin	CR&R	(877) 728-0446	Elsa Robinson [redacted]
Westminster	Midway City Sanitary District	(714) 893-3553	Jake Ngo [redacted]
Yorba Linda	Yorba Linda Disposal/Republic Services	(714) 238-3300	Geoff Spencer [redacted]
Yorba Linda Islands *	Yorba Linda Disposal/Republic Services	(714) 238-3300	

5.11 Hazardous Waste Contractors

Table 5.6: List of Hazardous Waste Contractors

NAME OF CONTRACTOR	ADDRESS	PHONE #	NOTES
Industrial Waste Utilization, Inc.	5601 State St. Montclair, CA 91763	(909) 984-9984	Main Hazardous Waste Contractor
Ocean Blue Environmental Services, Inc.	925 W Esther St. Long Beach, CA 90813	(562) 624-4120	On-Call Emergency Response Contractors
Hunter Consulting Inc. dba HCI Environmental & Engineering Service	12155 Magnolia Ave. Ste 4C Riverside, CA 92503	(909) 645-7101	
Patriot Environmental Services, Inc.	508 E St. Ste A Wilmington, CA 90744	(310) 866-9073	

5.12 Air Monitoring Standards

On-site Air Monitoring

At a minimum, the following on-site air monitoring procedures should be followed within the immediate debris removal area:

- Document on-site air monitoring activities in accordance with a Site-Specific Health and Safety Plan.
- 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 filter (MCEF) cassette and analyzed by transmission electron microscopy 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 are representative 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, or other protective occupational health guidance used in the site-specific Hazard and Security Plan.
- It is recommended that a full-time health and safety officer be assigned to the removal operations, preferably a certified industrial hygienist.
- 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

Recommended off-site air monitoring procedures are as follows:

- Coordinate any monitoring and sampling efforts with County environmental health departments and AQMD. Additional state and federal resources are available if local resources are unavailable or exhausted. The favored approach is an interagency effort with either AQMD or local Health Department as the lead agency.

- Develop a Sampling Plan and document community monitoring activities in a Community Health and Safety Plan.
- 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.
- 24-hr. 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 micrograms per cubic meter (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[46] or from the US EPA provisional advisory levels (https://www.epa.gov/aegl).

[46] http://oehha.ca.gov/air/allrels.html

5.13 Sample Public Information Messages

For Immediate Release (Approximately 48-72 Hours Prior to Event if Known)

Orange County, California – The potential for dangerous conditions is eminent for **Orange County** and its residents. In anticipation of a likely large debris-generating **TYPE OF INCIDENT**, residents are asked to prepare accordingly. The County is prepared and has a plan in place to immediately respond following the incident. Once dangerous conditions subside and roads have been cleared of obstructions, residents should bring any debris to the public right-of-way for removal.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Residents should separate clean, vegetative debris (woody debris such as limbs and shrubbery) from construction and demolition debris. Do not mix hazardous material, such as paint cans, aerosol sprays, batteries, or appliances with construction and demolition debris. Household garbage, tires or roof shingles cannot be combined with any storm debris.

Do not place debris near a water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, residents should continue to push their remaining debris to the public right-of-way for collection on subsequent passes. Residential debris drop-off locations may be available within the County. Check the Orange County Web site at **INSERT WEB SITE**, **APP, INSERT SOCIAL MEDIA SITE(S)** for the location of these sites and the hours of operation or call **INSERT NUMBER**. The County website will also provide County office closure times/date (including garbage collection and County facilities). All reconstruction debris (debris resulting from rebuilding) is the responsibility of the homeowner. Those items must be dropped off at the **INSERT LOCATION**.

County residents are encouraged to stay indoors until the danger has passed. Please tune into local news channels for updated information.

####

For Immediate Release (Approximately 0-72 Hours Following Event)

Orange County, California – Orange County is beginning its recovery process in the wake of **INSERT INCIDENT**. County residents are asked to place any debris generated by the incident on the public right-of-way.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (woody debris such as limbs and shrubbery) separated from construction and demolition debris, as they will be collected separately. Bagged debris should not be placed on the public right-of-way, only loose debris will

be collected. Any household hazardous waste, roof shingles or tires resulting from **INSERT INCIDENT**, may be eligible for removal and should be separated at the curb.

