
Exhibit H

**DISASTER DEBRIS AND HAZARD
TREE REMOVAL ASSESSMENT
AND MONITORING - SPECIAL
PROVISIONS (Revised)**

~~08/25/2021~~ 9/8/2021

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Acronyms and Abbreviations

ACM	Asbestos Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AQMD	Air Quality Management District
BMP	Best Management Practices
CAC	Certified Asbestos Consultant
CalEPA	California Environmental Protection Agency
Cal OES	California Office of Emergency Services
CalRecycle	Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CIH	Certified Industrial Hygienist
CM	Contract Manager
CSST	Certified Site Surveillance Technician
DDHTR	Disaster Debris and Hazard Tree Removal
DFW	Department of Fish and Wildlife (California)
DOT	Department of Transportation

DMV	Department of Motor Vehicles
DROC	Debris Removal Operations Center
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
EPP	Environmental Protection Plan
FEMA	Federal Emergency Management Agency
FSC	Finance Section Chief
GPS	Geographic Positioning System
HAZWOPER	Hazardous Waste Operations and Emergency Response
HHW	Household Hazardous Waste
IC	Incident Commander
ICS	Incident Command System
ICT	Incident Command Team
IFB	Invitation for Bid
IMT	Incident Management Team
LTO	Licensed Timber Operator
MOU	Memorandum of Understanding
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
Operations Team	Debris Removal Operations Team
OSC	Operations Section Chief
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PSC	Planning Section Chief
Proclamation	Proclamation of a State of Emergency

RFP	Request for Proposals
ROE	Right-of-Entry
RPF	Registered Professional Forester
SEMS	Standardized Emergency Management System
USA	Underground Service Alert
USEPA	United States Environmental Protections Agency
UXO	Unexploded Ordinance

Reference Documents

Attachment A, Wildfire-Damaged Structures Asbestos Site Assessments SOPs for the [“California Wildfire Asbestos Survey”](http://www2.calrecycle.ca.gov/docs/web/119346) (<http://www2.calrecycle.ca.gov/docs/web/119346>).

Attachment B, [Debris Operational Guidance: Damaged Concrete at Wildland Urban Interface Fires](https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/ehd-docs/zogg-fire/fire-damaged-concrete.pdf?sfvrsn=71d5f589_2) (https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/ehd-docs/zogg-fire/fire-damaged-concrete.pdf?sfvrsn=71d5f589_2).

Attachment C, [“Assessment of Burn Debris - 2015 Wildfires Lake and Calaveras Counties, California”](https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Disaster-Documents-2015yr-FireSample.pdf) (Geosyntec for DTSC 2015), (<https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Disaster-Documents-2015yr-FireSample.pdf>).

1.0 INTRODUCTION

The purpose of these Special Provisions is to provide the Disaster Debris and Hazard Tree Removal Contractor (DDHTR Contractor) and the Assessment and Monitoring Contractor (A&M Contractor) with a detailed understanding of the extent of services required by the State of California, Department of Resources Recycling and Recovery (CalRecycle), or the User Agency, for emergency debris removal Operations. Not all emergency debris removal Operations in California are conducted by the State. For the State to respond to a State proclaimed emergency, the Governor of California issues a *Proclamation of a State of Emergency* (Proclamation), which proclaims a state of emergency in specific Counties with provision to include State agency and contract resources.

In the process of developing the overall response to an emergency, a series of actions are taken at different levels of government before agency and contractor work takes place. At the County level, the County Health Officers issues a Proclamation of a Local Health Emergency and, if necessary, requests State assistance. Once the Governor’s Proclamation is issued and may include provisions for all agencies of the state government to utilize and employ state personnel, equipment, and facilities for the performance of any and all activities related to this State of Emergency consistent, with the direction of the California Governor’s Office of Emergency Services (OES) and the

State Emergency Plan. Additionally, the President of the United States of America may approve a Major Disaster Declaration for California, which allows federal disaster assistance through the Federal Emergency Management Agency (FEMA), which will include both federal funding and potentially additional federal contracting and procurement requirements.

The State Proclamation typically suspends, to the extent they apply, the following activities:

- A. Removal, storage, transportation, and disposal of hazardous and non-hazardous solid waste and debris resulting from a disaster in affected Counties and that are subject to the jurisdiction of agencies within the California Environmental Protection Agency (CalEPA) and the California Natural Resources Agency (CNRA).
- B. Necessary restoration and rehabilitation of timberland, streams, rivers, and other waterways.

Such State statutes, rules, regulations, and requirements are hereby suspended, only to the extent necessary for expediting the removal and cleanup of debris from the fire and for implementing any restoration plan by the affected County(ies). User Agency will typically receive signed waivers from the Secretary of the CalEPA and Secretary of CNRA, which are supported by an Environmental Protect Plan (EPP) prepared by the State, or in coordination with the A&M Contractor, or by other designated agencies. The EPP is written to summarize and address the potential environmental and historic preservation areas of concern, provided by the resource agencies responsible, within the defined Disaster Area. Then the EPP delineates the specific Disaster environmental and historic preservation requirements necessary to be implemented. The DDHTR Contractor will be required to be aware of and implement the best management practices (BMPs) and the Avoidance and Minimization Measures (AMMs) listed in them. Additionally, if the Operation is Federally funded, certain environmental and historical preservation measures are needed to comply with Federal and state laws, such as the National Environmental Policy Act (NEPA), the Federal Endangered Species Act. and the National Historic Preservation Act (NHPA). User Agency will work with A&M Contractor to evaluate the environmental, historical, prehistoric, Tribal, and cultural artifact protection concerns in the disaster area(s) for state and federal endangered species, endangered species habitat protection, and streambed crossings (among other areas) that will require state and federal emergency permits and/or protections. These evaluations and permitting actions will commence prior to and during the site and asbestos assessments and may extend into the early asbestos and debris removal process. Properties will not be entered, for any of these activities, until the state Incident Management Team (IMT) has received approved copies of the individual property Right-of-Entry (ROE) forms from the affected County(ies) and "Access Only" ROEs when needed.

The Proclamation may also suspend compliance with applicable provisions of the California Government Code and the Public Contract Code for state contracts, including

but not limited to travel, advertising, and competitive bidding requirements to assist with procuring materials, goods, and services necessary to quickly remove dangerous debris and repair damaged resources. Lastly, the Proclamation may also state that State agencies shall work with local officials to design and implement a comprehensive disaster debris removal plan.

In response to the Proclamation that includes State resources, OES typically issues a mission request task to CalRecycle, to enter into contracts to arrange for the procurement of materials, goods, and services necessary to quickly remove dangerous debris from private property resulting from a disaster in the affected Counties. OES and CalRecycle will work with the affected County(ies) to clear the debris, provide state certification of cleanup for the individual sites, and track and provide costs to the County(ies) for insurance recovery on a per lot basis.

This set of Special Provisions may only be updated pursuant to the terms of the contract, such as an Amendment Process.

1.1 Purpose

The purpose of these Special Provisions is to describe a detailed approach to managing the assessment, monitoring and removal of structural and vegetative debris. It also describes a detailed approach to removal of asbestos containing material (ACM), metals, vehicles, ash and debris, hazard trees, contaminated soil and other hazardous material resulting from a proclaimed disaster. These Special Provisions are based on CalEPA's "[Guidance for Conducting Emergency Debris, Waste and Hazardous Material Removal Actions Pursuant to a State or Local Emergency Proclamation](https://calepa.ca.gov/wp-content/uploads/sites/6/2019/06/Disaster-Documents-2011yr-GuideRemoval.pdf)," dated October 7, 2011 (<https://calepa.ca.gov/wp-content/uploads/sites/6/2019/06/Disaster-Documents-2011yr-GuideRemoval.pdf>). This guidance document identifies best management practices (BMPs) for undertaking the removal of debris and hazardous materials (including asbestos) from residential structures. These BMPs and Special Provisions provide a consistent approach to conducting removal and cleanup actions to protect response personnel, the surrounding community, public health, and the environment. This document does not specifically address the removal of debris from non-residential (i.e., commercial, industrial, public) properties; however, depending on the type of debris the methods and procedures can be the same. If non-residential properties are added to the list of eligible properties, special considerations will be taken into account as described in these Special Provisions.

1.2 Objective

The objective of these Special Provisions is to meet the above stated purposes and to detail processes and procedures for debris removal operations and will provide both the A&M Contractor and the DDHTR Contractor guidance for state-sponsored Disaster Debris Removal Program and to mitigate known hazards and dangerous conditions to limit the impacts to the public, the affected County(ies) and the surrounding environment.

2.0 PROGRAM OVERVIEW

2.1 Site Description

Debris generated by the disaster and within the disaster area described in the Operation Specific Scope of Work and the Contract documents generally consist primarily of residential disaster and hazard tree vegetative debris. This debris may also be sourced from non-residential properties, as included by the User Agency.

2.2 Site Eligibility

The intent of the disaster debris removal program is to remove destroyed single family homes, residential structures, and other eligible debris destroyed by the declared fires so that the property owner can rebuild on their property. The User Agency, with input from the state, may deem other structures to be destroyed on a case-by-case basis.

Mobile Home Parks are not automatically part of the Debris or Tree Removal Operations. They may be included in the program, on an as-approved basis. If mobile home parks are deemed eligible by the User Agency, then each mobile home park will be considered for compensation based on the User Agency's bid schedule for the DDHTR Contractor.

The debris program does not cover structures smaller than 120 square feet, fencing, trees other than those described in the "Hazard Tree Assessment" section, single vehicle with no other debris fields or structures, or other debris less than 10 cubic yards unless approved in advance by the User Agency. The debris program also does not cover cannabis, greenhouses, or other structures related to cannabis growing, drying, or processing unless approved in advance by the User Agency. The program also does not cover illegal dumps, landfills, other disposal areas unless approved in advance by the User Agency.

Only parcels for which the property owner has submitted a ROE permit will be included in this program, unless otherwise designated by the State IMT and local government. Public rights-of-way (ROWs) may also be included for the purposes of hazard tree removal if approved by the State IMT.

Non-residential, commercial, industrial and public properties (i.e., schools, local and state parks, camps, and other public structures may be included in this operation, by the User Agency, on a case-by-case basis. If such facilities are determined to be included in this program, the User Agency will compensate the DDHTR Contractor based on the User Agency's bid schedule.

Non-residential Parcels may also require waste profiling and characterization prior to debris removal. The A&M Contractor will be responsible for conducting any required waste profiling and characterization if requested by the User Agency, as described in Section 5.4.

In certain, limited scenarios, the User Agency may direct the DDHTR Contractor to provide demolition services. For the purposes of this operation, demolition is defined as removal of structures with more than one wall standing. If demolition is authorized, the A&M Contractor shall track all costs and work associated with the parcel where the demolition occurred separately.

2.3 Site Characterization

Based on past studies of burned residential homes and structures from large scale wildland fires, the resulting ash and debris from residential structures burned by fires can contain toxic concentrated amounts of heavy metals such as antimony, arsenic, cadmium, copper, lead, and zinc. Additionally, the ash and debris may contain higher concentrations of lead if the home was built prior 1978 when lead was banned from household paint in the United States. These heavy metals as discussed in numerous studies, including the Attachment C "[Assessment of Burn Debris - 2015 Wildfires Lake and Calaveras Counties, California](https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Disaster-Documents-2015yr-FireSample.pdf)" (Geosyntec for DTSC 2015), (<https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/Disaster-Documents-2015yr-FireSample.pdf>). The presence of these heavy metals can have significant health impacts to individuals, individual properties, local communities, and watersheds if the ash and debris is not removed promptly.

The residual materials, including, but not limited to, stucco, roofing, floor tile, linoleum, fireplaces, furnaces, vinyl tiles and mastic, sheetrock and joint compound, cement pipe, exterior home siding, thermal system insulation, concrete and mortar, and other building materials commonly used in homes built before 1984 may also contain other chemicals of concern such as asbestos.

Additionally, wildland fires can kill or seriously damage a great number of trees, resulting in a significant risk to the public as the impacted trees are more likely to fall onto public thoroughfares and other infrastructure.

2.4 Known Hazards

The type and number of known hazards will depend on specific conditions of each incident and each property within the incident such as how much of the structure is remaining, age of the structure, building materials used, and damage level of the site trees, on-site. If only ash and debris are present, the site is expected to contain elevated levels of heavy metals and possibly asbestos.

The California Department of Toxic Substances Control (DTSC) or United States Environmental Protection Agency (US EPA) will conduct a Phase 1 – Assessment and Removal of Household Hazardous Wastes prior to the Phase 2 – Disaster Debris and Hazard Tree Removal Program Operation that these Special Provisions contemplate. A part of Phase 1 work includes the preliminary hazardous waste assessment for asbestos containing material (ACM) and removal of bulk quantities of ACM in the impacted area soon after the fire. ACM has been commonly found on debris removal Operations, especially in structure construction that precede the mid 1980's. If

DTSC/USEPA finds possible ACM and/or removes bulk ACM and/or other hazardous materials on individual properties, they will report these findings directly to User Agency. User Agency will in turn notify the A&M Contractor and DDHTR Contractor's ACM Removal Crews of these findings prior to crews being deployed to these properties. All responders should be aware that asbestos is a human carcinogen with no known risk-free levels of exposure.

The ACM found in the disaster debris will likely be highly friable which allows asbestos fibers to be more easily released into the air during windy conditions and debris removal operations. Other hazardous materials will likely include heavy metals concentrated in the ash and debris and silica dust released when work around and removing concrete slabs and foundations. Silica is known to be a human carcinogen, and its potential presence must also be taken into consideration when developing a Health and Safety Plan for the Operation and for the local Community.

All personnel should be aware that asbestos is a human carcinogen with no known risk-free levels of exposure.

Therefore, worker safety statutes and regulations for handling ash with heavy metals, such as lead and asbestos, shall be followed at all times.

2.5 Worker Safety

All A&M Contractor, DDHTR Contractor and subcontractor personnel shall prepare and operate under their own Site Specific Health and Safety Plan developed and signed by certified industrial hygienist, or other registered safety professional, working for or hired by the A&M Contractor and separately the DDHTR Contractor. The presence and disturbance of asbestos and heavy metals are the primary health hazards that need to be addressed in these Health and Safety Plans. Also, the falling of damaged and potentially dangerous dead and dying trees and limbs impacted by the fires is expected to be another major safety issue.

Fall hazards are present on sites with chimneys, partially remaining structures, and burned trees. Physical hazards (i.e., slips, trips, and falls) are also present from exposed foundations, glass, metals, and debris. Additional hazards may be present if hazardous materials or medical wastes are discovered during the removal. Utilities such as (i.e., electrical, gas, cable, telephone, dead/dying or damaged trees, and sewer) are unmarked and must be accounted for during debris removal operations. Sometimes, wildfires may even burn out underground tree root systems resulting in dangerous underground holes that could collapse when loaded by personnel and/or equipment. The weather may also pose hazards from excessive heat, lightning, rain, and high winds.

Site personnel shall operate vehicles and equipment in a safe manner to ensure safety of its employees and the public and pay particular attention to operations around local roads and take all necessary and reasonable precautions. Site personnel must identify

and document the number and location of downed power lines, dangerous trees, chimneys, and underground utilities.

Since fire debris removal Operations contain ash with elevated levels of heavy metals, silica, and/or friable asbestos, an exclusion zone must be established around each site during removal, by the DDHTR Contractor. All personnel entering and leaving the exclusion zone shall be Hazardous Waste Operations and Emergency Response (HAZWOPER) trained and certified, respirator trained and medically cleared to use respirators, and to wear Level C protective personnel equipment (PPE) including Tyvek coveralls depending on the work zone and hazard level. Other PPE required for working in heavy equipment work sites should be worn as designated in the A&M Contractor's and DDHTR Contractor's Health and Safety Plans. Site personnel shall use designated eating areas exterior to the exclusion and transition work zone, and hand washing stations to reduce exposure.

The DDHTR Contractor shall also be aware of and prepared for providing instruction and necessary PPE for other hazards such as pandemics (i.e., Covid-19, etc.) and other local or regional health concerns.

2.6 Operation Cost Tracking

Operation costs that can be directly attributed to an individual property shall be tracked by both A&M Contractors and DDHTR Contractors on a per Assessor's Parcel Number (APN) basis. These are designated as "individual property costs". Other costs that cannot be directly attributed to an individual property but are necessary as part of the success of the operation, such as IMT approved community cost include, but are not limited to the following:

- A. A&M Contractor and DDHTR Contractor Delays and Non-Workdays,
- B. Operational Crew Mobilization/Demobilization,
- C. Operation management,
- D. Community health and safety activities, and
- E. Community air monitoring activities.

In the event costs are incurred relating to public properties such as government buildings, certain schools and institutions, those costs will be tracked pursuant to written direction provided by the User Agency's Contract Manager (CM). In all cases, A&M Contractors and DDHTR Contractors are required to track costs with sufficient level of detail, redundancy, and integrity necessary to meet the provisions in the User Agency Contract.

2.7 Operation Roles and Responsibilities

The debris removal operation will be managed per the User Agency Contract and in particular, by these Special Provisions set as part of the Contract. This Operation will be managed in accordance with the Standardized Emergency Management System (SEMS), utilizing the Incident Command System (ICS) for field response, ICS is the model management tool used in disaster response and recovery scenarios for the command, control and coordination of all agencies and/or private entities working on an incident. The User Agency and/or other State Agencies will likely fill all of the following positions (listed in these Special Provisions), including Incident Commander (IC), Planning Section Chief (PSC), Finance Section Chief (FSC), Operations Section Chief (OSC). The A&M Contractor will likely fill the following positions: Branch Directors (BDs), Division Supervisors (DSs), Task Force Leaders (TFLs) and other specific positions used to manage these operations. The A&M Contractor and DDHTR Contractor will be directly managed by User Agency's CM.

During the course of this operation, the Joint Field Office (JFO) Planning Section, in coordination with the PSC, will publish the Incident Action Plan (IAP) once every operational period. The length of operational period is determined by need, as determined by the State Coordinating Officer. The IAP will contain the specific personnel assigned to the various roles in the operation. The IAP will contain the contact information for the personnel assigned to the operation.

2.8 Documentation

The A&M Contractor will document activities for each individual site according to the procedures established by the IMT and CM. Photographs taken before, during, and after debris removal shall include the property address, either by using the installed Operation sign or white board with full address if Operation sign is not available. Alternatively, the A&M Contractor shall include GPS coordinates affiliated with these photos. The TFL will document all relevant activities and property conditions, including issuing tickets for each truck that transports debris or other materials from the property on which debris removal is occurring.

The User Agency A&M Contractor(s) will collect and organize all site and administrative documentation and will make the documents available electronically. The User Agency A&M Contractor(s) will also review the DDHTR Contractor invoices and recommend payment for User Agency. The tracking and documentation will be consistent with current FEMA debris removal standard for reimbursement as practicable (whether or not this is a federally funded operation).

A. Electronically Collected Property and ROW Data

All A&M Contractor electronically collected data shall be compatible with existing State data management systems such as ArcGIS, ESRI products, etc. A&M Contractor databases should be available for integration and syncing with State systems via API interface. Documentation of, and data related to, complete

operational and financial work shall be retained until 12 months after the termination of the A&M Contract and in a system that allows for State access and review within 24 hours of data entry on a daily basis. Parcel-specific documentation and data will be robust enough to support:

- 1) operational scheduling and project planning.
- 2) public-facing information platforms such as maps and dashboard.
- 3) requests for information from property-owners.
- 4) cost recovery requirements.

B. Track and Log Each Truck

The DDHTR Contractor Debris Trucks, Water Trucks, Street Sweepers, and other operational equipment, deemed appropriate by the IMT, will be equipped with GPS devices and/or capabilities provided by the A&M Contractor. These devices shall be operational during the workday so that the DDHTR Contractor, the A&M Contractor and the IMT can keep track of all DDHTR Contractor vehicles during the operation for safety purposes and to monitor productivity. The Trucks will be tracked to assure they are where they are expected to be per the properties and end use facilities that they have been directed to haul their loads to.

C. Record Trucks Identification Numbers

All DDHTR Contractor Trucks will be provided a placard or other visible means of identification as part of the Operation to be displayed prominently to identify trucks that are part of the operation. These placards shall be provided for each truck once they pass their DOT inspections, conducted as part of this operation. Trucks will also be given a bar coded sticker to be placed externally on the truck in an easily accessed location by the A&M Contractor in order to more easily identify the specific truck as it enters a debris removal site and an end use facility. Placards shall be covered when a truck is being used for a non-DDHTR Contractor directed use.

D. Collect and Organize Debris Removal Documentation Through Web Based Database

The A&M Contractors shall collect, organize and maintain all project related documentation utilizing GIS and other database software as described in the A&M Contractor Agreement "Scope of Work, Both Operations: Section A. GIS Services".

