



# **PG&E**

## **Vegetation Management**

### **Wildfire Response Guidance**

### **2019**



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## **PURPOSE OF THIS DOCUMENT**

This guideline is intended to provide the information and actions needed to ensure Vegetation Management (VM) successfully stands-up and implements a response organization that effectively supports company response to wildfires and other emergencies. The following is an overview of the processes, roles, and activities related to the identification, restoration, management, and de-mobilization of VM resources in support of wildfires.

## **HOW TO USE THIS GUIDANCE DOCUMENT**

- Vegetation Branch Director (VBD) understands all the chapters and interconnection.
- Quick Start Position Checklists are distributed as soon as a wildfire begins.
- Functional Leads know their Roles and Responsibilities by Incident Phases.
- “What Is Important” section highlights key concepts at the beginning of each chapter follow
- “Overview” section provides a succinct summary of the main topics covered in each chapter.
- “Key Review Items” are available for reference at the end of each chapter. Review these as a new event begins to refresh your mind on what are the key responsibilities by chapter / function.
- An Appendix list at the end of each chapter contains links to document to ensures the most current versions are available. Appendix documents are also included in print at the end of each chapter.

## QUICK START POSITION CHECKLISTS

<b>Position:</b>	<b>VEGETATION BRANCH DIRECTOR (VBD)</b>
<b>Reports To:</b>	Operations
<b>Position Description:</b>	Determines the staffing requirements of the Vegetation Branch, supervises VM Operations, ensures proper ICS integration and alignment with OEC Action Plan
<b>Source of Appointment</b>	Internal - Vegetation Management Team
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/> Contact OEC IC and Operations Chief to begin integration within the ICS.	
<input type="checkbox"/> Develop action plan for event and next operational period in coordination with Deputy VBD (using standard ICS format). This plan will feed into the larger Incident Action Plan (IAP) which is approved by the Incident Commander.	
<input type="checkbox"/> Notify all external stakeholders: USFS, CAL Fire, BLM, Counties, Cities and Park Associations. Note: Local Agencies will vary by division but contact details will be known as per normal routine operations.	
<input type="checkbox"/> Build a resource deployment plan and begin the assignments of key positions by notifying VM branch resources.	
<input type="checkbox"/> Deploy crews to fill vegetation requests from M&C (via phone). Note: communication may also be made directly to the Task Force Lead or through Central Dispatch.	
<input type="checkbox"/> Maintain adequate staffing throughout fire incident [see Chapter 2 HAZARD TREE AND RESOURCE FORECAST]. Work with Sr. Manager of Operations and the Vegetation Management Director to determine when to mobilize Non-Prime Contractors as the complexity increases.	
<input type="checkbox"/> Ensure an event onboarding process is established and includes the review of safety tailboards and event specific items.	
<b>RESTORATION PHASE</b>	
<input type="checkbox"/> Review OEC IC response plan and ensure VM work plan alignment.	
<input type="checkbox"/> Monitor access to impacted areas and ensure controls are in place so that all contractors check-in/check-out on a daily basis using Survey123, as detailed in Section 10.2.1 (See Appendix 3.3 - Daily Contractor Roster Check In-Out).	
<input type="checkbox"/> Provide daily status updates to M&C field representative and OEC IC in-person during the afternoon briefings.	
<input type="checkbox"/> Provide daily status updates to the VM Director during activation by email.	
<input type="checkbox"/> Notify OEC IC, Safety Lead and VM of any safety incidents (once made aware).	
<input type="checkbox"/> Follow up with the Contractor and VM Emergency Preparedness and Response (EP&R) manager (Andrew Trombley) for timely resolution of any discrepancies in contractor invoices.	
<b>COMPLIANCE PHASE</b>	

<input type="checkbox"/> Communicate via email and in-person daily briefings to internal and external stakeholders that VM work will continue past the official PG&E demobilization date.
<input type="checkbox"/> Work with VM Logistics Admin lead to maintain or re-establish key contractor support services such as lodging, meals and basecamp.
<input type="checkbox"/> Determine resource needs going forward.
<b>WWRP PHASE</b>
<input type="checkbox"/> Review Chapter 9 – WILDFIRE WOOD REMOVAL PROGRAM (WWRP) and ensure understanding for execution of responsibilities.
<input type="checkbox"/> Assign a Project Manager (normally a local contractor to coordinate and oversee the project).
<b>VEGETATION DEMOBILIZATION PHASE</b>
<input type="checkbox"/> Ensure hazard abatement, restoration of blocked access and debris removals are complete prior to releasing equipment and personnel.
<input type="checkbox"/> Notify Environmental Team of erosion control needs.
<input type="checkbox"/> Validate that environmental issues have been mitigated or notify Environmental Team for longer term mitigation needs
<input type="checkbox"/> Provide revised estimated completion date for all VM work. Communicate to VM leadership when crews are released and available for potential reassignment.
<input type="checkbox"/> Ensure safety tailboards and demobilization fitness to depart has been reviewed by all staff.
<b>POST-INCIDENT PHASE</b>
<input type="checkbox"/> Ensure that all Contractor invoices have been submitted for VPM approval. See Appendix 8.4 Invoice Process Flow Chart and 8.5 Contractor CWA and Invoice Guidance.
<input type="checkbox"/> Confirm that all resource and equipment utilization hours have been fully documented.
<input type="checkbox"/> Conduct “Hot Wash” debrief with all functional groups.
<input type="checkbox"/> Collect all event records and archive once invoicing is complete.

<b>Position:</b>	<b>DEPUTY VEGETATION BRANCH DIRECTOR</b>
<b>Reports To:</b>	Vegetation Branch Director
<b>Position Description:</b>	Oversees the incident VM operational support positions to ensure full engagement on any issues preventing a safe and efficient response.
<b>Source of Appointment</b>	Internal or External. Typically for Category 1 and 2 fires, Professional Contract Services are used. In Category 3 fires, a PG&E employee is preferred as a fill-in for the VBD when unavailable.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/> Develop action plan for event and next operational period in coordination with VBD (using standard ICS format). This plan will feed into the larger Incident Action Plan (IAP) which is approved by the Incident Commander.	
<b>RESTORATION PHASE</b>	
<input type="checkbox"/> Ensure all VM crews are on-boarded upon arrival by reviewing sign in sheet (See Chapter 2 – STAFFING for more information). Ensure activities recorded in resource input file are saved as per company process (on file or digitalized).	
<input type="checkbox"/> Validate Training and Qualifications Form (See Appendix 5.7) as well as supporting documentation for each Secondary Contractor. Sheet must be reviewed, signed and dated by Deputy VBD.	
<input type="checkbox"/> Validate with Sourcing that the contracting companies have provided confirmation that they have run criminal background checks on all crew members before the resources can begin working for PG&E. This confirmation should be provided each time an individual or crew are being onboarded.	
<input type="checkbox"/> Report all safety incidents to VM Safety lead and VBD as soon as they occur.	
<input type="checkbox"/> Determine optimal crew resource and assign field activities to Task Force Lead(s) – see Chapter 2 HAZARD TREE AND RESOURCE FORECAST for guidance.	
<input type="checkbox"/> Coordinate and direct PG&E fire suppression resources (i.e. water tenders) as needed.	
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/> Review VM items in the daily IAP with field operations staff.	
<input type="checkbox"/> Analyze and update VM items in the daily IAP as needed.	
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/> Ensure hazard abatement, erosion control, environmental protection, restoration of blocked access and debris removals are complete prior to releasing equipment and personnel.	
<input type="checkbox"/> Notify Environmental Team of erosion control needs.	
<input type="checkbox"/> Validate that environmental issues have been mitigated or notify Environmental Team for longer term mitigation needs	
<input type="checkbox"/> Provide revised estimated completion date for all VM work. Communicate to VM when crews are released and available for potential reassignment.	
<input type="checkbox"/> Ensure safety tailboards and demobilization fitness to depart has been reviewed by all staff.	