Do not place debris on or near a water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, please continue to push their remaining debris to the right-of-way for collection on subsequent passes. Household garbage collection will resume to its normal schedule on **INSERT DATE AND TIME**. Please check the Orange County Web site **INSERT WEB SITE**, **APP, INSERT SOCIAL MEDIA SITE(S)** for additional information and updates on the debris removal process.

For more information, please call the Orange County debris hotline at **INSERT NUMBER**.

####

For Immediate Release (72 Hours Prior to Final Pass of Debris Removal)

Orange County, California**.** – Final preparations are being made for the third and potentially final pass for debris removal in the wake of **INSERT INCIDENT.**

Orange County residents should have all disaster-generated debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than **INSERT DATE** to be eligible for pick-up.

The County will not be able to guarantee that debris placed on the public right-of-way after the specified deadline will be removed.

Residents should continue to separate vegetative debris (woody debris such as limbs and shrubbery) and construction and demolition debris. Do not place debris near water meter vault, fire hydrant or any other above-ground utility. Hazardous household chemicals such as paint cans and batteries may be deposited at the **INSERT LOCATION.**

If you have any questions regarding debris removal efforts, please see the Orange County Web site at **INSERT WEB SITE, APP, INSERT SOCIAL MEDIA SITE(S)**, or call **INSERT NUMBER**.

####

For Immediate Release (Residential Drop Off Sites)

Orange County, California**. –** Disaster debris drop off sites have been established for residents who would like to self-haul their **INSERT INCIDENT** disaster debris. Please note that only disaster related debris will be accepted at these sites. Acceptable disaster related debris to be accepted at the sites include:

INDICATE THE TYPES OF DEBRIS TO BE ACCEPTED

- Vegetative: Includes logs and tree branches.
- Construction and Demolition: Includes carpet, dry wall, furniture, lumber, mattresses, and plumbing.

- White Goods: Includes freezers (food removed), refrigerators (food removed), stoves, washers, dryers, and air conditioners.
- Electronic Waste: Includes computers, radios, stereos, televisions, and other devices with a cord.
- Household Hazardous Waste: Includes cleaning supplies, batteries, lawn chemicals, oil, oil-based paint and stains, and pesticides.

The locations will only be open to residents of Orange County with proper identification **DEFINE WHAT WILL BE ACCEPTED AS PROPER IDENTIFICATION**. Debris will not be accepted from businesses or contractors at the sites. Debris should not be bagged.

The drop-off sites will be open from **OPEN TIME** to **CLOSE TIME** and are located at:

- **LOCATION 1 ADDRESS**
- **LOCATION 2 ADDRESS**

Residents not wanting to self-haul their debris should have all debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than **INSERT DATE** to be eligible for pick-up. Debris should be separated into piles according to debris type such as vegetative, construction and demolition, white goods, electronic waste, and household hazardous waste. Regular household trash should also be placed in a separate pile to be collected by regular trash collection services.

Do not place near water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

You can follow the debris removal efforts by going to the Orange County **WEB SITE**, **APP, INSERT SOCIAL MEDIA SITE(S)**, or by calling **INSERT NUMBER**.

####

For Immediate Release (Temporary Debris Management Sites)

Orange County, California. – To help manage the debris from the INSERT INCIDENT, Orange County has identified the NAME LOCATION as a temporary debris management site. A temporary debris management site is used to temporarily store, segregate, reduce, and process debris generated from the disaster. Using the site will help to reduce the time it takes to remove debris from residences and will also help to reduce and/or recycle as much as the debris as possible to reduce the quantity of debris being deposited in local landfills.

Please note that only disaster related debris hauled by County crews and authorized contractors may bring debris into the site(s). Individuals wanting to self-haul debris from their property can take it to the residential drop-off site(s) located at LOCATION from TIMES OF OPERATION. See the notice concerning the debris that will be accepted at the residential drop off site at WEB SITE/SOCIAL MEDIA SITE.

The NAME LOCATION will only be operated during daylight hours to reduce the disruption to the neighboring community. When the site is no longer needed to serve as a temporary debris management site, the remaining debris will be hauled off the property and it will be returned to its pre-disaster condition.

Thank you very much for your cooperation and patience as we work together to clear our County of the disaster debris.

You can follow the debris removal efforts in your neighborhood and the rest of the County by going to the Orange County Web site at INSERT WEB SITE, APP, INSERT SOCIAL MEDIA SITE(S), or by calling INSERT NUMBER.