E. Prepare Site Specific Final Reports and Database

The A&M Contractor shall prepare final reports summarizing work completed on each property or ROW segment and provide a summary of costs incurred on that property as described in the A&M Contractor Agreement "Scope of Work, Section 5.E.2 Project Completion Documentation".

Also provide overall operational report of work completed including EPP compliance and any issues encountered and how they were addressed.

3.0 OVERVIEW OF OPERATIONS

3.1 Overview of Operations (DDHTR Contractor, A&M Contractor)

The operation will follow a systematic approach to removing debris off the property. The overall work in the operation will be divided up among technical A&M Contractors, local, State, and possibly Federal agencies, and DDHTR Contractors. The debris removal sequencing is outlined below, work outlined is delineated by the DDHTR Contractor described as and the A&M Contractor:

A. Initial Burn Scar Areas Reconnaissance:

- 1) Obtain, analyze, and evaluate burn scar area-wide background soil samples to inform the preparation of the operational cleanup goals (A&M Contractor).
- 2) Obtain, analyze, and evaluate background air quality to establish safe levels for the project (A&M Contractor).
- 3) Identify water (dust control and street sweeping, etc.) and electrical sources and obtain permits as required (DDHTR Contractor).
- 4) Identify equipment and material staging area (DDHTR Contractor).
- 5) Identify materials disposal and recycling options (DDHTR Contractor).
- 6) Identify and document immediate Erosion Control needs to protect waterways from contamination by hazardous ash and debris (A&M Contractor + DDHTR Contractor, County and the State Watershed Task Force (SWTF)).
- 7) Perform Vehicle Identification Number verifications (or vehicle abatements or adjudications) prior to removal of burned vehicle hulks ((appropriate State or Local law enforcement or authorized public agency employees)).
- 8) If it is not possible to conduct such abatements on-site, then the DDHTR Contractor shall provide a permitted site at which such abatements can occur off the debris removal APNs where such abatements can occur, safely, by the appropriate State or local law enforcement or authorized public agency employees.

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- 9) Conduct initial visual and video survey of roadways and infrastructure along those roads that could potentially be impacted by the debris cleanup operations. These videos will be used to compare with visual review of the same roadways at the end of the operation, therefore must be of quality to assist in assessing the likely impact of the operation on these roadways (A&M Contractor).
- B. Initial Environmental Assessment of the Burn Scar Areas (State or User Agency or A&M Contractor as directed by the User Agency).
- 1) Evaluate Federal National Environmental Policy Act (NEPA – for Federally funded operations or operations located on federal lands) requirements for the protection of the environment including, but not limited to surface water, endangered species, and cultural resources as required by law, consultation, and California Environmental Quality Act (CEQA) requirements and in the EPP. The EPP includes the required best management practices (BMPs) and Avoidance and Minimization Measures (AMMs) from Federal consultation to be implemented by the DDHTR Contractor as part of the Operation (State, User Agency or A&M Contractor as directed by the User Agency).
 - 2) Develop an Operation Specific EPP (User Agency or A&M Contractor as directed by the User Agency).
 - 3) Coordinate with local, state, and federal resources agencies with respect to these requirements when conducting work (DDHTR Contractor).
 - 4) Develop an Operation Specific EPP (State's Environmental Task Force).
- C. Individual Property Site Assessments, Asbestos Surveys, and Hazard Tree Assessments:
- 1) Install individual address signs for each property with a signed ROE. This new sign will assist in the accountability and direct emergency services to proper address. A&M Contractor will also Contact Underground Service Alert (USA) or other utility locator service to verify the location of the sign will not impact local utilities (A&M Contractor).
 - 2) If properties in the operational area are on septic systems, identify septic tank and leach field locations on each property (To be verified by: 1. Property Owner through ROE, 2. City/County, 3. A&M Contractor, and 4. DDHTR Contractor to mark). DDHTR Contractor is ultimately responsible for damaged septic tanks and leach field systems) (All).
 - 3) Identify water wells on properties not serviced by the local water agency (1. Property owner, 2. City/County, 3. A&M Contractor).
 - 4) Photograph each site from all sides to document all aspects of the property both burned and non-burned items (A&M Contractor).

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- 5) Sketch property boundaries including ash/structure footprints and delineate locations of visible septic tanks, leach fields, water sources, and imminent threat hazards to the DDHTR Contractor. Describe the type of foundation(s), sketch other hardscape and vehicles (A&M Contractor).
 - 6) Sketch and record ash footprints in addition to structures (i.e., vehicles, equipment, ATVs, trailers, recreational vehicles), creek beds, culverts, bridges etc., (A&M Contractor).
 - 7) Identify and photograph other property-specific hazards (i.e., swimming pools, retaining walls, basements, chimneys, partial walls, hazardous trees, large vehicles, propane tanks) (A&M Contractor).
 - 8) Conduct Mercury and Radiological site survey sweeps, with ash and debris footprints on all program properties, using handheld equipment described in Sections 5.6 and 5.7 below.
 - 9) Identify and contact Owner of large partially damaged or undamaged propane tanks (A&M Contractor).
 - 10) A&M Contractor's Certified Asbestos Consultant (CAC) or Certified Site Surveillance Technician (CSST) to conduct surveys to identify, sample, and analyze results for suspected gross asbestos containing materials, including concrete foundations and mortar (A&M Contractor).
 - 11) If Chimneys or partial walls are to be knocked down for asbestos assessment crews to assess for ACM, Contact and obtain permits from local Air Quality Management District (AQMD) or State Air Resources Board (ARB), whichever is the regulating agency, a minimum of 1 week prior to knocking down chimneys or partial walls regarding NESHAP notification, if necessary. Document CAC clearance of abated parcels (A&M Contractor).
 - 12) Knock down Chimneys and/or partial walls for CAC/CSST to safely assess them for asbestos containing materials (DDHTR Contractor).
 - 13) Assess the parcel or segment of right-of-way (ROW) for eligible hazard trees, as described in the "Hazard Tree Assessment" section (A&M Contractor), and danger trees threatening the ability of the debris crew to work safely (DDHTR Contractor).
 - 14) Ensure placement of biodegradable erosion control BMPs for immediate protection of waterways, culverts, drainage inlets, etc. after debris and hazard tree (if any) removal (DDHTR Contractor).
 - 15) If non-residential properties are added to the Operation, the A&M Contractor shall provide the following services for each such property:
 - a) Evaluate the property based on zoning.

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- b) If the presence of hazardous materials is clearly a concern or unknown, conduct Envirostor search (DTSC website).
 - c) If the presence of hazardous materials is still unclear, conduct an Environmental Site Assessment (ESA) by soliciting historical parcel data from Environmental Data Resources, Inc. (EDR) or equal provider.

If the results indicate the possibility that hazardous materials A&M Contractor shall prepare a soil sampling plan, similar to the one in the Special Provisions Section 7.1. analyzing for all appropriate constituents of concern for purposes of proper disposal of materials removed.

D. Disaster Debris Removal (DDHTR Contractor, A&M Contractor).

- 1) Utilizing qualified biologists, assess, monitor, and document identified endangered species using USFWS Qualified Biologists, nesting birds (during season), cultural resources using Secretary of the Interior Qualified Archaeologists, water quality permits, and stormwater (A&M Contractor).
- 2) Check for underground utilities by alerting Underground Service Alert (USA) for public right of way (DDHTR Contractor).
- 3) Check for underground utilities by using an independent private utility locator service for private ROW, if necessary (DDHTR Contractor).
- 4) Acquire necessary encroachment permits for work along public roadways from appropriate agencies including California Department of Fish and Wildlife, Caltrans, County, City, Town, etc. (DDHTR Contractor).
- 5) Remove gross asbestos containing materials for those properties where asbestos is found or suspected as identified by the A&M Contractor's CAC/CSST (DDHTR Contractor's ACM Removal entity).
- 6) Remove privately owned, fire-damaged propane tanks (DDHTR Contractor).
- 7) Initiate contact with property owners 24-48 hours prior to commencement of debris removal and hazard tree removal to notify them of the estimated commencement of debris removal and hazard tree removal (if any) activities. If unable to establish contact, document the number of attempted contacts and who authorized debris removal to move forward (A&M Contractor).
- 8) Prior to any debris removal activities A&M Contractor's TFL and DS to conduct a 360 degree Site Walk with the DDHTR Contractor's Crew Lead/Operator prior to commencing with any site work (including debris consolidation), review the property owner's ROE comments and requests, verify the extents of the property with review of the Site Assessment Report, point out locations of items to protect or stay away from (septic tanks, leach fields, water wells, drop offs, etc.), or that the property owner wishes to keep.

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- A&M Contractor to mark such items clearly and, if applicable, relocate such items on top of plastic and away from the immediate on-property debris removal operational area. Determine how and where the operator intends to load the trucks. Determine limits of Exclusion zone.
- 9) Fell danger trees that are an imminent threat to the Debris Removal Crew (DDHTR Contractor).
 - 10) Remove any existing erosion control BMPs, such as wattles or compost socks and sediment collected. These BMPs must be removed with ash and debris loads, as they are presumed to have captured fire debris runoff from the structural debris footprint (DDHTR Contractor).
 - 11) Remove vehicles for recycling or disposal in accordance with the IMT's direction on VIN verification. If VIN verification cannot be performed on the property, The DDHTR Contractor shall provide the state with one or more locations at which the state or local government can safely verify VINs for each vehicle, then transport vehicles for recycling or disposal (DDHTR Contractor).
 - 12) The A&M Contractor shall open a ticket for each vehicle that is removed from the property and delivered to a separate VIN verification site. A vehicle ticket will be closed upon arrival of that vehicle at a recycling or end use facility (A&M Contractor).
 - 13) The DDHTR Contractor should take into consideration that the vehicles will not necessarily be abated/adjudicated on the same day it arrives at this(ese) locations. Therefore, these abatement locations may need to be sized to accommodate vehicle storage to support the vehicle:
 - a) Delivery rate
 - b) Abatement rate and
 - c) Removal rate for recycling.
 - 14) For the purpose of this MSA it is assumed that for a:
 - a) Category 1 Operation the vehicle capacity should be assumed to be 50 vehicles.
 - b) Category 2 Operation the vehicle capacity should be up to 200 vehicles.
 - c) Category 3 Operation the vehicle capacity should up to 500 vehicles.
 - 15) Collect, consolidate, and remove metals for recycling (DDHTR Contractor).

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- 16) Collect, consolidate, and remove ash and debris for disposal. Contractor's equipment operator shall take care to minimize mixing of ash and debris and concrete with the underlying soil (DDHTR Contractor).
 - 17) Collect, consolidate, and remove concrete for recycling (DDHTR Contractor).
 - 18) Collect, consolidate, and remove six inches of contaminated soil from the ash and debris footprint for disposal or landfill reuse for cover soil, as determined by the CM, in support of the IMT (DDHTR Contractor).
 - 19) Document all of the above-mentioned debris loads (metal, ash, debris, concrete, contaminated soil) by opening a load ticket for each load that leaves the property. Load tickets shall be issued at the parcel of origin and closed upon arrival at the end use facility. Load tickets shall include the parcel of origin APN, name of end use facility, tonnage, and date and time of departure from property and arrival at the end use facility (A&M Contractor).
 - 20) Cap all sewer lines and/or water lines found open or damaged due to debris removal (DDHTR Contractor).
 - 21) Finish grading/smoothing ground surface. (if applicable) Multiple burned areas should not be smoothed together to avoid cross-contamination of soil (DDHTR Contractor, A&M Contractor to monitor).
 - 22) Place any remaining HHW on sheet of plastic near the property entrance (DDHTR Contractor).
 - 23) Contact the DTSC contact person to place such items on the DTSC "milk run" list for DTSC's contractor to pick up at their convenience (User Agency or A&M Contractor if directed by the User Agency).
 - 24) A&M Contractor TFL, together with the DDHTR Contractor's laborers, shall walk the debris footprint area to make sure there are no remaining nails, glass shards or other debris remaining within the former structural debris ash footprint. If applicable, ensure that trip hazards are identified with a brightly covered spray paint, impalement hazards are capped or cut to grade, and that temporary fencing is installed around any fall hazards or holes. Any damage to the property, utilities or other private property, caused during debris removal, shall be documented by the A&M Contractor (A&M Contractor and DDHTR Contractor).
 - 25) The TFL shall contact both the A&M Contractor DS (or designee) and the User Agency OSC, or designee, with at least an hour or more of lead time before they can conduct the intermediate site walk to confirm that the site is sufficiently cleaned of debris and should be cleared for soil sampling. Then the DDHTR Contractor's crew can mobilize to the next assigned site on the PSC's runway.

26) Prior to forecasted storm events, install temporary BMPs on active properties near waterways, as directed by the User Agency's OSC and approved by the IMT and the CM. (DDHTR Contractor).

E. Confirmation Sampling (A&M Contractor):

- 1) Sample and analyze soil, as described in the User Agency Soil Sampling Plan (A&M Contractor).
- 2) Compare soil results to cleanup goals, developed by the A&M Contractor (A&M Contractor and the User Agency's OSC or designee).
- 3) If results exceed cleanup goals, another layer of soil will be removed from the specific area that exceeded these goals, as directed by the User Agency's OSC or designee, for disposal (DDHTR Contractor) and the site re-sampled (A&M Contractor).
- 4) If applicable, other means and methods may be utilized to meet soil cleanup goals such as, soil borings or X-ray fluorescence (XRF) analysis (A&M Contractor at the direction of the User Agency's OSC or designee).

F. Implement Erosion Control (DDHTR Contractor. A&M Contractor – monitors and documents).

- 1) If results are less than or equal to cleanup goals, and are approved by the User Agency or designee, the DDHTR Contractor shall prepare the site for final erosion control (DDHTR Contractor) and certification (A&M Contractor).
- 2) Place required storm water best management practices to control sediment runoff from each remediated property, as identified in the EPP and Section 8.1 Erosion Control Methods, or as otherwise directed by the User Agency's OSC or designee. Typically, erosion control is placed on the downstream side of structure footprints where debris was removed, including the placement of wattles or compost socks and hydro mulch (no seeds) (DDHTR Contractor).

G. Hazard Tree Felling

- 1) Review the hazard tree assessment, prepared for each property, with the A&M Contractor's Arborist and/or TFL to determine if prepared prior to commencing with the debris removal work. The hazard tree felling crew supervisor will decide how the tree felling will be accomplished and inform the TFL prior to commencing work. No hazard trees will be felled in structural ash and debris. If it is, the tree and all its cuttings and grindings shall be considered ash and debris and disposed of as such (DDHTR Contractor and A&M Contractor).

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- 2) Submit forest practice rules required permits for felling and transporting trees to end use facilities (DDHTR Contractor's LTO with support of the A&M Contractor's RPF).
 - 3) Assess, monitor, and document identified endangered species using USFWS Qualified Biologists, nesting birds (during season), cultural resources using Secretary of the Interior Qualified Archaeologists, water quality permits, Forest Practice Rules, and stormwater (A&M Contractor).
 - 4) Fell hazard trees as identified and marked by the A&M Contractor's Arborist, stumps will be flush cut (within 6-inches) to existing terrain surface or as required in local government encroachment permits. No stumps will be removed unless pre-approved/directed by the IMT (DDHTR Contractor).
 - 5) Perform monitoring, oversight, and documentation of the felling and removal of every Hazard Tree removed. Open a ticket for each arborist marked hazard tree felled (A&M Contractor).
 - 6) Document with the IMT approved GIS (ESRI) – or compatible data collection software, all hazard trees removed, to include the following items (A&M Contractor):
 - a) Photograph after removal showing the identification number on the remaining stump.
 - b) Date of removal.
 - c) GPS coordinates of each tree felled.
 - 7) Once the marked trees are felled, limbs and tops are processed as necessary, and cleared off of each property, the TFL shall document, and mark the tree stumps with their original markings (prior to cutting) and take a photo and GPS the stump location. This information shall be logged into the A&M Contractor database, undergo thorough quality control check, and be accessible by the IMT by the next day (A&M Contractor).

H. Hazard Tree Removal.

- 1) Felled hazard trees and other vegetative debris will be collected and removed from the site within one-week (seven days) of felling or as directed by the User Agency's Operations Lead (OSC or Debris Group Supervisor, as applicable). Trees may be chipped directly into trucks on site, transported to a Hazard Tree Processing Yard for processing, or hauled directly to wood material end use facilities at the discretion of the DDHTR Contractor. A small amount of chips may be left on site for erosion control purposes as defined in the EPP and these Special Provisions. In some instances, at the discretion of the User Agency's OSC and State environmental lead, vegetative debris may be "lopped and scattered", if the

process of removal may cause environmental harm. Such activities must meet the forest practice rules and the permit(s) requirements. (DDHTR Contractor).

- I. Documentation Tracking and Consolidation (A&M Contractor).
 - 1) Document all activities on each site such as property owner interaction, daily truck loads, etc.
 - 2) Track and log each truck used and the total quantities and types of materials transported to landfill or end use facility.
 - 3) Record trucks identification numbers and type of material removed by each truck from each property.
 - 4) Collect and organize DDHTR documentation through web-based database.
 - 5) Prepare site specific final reports and database (at CM's direction) for delivery to User Agency. These reports shall be finalized within 3 months after the final property sign-off (FSO) report has been signed by the User Agency's OSC or designee.

3.2 Incident Action Planning

During the course of this operation, the PSC will publish the Incident Action Plan (IAP) once every operational period. The length of operational period will vary, depending on the incident and can vary throughout the operation. The IAP will contain the incident objectives, specific personnel assigned to the various roles in the operation, work assignments, safety information, and contact information.

The Incident Action Plan will be developed pursuant to the Action Planning Process, which is summarized below:

- A. Objectives Meeting: The IMT will review progress over the prior operational period, anticipated resource availability, limiting factors, and strategic goals to set objectives for the operational period. This meeting may be held informally or as part of other IMT meetings.
- B. Tactics Meeting: The OSC and PSC will lead a Tactics Meeting with all contractors to establish resource orders and work assignments necessary to meet incident objectives.
- C. Planning Meeting: The OSC and PSC will present the Incident Action Plan to the IMT and stakeholders for comment, review and approval.

4.0 PRELIMINARY OPERATIONS

4.1 Permits

All on-site debris removal work will be performed between the hours of 7:00 am to 6:00 pm, Monday through Saturday, or adjusted as specified by local noise ordinances. Debris removal crews may commence pre-work health and safety briefings at the beginning of shift and post-shift meetings at end of shift, outside of these allowed operational hours, which should not impact compliance with the noise ordinance.

Table 4 lists the requirements and permissions anticipated for the Operation.