**POST-INCIDENT PHASE**

- ☐ Conduct “Hot Wash” debrief with all functional groups.

<b>Position:</b>	<b>FIELD OPERATIONS MANAGER</b>
<b>Reports To:</b>	Vegetation Branch Director
<b>Position Description:</b>	Perform tactical assignments by geographical areas. Report out on work progress and resources status to a VBD and DMS/Logistic lead. Assurance that quality and compliance standards are maintained and documented properly.
<b>Source of Appointment</b>	Internal or External. Typically, an External Professional Contract Service is used.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Ensure expectations and guidelines for scope and quality of work are communicated to all PIs and Tree Crew when reporting for initial onboarding and re-enforcing during the daily briefings. For Scope see Facility Protect Process
<input type="checkbox"/>	Begin Tree tracking assessment work in designated Collector database [See Chapter 10 – TECHNOLOGY APPLICATIONS for details including type and method of data capture]. This data review should take place on daily.
<input type="checkbox"/>	Review Marking Guidelines (Appendix 3.4 and 3.5) and provide guidance to PI.
<input type="checkbox"/>	Review Debris Management BMPs policies/procedures (Appendix 3.6) and provide guidance to tree crews.
<input type="checkbox"/>	Review to Wildfire Felling – Cleanup BMP Tailboard (Appendix 3.7) and provide guidance to tree crews.
<input type="checkbox"/>	Review Task Force Lead – Tailboard (See Appendix 2.2).
<input type="checkbox"/>	Coordinate with Logistics / Resource Lead to obtain fire perimeter and electric line maps
<input type="checkbox"/>	Request records check to identify sensitive environmental and cultural resources
<b>RESTORATION PHASE</b>	
<input type="checkbox"/>	Monitor tree marking in the field to ensure correct trees are marked for removal (See Appendix 3.4 and 3.5: Wildfire Tree Marking Guidance)
<input type="checkbox"/>	Monitor tree work during pruning and felling operations and provide guidance as needed.
<input type="checkbox"/>	Conduct daily tailboards with tree marking and hazard tree cutting crews, informing all team members of any known customer concerns or issues
<input type="checkbox"/>	Review sensitive site locations once identified and required mitigations provided by Environmental Lead.
<input type="checkbox"/>	Ensure all VM crews are on-boarded on arrival and activities recorded in resource input file. See Appendix 5.1 Wildfire On-Boarding Tailboard and Chapter 3 Onboarding for more details.
<input type="checkbox"/>	Report all safety incidents to VM Safety lead and VBD as soon as they occur.
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Review VM items in the daily IAP with field operations staff.
<input type="checkbox"/>	Confirm equipment washing requirements with the Agency IC and PG&E's liaison. This is an environmental requirement to limit the spread of pests and diseases. Should a landowner or agency specify requirements these must be followed by VM crews.

- ☐ Conduct field inspections to verify standards adherence using Collector to identify work.

#### **VEGETATION DEMOBILIZATION PHASE**

- ☐ Ensure filed operations follow post felling activity check-list. See **APPENDIX A – FORMS AND ADDITIONAL INFORMATION** for guidelines.
- ☐ Ensure all data from the field is properly captured and reported. Review and analyze information stored in Collector so that all work has been updated as complete and pending work has been scheduled.

<b>Position:</b>	<b>BUSINESS FINANCE LEAD</b>
<b>Reports To:</b>	Operations
<b>Position Description:</b>	Coordinates with EOC.
<b>Source of Appointment</b>	Internal – Vegetation Management VPM (or higher)
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Develop and refine reporting templates specific to the event.
<input type="checkbox"/>	Provide outward facing report of VM activities & accomplishments to EOC, and/or other PG&E stakeholders.
<b>RESTORATION/COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Provide production analytics for VM Branch Director as requested.
<input type="checkbox"/>	Ensure data sources are correct and consistent.
<input type="checkbox"/>	Communicate with contract management to ensure adequate funding of CWAs for VM Vendors on incident.
<input type="checkbox"/>	Communicate with contract management to ensure timely vendor payments.
<input type="checkbox"/>	Communicate correct charging order(s) to field crews.

<b>Position:</b>	<b>LOGISTICS LEAD</b>
<b>Reports To:</b>	Vegetation Branch Director or Deputy Vegetation Branch Director
<b>Position Description:</b>	Coordinates logistical support for VM and the VM contract workforce. Assigned when the Deputy Vegetation Branch Director determines that the coordination of logistical activities requires a dedicated individual. This position could be combined with another position depending on the workload.
<b>Source of Appointment</b>	Typically, an External Professional Contract Service is used. Within ICS, there will be a PG&E Logistics Lead with whom the VM Logistics Lead will coordinate.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	If PG&E Base Camp is established immediately start planning for logistical support when the Base Camp is demobilized.
<input type="checkbox"/>	If PG&E Base Camp is established, request Secondary Contractors from Contracting.
<input type="checkbox"/>	If PG&E Base Camp is not established, determine and coordinate VM logistical support. Coordinate with the Environmental team for staging areas and provide oversight of contractor staging areas.
<input type="checkbox"/>	Record all equipment provided to and deployed by contractors (excel format). Recorded details should include equipment name, identifying item number, quantity, equipment cost, name of contractor, site location, date of provision/return.
<b>RESTORATION PHASE</b>	
<input type="checkbox"/>	Continually monitor and coordinate changing logistical support requirements.
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Work with PG&E Logistics Lead to maintain or re-establish key contractor support services such as lodging, meals and basecamp.
<input type="checkbox"/>	Continually monitor and coordinate changing logistical support requirements.
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/>	Recommend demobilization of logistical support based on workforce reduction.

<b>Position:</b>	<b>DATABASE MANAGEMENT SPECIALIST</b>
<b>Reports To:</b>	Vegetation Branch Director or Deputy Vegetation Branch Director
<b>Position Description:</b>	Responsible for the Tree and Resource data collection process and summation reporting.
<b>Source of Appointment</b>	Typically, an External Professional Contract Service is used.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Review and confirm the data collection and reporting process with the VBD and EP&R Manager for each fire incident.
<b>RESTORATION/COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Collect data from Collector for ARCGIS.
<input type="checkbox"/>	Collect Resource data from Survey123.
<input type="checkbox"/>	Maintain daily or weekly reporting for both Resources and Tree metrics.
<input type="checkbox"/>	Track refusal and restricted access locations.
<input type="checkbox"/>	Create maps with current tree data on tree inspected and worked.
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/>	Communicate final tree numbers to VBD and EP&R Manager.