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Figure 5.1: Separating Debris Graphic In English

Figure 5.2: Separating Debris Graphic in Spanish

Chapter 6 POSITION CHECKLISTS

- Debris Management Group Supervisor
- Debris Manager
- Debris Collection/Load Monitor
- Disposal Monitor
- Tree Debris Specialist

6.1 Debris Management Group Supervisor

Debris Management Group Supervisor	
Name:	Date:
Start Time:	End Time:

Position Checklists are a tool designed to provide the County and Operational Area emergency response organization with proposed activities to support essential functions during an EOC activation. The following checklists serve as a point of reference to identify the scope of actions that may occur during response operations. The items listed in the checklist should not be considered final or static. As response operations evolve, changes will be needed to the County and Operational Area emergency response organization.

Reporting Location: County and Operational Area Emergency Operations Center

Responsible Department: OC Public Works (OCPW)

Responsible Position: OC Public Works, Manager

Immediate Supervisor: Public Works & Utilities Branch Director

Subordinates in County and OA EOC: None

Coordinates with: Debris Manager at OCPW DOC

Similar Position in NIMS System: Debris Supervisor

6.1.1 Responsibilities

- Assists Debris Manager at the OCPW DOC with coordination of resources and personnel to assist with the mobilization and deployment for public works operations in support of County Debris Management.
- Coordinates resources and personnel for heavy equipment support.
- Coordinates emergency repair and restoration, debris clearance and route recovery operations.
- Coordinates debris removal and develops a debris management plan for the incident and aid the Operational Area.
- Coordinates with OC Waste and Recycling for debris management planning.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP, and with representatives at the OC Public Works DOC.

- READ ENTIRE CHECKLIST AT START-UP AND AT BEGINNING OF EACH SHIFT.

6.1.2 Start-Up Actions

- ❑ Upon notification, report to the County and Operational Area EOC and sign in.
- ❑ Report to the Public Works and Utilities Branch Director and obtain an initial briefing.
- ❑ Ensure telephone is off "forward."
- ❑ Login to EOC position computer:
  - Login: [redacted]
  - Password: [redacted]
- ❑ Activate Outlook; for all EOC activations you must use your EOC position email account, not your work email account.
- ❑ If Outlook has not been initiated on the assigned computer, follow the steps as directed on the computer:
- ❑ If you need additional assistance or have issues with the computer contact the Logistics Section, Information Technology Support Group (Orange vests) or Emergency Management staff (Black vests).
- ❑ Monitor your EOC position email throughout your shift.
- ❑ Log into WebEOC - (http://webeoc.ocsd.org) for additional log in procedures, go to the WebEOC tab in this binder.
  - Username: [redacted]
  - Password: [redacted]
  - Position: [redacted]
  - Incident: [redacted]
  - Name: [redacted]
  - Location: [redacted]
  - Phone Number: [redacted]
  - Email: [redacted]
- ❑ Maintain log of events, documenting all activities, either electronic or paper form activity log.
- ❑ Review position responsibilities and clarify any issues regarding your authority and assignment.

6.1.3 General Operational Duties

- ❑ Determine the status of local resources available to mitigate the emergency.
- ❑ Establish and maintain contact with the OC Public Works Department Operations Center (DOC), ICP, and other utilities.
- ❑ Provide technical advice on debris removal processes and requirements.
- ❑ Maintain accurate records on the use of personnel, equipment, and materials in support of the incident.
- ❑ Complete the Debris Management Status Report for each operational period.
- ❑ Paper version located in this binder under the "Status Report Forms" Tab.
- ❑ Electronic version located on computers "K" drive, folder "2 Operations Section, Public Works and Utilities Branch Information and Forms" Branch Status Reports.
- ❑ Determine and coordinate debris removal efforts within the County area of responsibility.
- ❑ Establish contact with Operational Area (OA) jurisdictions for the estimated amount and type of debris generated due to the incident.
- ❑ Obtain status of residential and business refuse pick-up services during the event.
- ❑ Coordinate with WEROC Liaison to obtain status of wastewater systems and repair activities in progress.
- ❑ Coordinate with OC Public Works Department Operations Center (DOC) to determine whether the activation of the County's Debris Management Service contract is required.
- ❑ In coordination with OA jurisdictions, OC Waste and Recycling, develop a debris removal plan to facilitate operations:
  - Identification of debris removal efforts being initiated throughout the OA.
  - Identification of County's and OA resource needs for debris removal efforts.
- ❑ Coordinate with OC Waste and Recycling for debris removal planning, including:
  - Landfill operating hours-consider modifying hours
  - Landfill fees-consider reducing or waiving landfill fees
  - Local, state, and federal regulatory requirements and considerations for debris handling and disposal

- Identification and establishment of debris collection sites.
- Evaluation of potential recycling of debris.