Table 4. Summary of Permit Requirements

Requirement/ Permission	Entity Responsible for Obtaining	Comments
Property owner Site Access/ Authorization for ROE and Access only ROEs	Counties	Executed forms are required by owners before work can begin on their property.
Property owner Access only Agreement	Counties	Executed forms from non-User Agency program property owners to provide access to properties that are part of the User Agency program.
California Environmental Quality Act (CEQA)	Exempt	Operations undertaken, carried out, or approved by a public agency to maintain, repair, restore, demolish, or replace property or facilities damaged or destroyed because of a disaster are exempt from CEQA. Public Resources Code, §§ 21080(b) (3), 21172; see also, 14 CCR 15269(a).
Section 1602 or 1610 Streambed Alteration, California Department of Fish and Wildlife (CDFW)	CDFW; User Agency	User Agency's PSC, OSC, Environmental Unit Lead, and/or A&M Contractor will consult with CDFW for removal of dangerous burned trees. Typically, the Operation does not include work in, or through, a streambed. If a stream crossing is necessary to access and remove burned debris, User Agency will consult with CDFW to determine whether work is consistent with the EPP or will need to submit a Lake or Streambed Alteration Program Notification of Emergency Work Permit

Requirement/ Permission	Entity Responsible for Obtaining	Comments
		to CDFW within 14-days of commencing with streambed crossing.
Federally Funded or on Federal Property Follow National Environmental Policy Act (NEPA)	FEMA as lead Agency; User Agency	User Agency's PSC, OSC, Environmental Unit Lead, and A&M Contractor will Consult with FEMA or Federal lead agency regarding the debris removal operation and potential impacts on federally protected resources (i.e., waters of the US, etc.) endangered species, and historical and cultural artifacts, etc. to be addressed and incorporated in the EPP.
Federally Funded or on Federal Property - - Federal Section 7 Permit for Federally Endangered Species	FEMA as lead Agency; User Agency	User Agency's PSC, OSC, Environmental Unit Lead, and A&M Contractor will consult with FEMA or Federal lead agency regarding the debris removal operation and potential impacts on federally endangered species or endangered species habitat as described in the EPP. Including submittal of final reports per the direction of the FEMA consultation with USFWS, and/or NOAA Marine Fisheries Service. Maps will be produced using GPS at sub-meter accuracy.
Federally Funded or on Federal Property – Section 106 National Historic Preservation Act assessments	FEMA as lead Agency; User Agency	User Agency's PSC, OSC, Environmental Unit Lead, and A&M Contractor will consult with FEMA who will consult with the State Historic Preservation Office (SHPO) to determine if there are any archeological sites of interest/concern within the footprint of the debris removal operation. If so, determine how to mitigate, as addressed in the EPP. A&M will provide Archaeologists to perform assessment and monitoring, and draft and submittal of final reports per the direction of the FEMA consultation with SHPO. Maps will be produced using GPS at sub-meter accuracy.
Federally Funded or on Federal Property -	User Agency or its A&M Contractor	User Agency PSC, OSC and/or its A&M Contractor will consult with the USACE

Requirement/ Permission	Entity Responsible for Obtaining	Comments
<p>-- US Army Corps of Engineers (USACE) Non-Reporting Nationwide 33 Streambed crossing or Regional General Permit to address Clean Water Act (CWA) Section 404 Regional General Permit for Clean Water Act Section permit</p>		<p>regarding the applicability of the Nationwide 33 permit for the emergency response/recovery activities affiliated with the operation or whether a Regional General Permit to address CWA Section 404 is required. Permit applications will be submitted per the February 10, 2016 Updated Map and Drawing Standards, including the use of sub-meter accurate GPS readings for the Ordinary High Water Mark. A 401 Permit approval from the local Regional Water Quality Control Board (RWQCB) may be required, as addressed in the EPP.</p>
<p>401 Permit</p>	<p>CalEPA State Water Resources Control Board; User Agency or its A&M Contractor</p>	<p>User Agency's PSC, OSC, Environmental Unit Lead, and/or A&M Contractor will consult with the RWQCB, and submit information required for review and approval as addressed in the EPP.</p>
<p>Laydown and storage yards, and other necessary operations supporting facilities will likely require National Pollutant Discharge Elimination System (NPDES) Stormwater permits</p>	<p>DDHTR Contractor for support facilities. Some support by the A&M Contractor</p>	<p>DDHTR Contractor will coordinate with the landowner, the City or County land use municipality and the RWQCB to apply for and obtain NPDES permits as required and install and maintain necessary BMPs.</p>
<p>Road Use or Special Permits for accessing private properties from roads on Federal lands (BLM, USFS, etc.)</p>	<p>DDHTR Contractor for access across roads on federal lands. EHP support from the A&M Contractor. Plus, may require additional assistance from state agencies and User Agency CM and /or OSC or designee.</p>	<p>Permits will require biological and historical preservation assessments and likely bmp protections to be installed and maintained and ultimately removed.</p>

Requirement/ Permission	Entity Responsible for Obtaining	Comments
CalFire Forest Practice Rules Permits for Timber Harvest activities (1104.1b, 1039g, 1052).	DDHTR Contractor's LTO to prepare, sign, and implement permit(s) and their requirements. May obtain assistance from A&M Contractor's RPF.	Prior to felling any Hazard Trees, the DDHTR Contractor shall confer with the CalFire Regional Office and the RWQCB representatives to confirm necessary permits and/or confirm applicable exemptions then submit obtain and implement required BMPs and AMMs, under A&M Contractor Forester's oversight and support.
County Encroachment Permit	DDHTR Contractor (May be waived)	Use of temporary trailers or storage units on County ROW will require submittal of an application.
County Demolition Permit	User Agency (may be waived)	Counties to issue a blanket permit to demolish all structures destroyed by the fire under this program.
Air District Asbestos Demolition Permit/ Notification	User Agency (may be waived)	User Agency or its A&M Contractor will make appropriate notification to local Air Quality Management District (AQMD), California air Resources Board (CARB), and/or Federal EPA for demolition of any remaining standing structures and chimneys that fall under the requirement, as necessary.
Site Hazardous Waste Transport	User Agency	User Agency will submit and emergency Department of Transportation (DOT) waiver to allow for the transport and consolation of hazardous materials at a predefined staging area within the immediate burn scar area.
Traffic Control (city, county roadways and state highways)	DDHTR Contractor	User Agency DDHTR Contractors apply for and obtain all road and highway permits in support of these operations and will supply necessary signage as required by the permitting agency(ies).
Hazardous Waste Disposal	User Agency	User Agency will contact the DTSC if any household hazardous waste is found on properties. User Agency will direct DDHTR Contractors to place such materials at one location on each property and/or in an environmentally protective, safe, and secure storage area (as appropriate) and arrange for the DTSC to make special collection trips,

Requirement/ Permission	Entity Responsible for Obtaining	Comments
		"milk runs", to collect and appropriately transport and dispose of such materials.
Temporary Heliport Authorization	CalTrans	For temporary take-off and landing facilities related to debris or tree removal via helicopter.

4.2 Background Soil Assessment (User Agency/ A&M Contractor)

User Agency and its A&M Contractor will identify regions with potentially differing soil types within the footprint of the Incident. The A&M Contractor shall also review geologic maps and look for signs of anthropogenic disruptions such as mining operations, disposal sites, contamination from previous disasters, other such activities that could have an impact on the background soils sampling locations as well as on the confirmation soil sampling that will take place after the debris has been removed from program properties. A&M Contractor, with approval from User Agency shall determine if levels above clean-up goals are the result of the incident fire ash and debris or from pre-existing conditions.

Soil samples in the vicinity but not in the ash impacted area will be collected and analyzed to establish the naturally or anthropogenic occurring metal concentrations around the Incident. These samples shall be analyzed for California Code of Regulations (CCR) Title 22 metals by a California-certified laboratory. Samples will be collected. These samples will also be analyzed for moisture content which the A&M Contractor will use to correct the metals concentration to determine dry metals concentrations from analytical results.

In addition, if directed by the User Agency's OSC, baseline assessment samples shall be taken at truck staging areas and equipment yards. These samples shall be analyzed for California Code of Regulations (CCR) Title 22 metals and Total Recovered Petroleum Hydrocarbons (TRPH) and also benzene, toluene, ethylbenzene and xylene (BTEX) analysis by a California-certified laboratory. Results from these samples will be used to establish a baseline and additional samples will be collected upon demobilizing to ensure no residual material or hydrocarbon spill was left behind. The DDHTR Contractor will be responsible for removing contaminated soils contributed by its operation in these staging areas, as verified by the A&M Contractor following appropriate predetermined soil sampling and analysis protocols.

4.3 Air Monitoring (A&M Contractor)

Prior to commencement of debris removal, User Agency and its A&M Contractor will prepare an operation air monitoring plan that will be reviewed and approved by the User Agency's IMT. This plan shall follow all local, regional, state and federal requirements for the types of activities included in these Special Provisions. The A&M Contractor shall be required to follow DTSC's "[Community Air Monitoring Plan Guidance](#)", dated

Jan 2020, (<https://dtsc.ca.gov/wp-content/uploads/sites/31/2020/10/2020-CAMP-Guide-FINAL-w-appendices-072020-A.pdf>) and as it is updated. The background, community, and debris removal property air monitoring will include particulate matter (PM 2.5), airborne metals and asbestos.

Once the Air monitoring Plan is approved, the A&M Contractor shall collect background air monitoring samples to establish baseline levels for air contaminants collected from community and highly sensitive receptor areas as determined by the User Agency's IMT, or designee, and the A&M Contractor. The A&M Contractor will include conducting debris removal property air monitoring on typically one-third of the properties that are actively having debris removed on a daily basis.

Once debris removal commences ongoing air monitoring in the community and at the selected debris removal property will be performed as outlined in the User Agency's OSC approved Air Monitoring Plan. Community and selected debris removal property air sampling shall take place during debris removal operational hours only.

Air monitoring results shall be reviewed and submitted to the User Agency's OSC and/or Designee, and the State H&S Officer within 1 day of receipt of results from the analytical laboratory (on a maximum 7-day turn around schedule). Any exceedances shall be flagged by the A&M Contractor to the IMT.

4.4 Water Source (DDHTR Contractor)

The DDHTR Contractor will be responsible for obtaining water use permits, complying with permit conditions, and monitoring water usage from water hydrants, or other approved and permitted water source (i.e., lake, river, stream, etc.), using a meter or other required and approved method of tracking water usage. A water source will be identified by the State before DDHTR Contractor work commences.

4.5 Underground Utilities (A&M Contractor and DDHTR Contractor)

Notify Underground Services Alert (USA) at least 48 hours prior to ground disturbing activities such as instillation of the property address signs (A&M Contractor) and (DDHTR Contractor). Check for underground utilities by using an independent private utility locator service for private ROWs, if necessary (A&M Contractor and/or DDHTR Contractor).

4.6 Identify equipment and material staging area (DDHTR Contractor)

Each contractor will provide the location of their equipment/office staging areas and any additional temporary facilities that support debris and hazard tree removal operations. Depending on the burn area and complexities of remote operations, the DDHTR Contractor may determine that temporary facilities, such as Temporary Debris Management Sites (TDMSs), storage facilities, laydown areas, vehicle adjudication facilities, equipment maintenance yards and housing base camps, may be required to efficiently meet operational goals.

The Environmental Protection Plan (EPP) waiver coverage shall not likely apply to debris removal operations activities, such as those mentioned above, for which local agency permits may be required. The local agencies for each county will likely require the need to obtain:

- A. An Industrial General Permit from the Regional Water Board and develop a Storm Water Pollution Prevention Plan (SWPPP), and all applicable specific rules in the EPP.
- B. May require a land use permit, depending on the property zoning and local agency requirements.
- C. In some circumstances soil sampling may need to occur before and after site usage.
- D. If the Operation is either federally funded or the temporary facilities were intended to be located on federal land, the Contractors shall work with the User Agency to consider these facilities for compliance under the National Environmental Policy Act (this process could take two weeks to 90 days).
 - 1) In this case, the Contractor(s) shall produce a site-specific plan to the User Agency's Environmental Lead, including:
 - a) Address/Location.
 - b) Aerial map showing the active use boundaries.
 - c) Uses a description of the site.
 - d) A description of all uses and impacts, including if heavy equipment will be stored there, utility tie-ins, etc.
 - e) Contractor(s) shall have a USFWS qualified biologist perform a desktop review, and field evaluation of the work site for Section 7 of the Endangered Species Act.
 - i. Provide CNDDDB and ECOS Critical Habitat review.
 - ii. Provide documentation of a field visit with photographs and notes.
 - f) Contractor(s) shall have an SOI qualified archaeologist perform a desktop review, and field evaluation of the work site for Section 106 of the National Historic Preservation Act.
 - i. Provide CHRIS review (keep confidential, to be forwarded to FEMA EHP).

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- g) If applicable, contractors will apply for Section 404 of the Clean Water Act permit, as well as provide evidence of compliance with Executive Order 11990 Protection of Wetlands, and Executive Order 11988 - Floodplain Management requires Federal activities to avoid impacts to floodplains.
 - h) Contractors will document that the site is not on the Hazardous Waste and Substances sites from DTSC's "Cortese list".
- 2) Contractor(s) shall be prepared to allow Local, State, Federal, or Tribal representatives to conduct environmental evaluations, or follow up inspections.
- E. Consultation with ALL affected California Native Tribes, if any.
- F. Permits will be collected for Public Assistance and Environmental and Historic Preservation Records (send them to the Environmental Lead).

4.7 Temporary Debris Management Sites (DDHTR Contractor)

Temporary Debris Management Sites (TDMSs) generally consists of a temporary ash and debris stockpile, a protective berm, and operational areas allowing for trucking access. The site shall be enrolled for coverage under State Water Resources Control Board Order WQ 2020-0004-DWQ, General Waste Discharge Requirements For Disaster-Related Wastes (General Order). A&M Contractor shall provide monitoring of Operations at TDMS, including community air monitoring services.

DDWTR Contractor shall note that the following conditions shall be enforced for the operation of the TDMS. The conditions are mandatory for its continued use. Violations of the conditions will be reported to the User Agency. If the IMT determines there is a violation the DDHTR Contractor will be informed of such violations. A violation will incur a minimum delay in operations for 24 hours. During that time no inbound or outbound ash and debris transports can be processed. Individual property ash and debris removal operations can continue but without the use of the TDMS. If violation is not resolved within 24 hours of notification from the Contract Manager, the closure plan will be triggered.

Health & Safety: The ash and debris stockpile area will be defined as an exclusion zone. DDHTR Contractor shall follow all exclusion zone procedures for the ash and debris stockpile area.

Operating Limit: The User Agency will define the maximum operating limit for each TDMS. A variance of 10% from the operating limit will be permitted. Any exceedance of the 10% variance will trigger a delay in operations for three working days in which no inbound materials will be accepted. Temporary scales are used to determine the weight of inbound and out bound trucks. Materials can be removed outbound if it complies with the Dispatch of Trucks requirements.

The Operating limit will be calculated based on the quantity delivered to the end use facility. Pre-loaded truck quantities are subtracted from the pile quantity when they arrive at the approved end-use facility.

Site Operations

Exclusion Zone: Includes all areas area within the perimeter berm and not including the truck dumping and transfer truck loading zones. Staked red tape will designate the hot zone and shall be maintained. Level C Personal Protective Equipment (PPE) requirements shall be enforced within the exclusion zone.

Loading Zone: Includes the length of the longest anticipated transfer truck and trailer anticipated to be used by DDHTR Contractor. A yellow caution taped off area of 15 feet wide by 65 feet long section will be staked and maintained to designate the loading zone. This area will be identified as the warm zone. No materials will be dumped on the ground in the warm zone. Transfer trucks will be backed into and be loaded within the loading zone. Materials spilled in this zone will be cleaned up prior to the transfer truck leaving the area and the next loaded truck being allowed to enter. This area will be inspected and cleaned once each transfer truck is loaded and at the end of the daily operations. If the underlying material is contaminated it will be removed and replaced. The loading zone located furthest away from all residents, general public or workers not affiliated with the TDMS.

Decontamination Zone: Includes an area for workers to put on and take off PPE as required in the Hot Zone. Decontaminate equipment and PPE items as needed in the work process.

Dispatch of Trucks: All trucks inbound and outbound shall be issued and carry truck load tickets. Loads inbound are received and dumped at the external edge of hot zone. Loaders will transport the ash and debris to the debris pile for the excavator to pile up and load the outbound transfer trucks. Outbound transfer trucks will only be loaded in the designated loading zone. The loading zone shall be specified and identified within the perimeter berm, as described above. Outbound trucks will receive their scale and load tickets to bring with them to the designated landfill expected to arrive at on that same day. Outbound trucks can also be sent to the designated and approved pre-load site for delivery the following day. Trucks will be issued load tickets the next day if there is no pre-load site and are not expected to arrive before the landfill closes.

Minimum staffing: DDHTR Contractor shall make a minimum of two (2) personnel available to operate the TDMS. A loading operator and dust control laborer is required for loading. Two laborers can work together to complete tasks. If two personnel are not on site the TDMS will be considered inactive. A plastic cover shall cover the pile of material while the site is inactive, during non-work hours (overnight) and all days when work is not occurring. No unloading or loading of materials can take place while the TDMS is inactive.

Staff operate the equipment at the facility, which shall include the excavator used for loading, loader for managing the consolidating materials, and a water truck and water buffalo for dust control. Staff will also assist with backing up trucks for loading and unloading.

Transfer Trucks: Outbound transfer trucks must follow the requirements of the truck loading as described in this document. All trucks loaded with ash and debris shall be lined with plastic sheeting and “burrito wrapped” with the plastic as described herein:

- All Ash and debris and contaminated soil loads must be well wetted and placed in a 6 to 10-mil plastic lined trucks and burrito wrapped to minimize any discharges on the roadways to the disposal site.
- All loads shall be covered with a non-permeable tarp not less than 14 mil in thickness; this includes metal debris, contaminated soil, and concrete. Ash and debris loads will be placed in a plastic liner before covering with a tarp. Tarps shall be secured with no less than 6 anchors around the perimeter of the truck. Tarps shall be in free of tears greater than six inches, and shall cover the entire load No auto tarps will be allowed for this purpose.”

This will ensure that materials and dust do not escape out of the truck. The User Agency will consider relaxing this requirement if DDHTR Contractor can demonstrate that the trucks are sealed and no leakage can occur.

Dust Control: Dust control shall be maintained during all hours of operation. This includes when inbound trucks are dumping their loads, outbound transfer trucks are being loaded, and all times in between.

Storm Water Protection

Weather events: A weather event shall be classified as a prediction of rain of 0.25 inches for the general area within 24 hours by the National Weather Service. The continuous exterior perimeter berm shall be maintained during weather events and no breaches of the berm will be allowed. Water that accumulates within the berm will be kept within the berm and allowed to evaporate. Any water removed from within the berm shall be considered contaminated. The User Agency, and the appropriate Regional Water Quality Control Board, shall be notified prior to the removal of this contaminated water from within the berms. If DDHTR Contractor deems it necessary to remove this contaminated water from within the bermed area, it will require sampling, analysis, and storage while awaiting the results of the lab analyses. If deemed necessary, the water may also require treatment as indicated by the lab analysis and the A&M Contractor.

Perimeter Berm: Shall comprised of clean fill materials. The berm height shall be a minimum of three feet tall when measured from the surrounding existing grade. A plastic liner shall be incorporated into the berm as well as under the entire bermed in area, to prevent leakage. Water shall not be allowed to leak from the perimeter berm. The perimeter berm shall also be treated for dust control. One access point shall be allowed

through the perimeter berm, for inbound loads to dump and for the loading zone. The access shall be a maximum width of 20 feet. The access point in the perimeter berm shall be filled in with a 3-foot tall berm, to fully enclose the transfer operations, when there is a forecast weather event. Rumble strips will be placed across the entire entrance and exit of the transfer station area to knock off dirt and mud that may have accumulated from trucks as they leave the transfer station. This area shall be inspected and cleaned, as necessary at the end of each operational day.

The TDMS shall be maintained as necessary. This is including sweeping of asphalt surfaces outside of the perimeter berm daily to limit track-out from debris hauling trucks.

Air Monitoring: Air monitoring shall be conducted, by the A&M Contractors air monitoring crew, during normal work hours. Air sampling stations will be placed upwind and downwind of the operations, on the perimeter of the transfer station and between the TDMS and the general public. Laboratory analysis of the air monitoring samples will be completed. Results will be reviewed by the A&M Contractor and shared with the User Agency for possible refinement of the dust control plan.

Closure Plan: The closure plan is the plan of ending operations of the TDMS. This will include removal of all waste materials brought from the site, decontamination of equipment and materials used, and removal of materials to create the TDMS to include the perimeter berm, sacrificial layer and underlying plastic sheeting. Cleanup of existing asphalt and surrounding surfaces shall also be completed. This may include removal of areas determined to be contaminated by way of soils sampling and testing from soils underlying the exclusion zone operating area by the A&M Contractor. The DDHTR Contractor will fully complete site closure plan and demobilize within 21 days' notice from the User Agency.

4.8 Identify material disposal and recycling options (DDHTR Contractor)

The DDHTR Contractor is responsible for identifying all material disposal and reuse/recycling facilities to be used during DDHTR operations. These facilities shall have all appropriate operating permits, and pre-approved by the User Agency.

4.9 Identify immediate erosion control needs (DDHTR Contractor)

The State Watershed Task Force typically works to identify the Values at Risk for life safety and addressing these concerns prior to debris removal. If the DDHTR Contractor identifies areas that need measures to protect waterways from contamination, they shall take immediate action to mitigate these concerns.

4.10 Perform Vehicle Identification Number (VIN) verifications (State or Local law enforcement or approved local agency staff)

Vehicles (e.g., automobiles, trailers) that are required to be registered with the Department of Motor Vehicles (DMV) and that have been destroyed by the fire must be adjudicated by the state highway patrol and/or local law enforcement or designated employee of an authorized

public agency. While this process is preferred to occur onsite, burned vehicles may also be adjudicated at an offsite facility if approved by the Incident Management Team.

Burned vehicles shall be considered burned hulks per DMV regulations and may be drained of fluids onsite or at an approved metal recycling facility. Vehicles and burned hulks shall be bundled with a net/cover to prevent items from falling from the vehicles during transport. (DDHTR Contractor).

If it is not possible for the VIN verifications to occur on each property, the DDHTR Contractor shall provide one or more locations at which State or local government can safely perform the VIN verifications. The State or local government will inspect each vehicle and fill out the appropriate paperwork prior to vehicles being disposed by the DDHTR Contractor. If directed by User Agency to establish a vehicle adjudication facility, the DDHTR contractor shall provide all necessary equipment and personnel necessary to operate the facility for the duration of the contract, including but not limited to the following:

- Sufficient physical space
 - Estimated to be 2-5 acres
- Federal, State, and Local permits and fees, cost of compliance
- Required notifications and consultations
- Heavy equipment, for example; forklift, dust control
- Temporary facilities, for example: shipping container, shade shelters, portable restrooms
- Labor
- Overhead, for example: insurance, mobilization, demobilization

4.11 Roadway Assessment and Documentation (A&M Contractor)

Video record pre-operational conditions of all County, City/Town and private roadways on which program participating ROE properties reside, roadways necessary to access these ROEs, and roadways required to access the end use facilities. The A&M Contractor will also take field notes during the road evaluations. These shall be compared to post-operational evaluation for potential local agency reimbursement by state or federal funding agency. Completed videos should be available at IMT request within 48 hours of beginning recording either via electronic or hard drive access.