<b>Position:</b>	<b>SAFETY BRANCH LEAD</b>
<b>Reports To:</b>	Deputy Vegetation Branch Director
<b>Position Description:</b>	Responsible for coordination of safety activities. Assigned when the Deputy Vegetation Branch Director determines the need for a dedicated individual.
<b>Source of Appointment</b>	Internal or External. Typically, in Category 1 and 2 fires, an External Professional Contract Service is used. In Category 3 fires, a PG&E employee is preferred. Within the ICS, there will be a PG&E Safety Lead, with whom the VM Safety Lead will coordinate.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Develop and distribute safety tailboards to all VM personnel.
<input type="checkbox"/>	Develop plan to prevent and reduce fire flare ups as hazard tree work begins.
<input type="checkbox"/>	Monitor daily weather forecast and fire hazard rating.
<b>RESTORATION PHASE</b>	
<input type="checkbox"/>	Perform onboarding for all VM crews on arrival and record activities in resource input file.
<input type="checkbox"/>	Communicate daily known hazards in the field and operational safety messages (see APPENDIX A – FORMS AND ADDITIONAL INFORMATION: 5.2 Wildfire Smoke – Tailboard, 5.3 Smoke Prevention use of Masks or Respirators, 5.4 Heat Illness Prevention – Tailboard, 5.5 Burned Out Stumps – Tailboard, and 5.6 Fatigue – Tailboard).
<input type="checkbox"/>	Communicate daily event safety tailboards.
<input type="checkbox"/>	Conduct field observations to ensure safety compliance and ensure safety of operational personnel.
<input type="checkbox"/>	When issues are identified during safety observations, identify safety tailboards or messages to be covered the following day.
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Conduct field observations to ensure safety compliance and safety of operational personnel.
<input type="checkbox"/>	Communicate daily known hazards in the field and operational safety messages.
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/>	Communicate vegetation demobilization / post event safety messages and ensure their implementation by contractors.
<input type="checkbox"/>	Communicate to internal and external stakeholders that VM work is completed.

<b>Position:</b>	<b>TASK FORCE TEAM LEAD</b>
<b>Reports To:</b>	Field Operations Manager
<b>Position Description:</b>	Responsible for performing tactical activities assigned to the Strike Team. Evaluate and manage removal of burned trees along the affected power lines.
<b>Source of Appointment</b>	Typically, an External Professional Contract Service is used.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Confirm communication and chain of command protocol.
<input type="checkbox"/>	Coordinate with Logistics / Resource Lead to obtain fire perimeter and electric line maps.
<input type="checkbox"/>	Request Cultural Resource Specialist (CRS) to conduct office records check.
<input type="checkbox"/>	Obtain fire area access permission from lead agency (Cal-Fire, BLM, and USFS).
<b>RESTORATION PHASE</b>	
<input type="checkbox"/>	Manage PSC (Professional Service Contractors) and supervise hazard tree inspections during tree marking and felling operations. Review Strike Team Lead – Tailboard (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 2.3) before dispatching.
<input type="checkbox"/>	Identify fire damaged trees capable of causing conflicts with powerline infrastructure following USFS Marking Guidelines for Fire Injured Trees in California, May 2011, Report #RO-11-01. (See APPENDIX A – FORMS AND ADDITIONAL INFORMATION 3.4).
<input type="checkbox"/>	Monitor tree marking to ensure correct trees are marked for removal (See APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9: Wildfire Tree Marking Guidance).
<input type="checkbox"/>	Report all safety incidents to VM Safety lead and VBD as soon as they occur.
<input type="checkbox"/>	Report daily work progress and resources status to a Field Operations Manager.
<input type="checkbox"/>	Maintain work records on assigned personnel activities and ensure protection of sensitive resources.
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Prioritize line segments based on where M&C will be performing restoration next, utilizing excess crews not supporting the Restoration Phase.
<input type="checkbox"/>	Report work progress and resources status to Field Operations Manager.
<input type="checkbox"/>	Maintain work records on assigned personnel activities and ensure protection of sensitive resources.
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/>	Ensure Fellers/ Loggers complete cleanup.
<input type="checkbox"/>	Re-open tree blocked roads/driveways.
<input type="checkbox"/>	Remove felling debris from watercourses, culverts, sensitive sites.
<input type="checkbox"/>	Request erosion control in equipment disturbed areas - water breaks and straw.



- ☐ Notify landowner of completed felling/logging activities if landowner is onsite. If no landowner onsite, tack up information poster with PG&E contact number onsite.

<b>Position:</b>	<b>ENVIRONMENTAL LEAD</b>
<b>Reports To:</b>	Deputy Vegetation Branch Director
<b>Position Description:</b>	Ensure completion of environmental compliance with VM work.
<b>Source of Appointment</b>	Typically, In Category 1 and 2 fires an External Professional Contract Service is used. In Category 3 fires, a PG&E employee is preferred. Within the ICS, there will be a PG&E Environmental Lead, with whom the VM Environmental Lead will coordinate.
<b>Activities</b>	
<b>ACTIVATION PHASE</b>	
<input type="checkbox"/>	Coordinate with Environmental team if on site, otherwise contact Dan Blair (VM Agency and Environmental) and obtain sensitive resource information.
<input type="checkbox"/>	Gather or create appropriate Avoidance Minimization Measures (AMM) tailboard documents, e.g. nests, riparian, cultural sites. (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 7.3 Cultural Resources).
<input type="checkbox"/>	Ensure protection zones are flagged in the field for known sensitive resource sites.
<input type="checkbox"/>	Ensure VM field resources are trained and tail-boarded for resource protections.
<input type="checkbox"/>	Engage with PG&E environmental when state or federal agencies need to be involved due to resource impacts.
<b>RESTORATION PHASE</b>	
<input type="checkbox"/>	Coordinate sensitive resource monitors (Cultural and Biological) for required sites to ensure natural and cultural resource protection is in place, before starting and during tree work.
<input type="checkbox"/>	Establish quality control to ensure compliance with BMPs (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 7.1, 7.2 and 7.3) and AMMs through PSC, RPF or Task Force Leads.
<b>COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Coordinate sensitive resource monitors (Cultural and Biological) for required sites.
<input type="checkbox"/>	Establish quality control to ensure compliance with BMPs and AMMs through PSC, RPF or Task Force Leads.
<b>VEGETATION DEMOBILIZATION PHASE</b>	
<input type="checkbox"/>	Ensure that required erosion control measures are in place.
<input type="checkbox"/>	Ensure the water crossings are cleaned out from work generated debris and/or soil.