❑ Coordinate with Medical and Health Branch, Environmental Health, and Public Health Groups to address environmental and public health issues.

❑ Coordinate with Fire and Rescue Branch, Hazardous Materials Group for hazardous waste/materials issues.

❑ Coordinate with the Law Enforcement Branch Director on disposal, or tow/storage of any vehicles in the right a way impeding debris removal operations or on private property impeding life safety search and rescue as per CVC 22650 et al.

❑ Coordinate with Logistics Section for proper protective clothing for personnel, including gloves, masks, and eye protection, etc.

❑ Provide the Public Information Officer and Public Information Officer Support Staff with information for the public on debris removal activities.

❑ Maintain status on debris removal activities within the OA.

❑ Coordinate the provision of resources to assist in debris management and recovery operations, as appropriate.

Recovery

(see County of Orange and Orange County Operational Area Recovery Annex for additional activities)

❑ Advise the Public Works and Utilities Branch Director on debris management issues affecting recovery.

❑ Monitor debris removal and debris management issues during recovery operations.

❑ Monitor landfill operations and other debris management sites.

Demobilization

❑ Authorize the demobilization of organizational elements within the group when authorized by the Public Works and Utilities Branch Director. Ensure any open actions are handled or transferred to other County and Operational Area EOC elements as appropriate.

- ❑ Complete all required forms, reports, activity logs and other documentation. Provide all completed documentation to the Public Works and Utilities Branch Director prior to your departure from the EOC.
- ❑ Return all checked out equipment to the Public Works and Utilities Branch Director prior to your departure from EOC.
- ❑ Participate in all debriefings and critiques of the County and Operational Area emergency response and be prepared to provide input to the County and Operational Area After Action and Corrective Action report.

Precise information is essential to meet requirements for possible reimbursement by Cal OES and FEMA.

6.2 Debris Manager

Debris Manager	
Name:	Date:
Start Time:	End Time:

The Position Checklists are a tool designed to provide the County and Operational Area emergency response organization with proposed activities to support essential functions during a DOC activation and activation of the Disaster Debris Management Plan (DDMP). The following checklists serve as a point of reference to identify the scope of actions that may occur during response operations. The items listed in the checklist should not be considered final or static. As response operations evolve, so will the requirements of the County and Operational Area emergency response organization and additions or modifications to actions outlined below will likely be required.

Reporting Location: Orange County Public Works Department Operations Center (DOC)

Responsible Department: OC Public Works (OCPW)

Responsible Position: OC Public Works, Operations and Maintenance Supervisor or above

Immediate Supervisor: OCPW DOC Operations Section Chief

Subordinates:

- Disposal Monitors
- Collection Monitors
- Tree Debris Specialists

Coordinates with: Debris Management Group Supervisor at County and OA EOC

Similar Positions in NIMS System: Debris Operations Manager, Debris Planning Manager

6.2.1 Responsibilities

The Debris Manager coordinates the overall debris management activities for the County. In general, the Debris Manager performs the following:

- Manages and coordinates debris removal activities related to the incident.
- Maintains communication between other members of the disaster management team.
- Provides communication of project status, activity, and reporting and manages dissemination and implementation of policy directives to debris removal personnel.
- Coordinates with internal resources, mutual aid, and contracted service providers to accomplish tasks and objectives as described in the DDMP.