A&M Contractor shall also verify that any roads that are required to be used for hauling debris are private or not. The A&M Contractor shall investigate and then advise the CM and the IMT, whether permission to use the private road(s) is/are required and how to obtain that permission. At the same time, the A&M Contractor shall inform the DDHTR Contractor(s) of a) the "Contractors Responsibility" clause, and b) their responsibility to take reasonable precautions to maintain the integrity of the private road, during the operation.

4.12 Environmental Assessment (State's Environmental Task Force, User Agency, or other state agency)

User Agency and other State Agencies will develop an EPP (similar to the [EPP sample](https://www2.calrecycle.ca.gov/Contracts/DownloadDocument/887) (<https://www2.calrecycle.ca.gov/Contracts/DownloadDocument/887>)) to summarize the key areas and types of environmental and historical resources present in the vicinity of the Operations. The EPP will summarize the compliance procedures necessary for the DDHTR Contractor and A&M Contractor to be aware of when conducting each function as part of the overall Operation. All BMPs and AMMs, regardless of their timing before, or after contract execution will be implemented by the DDHTR Contractor.

4.13 Operational Soft Starts

The User Agency may direct that the A&M Contractor and/or DDHTR Contractor conduct a “soft start” of any or all of the operations described in these Special Provisions (for example, Site Assessment, Asbestos Assessment, Structural Debris Removal, Confirmation Soil Sampling, Rescraping, Erosion Control BMP placement). A “soft start” is defined as a single day of the operation for the purpose of evaluating each contractor’s proposed methodologies and determining whether the methodologies are sufficient to commence full operations.

One purpose of a soft start is to evaluate the sufficiency of the A&M Contractor’s documentation processes. To assist the User Agency in determining the sufficiency of these processes, the A&M Contractor shall provide a presentation to the User Agency on the working day following a soft start, reviewing the operational protocols and processes, and the resulting data.

The User Agency will determine whether the protocols, processes, and resulting data are sufficient for further assessments or operations. If the User Agency determines the results are insufficient, User Agency shall provide feedback and needed corrections to the A&M Contractor. The A&M Contractor will be provided five (5) working days to make the requested adjustments, unless the User Agency determines a different timeframe is warranted. Once adjustments are made, the A&M Contractor will perform another day of work to and re-present the results to the User Agency the day following the work. The User Agency may continue to direct adjustments until the product is sufficient to commence hazard tree assessment.

The DDHTR Contractor’s soft starts would similarly be conducted in one day for each type of soft start activity would be for the purpose to determine if the methodologies utilized are effective and efficient means for completing the contracted for operational tasks.

The User Agency may direct that soft starts for multiple phases of the operation (for example, site assessments and asbestos assessments) are conducted on the same day, or may conduct soft starts over several days. Due to the preliminary nature of soft starts, the A&M Contractor and DDHTR Contractor should expect that soft start days

will be less operationally efficient than normal working days. The A&M Contractor and DDHTR Contractor should be prepared to mobilize and demobilize resources for soft starts and expect that resources may not be immediately employed in further operations depending on the results of the soft start.

Additional specifications for hazard tree assessment hazard tree removal soft starts are provided under Section 8.0, Hazard Tree Removal Operations.

5.0 SITE ASSESSMENT

User Agency's A&M Contractor will assess and document information prior to debris removal as described below.

5.1 Address Signs

The A&M Contractor shall complete underground service alert (USA) assessments at the entrance to each property for which an ROE has been obtained and prior to or as part of conducting the initial site assessment for such property. Once cleared, the A&M Contractor shall install one reflective aluminum address sign will be required to be installed per parcel. The sign dimension should be 4 to 6 inches in width and 18 to 24 inches in height. The edges shall be round and free of sharp edges. The background shall be a reflective green and all text shall be reflective white. Each sign shall be mounted on a 6-foot pre-drill, u-channel steel post. The numbering for the address shall be at 3 to 4 inches in height.

Address sign example (not to scale):



5.2 Identify Septic Tanks (A&M Contractors and DDHTR Contractors)

A&M Contractors shall identify, mark, and document septic tank and leach field locations, if possible, from the ROEs, from the County Environmental Health, contact with the homeowner or via site assessments or other means. DDHTR Contractors shall confirm and be responsible for protecting both items on all properties on which they operate.

5.3 Identify Water Wells (A&M Contractors and DDHTR Contractors)

A&M Contractors shall identify, mark and document water well and water pump locations, if possible, from the ROEs, from the County Environmental Health, contact with the homeowner or via the site assessments or other means. DDHTR Contractors shall confirm and be responsible for protecting these items on all properties on which they operate.

5.4 Property Site Assessment (A&M Contractors)

Property site assessments will include, but not be limited to: approximate property lines (utilizing software such as LandGlide or similar program for handheld devices), sketching the foundation and hardscape footprints and debris field footprints, septic tank and leach field locations (if applicable), sanitary sewer laterals, water lines, water wells, electrical lines, fuel tanks (i.e. fuel oil, kerosene, etc.), dead and dying trees in and around the debris field footprint (that could be a danger to the debris removal crew) possible environmental concerns (surface waterways, creeks, streambeds, or other pre-determined habitats of concern) and identifying property-specific hazards on a field data form. Oversized debris (i.e., burned cars, large appliances, water heaters, etc.), potentially hazardous materials (i.e., large propane tanks – 30+ gallons, chemical containers, ammunition cases, etc.), and potentially hazardous conditions (unstable walls, exposed electrical lines, wells, cisterns, damaged trees, steep slopes, post tension concrete slabs, etc.) and access issues due to terrain, weather, or bridge crossings will be noted and mapped on the form. Photographs will be taken from each angle of the property and additional photographs should be taken to document hazards or other existing conditions including non-burned items. Each property debris field shall have a unique number and be labeled on the assessment map.

A&M Contractor shall determine the owner (property owner or vendor) of large propane tanks (greater than 30 gallons) that are partially damaged or undamaged that need to be removed or are or may be in the way of the Debris or Hazard Tree Removal Contractor's operations. The A&M Contractor shall contact the tank owner and ask them to have the tank removed (ideally) prior to the DDHTR Contractor commencing operations on the property.

Non-Residential Property – Waste Profiling

If non-residential (i.e., commercial, industrial, public parks, or other public facilities) properties are added to the Operation, the A&M Contractor shall provide Waste Profiling sample and analyses services including the following for each such property:

- A. Evaluate the property based on zoning, what kind of use it had prior to the fire, and aerial photos, to determine if it is likely to have stored hazardous materials.
- B. If the presence of hazardous materials is clearly a concern or unknown, conduct an Environmental Assessment by checking the property against Envirostor (DTSC website) to determine if it is known to be a contaminated site.

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- C. If the presence of hazardous materials is still unclear, A&M Contractor shall conduct an Environmental Site Assessment (ESA) prior to conducting an individual parcel site assessment by soliciting historical parcel data from Environmental Data Resources, Inc. (EDR).
- D. If the results indicate the possibility that hazardous materials were used and/or stored on the property, Contractor shall prepare a soil sampling plan, similar to the one in the Special Provisions Section 7.1. The analysis shall include:
- 1) CAM 17 Metals
 - 2) Mercury
 - 3) DRO/MRO (diesel and motor oil range organics)
 - 4) GRO (gasoline range organics)
 - 5) BTEX/MTBE
 - 6) SVOCs
 - 7) PCBs
 - 8) Pesticides
 - 9) Herbicides
 - 10)Dioxins (as necessary)
 - 11)TCLP/WET (as necessary)

5.5 Asbestos Assessment and Removal

To be protective of the workforce, public health, and surrounding community, User Agency has elected to perform an asbestos survey with laboratory analysis of samples collected on each site to evaluate each property for the presence of ACM for the need for removal. Additional scrutiny is placed on homes constructed before 1985 and debris sites with cement siding or vermiculite insulation.

Asbestos sampling will be conducted for suspected ACM materials which will include concrete samples. The goal of this survey is to reduce sending false positive ACM to the landfill and provide additional quality assurance and control that other bulk ACM was not missed in the initial surveys. The samples will be analyzed by polarized light microscopy or transmission electron microscopy using the methods described in the U.S. Environmental Protection Agency (EPA) Method for the Determination of Asbestos in Bulk Building Materials EPA/600/R-93/116.

Full National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos surveys will be performed on partially burned structures and chimneys as long as they

are structurally safe. A Certified Asbestos A&M Contractor (CAC), or licensed structural or civil engineer will determine if the partially burned structure is safe to perform as asbestos removal on. Should the structure be deemed unsafe, the DDHTR Contractor will use wet methods and heavy equipment to eliminate the risks. Once the structure or chimney is safely on the ground a NESHAP asbestos survey will commence. The samples will be analyzed by polarized light microscopy or transmission electron microscopy using the methods described in the U.S. Environmental Protection Agency (EPA) Method for the Determination of Asbestos in Bulk Building Materials EPA/600/R-93/116.

5.6 California Wildfire Asbestos Survey Standard Operating Procedure

To reduce the exposure risk from bulk asbestos to the debris removal workers; incident management personnel; nearby residents and neighbors in the community; and others handling, transporting, and disposing of the debris, the IMT, and its A&M Contractors during the past five years of debris response have developed a standard operating procedure (SOP) for fire-related asbestos issues. This SOP known as the “California Wildfire Asbestos Survey” (Attachment A) is more stringent than the current federal NESHAP requirements and was developed by ACs, Certified Site Surveillance Technicians (CSSTs), and Certified Industrial Hygienists (CIHs) with thousands of hours of field response. The California Wildfire Asbestos Survey presents procedures to identify, remove, and properly dispose of bulk asbestos from residential structures damaged by a wildfire.

The “Asbestos Site Assessments Standard Operating Procedure (SOP) - California Wildfire Asbestos Survey” 7 will be followed during a coordinated structural debris assessment removal conducted by User Agency and its A&M Contractors. This SOP will be used, by the A&M Contractor, to establish minimum procedures to verify that the precision, accuracy, completeness, comparability, and representativeness of all data collected throughout the project duration is acceptable; and to ensure that all information and decisions are technically sound and properly documented to identify and remove bulk ACM.

5.7 Radiological Site Survey (A&M Contractor)

While it is unlikely that radiological debris will be found, based on past debris removals, radiological surveys are necessary to prevent exposure. User Agency’s A&M Contractor shall, as part of conducting the initial site assessment, perform a radiological survey around all destroyed structures and structural ash and debris fields on all approved ROE properties. Survey equipment should be designed for general radiological surveying such as a Ludlum 2241 or equivalent.

The action level for this Operation is set at two times background. Should a level of 2x background be detected, the surveyor will isolate (i.e., cordon off) the area and notify the User Agency’s OSC, or Designee. The elevated reading(s) will be traced until the source is determined to be due natural sources such as brick or geological formations. Should the reading not result from natural sources the User Agency’s OSC, or

designee, will determine the location and rate and develop an action plan to secure the source as long as the reading does not exceed one milliroentgen per hour (1mR/hr) at one foot.

5.8 Mercury Site Survey (A&M Contractor)

While it is unlikely that mercury will be found in the debris, based on past debris removals, mercury surveys are necessary to prevent exposure. User Agency's A&M Contractor shall perform, as part of conducting the initial site assessment, a mercury survey around all destroyed structures and structural ash and debris fields on all approved ROE properties. Survey equipment should be designed for general mercury surveying such as a Jerome 43-X Mercury Vapor Analyzer or equivalent.

The action level for this Operation is if the instrument detects any concentration of mercury. Should mercury be detected, the surveyor will isolate (i.e., cordon off) the area and notify the User Agency's OSC, or Designee. The elevated reading(s) will be traced until the source is determined to be due natural sources, on-site mine tailings, other source. Should the reading not result from natural sources the User Agency's OSC, or designee, will determine the location and rate and develop an action plan to secure the source. If the soil is tested and the concentration of mercury is 5mg/kg or greater, an outside agency such as the DTSC, USEPA or the County Environmental Healthy may be contacted to assess and cleanup or otherwise deal with the area source.

5.10 Immediate Placement of BMP's

DDHTR Contractor shall place erosion control BMPs immediately around properties on which they are working, if rain is forecast that may stop work.

6.0 DEBRIS REMOVAL OPERATIONS

6.1 Notifications

At a minimum, the following notices are required prior to the start of the Operation:

6.1.2 DDHTR Contractor

- A. Underground Services Alert (USA) will be notified at least 48 hours prior to debris removal.
- B. Local utility providers (i.e., water, sewer, power) will be notified prior to removal of any damaged structure to ensure the utilities are secure and off.
- C. Conduct underground utility survey by a private contractor on private property if necessary.

6.1.3 A&M Contractor

- A. The property owner will be notified at 24-48 hours prior to any debris and/or hazard tree removal.
- B. CARB Asbestos NESHAP Program, or local air district with delegated authority, will be notified of any demolition of a partially destroyed structure within one working day (as directed by User Agency). Notification form will be provided by the state or its A&M Contractor as directed.

6.2 Household Hazardous Waste Identification and Removal

Based on past experiences, additional household hazardous waste (HHW) may remain under the debris, after DTSC/USEPA completes its Phase 1 hazard waste survey and removal. For smaller debris cleanup operations, the Local environmental health department, or their contractor, may complete this Phase 1 cleanup. Sometimes during Phase 1 HHW removal crew cannot remove all of the HHW, since it may be partially buried. If the HHW removal crew discovers a questionable item, that crew will mark the item(s) as hazardous with bright orange spray paint to be checked by a qualified individual. If the qualified individual does not deem it a hazard (e.g., propane tank without a valve), then the item will be marked with bright green or white spray paint with the words "O.K.", "MT", an "X", or two stripes indicating whether the item is to be removed as debris or recycled.

If the DDHTR Contractor identifies an item and deems it hazardous, the waste will be segregated by the removal team and either left on-site on a plastic sheet near the entrance of the property or taken to a temporary on-site storage. DTSC, when contacted will collect and transport the hazardous waste, on one of their "milk runs", to an appropriate facility at no charge to the Operation.

In an attempt to visually communicate hazards in the field, the guide shown below will be used to indicate if a hazard is or is not visually present. Each TFL will determine if any member has color perception issues.

Table 5. Hazardous Materials Marking Colors

Debris or Potential Hazard	Spray Paint Color
Household Hazardous Waste (HHW), Battery, Tank, Cylinder	Bright Orange
Possible ACM	Bright Pink
Material Safe for Normal Disposal	Bright Green or White

6.3 Asbestos Containing Material Removal (DDHTR Contractor, Assessed and Documented by A&M Contractor)

The California Wildfire Asbestos Survey SOP will be followed during a coordinated structural debris removal conducted by the Asbestos Removal Contractor. This SOP will be followed by the Asbestos Removal Contractor throughout the project duration to ensure that all ACM, marked by the CAC and/or CSST, is properly removed from each property. At minimum, the ACM removal Contractor will implement the following best management practices for removing ACM:

- A. The A&M Contractor's CAC or (CSST will consult with a licensed ACM removal Contractor to identify the location and area of ACM to be removed (A&M Contractor).
- B. The Contractor's registered ACM Removal Contractor will oversee and remove the ACM identified on-site by the A&M Contractor's CAC (ACM Removal Contractor).
- C. All on-site personnel removing ACM must have received the necessary health and safety training for conducting asbestos removal activities pursuant to Occupational Health and Safety Administration (OSHA) 1910.100, and CCR Title 8, Section 5192, and will be required to wear Level C personal protective equipment (PPE) when working in the exclusion zone (ACM Removal Contractor).
- D. All gross ACM that can be safely and easily removed from the site will be adequately wetted prior to being bagged to meet the NESHAP leak-tight requirement for removal. At a minimum the plastic bags must be of at least 6-mil thickness, and the contents must remain wet (ACM Removal Contractor).
- E. If bulk loading of ACM is utilized, the bin or container used for transport (e.g., end-dump trailer or roll-off box) will be tarped before transport. In addition, each load will be double-lined with 10-mil ply in such a way that once loaded both layers can be sealed up independently if as required by the landfill (ACM Removal Contractor).
- F. All ACM must be sufficiently wetted 48 to 72 hours in advance of initiating removal of the material. The water shall be applied in a manner so not to generate significant runoff (ACM Removal Contractor).
- G. ACM removed from the property must be manifested and transported for disposal by the asbestos removal contractor. An EPA Generator ID number will be assigned to this incident by the User Agency's OSC or the PSC (ACM Removal Contractor).
- H. Prepare manifests and obtain User Agency's OSC or designee signature on the manifest when the ACM is ready to be transported to landfill permitted to accept ACM (A&M Contractor).

6.4 Appliance (White Goods) and Vehicle Recycling (DDHTR Contractor, Documented by A&M Contractor)

The DDHTR Contractor shall provide one or more locations at which State or local government can safely perform the vehicle (incl. automobiles, trucks, equipment, boats, trailers, recreational vehicles, motorcycles, all-terrain vehicles, etc.) VIN verifications and abatements. The State or local government will inspect each vehicle and fill out the appropriate paperwork prior to vehicles being disposed by the DDHTR Contractor. These registration abatements will likely be conducted by the local law enforcement, the City/County, the California Highway Patrol, or another means, as determined by the User Agency's OSC and the IMT.

Materials that must be removed from appliances and vehicles (that are not completely burned) prior to crushing, baling or shredding for recycling include, but are not limited to:

- A. Used oils as defined in Article 13 of Chapter 6.5 of the Health and Safety Code (includes engine oil, lubricating fluids, compressor oils, and transmission oils).
- B. Fuel.
- C. Chlorofluorocarbons, hydrofluorocarbons, and hydrochloroflourocarbons used as refrigerants.
- D. Polychlorinated biphenyls known to be contained within motor capacitors and fluorescent light ballasts.
- E. Sodium azide canisters in unspent automobile air bags.
- F. Antifreeze in coolant systems.
- G. Mercury that may be found in thermometers, thermostats, barometers, electrical switches, and batteries.
- H. Putrescent materials (i.e., decomposing food wastes, etc.).

Records detailing removal and disposal operations involving all such materials will be recorded and manifested by the DTSC/USEPA or other agency responsible and/or permitted to manage their removal.

Appliances and vehicles that were completely consumed by the fire will likely not contain any of the above items. Appliances will be treated as metal debris and removed accordingly. Vehicles will be removed from the site and checked/processed for fluids before shipment to the recycling facility, unless otherwise directed by the User Agency's OSC.

6.5 Storm Water Protection (DDHTR Contractor, Documented by A&M Contractor)

Best management practices (BMPs) will be employed to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Potential sources of sediment from cleanup activities include vehicle and equipment tracking, exposed soil and slopes, export operations, disposal operations, and ash-filled topsoil stripping and stockpiling. Authorized non-storm water discharges anticipated for the Operation include water used to control dust, potable water, and uncontaminated excavation dewatering.

BMPs guidelines include, but are not limited to, the following:

- A. Water to Control Dust: Dust control is of the utmost importance on this Operation. Adequate dust control is required on all parcels within the Operation scope until all burn ash and debris, concrete, and soil materials are removed. This includes parcels where the DDHTR Contractor is actively working and parcels awaiting remediation and gravel and dirt roads used to transport DDHTR Contractor debris truck traffic. The DDHTR Contractor is required to provide one (1) water buffalo (or equal) for every debris removal crew assigned to an operation.

Dust control will be implemented when there is visible dust generated from the site using fire-grade nozzles, small diameter (3/4" to 1") fire or garden hose, or with a water truck depending on the area being serviced. Water to be used for dust suppression may only be from sources approved by the IMT. While the goal is to apply water spray for dust control to avoid surface run off, dust control shall take precedence. In the event there is significant surface run off, the DDHTR Contractor will control runoff with erosions control BMPs.

- B. Good Site Management Housekeeping: Good site management measures include cover or berming loose consolidated materials that are not actively being removed; storing any chemicals in watertight containers; control of off-site tracking of loose soils; preventing disposal of rinse or wash waters into the storm drain system; ensuring containment of sanitation facilities; cleaning or replacing sanitation facilities by inspecting them regularly for leaks; and inspecting and keeping equipment in good working order to prevent leaks.
- C. Vehicle Washing or Decontamination: Wash vehicles in a manner as to prevent unauthorized non-storm water discharges from reaching storm drain systems.
- D. Street Cleaning: Clean streets to collect tracked out sediment and operate street sweeping vehicles to prevent unauthorized non-storm water discharges from reaching storm drain systems. The DDHTR Contractor is to provide street sweeping on roadways throughout the Operation on which debris and other disposal materials are hauled and tracked off parcels within the operational area. The street sweepers are to be PM10 efficient street sweepers that are certified by the South Coast Air Quality Management District (SCAQMD) as meeting the testing and performance standards set forth in SCAQMD Rule 1186. The

DDHTR Contractor is to provide the number of street sweepers as indicated in the User Agency Agreement.