<b>Position:</b>	<b>CUSTOMER OUTREACH LEAD</b>
<b>Reports To:</b>	Deputy Vegetation Branch Director
<b>Position Description:</b>	Coordinates with PG&E customer outreach programs to ensure vegetation issues are addressed proactively.
<b>Source of Appointment</b>	Internal - Vegetation Management Team.
<b>Activities</b>	
<b>RESTORATION/COMPLIANCE PHASE</b>	
<input type="checkbox"/>	Coordinate with VM Branch Director regarding scale of customer impacts.
<input type="checkbox"/>	Staff booth/table at evacuation centers.
<input type="checkbox"/>	Ensure customer inquiries are attended to at a timely manner / contact property owner as directed to explain vegetation management activities.
<input type="checkbox"/>	Review and utilize PG&E emergency work communications (talking points, posted PG&E contact details etc.).
<b>WWRP PHASE</b>	
<input type="checkbox"/>	Review Chapter 9 – WILDFIRE WOOD REMOVAL PROGRAM (WWRP), ensuring solid understanding for execution of responsibilities.
<input type="checkbox"/>	Communicate media pushes to acting VBD, so field operations expectations are set accordingly.

<b>Position:</b>	<b>WWRP PROJECT MANAGER</b>
<b>Reports To:</b>	Vegetation Branch Director or Deputy Vegetation Branch Director
<b>Position Description:</b>	Local contractor responsible for coordination and oversight of Wildfire Wood Removal Program, assigned by VBD.
<b>Source of Appointment</b>	Typically, an External Professional Contract Service is used.
<b>Activities</b>	
<b>WWRP PHASE</b>	
<input type="checkbox"/>	Review Chapter 9 – WILDFIRE WOOD REMOVAL PROGRAM (WWRP), ensuring solid understanding to execute.
<input type="checkbox"/>	Identify and train Assessment and Tree Crew workforce on how to interact with customers.
<input type="checkbox"/>	Assign VM WWRP Customer Communication Lead.
<input type="checkbox"/>	Obtain the customer's signatory authorization on the WWRP Customer Authorization Form (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9.3) following the customer's wood qualification for the WWRP.

## Chapter 1 – VM MAJOR EMERGENCY RESPONSE OVERVIEW

### WHAT IS IMPORTANT

1. Adherence to and integration with the ICS.
2. Understanding the VM Wildfire Phases and the activities associated with each of them.

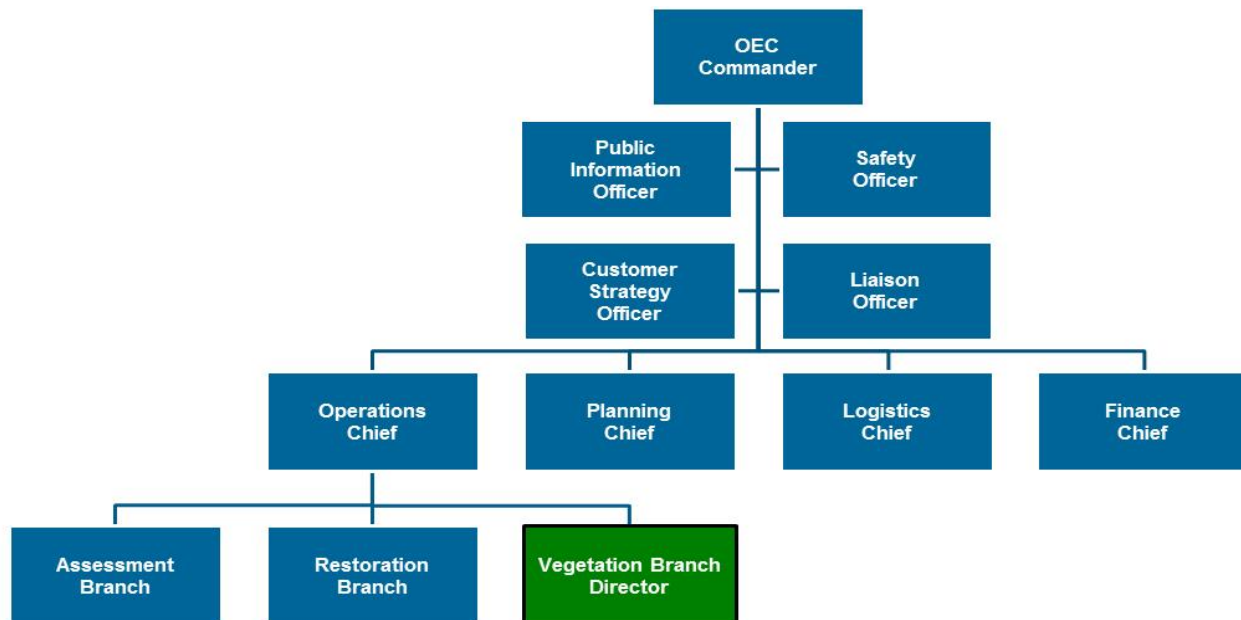
### 1. OVERVIEW

The purpose of this document is to provide direction and structure within VM Operations when responding to wildfire incidents that cause electric outages and/or damages to PG&E facilities and infrastructure.

Based on Public Resources Code (PRC) Sec. 4293, CPUC General Order 95 Rule 35, and federal regulations, hazard trees shall be felled, cut, or trimmed to remove such hazard. The purpose of these laws/ regulations is to prevent unwanted ignitions from trees striking power lines, to improve reliability of electrical service, and to promote public safety and restore electric power.

### 2. OPERATIONS EMERGENCY CENTER (OEC)

The Operations Emergency Center is a physical location, typically one per division, where Incident Command System staff manage the emergency response. All OECs have the same “modal” organization that allows for easy scalability across the PG&E territory. The VBD reports to the OEC Operations Chief and to the REC Vegetation Lead (if the REC is activated). During fire events the VBD is responsible for the coordination of daily email updates, conference calls and report outs with all VM branch staff.



### 3. INCIDENT COMMAND STRUCTURE (ICS)

ICS enables multiple PG&E LOBs, governmental agencies, private sector and non-governmental organizations to work effectively under the same emergency management system. The integration of VM Operations into PG&E ICS is essential for an efficient coordinated approach to wildfire response. Regardless of whether PG&E establishes an ICS by activating an OEC, the VM organization is scalable based on the size and complexity of the fire event.

### 4. VM WILDFIRE INCIDENT PHASES

Wildfire support for VM Operations is separated into seven incident phases. Work associated with the operational phases (Activation to Demobilization) will overlap as shown in the image below. Adherence to safety compliance is primary focus in all incident phases.



**4.1 PHASE 1 - PLANNING:** This phase includes pre-training and identification of resources before the beginning of the wildfire season.

- ☐ Review overall guidance including reference documents and update as needed.
- ☐ Contractor resources annual CWAs start on June 1<sup>st</sup> (document Contractors by work function).
- ☐ Emergency CWAs must be ready to execute
  - ☐ Time & Material rates in addition to unit rates must be included
  - ☐ Wood Management rate must be outlined
- ☐ VM training commences after Fire Season Kickoff (FSKO) meeting (document individuals to fill VM branch positions).