6.2.2 Start-Up Actions

- ❑ Upon notification, report to the OCPW DOC and sign in.
- ❑ Report to the OCPW DOC Operations Section Chief and obtain an initial briefing.
- ❑ Maintain log of events, documenting all activities, either electronic or paper form activity log.
- ❑ Review position responsibilities and clarify any issues regarding your authority and assignment.
    - Additional information, tools, and documents can be found on the computers OCPW Shared Drive Network "S"
- ❑ READ ENTIRE CHECKLIST AT START-UP AND AT BEGINNING OF EACH SHIFT CHECKLIST ACTIONS

6.2.3 General Operational Duties:

Response

- ❑ Activate the DDMP and establish a debris operations organizational structure.
- ❑ Conduct emergency roadway clearance.
- ❑ Coordinate with the OA EOC Law Enforcement Branch Director if activated, or local law agency's dispatch center on disposal, or tow/storage of any vehicles in the right a way impeding debris removal operations or on private property impeding life safety search and rescue as per CVC 22650 et al.
- ❑ Begin tracking costs.
- ❑ Conduct debris damage assessment.
- ❑ Identify and manage temporary debris management sites (TDMS).
- ❑ Ensure contracted trucks are certified.

Recovery

- ❑ Conduct right-of-way debris collection.
- ❑ Use force account resources.
- ❑ Procure and use contracted services.
- ❑ Monitor debris operations.
- ❑ Conduct final disposition operations.
- ❑ Ensure compliance with environmental and other regulatory requirements.
- ❑ Conduct special debris programs.
- ❑ Obtain permits.
- ❑ Provide public information.
- ❑ Compile and reconcile debris-related costs.

Safety

- ❑ Ensure all staff have completed health and safety training related to their job position.

- ❑ Ensure mutual aid and contracted service providers are implementing the County's health and safety plan.
- ❑ Ensure all field personnel are documenting their health and safety actions in their daily activity logs.
- ❑ Ensure all personal protective equipment (PPE) is worn.
- ❑ Implement corrective actions if personnel are not following health and safety procedures.
- ❑ Coordinate with the Occupational Safety and Health Administration (OSHA) for guidance and best management practices.
- ❑ Ensure health and safety incidents are properly documented and reported.

Diseased trees

- ❑ Coordinate with California Department of Food and Agriculture for regulations, guidance, and best management practices to manage disaster vegetative debris.
- ❑ Ensure all documentation requirements are implemented in the field.
- ❑ Ensure all field personnel are properly trained to identify and handle diseased trees.

Demobilization

- ❑ Authorize the demobilization of organizational elements within the group when authorized by the Operations Section Chief. Ensure any open actions are handled or transferred to other OCPW DOC or County and Operational Area EOC elements as appropriate.
- ❑ Complete all required forms, reports, activity logs and other documentation. Provide all completed documentation to the OCPW Operations Section Chief prior to your departure from the DOC.
- ❑ Return all checked out equipment prior to your departure from OCPW DOC.
- ❑ Participate in all debriefings and critiques of the County and Operational Area emergency response and be prepared to provide input to the County and Operational Area After Action and Corrective Action report.

Precise information is essential to meet requirements for possible reimbursement by Cal OES and FEMA.

6.3 Debris Collection/Load Monitor

Debris Collection/Load Monitor	
Name:	Date:
Start Time:	End Time:

The Position Checklists are a tool designed to provide the County and Operational Area emergency response organization with proposed activities to support essential functions during a DOC activation and activation of the Disaster Debris Management Plan (DDMP). The following checklists serve as a point of reference to identify the scope of actions that may occur during response operations. The items listed in the checklist should not be considered final or static. As response operations evolve, so will the requirements of the County and Operational Area emergency response organization and additions or modifications to actions outlined below will likely be required.

Reporting Location: Orange County Public Works Department Operations Center (DOC) or if directed, Specific Debris Collection Point

Responsible Department: Contract Service Manager

Responsible Position: As described in contract

Immediate Supervisor: OCPW DOC Debris Manager

Subordinates: Contract Service Workers

Coordinates with:

- Disposal Monitors
- Tree Debris Specialist

Similar Position in NIMS System: Debris Monitoring Team

6.3.1 Responsibilities

Debris Load 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. The debris loading monitor's primary job is to maintain documentation of work performed at the point of debris collection. This is typically captured on a debris load ticket and includes the following information:

- ❑ Date, time, and location of work site
- ❑ Contractor, truck number, and truck operator's name
- ❑ Debris type (vegetative, construction and demolition, white goods, household hazardous waste, or other)
- ❑ Debris loading monitor name/signature

6.3.2 General Operational Duties:

Debris Loading Monitors should be cognizant of the regulations for collecting disaster debris and document if haulers are collecting ineligible debris. If debris is collected from ineligible areas or ineligible debris types, the monitor should document the issue and report it to their supervisor.