- E. Sediment Controls: Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. Best management practices include the use of silt fencing, fiber rolls, and street sweeping to prevent sediment migration. All materials shall be certified weed free in an effort to control the spread of noxious weeds. Sufficient quantities of temporary sediment control materials will be maintained on site throughout the duration of the Operation to allow implementation of temporary sediment controls in the event of significant rain.
- F. Run-on and Run-off Controls: Run-on and run-off will be managed within the immediate vicinity of each property's debris footprint area and areas used for equipment and truck access.
- G. Public Rights of Way: The DDHTR Contractor will be responsible for all storm water protection on public rights of way on which the DDHTR Contractor assigned debris removal properties.

6.6 Trackout Management (DDHTR Contractor, Documented by A&M Contractor)

The DDHTR Contractor will implement procedures to prevent or cleanup carryout and trackout of mud and soils as specified below. The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout materials from the heavy equipment on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

The DDHTR Contractor shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site and at the minimum remove all other visible carryout and trackout at the end of each workday.

Cleanup of carryout and trackout shall be accomplished by:

- A. Manually sweeping and picking up; or
- B. Operating a rotary brush or broom accompanied or preceded by sufficient wetting; or
- C. Operating a PM10-efficient street sweeper.

Waste from a street sweeper during this operation shall be disposed of as contaminated soils and transported directly to the landfill or covered in a waste hauler.

6.7 Traffic Control (DDHTR Contractor, A&M Contractor – Monitors and Documents)

Traffic control is required for these Operations and traffic control crews are required to provide traffic control throughout the Operation as required for safety and as approved by the IMT. The traffic control crews shall be trained in the principles of the [California Department of Transportation \(Caltrans\) Revision 5 \(Rev 5\) of the 2014 California Manual on Uniform Traffic Control Devices](https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-rev5) (CA MUTCD) (<https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-rev5>), prior to commencing their work. The number of traffic control crews expected to be provided by the DDHTR Contractor is indicated in the RFP.

Traffic controls and warnings standard to the construction industry and as required by the State of California motor vehicle code will be implemented on an as needed basis. Vehicles utilized for debris removal will be of legal weight according to the [CalTrans State Standard Specifications](https://dot.ca.gov/-/media/dot-media/programs/construction/documents/policies-procedures-publications/construction-manual/2020cmsearchabledoc.pdf) (2020 Edition) (<https://dot.ca.gov/-/media/dot-media/programs/construction/documents/policies-procedures-publications/construction-manual/2020cmsearchabledoc.pdf>), Chapter 3, Section 702 “Public Convenience”, Chapter 3, Section 703 “Public Safety”, and Chapter 4, Section 12 “Construction Area Traffic Control Devices”.

Traffic signs will be placed at both entrances to the community as needed. Traffic control will be updated as needed to adjust for changing conditions on site and in the community. Updated traffic plans will be prepared by the DDHTR Contractor and reviewed by the appropriate County representatives and User Agency’s OSC and communicated to all Operation personnel at each Safety Meeting.

All construction equipment working within the residential zones shall maintain a speed of 15 mph or less.

The User Agency, or designee together with the User Agency’s Safety Officer will establish additional traffic controls as needed for safety reasons as well as to control site vehicle traffic during specific site activities such as equipment movement, press events or visits by dignitaries.

To help the User Agency or designee and DDHTR Contractor ensure commercial trucking resulting from this operation are conducted safely and not unreasonably disruptive to normal highway operations and impacted communities, the California Department of Transportation has prepared Traffic Management Analyses for certain portions of the operating area. The User Agency will direct the DDHTR Contractor how and when to implement recommendations from these analyses.

6.8 Crew Signs (DDHTR Contractor)

To allow emergency responders and/or the IMT to quickly ascertain the location of the work force in the disaster zone where address signs and house numbers have been destroyed, the IMT will require all ROEs sites to have address signs. Additionally, each crew will also display a portable two-sided A frame sign with the assigned crew number

to allow for emergency responders and trucking resources to easily locate each crew and so the IMT can visually track the crews from the road. If the site is located off a designed private or public road where the crew is not visible, the sign shall be placed at the entrance of the driveway. The address sign will be placed at the beginning of the driveway. If the driveway is shared by multiple crew, then all the crew signs will be placed on one side of the common driveway out of the truck path.

The crew sign will be constructed of rust-free, heavy gauge, durable aluminum with a reflective sheeting with black outline, lettering, and numbering. The sign will have rounded edges with two mounting holes and measure 24 inches in length and 30 inches in height. In general, the lettering and numbering will follow a typical CalTrans specification for Speed Limit signs. The sign will be posted each day on an all-weather portable, two-sided A frame sign holder.

6.9 Pavement and Drainage Protections (DDHTR Contractor, A&M Contractor – Monitors and Documents)

The DDHTR Contractor, at all times, will protect the edge of pavement and drainage features to the extent feasibly possible. The DDHTR Contractor will also protect other crossing such as cattle guards and bridges.

6.10 Community Health and Safety (User Agency, DDHTR Contractor, A&M Contractor)

A Community Health and Safety Plan will be prepared by the User Agency Health and Safety Professional. All site activities will be conducted consistent with this community plan and with consideration to the surrounding community and all citizens affected by the Incident. A copy of the Community Health and Safety Plan will be provided to the DDHTR Contractor and A&M Contractor.

6.11 Health and Safety (User Agency, DDHTR Contractor, A&M Contractor)

The debris removal operations including A&M Contractors and contractors will, at all times, operate equipment and perform labor in a safe manner to ensure the safety of its employees and the public. The team will pay particular attention to operations around local roads and take the necessary precautions. Prior to start of debris removal, the contractors should note the number of power lines crossing the site, dead and dying trees, chimneys, mines, hand dug wells, and all underground utilities.

Appropriate eating areas will be designated and hand and eye washing, and mobile sanitary facilities will be provided for each Operation site.

The contractors shall also be aware of, include in the Contractor's Health and Safety Plan and provide instruction and necessary PPE for other local or regional health issues health issues such as pandemics.

Personnel assigned to each Operational site shall have the necessary equipment to conduct their work safely as outlined by these Special Provisions and the IMT, and in

the respective Contractors' Health and Safety Plan. This equipment can include, but is not limited to, four-wheel drive vehicles, two-way radios, cell phones and tablets.

6.12 Rope Access Work (DDHTR Contractor and/or A&M Contractor).

Steep slopes may require the use of ropes and repel gear to assess and remove debris. If ropes are necessary for access, the DDHTR Contractor will submit a Rope Access Plan per the California Code of Regulations, Title 8, Section 3270.1, Use of Rope Access Equipment. The DDHTR Contractor or S&M Contractor shall establish, implement, and maintain a written Code of Safe Practices for rope access work. The written plan shall include, but not be limited to the following elements:

- A. Methods of rope access and anchorage used by the employer.
- B. Employee selection criteria.
- C. Equipment selection and inspection criteria.
- D. Roles and responsibilities of rope access team members.
- E. Communication systems.
- F. Employee training program.
- G. Rescue and emergency protocol.
- H. Identification of any unique site hazards that may affect the safety of employees using rope access methods.
- I. Prevention of rolling debris.
- J. Structure and infrastructure protection.

This work plan, equipment, training, supplies, protection devices, any other material deemed necessary by the User Agency and the User Agency's Health and Safety Professional to implement this plan will be covered under a change order or time and material agreement.

6.13 Site Personnel and Community Air Monitoring (DDHTR Contractor – Personnel Air Monitoring, A&M Contractor – Community and Personnel Air Monitoring)

Personnel air monitoring for DDHTR Contractor debris removal crews will include monitoring for asbestos, silica, and heavy metals (at a minimum arsenic, cadmium, chromium, (chromium +6 and mercury will be limited to the first 10 days of the initial personnel breathing zone samples or as directed by the User Agency's OSC based on site history and geological observations), copper, lead, manganese, nickel, silver and zinc) per OSHA requirements for hazardous waste operations. Samples are not

required during soil re-scrapes or any other work after debris materials have been removed. At a minimum, the DDHTR Contractor shall monitor one crew out of every five crews, or one crew if under five crews, two crews if under 10, three crews of under 15, etc. Crews shall be monitored on a rotational basis during the workweek. The personnel air monitoring results shall be submitted to the incident management team no later than seven (7) days of the sample event. A&M Contractor shall conduct personnel air monitoring per A&M Contractor's Health & Safety Plan.

The A&M Contractor will develop a User Agency's OSC approved Community Air Monitoring Plan and implement the plan. Work sites will also be monitored on a User Agency's OSC or designee, pre-approved basis for asbestos, heavy metals, and dust for the duration of the Operation or until such time the User Agency's OSC or designee determines that air monitoring may cease. The locations of the air sampling stations will be approved by the User Agency's OSC.

6.14 Debris and Ash Removal (DDHTR Contractor, A&M Contractor – Monitors and Documents)

The DDHTR Contractor shall conduct Debris removal, on each property, in the following order:

- A. As directed by the User Agency's PSC, the DDHTR Contractor will knock chimneys down to ground level for Health and Safety reasons. This will assist the A&M Contractor's asbestos assessment CAC to safely assess chimneys and other portions of the debris for ACM. All chimneys taken down will be done with proper dust control.
- B. Likewise, as directed by the PSC, the DDHTR Contractor will knock down hazard vertical walls that pose an eminent threat to the asbestos or debris removal crews.
- C. If ACM is found by the CAC, the DDHTR Contractor's licensed ACM abatement contractor will remove Asbestos removal prior to debris removal operations being scheduled by the PSC.
- D. Once the DDHTR Contractor Crew has been directed in the IAP and is slated on the crew's property runway the DDHTR Contractor will mobilize to the property to commence operations.
- E. Once there or prior to mobilization the DDHTR Contractor's Excavator Operator and Superintendent will walk completely around the property (360 walk) with the Division Supervisor and the TFL to acknowledge what is on the property to be removed, confirming what the homeowner has asked to be saved, the locations of utilities, septic tanks and leach fields (to be protected by the DDHTR Contractor), power poles, above ground fuel and propane tanks, dead and dying trees, location where the operator plans on staging and loading trucks, planned truck ingress and egress for the property, and other operational concerns can be addressed prior to commencing with any work.

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- F. Segregate and remove and load out all metals onto metals trucks.
 - G. Remove ash and commingled debris and load out onto debris trucks.
 - H. Remove previously placed stormwater BMPs, placed by others, and the disaster debris sediment trapped by them, assuming they are in proximity to burned disaster debris.
 - I. Remove fire damaged concrete foundations, walkways etc. within the former footprint, from the site and load out onto concrete trucks. Refer also to Attachment B, Debris Operational Guidance: Damaged Concrete at Wildland Urban Interface Fires.
 - J. Remove 3-6 inches of residual ash impacted soil from debris site for disposal, as necessary to remove fire-caused contamination, unless User Agency prescribes a specific depth within that range.
 - K. The DDHTR Contractor, when collecting and loading various types of materials from each property, shall not mix unlike materials together in a truck load and shall comply with the following:
 - 1) A Mixed Load is any load of fire debris that has an unreasonable amount of other types of debris mixed with the truck load content as it is ticketed.
 - 2) An unreasonable amount is defined by the type of equipment being used and the ability of that equipment to differentiate the materials.
 - 3) A load that is ticketed as "Concrete" should not have an unreasonable amount of metal, ash and debris, or contaminated soil mixed with the concrete.
 - 4) A load that is ticketed as "Contaminated Soil" should not have an unreasonable amount of metal debris, concrete in chunks greater than 12 inch diameter, or an unreasonable amount of ash and debris.
 - 5) A load that is ticketed as "Metal" should have little or no contaminated soil, concrete, or ash and other fire debris.
 - 6) A load ticketed as "Ash and debris" should not have an unreasonable amount of metal, contaminated soil, or incidental pieces of concrete greater than 12 inches in diameter.
 - 7) The determination of the load classification on-site will be made by the State's monitoring A&M Contractor' TFL, as directed by the User Agency's OSC or the OSC's designee. Any disagreement will be adjudicated by the OSC or the OSC's designee.

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- 8) Cap all sewer lines opened/damaged due to debris removal (DDHTR Contractor).
 - 9) Cover all exposed septic tanks with plywood and if applicable, for health and safety purposes, fence off with a temporary safety fence described in Section 7.2 (DDHTR Contractor).

Additionally,

- a) All materials removal equipment (i.e., track mounted excavators or equal) should have glass enclosures and weigh less than 60,000 pounds. The goal is to use equipment that minimizes the impact to the local roadway while completing the removal. For example, excavators should be smaller than or equal to a 325 Caterpillar or equivalent and front-end loaders should be small than or equal to a 950 Caterpillar or equivalent. However, certain operations may require large equipment.
- b) A water fog will be used during debris handling and waste loading operations utilizing an excavator mounted fogger (built in for knocking down dust while excavating) or a fire grade firefighting nozzle 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.
- c) All burn ash and debris must be sufficiently wetted 48 to 72 hours in advance of initiating removal of the material. The water shall be applied in a manner so not to generate significant runoff.
- d) All Ash and debris and contaminated soil loads must be well wetted and placed in a 6 to 10-mil polyethylene plastic lined trucks and “burrito wrapped” to minimize any discharges on the roadways to the disposal site.
- e) All loads shall additionally be covered with a non-permeable tarp not less than 14 mil in thickness; **this includes ash and debris, metal debris, contaminated soil, and concrete.** Ash and debris loads will be placed in a plastic liner before covering with a tarp. Tarps shall be secured with no less than 6 anchors around the perimeter of the truck. Tarps shall be in free of tears, holes, or rips greater than six inches, and shall cover the entire load. No auto tarps will be allowed for this purpose.
- f) All waste material that is not loaded out at the end of each workday should be consolidated, sufficiently wetted, and/or covered to prevent the offsite migration of contaminants. No trucks can be pre-loaded with ash and debris.

6.15 Hazardous Waste Concrete Removal (Retaining Walls, Foundations and Slabs) (DDHTR Contractor, A&M Contractor – Monitors and Documents)

User Agency considers all structural foundations for residential structures to be destroyed by the heat from an unsuppressed structure fire. These slabs and foundations are no longer structurally sound and are consequently considered debris. Additionally, with the known amounts of carcinogens, heavy metals, and asbestos, structural slabs, foundations and retaining walls shorter than 4 feet tall (subjected to the wildfire and covered in structural debris), will need to be removed to assess the former building sites for residual ash contamination.

While some concrete structures such as retaining walls greater than four feet and piers, pilings, caissons, and horizontal structural will be left in place for slope stability, the IMT cannot guarantee these structures will be undamaged or are structurally sound. Such dual function foundation and retaining walls will be removed or as determined by the IMT Operations Lead (Operations Chief or Debris Group Supervisor, as applicable) at no additional cost to the State. The property owner should consult a license civil or structural engineer to determine the proper course of action to rebuild any concrete structure left by the IMT. For more detailed description of concrete foundation and retaining wall requirements, see Attachment B “Debris Operational Guidance: Damaged Concrete at Wildland Urban Interface Fires”.

6.16 Hazardous Waste Operations Crews BMPs (DDHTR Contractor, A&M Contractor – Monitors and Documents)

These Crew BMPs should be undertaken to address the removal of hazardous materials, HHW, debris, asbestos containing materials (ACM), and air monitoring and sampling from the disaster or incident site. Use of BMPs will also ensure the proper management and removal of hazardous materials, debris, burn ash, and other asbestos containing materials in a manner that ensures protection of public health and the environment, as well as, ensuring the health and safety of on-site personnel.

At a minimum, site personnel shall follow the following BMPs for undertaking debris removal activities:

- A. All on-site personnel working in the exclusion zone (EZ) shall receive the necessary health and safety training and medical surveillance pursuant to OSHA 1910.100, and CCR Title 8, Section 5192. An exclusion zone contains areas where contamination is either known or likely to be present or, because of work activity, has the potential to cause harm to personnel. The exclusion zone is identified as the debris/ash footprint of each property.
- B. All on-site personnel working in the EZ shall be required to wear Level C PPE when working in the EZ.

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- C. The contamination reduction zone (CRZ) is an area of the property not visibly contaminated with ash and debris. The contamination reduction zone will be used for removing PPE.
 - D. A support zone (SZ) may consist of any uncontaminated and nonhazardous part of the property. Donning of clean PPE is completed in the support zone.
 - E. The A&M Contractor will conduct on-site and off-site air monitoring and sampling for asbestos and heavy metals during all ACM and debris removal operations to demonstrate the effectiveness of engineering controls to protect cleanup personnel and the surrounding community.
 - F. All non-hazardous waste haulers shall stay in their vehicles during loading, unless their trucks are being loaded with metals. When trucks are being loaded with metals, waste haulers shall stand away from their trucks, outside of the “warm zone” loading area and they must wear N95 masks and Tyvek coveralls. This also applies when haulers are covering (e.g., tarping) the trailer or container.
 - G. All 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.

6.17 Overview of Waste Types and Destination Facilities (DDHTR Contractor)

Disaster debris removed during this operation shall be classified as one types listed below:

- A. Metals
- B. Ash and Debris
- C. Previously placed stormwater BMPs and upstream trapped debris and sediment
- D. Concrete
- E. Contaminated Soil
- F. Rescrape soil
- G. Vegetative materials (shrubs and trees, etc. removed by debris removal crews)
- H. Tree logs
- I. Chipped/processed wood materials

The DDHTR Contractor is responsible for removing all qualifying debris, as determined by the TFL and the IMT, and transporting it to an IMT-approved end use facility that will

accept it. At time of loading, the onsite TFL will notate what debris stream is included in each truck load on the truck's load ticket. All loads will be subsequently weighed at the end use facility, and the weight information will be recorded with the load ticket.

All loads must be tracked per parcel, such that the total tonnage of debris removed from each parcel can be clearly accounted for. In certain circumstances, the User Agency's OSC may approve loads to contain debris of the same material type be loaded from more than one property. For example, metals from multiple parcels could be loaded into the same truck, if approved by the User Agency's OSC. The User Agency's OSC, in conjunction with the IMT will consider whether such approval would provide a significant efficiency, and may provide such approval on a by-crew basis.

Quantities of metal and concrete that are recycled must be specifically tracked and reported to User Agency. The A&M Contractor shall institute additional controls, as directed by the IMT, to ensure that all qualifying debris is removed and transported to an appropriate end use facility.

The typical facilities that will be provided are listed below:

Landfills

To be determined by DDHTR Contractor and approved by the IMT.

Concrete Recycler

To be determined by DDHTR Contractor and approved by the IMT.

Metal Recycler

To be determined by DDHTR Contractor and approved by the IMT.

Table 6 provides waste types and destination information for a typical Incident.

Table 6: Waste Destination Summary

Material	Disposal Contact or Facility
Ash and Debris	Approved Landfill
ACM	Name of Permitted Asbestos Receiving facility. Friable asbestos will be disposed of an appropriate facility by the asbestos removal DDHTR Contractor under EPA Generator ID [CASXXXXXXXXXX]. (Provided by User Agency)
Metal Debris	Metal may be recycled, at a location to be determined by the Contactor and approved by the IMT.
Metal Discards (Appliances)	Freon Extraction is REQUIRED for refrigerators not impacted by the fire. DTSC has removed refrigerant. Remaining metal will be recycled at [DDHTR Contractor to determine, with IMT approval.
Vehicles and Trailers	Vehicles and/or hauling trailers that <u>did not sustain</u> damage or vehicles and/or trailers that sustained minor damage will be left

Material	Disposal Contact or Facility
	on the property. These vehicles and/or trailers may be moved by the debris removal team to ensure worker safety and as needed to complete the debris removal. Other damaged vehicles and/or trailers will be removed by the DDHTR Contractor through a covered vehicle transporter or low bed or other User Agency's OSC approved method.
Concrete	Concrete may be recycled, at a location to be determined by the Contactor and approved by the IMT.
Tires	Tires will be shredded and disposed of at a facility to be determined by DDHTR Contractor and approved by the IMT.
Household Hazardous Waste (HHW)	DTSC/USEPA will collect and transport HHW.
Human Remains	User Agency will coordinate with the County Coroner, or other appropriate entity, on the discovery of human remains. If human remains are located, the work will stop and the User Agency's OSC or designee will contact the County. Due care of the remains will be taken. EHP personnel will also be contacted upon finding such remains.
Dead Animals	If dead animals are discovered, the User Agency's OSC or designee will contact County Health and the Homeowner. These remains will be disposed of in accordance with the County health department requirements, unless directed by the property owner. EHP personnel and A&M biologist will also be contacted upon finding non-domesticated animals.
UXO (Unexploded Ordinance)	If UXO is discovered, the User Agency's OSC or designee will notify the local Sheriff Department to arrange for proper disposal.
Radioactive Debris	If radioactive debris is encountered, the material will be removed and properly disposed of by DTSC.