**Note:** As the purpose of this document is a quick start manual to wildfire response, the Planning Phase activities are not included in the Quick Start Position Checklists. It is assumed that Planning will have already taken place.

**4.2 PHASE 2 - ACTIVATION:** In this phase the Scope of Work is determined and VM branch team is built. In most cases, **OEC activation marks the beginning of this phase.**

- ☐ The first action for VM is to confirm the appointment of a Vegetation Branch Director.
- ☐ Situational awareness and asset protection including pole clearing to create defensible space.
- ☐ Define Scope of Work expected for the duration of the fire event and adjust throughout.
  - ☐ Vegetation demobilization planning starts during this phase.
- ☐ Contact OEC IC and Operations Chief to begin integration within the ICS.
- ☐ Determine VM operations logistical requirements and coordinate with OEC Logistics.
- ☐ Build a resource deployment plan and begin the assignments of key positions.
- ☐ Define Resource and Tree data collection process.
- ☐ Define reporting process and cadence to both OEC and VM.
- ☐ Acquire GIS incident footprint maps (street, circuit and topographical).

**4.3 PHASE 3 - RESTORATION:** During the restoration phase, VM is primarily responsible for providing hazard tree assessment, abatement in support of Maintenance and Construction (M&C)'s equipment repairs, and replacement electric restoration service. This Work typically falls into three main categories:

- 1) Clearing vegetation for access to work locations.
- 2) Clearing vegetation for "Re-conductoring".
- 3) Work-site hazard tree mitigation.

Activities will include:

- ☐ Review OEC IC response plan and ensure VM work plan alignment.
  - ☐ Monitor access to impacted areas and adjust rolling 12-hour vegetation response plan.
  - ☐ Ensure assessments and imminent hazardous tree work is completed before re-energizing lines.
  - ☐ Request lines remain de-energized where hazardous tree work is located – if possible.
  - ☐ Set guidance for daily resource documentation, work plan and tree mitigation reporting.
- Coordinate with Cultural Resource Specialist to ensure natural and cultural resource protection is in place, before starting tree work.

**4.4 PHASE 4 – COMPLIANCE:** Hazard tree abatement started in the Restoration phase continues into this phase. This **phase is marked by the OEC deactivation**, since electric services have been restored to the majority of customers. However, vegetation work can continue for up to 60 days.

- ☐ Continued pre-inspection assessments to complete first and second patrols.
- ☐ Hazard tree abatement with Tree and Ground Crews.
- ☐ Safety observations conducted, trends analyzed, and feedback provided to on site Contractors.
- ☐ Quality Control patrols begin to ensure conformance to contract specifications.
- ☐ Coordinate with M&C Logistics to leverage existing basecamp resources.
  - PG&E IT mobile vehicle, basecamp site access, lodging, command trailers.

**4.5 PHASE 5 – WILDFIRE WOOD REMOVAL PROGRAM (WWRP):** The Wildfire Wood Removal Program (WWRP) is approved by event and is only relevant to Category 3 level fires – see Chapter 9 for details.

**4.6 PHASE 6 - VEGETATION DEMOBILIZATION:** For large wildfire events, vegetation work will continue well after the OEC is deactivated. Resources and equipment are demobilized as their work functions are completed.

- ☐ Confirm all work completed before releasing equipment and personnel.
- ☐ Confirm that all hazard abatement work, erosion control, environmental protection measures, and restoration of blocked access are completed prior to releasing resources and equipment.
- ☐ Ensure compliance with agency equipment washing requirements.
- ☐ Report out on completion of hazardous tree abatement to VM and Emergency Management.
- ☐ Demobilization safety tailboard reviewed by all VM personnel.
- ☐ Collect all documentation - maps, tracking sheets and electronic fil–s.

**4.7 PHASE 7 - POST INCIDENT:** This phase marks the official end of the event for Vegetation Operations, any work performed after this date CANNOT be charged to event orders.

- ☐ VBD ensures that all Contractor invoices have been submitted for VPM approval.
- ☐ VPM approves all outstanding invoices.

- ☐ VBD confirms that all resource and equipment utilization hours have been fully documented.
- ☐ Communicate Contractor crews are available for potential reassignment.
- ☐ “Hot Wash” debrief with all functional groups.

**KEY REVIEW ITEMS:**

- First define VM “Scope of Work” for the event, this will set staffing levels.
- ICS adherence results in effective communication and coordination within PG&E and Agencies.
- Know the “triggers” for the beginning of each incident phase.
- Review key actions required for vegetation operations within each incident phase.
- All potential VBDs should take ICS introduction (100 and 200) WBT classes.



## Chapter 2 – STAFFING

### WHAT IS IMPORTANT

- 1) Plan for the full event at the start of the event by first determining the size of the fire.
- 2) Based on the size of the fire, build the VM branch organization.
- 3) Reference the wildfire incident categories to first deploy essential vegetation branch positions.
- 4) Understand roles and responsibility within each position.
- 5) Utilize both a high level and analytical approach to provide a hazard tree forecast.
- 6) Learn the three Work Classifications position groupings within the VM Organizational Chart.

### 1. OVERVIEW

The purpose of this chapter is to provide direction to the level of VM response required based on the impact of the wildfire and size of the event. VM initial staffing relies on local primary Contractor resources that are transitioned to secondary Contractors, if needed, to minimize impact on core vegetation operations.

At the start of the event these resources' priority is to support M&C restoration activities. During fire events the VBD is responsible for defining the VM branch organization this includes both VM Primary and Secondary Contractors.

### 2. WILDFIRE CATEGORIZATION

Upon identification of a wildfire, the regional manager will categorize the wildfire severity based on the following criteria (see Chapter X for additional details):

- Category 1: Small/Local – Wildfire restoration period is 1-2 days (<100 trees) with minimal customer impact
- Category 2: Medium/Impactful – Wildfire restoration period is 3-10 days (100-2,000 trees)
- Category 3: Large/Significant – Wildfire restoration period is >10 days (>2,000 trees)