Safety

Debris load Monitors will also follow the following SAFETY criteria:

- ❑ Ensure all personal protective equipment (PPE) is worn.
  - Always maintain situational awareness.
- ❑ Stay out of the contractor's work zone, typically twice the length of the fully extended boom.
  - Drive safe – Wear seatbelt, keep both hands on the wheel, and no distracted driving (cell phone).
  - Use caution when entering and exiting traffic.
  - Be extremely careful when getting in and out of your vehicle (check for oncoming/passing traffic, downed lines, trip hazards, etc.).
- ❑ Do not walk and operate your handheld, stop in a safe location to operate.
- ❑ Bring enough food and water for your work day.
- ❑ Contact the Debris Manager at the OCPW DOC if any issues arise.
- ❑ Check in with the Debris Manager every 4 hours with an update on activities.

Description of Eligible Debris Types

- Vegetative debris – Tree trunks, branches, and other leafy material.
- C&D debris – Metal, roofing material, wallboard, other damaged building material.
- Household hazardous waste – Household cleaners, paint, etc.
- White goods – Refrigerators, washer machine, dryer, etc.

Once a truck begins collecting one type of debris they must only collect the same type of debris until they have a full load.

- Eligibility criteria.
  - Debris must be a result of the disaster.
  - Debris must be placed on the right-of-way (ROW) for collection.
  - Debris cannot be put inside garbage bags for collection.
- Right-of-way (ROW)
  - The ROW is the area of land from the middle of the street to the front part of a property.
  - The ROW varies from street to street but is often marked by sidewalks, utility poles, or fire hydrants.
  - A tree can be located outside the ROW but have hazardous branches that extend into the ROW.

  - Contact the Debris Manager Group Supervisor for any vehicles requiring coordination with local law enforcement for removal as per CVC 22650 et al.
- Zone map
  - A zone map identifies the area in which the contractor crew can work and the work location for the day.
  - As disaster debris is collected from a road, highlight the road as completed.
  - Turn in your highlighted zone map at the end of the day.
  - Do not leave the assigned zone without authorization from a supervisor.
- Documentation requirements
  - Complete your collection log.
    - Date, time, and location of work site
    - Contractor, truck number, and truck operator's name
    - Debris type (vegetative, construction and demolition, white goods, household hazardous waste, or other)
    - Debris loading monitor name/signature
  - Only issue one control ticket per container when the debris contractor is ready to depart to the disposal site.

Demobilization

- ❑ Authorize the demobilization of organizational elements within the group when authorized by the OCPW DOC Debris Manager. Ensure any open actions are handled or transferred to other OCPW DOC or County and Operational Area EOC elements as appropriate.
- ❑ Complete all required forms, reports, activity logs and other documentation. Provide all completed documentation to the OCPW DOC Debris Manager at the end of your shift.
- ❑ Return all checked out equipment prior to your departure from OCPW DOC.
- ❑ Participate in all debriefings and critiques of the County and Operational Area emergency response and be prepared to provide input to the County and Operational Area After Action and Corrective Action report.

Precise information is essential to meet requirements for possible reimbursement by Cal OES and FEMA.

6.4 Disposal Monitor

Disposal Monitor	
Name:	Date:
Start Time:	End Time:

The Position Checklists are a tool designed to provide the County and Operational Area emergency response organization with proposed activities to support essential functions during a DOC activation and activation of the Disaster Debris Management Plan (DDMP). The following checklists serve as a point of reference to identify the scope of actions that may occur during response operations. The items listed in the checklist should not be considered final or static. As response operations evolve, so will the requirements of the County and Operational Area emergency response organization and additions or modifications to actions outlined below will likely be required.

Reporting Location: Orange County Public Works Department Operations Center (DOC) or if directed, Specific Disposal Monitoring Location

Responsible Department: Contract Service Manager

Responsible Position: As described in contract

Immediate Supervisor: OCPW DOC Debris Manager

Subordinates: Contract Service Workers

Coordinates with:

- Collection Monitors
- Tree Debris Specialist

Similar Position in NIMS System: Debris Monitoring Team

6.4.1 Responsibilities

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.
- Documenting debris removal trucks are accurately credited for their loads.
- Documenting trucks are not artificially loaded.
- Documenting hazardous waste is not mixed in with loads.