6.18 Commercial Department of Transportation (DOT) Inspections (A&M Contractor/DDHTR Contractor)

The A&M Contractor will hire an independent third-party DOT commercial truck inspector teams. The inspector teams shall perform a level one inspection for all commercial trucks assigned to the incident. Inspections will include all haul trucks, water tenders, tow trucks, street sweepers, low-beds, and other commercially licensed vehicles used on the Operation. Water trucks used specifically on site lots are not subject to inspection provided they are not carrying water loads on a public road. These water trucks are considered construction vehicles. Each commercial truck will display a disaster operation sticker, DOT inspection sticker and/or other relevant operational placards for identification, verification and tracking. These identifications methods are to be provided by the DDHTR Contractor. After each 30-day period, 10% of the commercial trucks will be re-inspected per Level 1 requirements.

The DDHTR Contractor will be responsible for providing a location(s) where the DOT inspections shall be conducted and coordinate closely with the A&M Contractor in order to conduct these inspections prior to deployment of each applicable vehicle to the operation.

6.19 Significant Archaeological and Tribal Resources and Human Remains Protocols (Awareness by all)

Based on past debris removals, culturally significant artifacts and/or remains are highly likely to be found. User Agency will work with the local culturally affiliated Native American tribe(s), within designated geographical areas of interest, to ensure that artifacts are properly cared for per the tribe's policies and procedures.

In the event that Native American human remains are found during these activities, debris removal crews will immediately cease work on the site and contact the lead A&M Contractor Archaeologist, the User Agency's OSC, the IMT, and any applicable Tribal Monitor to come view the find. The Archaeological and Tribal Monitors are empowered to recommend stoppage or relocate excavation activities, for short periods of time, to conduct further controlled excavation of inadvertently discovered cultural items for evaluation by an archaeologist. The User Agency CM should also be notified and kept apprised when such discoveries occur.

If Native American human remains are found, coordination of the treatment of Native American remains and funerary objects and any cultural, archaeological, and ceremonial items will be conducted by the local tribe.

If necessary, a qualified archaeologist may be required to be present during grading activities to identify and/or ascertain the significance of any subsurface cultural resources or to aid in the avoidance of sensitive areas. It is agreed that the local tribe may select the archaeologist to ensure the archaeologist is familiar with the Tribes' indigenous lands. Tribal monitors must also comply with HAZWOPER requirements while on site during debris removal operations.

6.20 Driveways (DDHTR Contractor, A&M Contractor – monitors and documents)

Undamaged driveways shall be preserved to the extent practicable. The goal is to provide a stabilized construction entrance for reconstruction. If the driveway is damaged or contaminated by burned vehicles or by debris removal equipment or haul trucks to the extent that the driveway is unsafe, the driveway will be removed to the extent necessary. Remove the driveway to the nearest concrete joint or five feet if asphalt outside the contamination or damage. All driveway cuts will be made using a concrete saw. Use appropriate PPE.

6.21 Pools (DDHTR Contractor, A&M Contractor – monitors and documents)

In general, pools are not eligible for removal and will not be drained by the DDHTR Contractor. The owner should contact the local government for assistance or evaluation

of pools due to possible vector and health issues. Surface debris may be removed from the pool depending on site circumstances.

The DDHTR Contractor will place safety fencing (as per CalTrans 2018 Standard Specifications 16-2.03) completely around the pool where feasible. Should the pool be structurally built into the foundation/slab, the IMT will discuss removal options with the property owner and DDHTR Contractor to determine the course of action.

Burned/melted above ground pools and Jacuzzi's may be removed if so damaged they are unusable and the property owner wants it removed. Pool water may be used as dust control, if feasible.

6.22 Survey Monuments and Markers

Some survey monuments may be at risk during the ash and debris and hazard tree removal operations. To the extent feasible, all DDHTR Contractors shall protect survey monuments and markers. The DDHTR Contractor shall mark with a standard lath any exposed monuments or marks with ribbon flagging. DDHTR Contractors should generally not work, park vehicles or move equipment near the corners of the lot near such survey monuments.

6.23 Identification and Removal of Danger Trees

Certain fire damaged trees are so dangerous that they prevent the safe operation of the debris removal crew or other personnel. These trees should be removed prior to commencing debris removal operations. Note that these trees are different than *eligible hazard trees*, which must meet the criteria outlined in the "Hazard Tree Assessment" section and which are compensated separately. In the event a danger tree is both an eligible hazard tree and is prohibiting safe debris operations, the DDHTR Contractor should coordinate with the A&M Contractor to confirm an arborist has reviewed the tree and all relevant documentation has been recorded prior to the tree's removal.

Trees should be felled in areas away from structural ash and debris, utilities, fences, or septic tanks. Should it be necessary to fall a tree in the ash, the tree shall be handled as impacted ash and debris. In some cases it may be decontaminated, as approved by the User Agency's OSC or designee. All wastes generated from the removal of trees will be hauled to an appropriate waste or recycling facility.

6.25 Damage Claims from Public and Private Properties (DDHTR Contractor, A&M Contractor – Monitors and Documents)

Damage claims that arise from Debris Removal or Hazard Tree Removal operations will be documented by the A&M Contractor(s). After a review of the details, from the documentation, of the damage, the IMT will make a decision regarding the validity of the damage claim and who, if anyone, will be responsible for repairing the reported damage. The DDHTR Contractor may be liable to repair such damages as directed by the IMT.

Rural roads will be repaired, restored, and prepared for the winter period utilizing Best Management Practices specified by the Forest Practice Rules, as an example the Handbook for Forest, Ranch, and Rural Roads provides specifics for preparing rural roads, [Chapter 7 Section H. Winterizing Roads](#), link and is here: (<https://www.pacificwatershed.com/sites/default/files/RoadsEnglishBOOKApril2015b.pdf>) and the key citation below:

“Before winter or the wet season, all permanent, seasonal and temporary roads should be inspected and prepared for the coming rains. Winterizing consists of maintenance and erosion control work needed to drain the road surface, to ensure free flowing ditches and drains, and to open all culverts to their maximum capacity. On unsurfaced roads, waterbars may be required at spacings dictated by the road gradient and the erodibility of the soil, as well as the proximity of the drainage structure to a stream (Table 3). Trash barriers, culvert inlet basins and pipe inlets should all be cleaned of floatable debris and sediment accumulations. Ditches that are partially or entirely plugged with soil and debris should be cleaned and heavy concentrations of vegetation which impede ditch flow should be trimmed. This is also the best time to excavate all unstable or potentially unstable road fills and side cast which could fail and be delivered to a watercourse during the coming wet season. All bare soil areas which were disturbed by maintenance work or other activities should be seeded and mulched with straw. Once seasonal and temporary roads have been winterized, they should be gated and closed to “non-essential” traffic”.

6.26 Dangerous Conditions

Wildfire disasters can uncover and cause a number of dangerous conditions that would otherwise go undetected. Besides the dangerous conditions from burned trees, past User Agency disaster Operation have also discovered hand-dug wells and cisterns, unsecured mine shafts and tunnels, and unsafe bridges. These items may need to be addressed by the DDHTR Contractor either using contract bid items, if applicable, or by working through a contract change order process to assess the costs and include them in the DDHTR Contractor’s scope or work. Other unexpected dangers experienced include disgruntled and/or distraught property owners or neighbors. Care and respect shall be taken when approaching any local residents. If the A&M Contractor or DDHTR Contractor finds themselves facing an angry or distraught person, they should not engage, go to a safe location, and contact both health and safety officer and the User Agency’s OSC ASAP to describe the circumstances and to await further instructions.

6.27 Temporary Bridges

Access to some properties may require placement/construction of temporary bridges (due to damaged, undersized or non-existent bridges) across active or intermittent streams, ravines, or other waterways. The DDHTR Contractor shall be prepared and required to place/construct such temporary bridges up to 50-foot spans, between the ordinary high-water marks, as part of these operations. Bridges necessary to span greater distances maybe compensated separately. If necessary, as a crossing may fall within the Ordinary High Water Mark, the contractor will work with the archaeologists,

biologists and stormwater staff to draft a Clean Water Act Section 404, 401, and Fish and Game Code Section 1600 permit. The DDHTR Contractor will be responsible for submitting such necessary permits.

The DDHTR Contractor shall provide temporary bridges concurrent with IMT direction to maintain pace of disaster recovery operations. At no point shall a debris or hazard tree removal operations be delayed due to the DDHTR Contractor deploying a limited number of temporary bridges, contrary to the IMT's direction. DDHTR contractor shall be responsible for deploying temporary bridges within 30 days of notice from the IMT. The DDHTR shall be responsible for providing a sufficient number of temporary bridges concurrently to ensure no delay to recovery operations. The A&M Contractor shall assist the IMT in determining the need for any temporary bridges and the appropriate span length of the temporary bridges.

All temporary bridges shall be removed by the DDHTR contractor once all parcels requiring the bridge for access are returned to county.

6.28 Base Rock Placement

Base rock materials, used to assist the DDHTR Contractor to access ROE properties or to access debris piles on such properties, must meet the requirements of Section 26 of the 2018 CalTrans Standard Specifications for ¾" Class 2 Aggregate Base, placed at a nominal thickness of 3" with a 95% relative compaction. Recycled material that meets CalTrans specifications for Class 2 Aggregate Base is acceptable. Base rock should be deployed when necessary, to make safe access to work sites.

7.0 POST DEBRIS REMOVAL OPERATIONS.

7.1 Confirmation Sampling (A&M Contractor).

Confirmation sampling will be conducted after fire-related structural debris has been removed from a property. After the debris is removed, representative soil samples will be collected and analyzed to measure concentrations of constituents of concern. The number of soil samples collected per excavated area on a parcel will be determined based on the estimated square footage of the ash footprint; a minimum of one composite sample will be collected from a footprint measuring approximately 100 square feet or less.

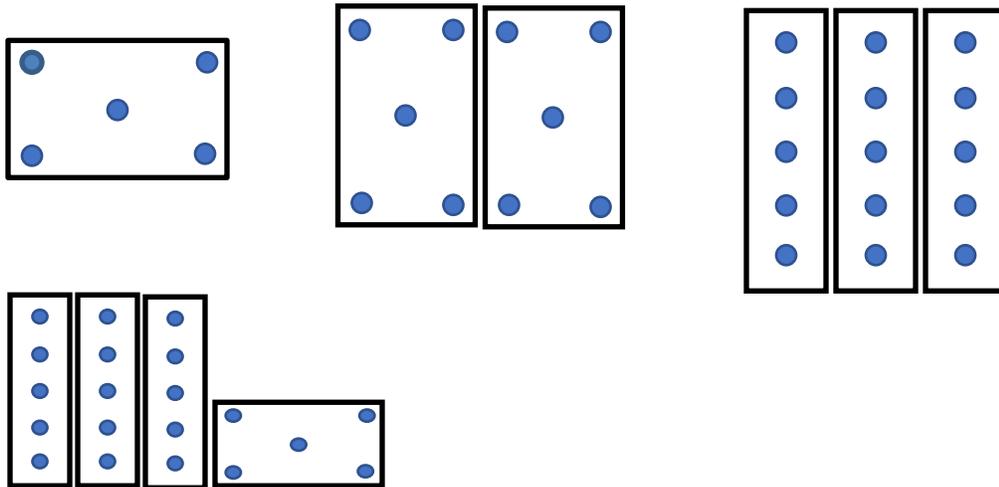
If the ash footprint is greater than 5,000 square feet, the A&M Contractor will prepare a sampling strategy such no five-point decision unit has any dimension greater than ~~400~~ **1000 square** feet. In general, a sampling strategy of one additional decision unit per 1,000 square feet if the ash footprint exceeds 5,000 square feet should be followed. All sampling strategies should use a five-point dice pattern for single, double, or irregular shape decision units. If two, five-point dice decision units are used, the adjacent five-point composite sample point shall be a minimum of 12 inches away from the other decision unit. Each decision unit shall have a unique sampling location and should not be co-located. Contiguous decision units of three or more should favor the use of a straight-line pattern.

Table 7 below indicates the total number of five-point, composite samples needed to be collected based on the estimated square footage of ash footprint.

Table 7. Confirmation Sampling Matrix

Estimated Square Footage of Ash Footprint (Decision Unit)	Number of 5-Point Aliquots
0-100 square feet	1
101-1,000 square feet	2
1,001-1,500 square feet	3
1,501-2,000 square feet	4
2,001-5,000 square feet	5
>5,000 square feet	Sampling strategy will be discussed between the IMT and Environmental A&M Contractor.

Figure 7.1. Typical Confirmation Sampling Strategies for Decision Units



All confirmation samples will be collected from a depth of 0-3 inches using a dedicated 4-ounce plastic scoop and placed in 8-ounce jars. Samples will be shipped to an approved laboratory for analysis for Title 22 Metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc) by **EPA Method 6020 and/or EPA Method 7471A for Mercury**. Other analytes were not selected based on previous fire incident sampling (CalEPA 2015). Each aliquot location will be recorded on the site assessment log and physically marked with irrigation flags. A geographic positioning system (GPS) may also be used if sample locations are not easily determined.

If any of the areas exceed the site-specific screening levels, the aliquot (sample) locations will be evaluated, and it will be decided by User Agency and the A&M Contractor if a localized scrape or a full scrape of the portion of the remediated footprint will be needed. Upon completion of this remediation, the A&M Contractor will collect the

same five-point composite sample from the area and submit them for analysis as discussed above.

Confirmation sampling results will be compared to the project established cleanup goals to assess the effectiveness of the ash and debris removal. The A&M Contractor will evaluate the analytical results by comparing the soil sampling results to the pre-determined background concentrations and cleanup goals. If any of the confirmation sampling results exceed cleanup goals, the parcel will be further excavated (Re-scraped) at the direction of the User Agency's OSC and the A&M Contractor will collect additional confirmation soil samples after the excavation is complete.

All soil confirmation samples will go through a Level 2 verification process.

Once the samples pass the cleanup goals or site-specific goals, the DDHTR Contractor has placed the required and approved erosion control materials, and a final site walk conducted and approved by the User Agency's OSC or designee, a sample approval form will be forwarded to the local government so the property owner can begin the permit process. The property owner is not allowed to impact the sampling area until erosion control and final site walk is complete.

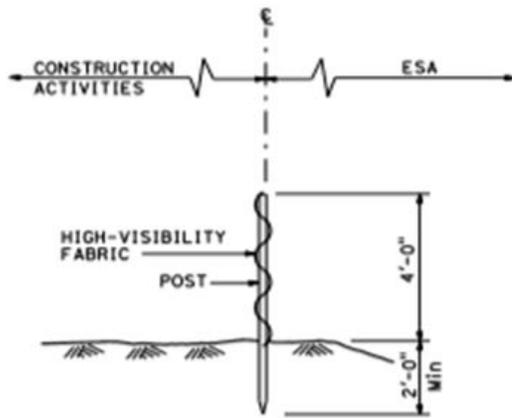
Cleanup goals will be established by User Agency with support from the A&M Contractor.

7.2. Temporary Safety Fencing Installation (CalTrans Type ESA) (DDHTR Contractor, A&M Contractor – Monitors and Documents)

Temporary Safety fence, as described in the following paragraphs, will be installed around potential safety hazards, such as swimming pools, drop-offs, ledges, cisterns, or other potential safety hazards for which such a fence would be protective, as determined by the User Agency's OSC or designee. Sites on which fencing is to be placed will have been cleared of ash and or other debris, as part of the overall debris removal operation. Fencing will be installed after the DDHTR Contractor has demobilized from the area and the property has passed its soil sampling and analysis testing. The fencing is intended as a safety precaution to indicate that there is a nearby fall hazards after the debris removal operation has been completed. The fence is intended to minimize access in areas directed by the User Agency's OSC. This fencing will not be removed by the DDHTR Contractor.

Temporary fence shall be furnished, installed, and maintained (while the DDHTR Contractor is deployed to the Operational area and until the properties are signed off back to the County, in conformance with the details shown on the plans below (Figure 7.2, Temporary High Visibility Fence), as specified in these special provisions and as directed by the User Agency's OSC or designee.

Figure 7.2 Temporary High Visibility Fence



SECTION
TEMPORARY HIGH-VISIBILITY FENCE

Used materials may be installed provided the used materials conform to these special provisions. Materials for temporary safety fence (Type - Environmentally Sensitive Area - ESA) shall conform to the following:

High visibility fabric shall be machine produced, orange colored mesh manufactured from polypropylene or polyethylene. High visibility fabric may be made of recycled materials. Materials shall not contain biodegradable filler materials that can degrade the physical or chemical characteristics of the finished fabric. High visibility fabric shall be fully stabilized ultraviolet resistant, shall be a minimum of 5-feet in width with a maximum mesh opening of 2 inches x 2 inches. High visibility fabric shall be furnished in one continuous width and shall not be spliced to conform to the specified width dimension.

Posts for temporary safety fence (Type ESA) shall be of one of the following:

- a) Wood posts shall be fir or pine, shall have a minimum cross section of 2 inches x 2 inches, and a minimum length of 5-6 feet the end of the post to be embedded in the soil shall be pointed. Wood posts shall not be treated with wood preservative.
- b) Steel posts shall have a "U", "T", "L" or other cross-sectional shape that resists failure by lateral loads. Steel posts shall have a minimum mass per length of 1.1 kg/m and a minimum length of 5-6 feet. One end of the steel post shall be pointed, and the other end shall have a high visibility colored top.

Fasteners for attaching high visibility fabric to the posts shall be as follows:

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- a) The high visibility fabric shall be attached to wooden posts with commercial quality nails or staples, or as recommended by the manufacturer or supplier.
 - b) Tie wire or locking plastic fasteners shall be used for attaching the high visibility fabric to steel posts. Maximum spacing of tie wire or fasteners shall be 2-feet along the length of the steel post.

Temporary fence shall be installed as follows:

- 1) All fence construction activities shall be conducted from outside the ESA as shown on the figure above or as staked.
- 2) Posts shall be embedded in the soil a minimum of 1-foot. Post spacing shall be 8-feet maximum from center to center and shall at all times support the fence in a vertical position.

8.0 Hazard Tree Removal Operations

If User Agency elects to include hazard tree removal in the Operation, the following section applies.

8.1 Eligibility

8.1.1 Hazard Tree Categories

For the purposes of these Special Provisions, hazard trees are classified into four categories. The User Agency will determine and advise the A&M Contractor what categories of trees are eligible for assessment. For all categories of hazard trees, refer to the “Criteria” section for additional requirements regarding which trees are eligible for removal.

- Category 1 – Public Right-of-Way Tree: A tree rooted in the publicly owned or maintained right-of-way (ROW) of the local government, as defined by local California municipal code, not to include lands owned by the Federal Government.
- Category 2 – Danger Tree: A tree on an enrolled private property that prohibits the safe operation of debris removal personnel, as determined by the DDHTR contractor. Removal of these trees is a component of the structural debris removal function and not eligible for separate compensation.
- Category 3 – PPDR Tree with Public Improved Property Target: Tree on an enrolled private property that is within striking distance of public ROW or other public improved property (for example: public schools, libraries, or other public buildings).
- Category 4 – PPDR Tree with Private Road Target: Tree on an enrolled private property that is within striking distance of a private road (see “Road Types” for additional definition of “private road”).

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- Category 5 – Public Property Target: Tree on approved public agency property threatening public improved property.

8.1.2 Road Types

The following descriptions define whether a road should be considered “public” or “private”, for purposes of determining whether a tree should be classified under Category 3 or Category 4 of the above section.

Public Roads

- Public roads are legally defined by recorded map and include improved and unimproved land within a public right of way
- Public roads within the operational area owned and maintained by fee title or easement by the local government jurisdiction; public roads are intended for use as multi-modal transportation corridors for the mobility of people, goods and services. Public roads serve vehicles, pedestrians, bicycles and mass transit, service companies, such as mail and package delivery, waste-haulers, and emergency responders.
- For the purpose of the Operation, the public road right of way is generally determined and validated by the local agency
- The public road right of way includes the roadway, and the adjacent improved or unimproved portion, roadside.

Private Roads

- Private roads include improved and unimproved land
- Private roads within the operational area are generally owned and maintained as an easement by one or more private property owners (see Civil Code section 845(b)). Such easements by use are generally recorded and defined by title. Private road easements may be maintained by one or more property owners or by legal entities such as a Homeowner’s Association by Covenants, Conditions and Restrictions (CCRs), non-profit corporation, or another corporate entity.
- The private road right of way includes the road surface, such as pavement, gravel, or other road surface materials.