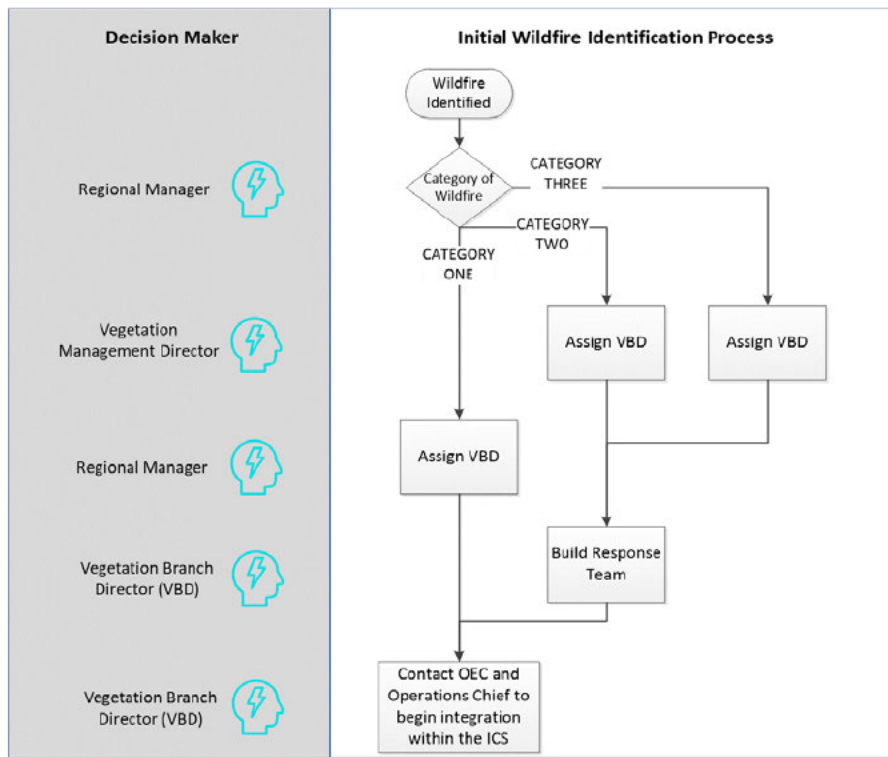


Figure 1: Initial Wildfire Identification Process

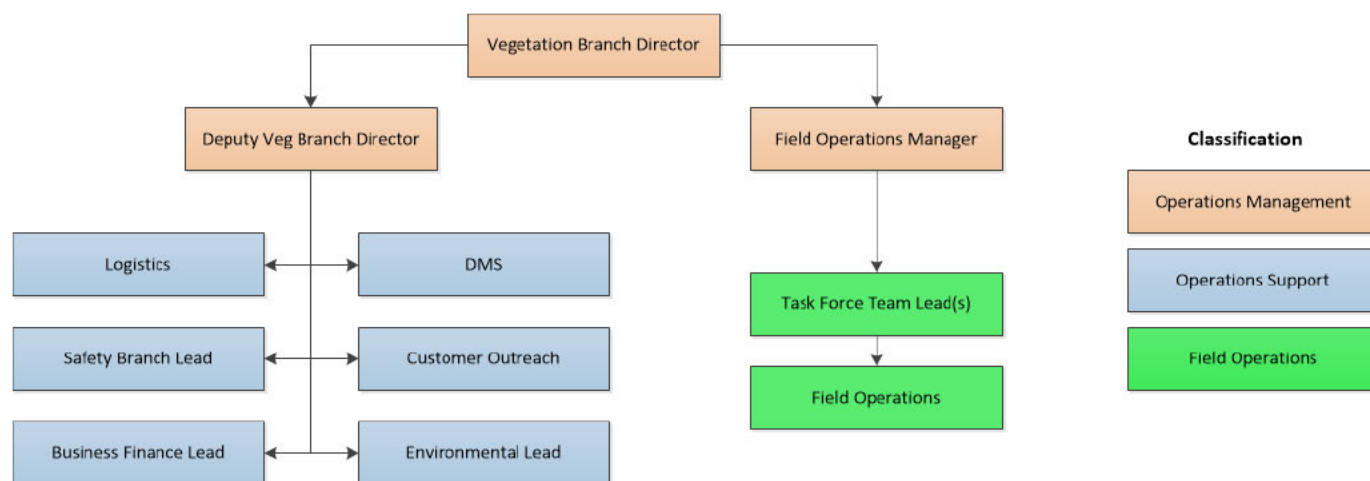
### 3. WORK FUNCTION CLASSIFICATIONS

VM major emergency response work is classified into one of three groups; Operational Management, Field Operations and Operational Support. The majority of Contractor resources are in field operations. During large events with significant impacted infrastructure, VM will mobilize operational management and support resources. These classifications are referenced in the table below with related core work functions.

Classification	Work Function
Operations Management	Vegetation Branch Director, Deputy Vegetation Branch Director, Field Operations Management, and Task Force Lead
Field Operations	Pre-Inspectors, Ground Crews, Tree Crews, Quality Control, and Field Supervision
Operational Support	Database Management Specialist/Logistics, Safety, Environmental and Customer Outreach

### 4. VM WILDFIRE BRANCH ORG CHART

As discussed above, the Vegetation Management Branch will feed into the greater PG&E Incident Command Structure using the organization structure below. Task Force Leads are responsible for the Field Operations positions (PI, Ground Crews, Trees Crews, QC and Field Supervision) assigned under them. For large fire events there should be multiple Task Force Lead(s) assigned geographically. VBD is responsible to perform all the duties of positions that report to them until those positions are assigned.



## 5. WILDFIRE ROLE IDENTIFICATION

Depending on the categorization of the wildfire, the VBD will identify the resources assigned to specific wildfire response roles. Note: it is not mandatory to fill these roles, the VBD has discretion based on what is needed to implement operations objectives.

Roles	Wildfire Category		
	Category 1	Category 2	Category 3
Vegetation Branch Director (VBD)	X	X	X
Deputy VBD		X	X
Field Operations Manager		X	X
Business Finance Lead			X
Logistics Lead	X	X	X
Database Management Specialist (DMS)	X	X	X
Safety Branch Lead		X	X
Task Force Team Lead		X	X
Environmental Lead			X
Customer Outreach Lead			X
WWRP Project Manager			X

The deployment of Safety, Environmental and Customer Outreach Leads is recommended for large events to ensure coordination with fire agencies and PG&E Customer Lead for public distribution.

## 6. HAZARD TREE AND RESOURCE FORECAST

Each wildfire event will be evaluated initially by the VBD to determine the size and timing of resources required. The Hazard Tree Forecast is first developed at a high level based on input from the following:

- Local Knowledge
- Fire Maps, GIS, Google Earth and Maps+
- M&C Assessment

- PMD
- News Reports

Post determination of the high-level forecast, an analytical approach shall be taken, multiplying the following three estimated metrics for each circuit, adding up all impacted circuits.

- 1) **Impacted line miles** – define by each individual circuit impacted.
- 2) **Tree density/mile** – dependent of forecast type again by circuit impacted.
- 3) **Percentage of trees impacted** – dependent of the fire intensity / impact by circuit.

Example: 10 Impacted line miles x 1,000 tree density / mile x 50% impacted trees = 5,000 hazard trees

The forecasted hazard trees will then be used to estimate the resources required (per position) by using the below reference table.

Function	VM Branch	Positions	2K Trees
Operations Management	Task Force Lead	Supervisor Consulting Utility Forester	2
	Field Operations Manager	Project Manager	1
		Project Coordinator	1
Field Operations	PI / QC	Pre-Inspector	24
		Quality Control Lead	6
	Ground Crews	Groundman / Labor	12
		Skilled Labor	12
		Traffic Control / Flagman	6
		Chainsaw Operator	24
	Tree Crews	Apprentice Climber	6
		Groundman / Labor	24
		Climber	24
		Faller Hazard Tree Specialist	16
		Equipment Operator level	24
	Field Supervision	Working Foreman	24
		Field Supervisor	6
		General Forman	3
Operational Support	DMS	Database Management Specialist	1
	Logistics	Project Admin / GIS Specialist	1
	Customer Outreach	Filled by PG&E VM Employee	1
	Environmental	Environmental / Cultural Lead	1

Note: Numbers are people not Crews

#### KEY REVIEW ITEMS:

- Defining the size of the event will affect incident phase impact – Example: Wildfire Wood Removal Program.
- The complexities of staffing assignments are directly related to VM Wildfire Category levels.
- Tree Forecast Accuracy is critical – need to at least provide a range at start of the event.
- Assign staff proportionally across the three work classifications.