- Documenting all debris is removed from the debris removal trucks before exiting the temporary debris management site (TDMS) or final disposal site.
- Documenting 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:

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

6.4.2 General Operational Duties:

The Disposal Monitor will document the disposal of disaster debris at approved TDMS and final disposal or end use locations. The Disposal Monitor will perform quality assurance/quality control checks on load documentation and haul-out documentation to review the 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

Safety

Disposal sites are active work sites. Disposal Monitors will also follow the following SAFETY criteria:

- ❑ Wear the correct personal protective equipment PPE per Occupational Safety and Health Administration (OSHA) standards.
- ❑ Bring enough food and water for your workday.
- ❑ Charge electronic equipment and bring supplies for the workday.
- ❑ Contact your supervisor if there is an issue with your contractor.
- ❑ DO NOT allow unapproved debris types into the debris management site (DMS).
- ❑ BE COURTEOUS to all who want to bring debris into the DMS.
    - Explain that this is not a community drop-off site, it is an active work site.
    - They should move to a “non-work area” as quickly as possible.
    - Provide them your supervisor’s contact information for inquiries.
- ❑ Participate in Just in Time Disposal Monitor training.
- ❑ BE CONSISTENT with your load calls.
- ❑ Contact the Debris Manager at the OCPW DOC if any issues arise.
- ❑ Check in with the Debris Manager every 4 hours with an update on activities.

Safe disposal of diseased trees

- ❑ Coordinate with the Tree Debris Specialist on all matters pertaining to the appropriate disposal and removal of diseased trees.

Demobilization

- ❑ Authorize the demobilization of organizational elements within the group when authorized by the OCPW DOC Debris Manager. Ensure any open actions are handled or transferred to other OCPW DOC or County and Operational Area EOC elements as appropriate.
- ❑ Complete all required forms, reports, activity logs and other documentation. Provide all completed documentation to the OCPW DOC Debris Manager at the end of your shift.
- ❑ Return all checked out equipment prior to your departure from OCPW DOC.
- ❑ Participate in all debriefings and critiques of the County and Operational Area emergency response and be prepared to provide input to the County and Operational Area After Action and Corrective Action report.

Precise information is essential to meet requirements for possible reimbursement by Cal OES and FEMA.

6.5 Tree Debris Specialist

Tree Debris Specialist	
Name:	Date:
Start Time:	End Time:

The Position Checklists are a tool designed to provide the County and Operational Area emergency response organization with proposed activities to support essential functions during a DOC activation and activation of the Disaster Debris Management Plan (DDMP). The following checklists serve as a point of reference to identify the scope of actions that may occur during response operations. The items listed in the checklist should not be considered final or static. As response operations evolve, so will the requirements of the County and Operational Area emergency response organization and additions or modifications to actions outlined below will likely be required.

Reporting Location: Orange County Public Works Department Operations Center (DOC) or as directed by the Debris Manager

Responsible Department: OCPW Agricultural Commissioner Responsible Position: OCPW Arborist

Immediate Supervisor: OCPW DOC Debris Manager

Subordinates: Contract Arborist Service Workers

Coordinates with:

- Debris Collection Monitors
- Disposal Monitors

Similar Positions in NIMS System: Debris Assessment Team, Debris Technical Specialist

6.5.1 Responsibilities

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 FEMA PA Grant Program requirements for potential federal reimbursement for hazardous tree and stump removal are provided below.

Hazardous Trees

Removing a hazardous tree may be eligible for FEMA PA Grant Program funding. **FEMA considers incident-damaged trees to be hazardous and eligible for removal if the tree presents a hazard to the public due to conditions including, but not limited to:**

- **Deterioration or physical damage to the root system, trunk, stem, or limbs; or**
- **The direction and lean of the tree per the Occupational Safety and Health Standards.**

For hazardous trees that have 50 percent or more of the root-ball exposed, removal of the tree and root-ball and filling the root-ball hole are eligible. For contracted removal of a tree with an exposed root-ball, FEMA will not reimburse two separate unit costs to remove the tree and its root-ball.

For hazardous trees that have less than 50 percent of the root-ball exposed, FEMA only provides PA funding to flush-cut the item at ground level and dispose of the cut portion based on volume or weight. Grinding any residual stump after cutting the tree is ineligible.