8.1.3 Criteria

Potential hazard trees will be identified as eligible utilizing the following criteria:

- Tree is rooted on a private parcel with a Right-of-Entry permit or approved public lands (including Rights-of-Way).
- Tree is dead or likely to die in the next five years as a result of the declared wildfire, as determined by a Register Professional Forester or a Certified Arborist with a Tree Risk Assessment Qualification (TRAQ) certification.
- The tree is standing and, as determined by the Registered Professional Forester or TRAQ Certified Arborist, presents a hazard to the public right-of-way, public

improved property, or other IMT- designated eligible target. For the purposes of this Operation, to assist in the determination of whether the tree presents a hazard, the Registered Professional Forester or TRAQ Certified Arborist should consider the tree's distance from the target pursuant to U.S. Occupational Safety and Health Administration (OSHA) criteria for establishing work areas. This OSHA standard prescribes at least two tree lengths (200% the height of the tree) and a greater distance where conditions make rolling or sliding of trees reasonably foreseeable, or the grade of the land the tree sits upon is such that the tree could not reach the target (on a steep slope below the target).

- The tree has a diameter of 6 inches or greater measured 4.5 feet above ground height.

8.1.4 Identification of Potentially Eligible Parcels (A&M Contractor)

The A&M Contractor is responsible for determining which enrolled private parcels could be potentially eligible for hazard tree removal and should be inspected by a Registered Professional Forester or TRAQ Certified Arborist, through a desktop review.

Parcel eligibility for hazard tree removal will be determined using the "Buffer" analysis tool in ArcGIS (or equal compatible software as directed by the User Agency), an analytical tool which approximates which parcels are adjacent to rights of way. The result of this analysis will identify which parcels fall within the "public road buffer", a geographic polygon extending on both sides of the centerline of the public road right of way. GIS shapefiles (or equal) identifying public roads shall be acquired from all involved local jurisdictions for this analysis, unless otherwise provided or directed by the User Agency. The buffer distance for the public roads layer(s) shall be determined based on the height-distance to target criteria described in the "Criteria" (6.1.3) section of this plan, and the expected height of trees in the area. The buffer should be applied to both sides of the centerline of the road right of way. Parcels that intersect with the public roads buffer should receive a hazard tree assessment. The IMT should appropriately consider scenarios where trees taller than the expected height are discovered and adjust assessment procedures where warranted.

8.2 Soft Start

To confirm the A&M Contractor and DDHTR Contractor's readiness to conduct hazard tree removal operations, "Soft Starts" will be conducted at two milestones:

- Start of hazard tree removal assessment
- Start of the hazard tree removal

Assessment and Monitoring (A&M) Activities (A&M Contractor)

Once directed to start work, the A&M consultant will perform one full day of hazard tree assessments. They will also perform one full day of video recording for the roadways within the burn scar. Once a full day of assessments has occurred, the A&M Contractor

will provide a presentation to the User Agency, reviewing the assessment protocols and processes, and the resulting data. The User Agency will determine whether the protocols, processes, and resulting data are sufficient to commence hazard tree assessment. If the User Agency determines the results are insufficient, it will provide feedback and needed corrections to the A&M Contractor, the A&M Contractor will be provided five (5) working days to make the requested adjustments, unless the User Agency determines a different timeframe is warranted. Once adjustments are made, the A&M Contractor will perform another day of work to and re-present the results to the User Agency the day following the work. The User Agency may continue to direct adjustments until the product is sufficient to commence hazard tree assessment.

Hazard Tree Removal (DDHTR Contractor and A&M Contractor)

All parties will be present to perform their function of the tree removal process including, but not limited to, the pre-work site walk (referred to as the “360* site walk”), reviewing of documents via the consultant’s platform, safety area establishment, ticket issuance, roles and responsibilities of all parties, communication between all parties including the DDHTR Contractor and the A&M Contractor, and traffic control. Following the completion of the soft start day, the A&M Contractor will provide the User Agency with examples of the documentation collected. The User Agency will confirm the documented collected is sufficient to commence hazard tree removal operations. If the User Agency determines documentation is insufficient, the User Agency may direct that the A&M Contractor make adjustments to its documentation processes and conduct an additional soft start to evidence that all requested changes have been made. All adjustments must be made within five (5) working days.

8.3 Assessment (A&M Contractor)

Credentials:

Only a Registered Professional Forester or TRAQ Certified Arborist may perform hazard tree assessment. Additional staff may be assigned to assist in documentation, tagging, or other activities not directly related to assessing hazard trees.

8.3.1 Pre-Assessment Activities (A&M Contractor)

An assessment team will be composed of a Registered Professional Forester or TRAQ Certified Arborist and at least one Crew Leader. The assessment team will be assigned to authorized, enrolled private properties or segments of the public right of way (“ROW Segments”). The Planning Group will provide the assessment team with a daily list of enrolled private properties and/or ROW segments to assess. The assessment team will review the Right of Entry Permit (ROE) prior to entering the property, which contains the address, the corresponding assessor’s parcel number (APN), homeowner accounts and descriptions, and other pertinent site information. The assessment team will mobilize and using the information provided in the ROE, confirm they are at the correct property. Parcel maps and GPS-equipped applications may also be used to help the assessment team confirm the property.

Prior to entering the property, the assessment team will conduct a health and safety review to communicate the site-specific emergency response plan, known or anticipated hazards (e.g. overhead lines), unusual conditions, and other information relevant to performing work on the property. The team will conduct a 360 site walk to identify additional, previously unknown hazards and mitigate them prior to entering the site.

8.3.2 Hazard Tree Assessment Process (A&M Contractor)

Consistent with its contract, the A&M Contractor shall develop and present to the User Agency a technical methodology for identifying and assessing hazard trees. The methodology should account for all requirements herein and be used consistently throughout the Operation.

Additionally, the A&M Contractors hazard tree assessment process should account for the following:

1. Appropriate controls for ensuring all eligible targets are accounted for in the assessment
2. Appropriate processes for accounting for other tree mortality factors, such as drought or insect infestation, and for ensuring that only trees that are dead or likely to die in the next five years as a result of the declared wildfire are marked for removal
3. Processes for a Modified Tree Assessment for steep slopes where standard assessment processes are impracticable or unsafe:
 - a. GPS Coordinates will be located at the closest safely accessible area on the road to which its address or ROW segment is assigned.
 - b. The diameter will be estimated remotely with the help of binoculars and a range finder. No photo of the tree diameter would be provided, the actual diameter of the tree will be determined when it is brought to a safely accessible area.

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- c. No stump photo will be taken. If the tree must be brought off the slope, the arborist or TFL will take a photo of the cut face; however, no spray paint or tag will be affixed to the tree.
 4. Other scenarios in which a standard tree assessment is impracticable or unsafe
 5. Relevant guidance from FEMA, including applicable Public Assistance Program and Policy Guide (PAPPG), concerning Hazard Tree eligibility
 6. Relevant subject matter guides on Hazard Trees, such as: The U.S. Forest Service's "Field Guide for Danger-Tree Identification and Response along Forest Roads and Work Sites in Oregon and Washington" as applicable and "Post-Fire Assessment of Tree Status and Marking Guidelines for Conifers in Oregon and Washington"

8.3.3 Hazard Tree Assessment Documentation (A&M Contractor)

As part of the Strike Team, the Contractor Arborist shall mark and document all hazard trees with a User Agency approved Esri-compatible data collection software. The User Agency approved Esri-compatible data collection software shall be accessible and viewable by the User Agency at all times during the operation. Data collected shall include:

1. Unique identification numbers for all trees.
2. The number of trees (on the parcel or county road segment) on a SA map.
3. Each tree's species (as determined by the Arborist).
4. Tree height.
5. Tree diameter (at 4.5 feet above ground level).
6. The relative height of the tree.
7. Tree GPS coordinates.
8. Distance of tree to eligible target measured by hypsometer or measuring tape.
9. Photographs of each tree before removal showing all of the following unless directed and approved by the User Agency:
 - i. The unique identification number on the tree trunk prior to felling.
 - ii. The diameter on the measuring tape.
 - iii. The tree standing and in context (photo should be taken from sufficient distance away from the tree to show the tree alongside the rest of the parcel).

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- iv. The threatened public improved property or right of way from the perspective of the hazard tree.

A&M Contractor shall place all data and photographs collected (including the map prepared in “e)” below) in a database folder for each property by APN and available to the IMT electronically in the GIS management services database (refer to Section 5.B.11). Information shall be uploaded to the Contractor’s database and accessible by the User Agency and IMT within twenty-four (24) hours of the day the tree was assessed.

A&M Contractor shall create a map showing the location of the trees included on the property or ROW. This survey map shall include a tree represented as a circle and tagged with a tree identification number. As necessary, A&M Contractor shall utilize Licensed Land Surveyor(s) (with all required survey equipment) as part of a two-person survey team(s) to delineate hazard tree locations with respect to property lines.

When necessary, the Strike Team shall mark approximate property boundaries if access to hazard trees that are marked to be cut may require access across such a boundary or if the trees may fall across such boundaries after being felled. Mark this possibility on the site map.

8.3.4 Hazard Tree Marking Specifications (A&M Contractor)

Contractor shall mark each hazard tree in accordance with the specifications provided below, unless otherwise directed by the User Agency:

1. Three blue dots shall be painted with marking paint on the bole of tree at breast height, in a manner such that the dots will be visible from multiple angles.
2. A metal tag marked with both the Unique ID number of the hazard tree and a barcode connected to the Unique ID number should be affixed with a nail to the tree below the cut line (less than six inches from the ground). The metal tag should be circled with blue marking paint to ensure it is noticeable.

8.3.5 Boundary Trees (A&M Contractor)

A “Boundary Tree” generally refers to a tree which straddles a boundary line. The Professional Land Surveyor(s) are requested to locate and mark in the field and prepare a written report regarding certain Boundary Trees with respect to the relevant boundary line(s). At a minimum the written report from a Professional Land Surveyor of Boundary Trees should include the following elements for each tree:

1. Tree ID
2. General tree type (conifer, deciduous)
3. Approximate tree diameter
4. Property Address(es)
5. Property APN(s)

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6. Determine the relationship of subject trees to relevant boundaries
 7. Map to scale of relevant boundary lines and tree(s)
 8. Identify the surveyor, the surveyor's address, and license number; and
 9. Identify the north reference and/or basis of bearings.

8.4 Work Management Planning

8.4.1 Prioritization Considerations for Runways (User Agency or Designee)

Parcels will be prioritized for the hazard tree removal by the User Agency. The User Agency may consider a number of factors when prioritizing parcels and developing work schedules to meet operational needs, to ensure parcels move expeditiously through the debris process so the property owner can commence rebuilding, or to protect the public. At times this prioritization may impact contractor operational efficiency. Below are example priorities that the User Agency may elect to implement:

1. Imminent Dangerous Trees
Parcels with trees that, in the opinion of the User Agency or A&M Contractor, pose a more imminent risk to the public may be prioritized above others.
2. Debris Removal Properties Approved for Erosion Control
Prioritizing properties for which soil samples meet operational cleanup goals and are deemed ready for erosion control by the User Agency or designee will ensure that the hazard tree removal function can proceed expeditiously through the hazard tree removal process.
3. Hazard Tree Only
Properties that do not require structural debris removal generally have less dependencies and hazard tree removal may be able to commence on these properties sooner than other.
4. Debris Containing Properties
These parcels have not yet been entirely cleared of debris or contaminated soil, however the hazard trees can be safely felled if tree operations can be conducted without disturbing the debris and ash footprint.
5. ROW Trees
ROW Trees may be prioritized by the User Agency. These trees may be the highest priority if presenting an immediate threat to the travelling public.

8.4.2 Work Management Processes

The User Agency shall establish appropriate work management processes or may direct the A&M Contractor to develop a work management process for managing hazard tree assessment and removal activities. The User Agency's work management process

may define timelines under which the A&M Contractor and the DDHTR Contractor shall complete certain tasks. The User Agency may elect to divide the work into “Work Packages” as described below:

- Available work (enrolled private parcels or ROW segments) will be divided into Work Packages
- A Work Package will be assigned to the A&M Contractor, who will complete all hazard tree assessments (if not completed prior to Work Package development), biological inspections, archaeological inspections, and any other required pre-felling inspections. The User Agency may define the timeline by which these pre-felling inspections shall be completed for each Work Package, based on the size and complexity of the Work Package.
- A Work Package will subsequently be assigned to the DDHTR Contractor for pre-inspection. During pre-inspection, the DDHTR Contractor shall determine and document the means and methods for felling and removal (such as type of equipment to be used, potential access issues, or any required permits or CAL FIRE regulatory documents).
- Once the DDHTR Contractor has completed all pre-inspection tasks, that Work Package will be assigned to the DDHTR Contractor for hazard tree removal. The DDHTR Contractor will complete all felling and removal operations for the Work Package. The User Agency may prescribe expected or required timeframes for completing operations in the Work Package or may elect not to release additional Work Packages until prior Work Packages are complete. The intent is to prosecute the full scope of the work in a systematic and incremental manner.
- The User Agency may direct the A&M Contractor to validate the completion of the Work Package, or otherwise assist in determining that all needed hazard tree removal operations have been completed within a Work Package or set geographic area.

8.5 Pre-Felling Inspections (DDHTR Contractor)

8.5.1 Forest Practice Considerations

The DDHTR Contractor, as a California Licensed Timber Operator (LTO), is responsible for their compliance with the Forest Practice Rules. The DDHTR Contractor’s Registered Professional Forester (RPF) is tasked with drafting and submitting permitting and regulatory documents and oversight of all aspects of a Timber Harvest activity, acting as a lead in interpretation of the Forest Practice Rules. In this capacity the RPF will typically oversee the placement and mapping of the Watercourse and Lake Protection Zone (WLPZ) by determining stream class, slope, and other factors; supervise or determine the mortality of dead, or dying trees; work with the archaeologists, or act in their capacity to determine and put in avoidance, minimization, and mitigation measures to protect significant cultural and prehistoric sites; working with

biologists, or acting in their capacity to determine and put in avoidance measures to protect endangered or threatened species, and nesting birds; work with the CAL FIRE Unit Inspector to determine the best means and methods to fell trees near sensitive resources, and enforce all other aspects of the Forest Practice Rules.

The A&M Contractor's RPF(s) is/are responsible for assisting the User Agency in ensuring DDHTR Contractor's compliance with the Forest Practice Rules and overseeing hazard tree assessment operations.

8.5.2 Consultant Pre-Inspection (A&M Contractor)

Arborist Final Assessment

The User Agency may request that at least 48 hours but no more than 7 working days prior to the beginning of the hazard tree removal, a final hazard tree assessment will be conducted by a RPF or TRAQ Certified Arborist certification to ensure all potential hazard trees have been assessed and all marked trees meet hazard tree eligibility criteria.

Final Biological Review

The User Agency may direct that the A&M Contractor perform a final biological review prior to felling. The need and specification for such a review are discussed in greater detail in the Environmental Protection Plan.

Data Validation

Prior to commencing hazard tree removal on each parcel or ROW segment, the A&M Contractor shall confirm that all hazard tree data and, if applicable, documented permits associated with the parcel or ROW segment, are accounted for and match across all data sets. The A&M Contractor shall:

1. Confirm the appropriate hazard tree assessment is accounted for and accessible.
 - a. Confirm the count of hazard trees identified in the assessment matches the count of unique tree photos in the assessment.
 - b. Confirm the count of hazard trees identified in the assessment matches the count of hazard trees on the tree sketch.
 - c. Confirm that all exception/incidental trees are identified and noted in the tree assessment and sketch.
2. Confirm that the count of hazards trees in the tree assessment matches the count in the approved database.
3. Confirm that the number of tree tags associated with this APN matches the count of trees identified in the hazard tree assessment.
4. Confirm that, if applicable, the required permits are associated with the correct APN and are documented properly in the approved database.

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5. If any of the above criteria are not met, the discrepancies should be resolved via a desktop or physical site review prior to the parcel being assigned to a tree felling crew or placed on a runway.

8.5.3 Contractor Pre-Inspection (DDHTR Contractor)

The DDHTR Contractor shall inspect the property prior to beginning tree-felling operations to determine the preferred means and methods, identify access issues, incidental trees (trees that inhibit the safe felling of eligible hazard trees), and any property owner issues or concerns. This information should be provided to the User Agency upon completion of pre-inspection on a parcel to ensure it can be accounted for in the User Agency and A&M Contractor's planning.

The DDHTR Contractor may also be required to physically mark timber onsite prior to the Operation's felling operation, such as with marking paint or flagging tape. The purpose of this marking is to delineate what timber must be removed by the DDHTR Contractor, and what timber was pre-existing and will not be removed.

It is the DDHTR Contractor's decision to utilize an adjacent property to fell an eligible hazard tree. Where a DDHTR Contractor utilizes an adjacent property to fell, remove, or manage an eligible hazard tree, the DDHTR Contractor shall ensure the following minimum steps occur prior to commencement of felling activities:

1. Establish that a valid ROE Permit or Access ROE exists for the adjacent property.
2. Ensure all archaeological and biological protocols and protection measures are in place; and
3. Make reasonable attempts to notify the adjacent property owners. At a minimum the DDHTR Contractor (or the A&M Contractor, if requested by the User Agency) must attempt to make contact with this adjacent property owner no less than 24 hours before the start of work.

In making a decision to utilize an adjacent property to fell, remove, or manage an eligible hazard tree, the DDHTR Contractor shall acknowledge that

- 1.) several factors including, property ownership changes, could affect the accuracy of available information relating to adjacent properties; and
- 2.) the A&M Contractor may not have accurate information to support the proposed activities on an adjacent property.

The DDHTR Contractor bears sole responsibility for all harm resulting from its decision to use an adjacent property to fell, remove, or manage an eligible hazard tree. To minimize these risks to the DDHTR Contractor, the DDHTR Contractor should incorporate the potential for felling eligible hazard trees into adjacent properties into the compulsory pre-inspection protocols and provide advance notice to A&M Contractor.

A&M Contractor personnel, to the best of their abilities and knowledge, should advise the DDHTR Contractor whether any of the DDHTR Contractors' proposed activities could result in harm to the Operation, including the any available information relating to an ROE Form or the known archaeological, and biological information for that immediate area. In doing so, the A&M Contractor personnel shall consider the specific circumstances where the DDHTR Contractors elects to use an adjacent properties with approved ROE Forms to fell eligible hazard trees. The A&M Contractor personnel shall record all pertinent information.

8.6 Hazard Tree Felling and Removal

8.6.1 Pre-Work Walk (360 Walk) (DDHTR Contractor and A&M Contractor)

This walk is conducted by both the DDHTR Contractor and A&M Contractor's TFL by walking the entire parcel to accomplish the following: Identify property boundaries, ingress and egress routes, anticipated felling techniques to be used, potential incidental trees to be taken, review the listing of eligible trees and site sketch against marked trees on site and document changes such that it reflects what is observed, identify and mark (if not already marked) septic tanks, wells, utility connections, and other fixed structures that could be damaged, identify drop zone and mark the area, establish traffic control (see Traffic Control Guidance in Section 5.22), and physically mark trees which had already been assessed and determined to be eligible hazard trees which are no longer standing. For each 360 Walk, the DDHTR Contractor and A&M Contractor shall agree to the number of eligible hazard trees to be felled (prior to any actual tree felling), record the number of trees actually felled, reconcile any discrepancies, and report any disputes using the Chain of Command.

8.6.2 Responsibilities of the A&M Contractor

Pre-Felling Documentation

The A&M Contractor shall photograph each tree immediately prior to, but no more than twenty-four (24) hours prior to, felling. This photograph must show that the tree is standing and has not been felled by others. If the tree has fallen naturally or appears to

have been felled by a third party, the A&M Contractor should photograph the current condition or the tree (or stump) and notate the finding in its database.

The A&M Contractor should validate the GPS coordinates of each tree at time of felling, to ensure the coordinates reflected in the A&M contractor's database are accurate.

Post-Felling Documentation

The felled surface of each stump must be marked with the last three numbers of its unique identification number with marking paint.

The A&M Contractor shall photograph each tree stump after the tree is felled. The photograph must show the tree tag and the painted number on the cut surface. Any changes in the total tree count must be documented.

A final GIS site map, which includes GPS coordinates of each tree, shall be created.

At the Contract Manager's discretion, alternative forms of documentations may be followed to accommodate specific site conditions. Some examples include:

- White paint marking an "X" for previously located stumps that have been removed during tree felling
- Documentary evidence captured concurrently with tree felling
- Other assessment documentation methods that accommodate safety concerns, as determined by the Contract Manager

Archeological and Biological Monitoring

Consultants/Monitors will produce the assessment and monitoring post-felling reports for Endangered Species Act Section 7 and National Historic Preservation Act Section 106 compliance. The report will include all documents and will be sent to the Environmental Lead for review and final approval. Other guidance, direction or requirements are outlined in the EPP.