Refer to each position's Roles and Responsibilities at the beginning of each incident.–

**Chapter 2 - APPENDIX:**

Ref #	Document Title	Document Link
2.1	Incident Report Form	<i>Incident Report Form</i>
2.2	Task Force Lead – Tailboard	<i>Tas– Force Lead - Tailboard</i>
2.3	Strike Team Lead – Tailboard	<i>Strike Team Lead - Tailboard</i>
2.4	PSC Wildfire Tailboard	<i>PSC Wildfire Tailboard</i>

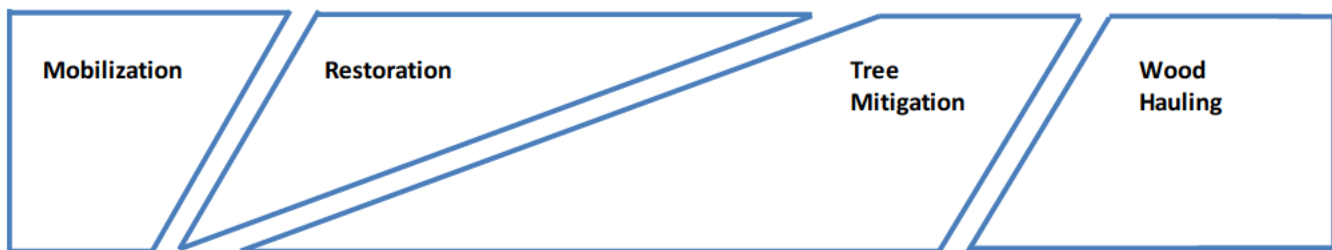
## Chapter 3 – OPERATIONS

### WHAT IS IMPORTANT

- 1) On-board ALL contractors thoroughly BEFORE they begin working the event.
- 2) Understand the overlap between VM “Working” Incident Phases and the priority of each.
- 3) Assign Task Force Lead(s) to geographic areas.
- 4) Assign crews to either tree felling operations or debris cleanup depending on the skill level.

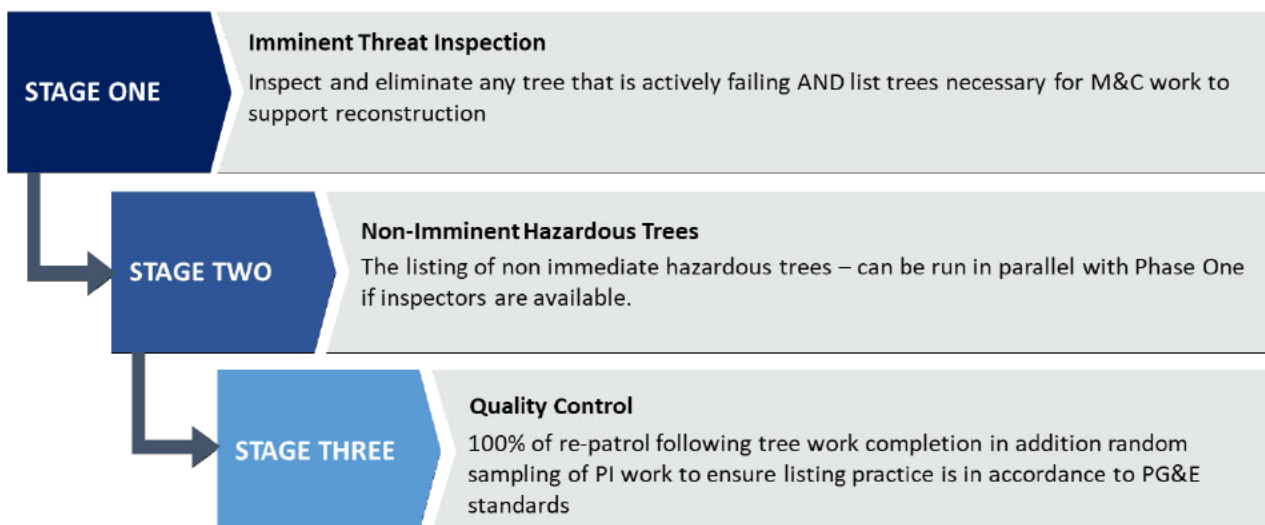
### 1. OVERVIEW

Field Operations encompasses the execution of the four “Working” Incident Phases. These phases overlap in timing which will require pre-planning and setting the appropriate prioritization.



### 2. STAGES OF INSPECTION

Throughout the “working” incident phases three types of VM inspections which will take place. The duration of each phase will vary due to timeline dependencies such as CalFire clearance / accessibility, availability of Pre-inspectors, and the volume of damage or fire footprint.



### 3. ACTIVATION PHASE

This phase consists of mobilizing staff and field resources based on estimated fire impact from Chapter 2. Utilization of local Primary Contractors resources is critical to support PG&E's Restoration efforts.

- Design and communicate the VM Branch Organization to the EP&R Program Manager.
- Rely on the EP&R Program Manager to assist with obtaining Secondary Contractor resources.
- Demobilize Primary resources as Secondary resources arrive.

After select OEC ICS staff have determined the Category notification of a wildfire, in the event of a Category 3 Wildfire notification the VM Logistics Lead may make a request to the primary contracting companies for Secondary Contractor resources. The mobilization of Secondary Contractor resources as quickly as possible will minimize the impact on routine operations.

These resources are deployed to the event zone, trained on safety protocol in addition to event specific information, and validated as qualified by the PG&E appointed Deputy VBD that reviews incoming contractor Training and Qualification forms.

#### 3.3.1 Validation of Contractor Staffing Qualifications and Equipment Standards

Below is a table outlining the qualification and training requirements required for tree crew. In addition, it is a requirement for Sourcing to request that the contracting companies provide confirmation that they have run criminal background checks on all crew members before the resources can begin working for PG&E.