The removal of hazardous trees that pose an immediate threat to life, public health and safety, or significant damage to improved public or private property, as assessed by County, in coordination with a qualified individual is eligible.

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.

6.5.2 General Operational Duties:

The OCPW Arborist is responsible as the Tree Debris Specialist to monitor and guide this portion of the Debris Management Plan. The Tree Debris Specialist identifies and marks the trees eligible to be removed, cut, and disposed of following a disaster.

Hazardous Limb Removal

- ❑ Document and take pictures of any removal of hanging limbs. Note if note documents it may not be eligible for FEMA PA Grant Program funding. Limbs must be:
    - Located on improved public property.
    - Still hanging in a tree and threatening a public-use area, e.g., trails, sidewalks, golf cart paths.
    - 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 right-of-way such as a sidewalk, removal of hazardous limbs on the tree that extend over the public right-of-way and meet the above criteria may be eligible. Limbs on the tree that do not extend over the public right-of-way are not eligible.
- ❑ Document the following:
    - 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 Global Positioning System (GPS) location; and
- Denote date, labor (force account or contract), and equipment used to perform the work.

Hazardous Tree Stumps

- ❑ Document and take pictures of all tree stumps determined to be hazardous and eligible for FEMA PA Grant Program 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 24 inches in diameter, as measured 24 inches above the ground;
  - It is on improved public property or a public right-of-way; and
  - It poses an immediate threat to life and public health and safety.
- ❑ Document thoroughly if an uprooted stump must be removed prior to FEMA's approval, the County must submit the following information for FEMA PA Grant Program 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;
  - Quantity of material needed to fill the resultant hole.

Safety

Ensure all personnel working with trees adheres to the following SAFETY criteria.

- ❑ Ensure all personal protective equipment (PPE) is worn.
  - Always maintain situational awareness.
- ❑ Stay out of the contractor's work zone, typically twice the length of the fully extended boom.
- ❑ Do not enter a work area unless all work has stopped and the contractor provides visual or verbal confirmation to proceed.
  - Be cautious of overhead hazards.
  - Do not walk and operate your handheld, stop in a safe location to operate.
  - Drive safe – Wear seatbelt, keep both hands on the wheel, and no distracted driving (cell phone).
  - Use caution when entering and exiting traffic.
  - Be extremely careful when getting in and out of your vehicle (check for oncoming/passing traffic, downed lines, trip hazards, etc.).
- ❑ Bring enough food and water for your workday.
- ❑ Charge electronic equipment and bring supplies for the workday.
- ❑ Contact the Debris Manager at the OCPW DOC if any issues arise.

- ❑ Check in with the Debris Manager every 4 hours with an update on activities.

Guidelines to Assist with Tree Debris

Qualifications for designating a tree or limb as hazardous:

Hazardous Tree/Limb:

- Hazardous Tree:
  - The tree presents a hazard to the public due to conditions;
  - Deterioration or physical damage to the root system, trunk, stem, or limbs; or
  - The direction and lean of the tree per the Occupational Safety and Health Standards.
- Hazardous Limb:
  - Limbs or branches extend over the public ROW.
  - Limbs or branches pose an immediate threat.
  - The County can remove the hazard from the public ROW (without entering private property).

Right-of-Way (ROW):

- The ROW is the area of land from the middle of the street to the front part of a property.
- The ROW varies from street to street but is often marked by sidewalks, utility poles, or fire hydrants.
- A tree can be located outside the ROW but have hazardous branches that extend into the ROW.

Zone Map:

- A zone map identifies the area in which the contractor crew can work and the work location for the day.
- As disaster debris is collected from a road, highlight the road as completed.
- Turn in your highlighted zone map at the end of the day.

Demobilization

- ❑ Authorize the demobilization of organizational elements within the group when authorized by the OCPW DOC Debris Manager. Ensure any open actions are handled or transferred to other OCPW DOC or County and Operational Area EOC elements as appropriate.
- ❑ Complete all required forms, reports, activity logs and other documentation. Provide all completed documentation to the OCPW DOC Debris Manager at the end of your shift.
- ❑ Return all checked out equipment prior to your departure from OCPW DOC.
- ❑ Participate in all debriefings and critiques of the County and Operational Area emergency response and be prepared to provide input to the County and Operational Area After Action and Corrective Action report.

Precise information is essential to meet requirements for possible reimbursement by Cal OES and FEMA.