8.6.3 Responsibilities of the DDHTR Contractor

The DDHTR Contractor's Crew supervisor will decide how the tree felling will be accomplished and inform the TFL during the 360 site walk. All trees must be felled in a safe manner, and in a manner that does not impact neighboring unenrolled parcels, public infrastructure, or improved property (including underground infrastructure, such as septic tanks, utility lines, etc.).

The DDHTR Contractor's Crews will fell hazard trees as identified and marked by the A&M Contractor's Arborist, stumps will be flush cut (within 6-inches) to existing terrain

surface or as required in local government encroachment permits. No stumps will be removed unless pre-approved/directed by the User Agency or designee.

The DDHTR Contractor must ensure reasonable access is provided to the A&M Contractor to perform their tasks, as specified in these Special Provisions, or as otherwise directed by the User Agency. Provision of this reasonable access may impact the DDHTR Contractor's operational efficiency.

Felled trees and other vegetative debris will then be collected and removed from the site. In some situations, the User Agency may direct that certain trees are lopped and scattered on-site or otherwise not removed for environmental protection or safety reasons. Trees and/or tops and limbs may be chipped directly into trucks on site, transported to a Hazard Tree Processing Yard for processing, or hauled directly to end use facilities at the discretion of the DDHTR Contractor. If directed by the User Agency, the DDHTR Contractor will place no more than two (2) to three (3) inches of chipped slash on all areas greater than 100 contiguous square feet where the soil has been disturbed by the DDHTR Contractor's hazard tree removal operation. The User Agency may prescribe specific requirements for wood chipping, for example:

- The Wood mulch shall be placed to stabilize disturbed soil and reduce sediment transport caused by erosion from entering a storm drain system or receiving water.
- The wood mulch shall be a maximum of ½ to 3 inches in length and an average thickness of 1/16 to 3/8 inches in any direction,
- Efforts shall be made to preserve existing vegetation, if practicable.

It is expected that the DDHTR Contractor will complete all necessary felling, processing, chipping, and removal activities as part of a singular operation rather than multiple discrete steps, unless otherwise authorized by User Agency. For example, the DDHTR Contractor shall not split hazard tree removal crews into multiple discrete units (for example, separate wood management, tree felling, tree removal crew). Each Hazard Tree Removal Crew must include all required equipment and personnel to complete the full felling, processing, and removal process. Such equipment may include, for example:

- 1 crane or rubber tired and/or rubber tracker bucket rig
- 1-2 tree fallers, or heavy equipment for tree falling, such as a feller buncher
- 1-2 laborers, for processing fallen timber
- 1 skidsteer or excavator, for handling timber onsite
- 1 track or tow-behind chipper
- Appropriate quantity of log trucks, grapple trucks, high-side dump trucks, or other trucks for removing wood material to a processing facility or end user, and any equipment needed to load wood material onto trucks.

The User Agency may approve alternate crew makeups if the DDHTR Contractor evidences the need for different personnel or equipment. A Hazard Tree Removal Crew consists of between two (2) and seven (7) DDHTR Contractor personnel. The DDHTR

Contractor is responsible for providing all necessary equipment and personnel to safely fell, process, and remove all marked hazard trees and wood materials, which may exceed the equipment and personnel listed above. No additional compensation will be provided for additional equipment or personnel.

Wood material other than chips or mulch used for erosion control shall not be left onsite after demobilization of the Hazard Tree Removal Crew. With approval of the User Agency, Hazard Tree Removal Crews may be permitted to work on multiple parcels concurrently (for example, the felling component of the crew may advance to the next scheduled parcel while the chipping and removal components are continuing work on the initial parcel). The User Agency may prescribe how many parcels may be actively worked per Hazard Tree Removal Crew. However, methodologies that bifurcate felling and removal operations as a standard practice are unacceptable, unless specifically authorized by the User Agency. A Hazard Tree Removal Crew should demobilize from a parcel prior to removing all wood material only in cases where a weather standdown or other nonworking day is ordered.

8.7 Post Tree Felling and Removal Site Walk (DDHTR Contractor, A&M Contractor)

Prior to the Hazard Tree Removal Crew's demobilization, the A&M Contractor shall confirm the following and document on the A&M Contractor provided "tree felling and removal site walk form/survey":

- All marked hazard trees have been removed from the property.
- Any marked hazard trees that fell naturally or which appear to have been felled by others are documented, with the tag removed, and the marking paint concealed.
- If applicable, tree erosion control (chips) have been applied to appropriate disturbed areas. Chipping complies with all contract specifications regarding size and depth, and are not covering driveways, structure footprints, drainage features, or WLPZ zones.
- If chips not used for erosion control, hydromulch or other Forest Practice Rule BMPs shall be utilized and confirmed used for such disturbed areas.
- No tree materials resulting from the Operation remains on-site, unless otherwise directed by the User Agency.
- If any property damage resulted from the Operation, the damage is documented by the A&M Contractor as prescribed by the User Agency.

9.0 Final Erosion Control (DDHTR Contractor, A&M Contractor – Monitors and Documents)

Erosion control measures will be implemented 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 erosion controls may include the use of fiber rolls, silt fences, erosion control blankets,

hydraulic mulch, soil binders, and other mechanisms to reduce sediment. Erosion control plans will be developed by the User Agency's OSC or designee, with input from the A&M Contractor, for those sites requiring Level 3 erosion control. These erosion control levels are described below. Biodegradable erosion control shall be installed after each lot has met site specific cleanup goals. Effort should be made to preserve existing vegetation, if practicable. Once the removal has been completed, storm water control measures must be maintained by the property owner or local government. No seeds will be used for individual lots based on property owner concerns.

All erosion control methods, materials, and specifications will be described in the EPP or as directed by the User Agency's OSC or designee. Materials used for erosion control shall be placed at minimum in accordance with the manufacturer's specifications. All materials shall be certified weed free in an effort to control the spread of noxious weeds.

9.1 Erosion Control Methods

Each residential parcel will receive one of the following measures, as determined by the User Agency's OSC or designee:

- A. Level 1: Hydraulic mulch. Hydraulic mulch will include a wood base mulch along with an organic tackifier to cover the entire area impacted by the structural debris removal operations. No seeds will be used on this Operation. Level 1 applies to less than 7% slopes.
- B. Level 2: Hydraulic mulch and bio-degradable straw wattles shall be a minimum of 8" to 12" diameter and shall be staked and keyed in. Compost filter socks shall be a minimum of 5" to 8" diameter and shall be sandbagged in place, as necessary. No staking or keying in will be necessary with Compost filter socks. Silt fences shall be wire-backed in snow zones and used in areas on slopes greater than 7%.
- C. Level 3: Hydraulic mulch, non-synthetic compost filter socks and/or silt fence and erosion control blankets (such as compost blankets, etc.). Level 3 erosion control applies to sloped areas greater than 15%.

Additional erosion control methods may be developed after consultation with regulatory agencies (see alternative products below).

9.1.1 Erosion Control Materials and Specifications

Materials used for erosion control shall be placed in accordance with these Special Provisions or as directed by the User Agency's OSC or designee. All materials shall be certified non-synthetic weed-free in an effort to control the spread of noxious weeds.

The following materials have been identified for the Operation:

-
- A. Hydraulic Mulch – Hydraulic mulch or hydro-mulching is an erosion control process that uses a slurry wood fiber and a tackifier. The slurry is transported in a tank, either truck or trailer-mounted, and sprayed on prepared ground. Each DDHTR Contractor will develop a submittal for the hydraulic mulch for approval by the IMT. The mulch design will be based on virgin wood fiber and a non-toxic organic base tackifier. Application rates will also be submitted based on slopes.
- B. Fiber Rolls/Straw Wattles – Fiber roll barriers (also called sediment logs or straw wattles) are commercially manufactured and usually consist of milled wood or other natural fibers are sewn into a circular weave fabric. Fiber rolls are good perimeter protection, designed to slow stormwater runoff and trap small amounts of sediment. Fiber rolls shall be 8” to 12” diameter. Fiber rolls must be certified weed free.
- C. Compost filter socks - Compost filter socks are a three-dimensional tubular sediment control and stormwater runoff filtration device typically used for perimeter control of sediment and soluble pollutants on and around construction activities. Compost filter socks trap sediment and soluble pollutants by filtering runoff water as it passes through the matrix of the compost filter socks. Compost filter socks shall be used on all hardscape areas for erosion control. These areas include driveways, hardscape features including concrete, brick, asphalt and gravel roads, lava cap soils, and areas directed by the IMT. Compost filter socks shall be 5” to 8” inches in diameter.
- D. Erosion Control Blanket – Erosion control blanket is a manufactured blanket or mat that is designed to hold soil and seed in place on slopes. It consists of organic biodegradable materials such as wood fiber, coconut fiber, or a combination of these materials. It is commercially manufactured and delivered to the site in rolls.

Erosion control blankets shall be 100% organic biodegradable (including parent material, stitching, and netting). The minimum thickness shall be 3/8” (9mm). The netting shall be stitched to prevent separation of the net from the parent material. The netting shall be capable of withstanding moderate foot traffic without tearing or puncturing. Neither the blanket or netting or the installation shall pose a safety risk to people walking on/crossing over it, or pose a hazard to wildlife such as birds, reptiles, and amphibians.

Appropriate products include, but may not be limited to:

- 1) Curled I Fiber net (American Excelsior)
- 2) Curled II Fiber net (American Excelsior)
- 3) AEC Premier Straw Fiber net (American Excelsior)

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- 4) S 75 BD (North American Green)
 - 5) S 150 BN (North American Green)
 - 6) SC 150 BN (North American Green)
 - 7) C125 BN (North American Green)
 - 8) Excel S-2 All Natural (Western Excelsior)
 - 9) Excel SS-2 All Natural (Western Excelsior)
 - 10) Excel CS-3 All Natural (Western Excelsior)
 - 11) Excel CC-4 All Natural (Western Excelsior)

- E. Silt Fence – Silt fence consists of a permeable filter fabric that is keyed into the ground and staked beyond the toe of a slope. The fabric pools runoff, causing entrained sediment to settle out behind the fence while the water slowly filters through the fabric.
- F. Anchors – Anchors are devices that secure erosion control materials such as fiber rolls, erosion control blankets, and silt fence.

For erosion control blankets, anchors shall be completely biodegradable, environmentally safe, and have no potential for soil and/or water contamination. Steel wire pins or staples may be approved by the User Agency's OSC if the alternative is not available or not functional. Petroleum-based plastics or composites containing petroleum-based plastics will not be approved. Materials deemed to present a hazard from splintering or spearing will not be approved. Wood stakes or stakes manufactured from wood byproducts may be approved.

Appropriate products include, but may not be limited to:

- 1) E-Staple (American Excelsior)
- 2) CF Bio Staple (CFM Corp)
- 3) Green Stake (Green Stake)
- 4) Bio-Stake (North American Green)
- 5) Enviro-Stake (ODC Inc.)

For silt fence, anchor posts shall be at least 36" long. Steel posts should weigh no less than one pound per linear foot.

For fiber roll barriers or compost filter socks, stakes shall be wooden and at least 18" long.

- G. Netting – Netting is a manufactured product intended to secure wood chips or pine needle mulch to the soil surface.

Netting shall be 100% organic biodegradable and may consist of paper, jute, cotton or wood fiber netting. Netting material shall be approved by User Agency staff prior to installation.

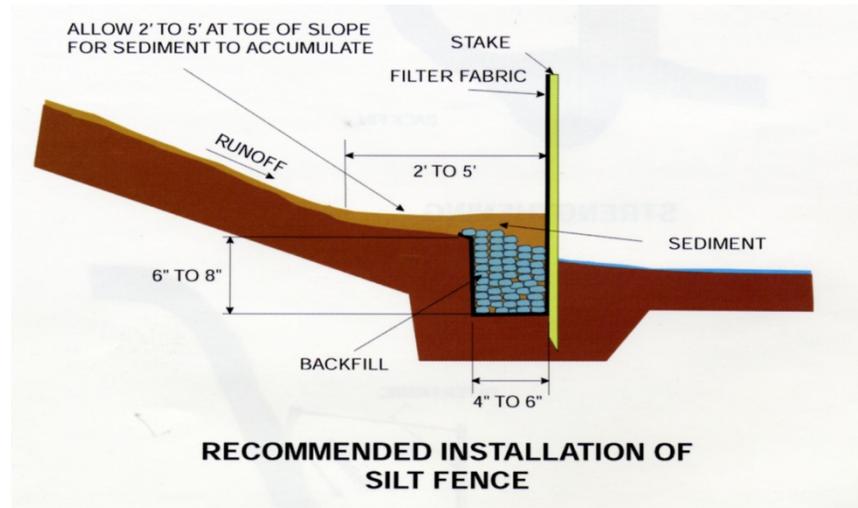
- H. Gravel Bags – Gravel bags are intended to slow stormwater flows and trap sediment on paved surfaces.

Gravel bags shall be filled with $\frac{3}{4}$ " to $1\frac{1}{2}$ " *washed* rock. Bags filled with sand will not be approved.

9.2 Installation Standards

- A. Erosion control BMPs installation shall consist of furnishing and applying erosion control materials. The work includes proper material handling, area preparation, and proper application of the erosion control materials and structures.
- B. Area Management – Construction/demolition materials shall be stored to the maximum extent possible on paved surfaces. When this is not possible, construction/demolition materials shall be stored on areas where a future structure or other hard impervious surfaces will be constructed, such as a future building foundation or driveway.
- C. Compost filter socks and fiber roll barriers – Install 5, 8 or 12-inch diameter compost socks as directed by User Agency's OSC. Compost socks may require stakes/anchors, depending on the application, as directed by the User Agency's OSC. Compost socks do not require trenching when used to interrupt sheet flows on asphalt, concrete or other impervious surfaces.
- D. Construction/demolition vehicles shall remain on paved surfaces to the maximum extent possible. When this is not possible, construction/demolition vehicles shall be used in areas where a rebuild of impervious surfaces will occur, such as building foundation or driveway locations.
- E. Silt Fence – Install silt fences as directed by the User Agency's OSC. Six inches of the fence shall be buried in a trench along the base of the fence. The posts shall be spaced a maximum of 10 feet apart and driven 18" into the soil or to refusal. Sediment shall be removed from the up-slope side of the fence when it reaches $\frac{1}{3}$ the height of the fence. Refer to Figure 9-1 below.

Figure 9-1. Silt Fence Detail Drawing



- F. Erosion Control Blanket – Install erosion control blankets as directed by the User Agency’s OSC. Starting at the top of the slope, anchor the blanket in a 6-inch trench, backfill, and securely tamp the backfilled soil. Unroll the blanket downslope, overlapping parallel and subsequent blankets a minimum of 4 inches. Secure blankets with anchors along with the overlaps and place a minimum of 3 anchors per square yard. DDHTR Contractor shall determine if more anchors are required and shall be responsible for installing the erosion control blanket so that it will stay in place.
- G. Fiber Roll Barriers – Install 8 or 12-inch fiber roll barriers as directed by the User Agency’s OSC. Place the fiber roll barrier in a 2 to 4-inch trench perpendicular to the flow path of stormwater. Drive stakes in perpendicular to the ground. If required on steep slopes, drive stakes on either side of the roll and bind together with baling wire. Weighted rolls may be used as appropriate, especially on driveways. Refer to detail Figure 9-2 below. Typical installation spacing for the fiber rolls will be as follows:
- 1) 10 feet apart for slopes steeper than 2:1 (horizontal: vertical).
 - 2) 15 feet apart for slopes from 2:1 to 4:1 (horizontal: vertical).
 - 3) 20 feet apart for slopes from 4:1 to 10:1 (horizontal: vertical).
 - 4) 50 feet apart for slopes flatter than 10:1 (horizontal: vertical).

Figure 9-2. Fiber Roll Detail Drawings for Steep Slopes, Fiber Roll Installation

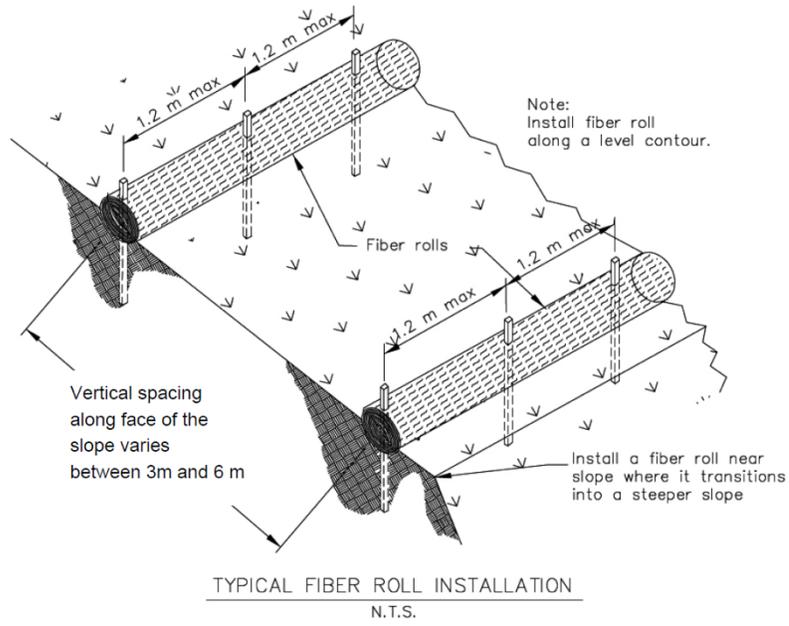
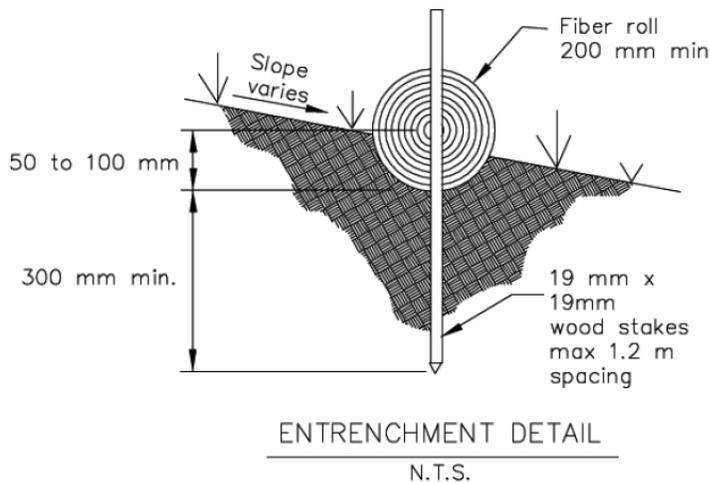


Figure 9-3. Fiber Roll Detail Drawings for Steep Slopes, Entrenchment



H. Compost filter socks - The sock shall be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Compost filter socks are effective when installed perpendicular to sheet or low concentrated flow, and in areas that silt fence is normally considered appropriate. Acceptable applications include:

- 1) Site perimeters.
- 2) Above and below disturbed areas subject to sheet runoff, inter rill and rill erosion.
- 3) Above and below exposed and erodible slopes.
- 4) Along the toe of stream and channel banks.
- 5) Around area drains or inlets.
- 6) On compacted soils where trenching of silt fence is difficult or impossible.
- 7) Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation.
- 8) On frozen ground where trenching of silt fence is impossible.
- 9) On paved surfaces where trenching of silt fence is impossible.
- 10) As a slope interruption device to slow runoff and reduce soil erosion.
- 11) As a check dam in a swale, ditch, or channel.

12) Areas where post-fire stormwater pollutants are a concern.

- I. Gravel Bags – Gravel bags or weighted fiber rolls shall be placed on the downslope edge of impervious surfaces, such as driveways. Place gravel bags in a double row in a “U” shape.

9.3 Site Approval and Final Reports (User Agency, A&M Contractor – Monitors and Documents)

Following placement of erosion control, the User Agency’s OSC or designees will conduct final site walks of each property. The site walk will consist of a review of the ROE, Site Assessment Report, debris removal information, and other relevant information, and then conducting a site visit to verify all work has been completed to the specifications outlined herein and in the contract. The User Agency’s OSC or designee will prepare a final site walk checklist/report with sign-off signature and submit to the County.

Additionally, the A&M Contractor will prepare final completion report package, for each property to the affected Counties that includes a copy of the initial property site assessment documents, pre-removal site photographs, final site condition photographs, certified laboratory data for the confirmation samples, and tabulated laboratory data comparing the confirmation sample results to the established cleanup goals. The report will describe the work conducted, the results of asbestos surveys/sampling and confirmation sample results. Reports will be signed by a Certified Engineering Geologist, Professional Geologist, or Professional Engineer licensed in the State of California.