Contractor Minimum Standards	Category 1 Wildfire	Category 2 Wildfire	Category 3 Wildfire
Restoration Forecast	1-2 days	3-10 days	>10 days
Crew Size	2 FTEs per tree crew min.		
Requires utilization of VM Secondary Contractors?	No	No	Yes
PI Supervisor Minimum Qualifications	<ul style="list-style-type: none"> <li>• Two (2) years of satisfactory experience working on electric utility projects</li> <li>• ISA Certified Arborist or Registered Professional Forester</li> <li>• Approval by PG&amp;E representative</li> </ul>		
PI Minimum Requirements	<ul style="list-style-type: none"> <li>• One (1) year of related arboricultural experience <u>OR</u></li> <li>• 2-year or 4-year college degree in a related field</li> </ul>		
Tree Crew Field Supervisor Minimum Qualifications	<ul style="list-style-type: none"> <li>• Minimum of 5 years' experience in line clearance tree work and have been a qualified line clearance tree worker (equivalent experience may be acceptable at the discretion of the Vegetation Branch Director or Deputy VBD)</li> </ul>		
Foreman Minimum Requirements	<ul style="list-style-type: none"> <li>• Minimum of 18 months experience in line clearance tree work and is a qualified line clearance tree worker</li> <li>• Capable of climbing and possess a valid certification document issued by Contractor (equivalent experience may be acceptable at the discretion of the Vegetation Branch Director or Deputy VBD)</li> </ul>		
Patrolman Minimum Requirements	<ul style="list-style-type: none"> <li>• Familiar with the requirements of line clearance tree pruning</li> <li>• Possess good customer contact skills</li> </ul>		
Climber Minimum Requirements	<ul style="list-style-type: none"> <li>• Minimum 18 months experience in line clearance tree work</li> <li>• Possess a valid certification document issued by Contractor</li> </ul>		

	<ul style="list-style-type: none"> <li>State approved training requirements to work within 10 feet of energized conductors</li> </ul>
Groundman/Flagman	A crew member other than a PT, CL or AC working under the direct supervision of the FM.
Language Requirement	All senior leadership must be able to read and interpret the language of the crew as well as English.
Transportation	Contractor shall furnish transportation.
Tools & Equipment	Contractor shall furnish tools and equipment.

*Table 1: Validation of Contractor Staffing Qualifications and Equipment Standards*

### 3.3.2 Onboarding

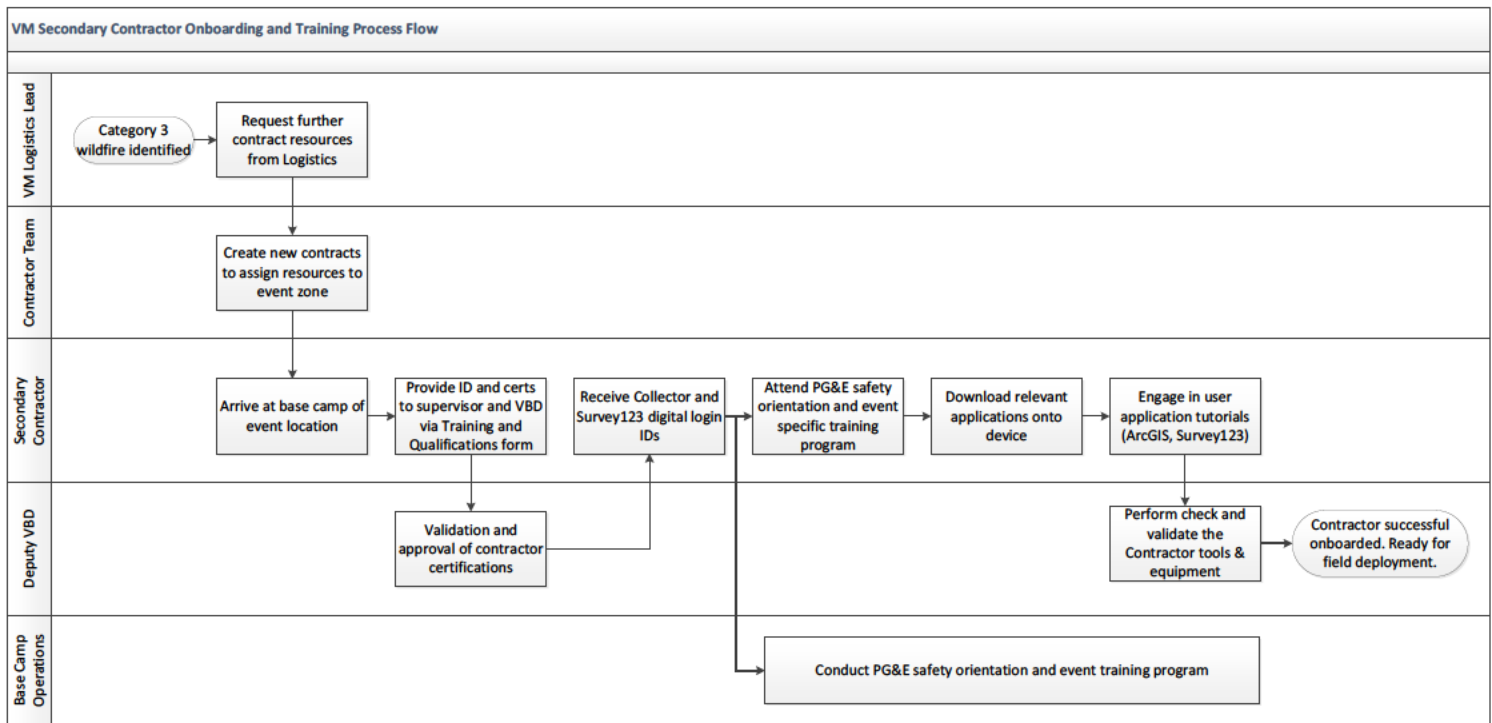
Onboarding is a critical component of the Activation phase and is required for all VM personnel supporting the fire response. Do not sacrifice thorough onboarding and training to release resources to the field.

- Utilize the training material for onboarding and document attendees.
- Utilize tailboard material in the appendices.
- Tailboard/Training focuses on:
  - Establishing a safety culture (Chapter 5 – Safety).
  - Reporting Requirements.
  - Customer Interaction.
  - Field procedures and Roles and Responsibilities.
  - BMP Environmental protection measures.

The process flow below identifies the necessary steps in order for successful onboarding. As Primary Contractors have already been integrated into the PG&E network they should have already received their digital login credentials and have already downloaded the necessary tracking applications.

All contractors, Primary and Secondary will go through the safety orientation and event specific training primarily consisting of reviewing safety tailboards (covered in **APPENDIX A – FORMS AND ADDITIONAL INFORMATION** Items 14-20), reviewing the scope of work, and additional items specific to the event.





#### 4 RESTORATION PHASE

This phase is focused on supporting M&C's restoration efforts; as such this will take a higher priority than VM routine operations. This will be the most chaotic phase as you bring in resources simultaneously supporting M&C. It is critical that adequate resources are dedicated to support M&C requests as timely as possible. The majority of PI and Tree Crew resources can remain dedicated to the Compliance Phase. This Work typically falls into three main categories:

- 1) Clearing vegetation for access to work locations.
- 2) Clearing vegetation for "Re-conductoring".
- 3) Work-site hazard tree mitigation.
  - Wildfire Wood Removal Program is not implemented during this phase.

Tasks to focus on:

- Attend ICS Operations daily meeting to align VM priorities with M&C's action plan.
- Bring on additional VM VPMs to assist, preferably individuals that can stay for 2 weeks.
- Assign Task Force Leads to distinct geographic areas with the following responsibilities:
  - Good situational awareness.
  - Coordinate with M&C field leads.
  - Customer outreach (i.e. questions, refusals).
  - Provides/coordinates safety oversight.
  - Provide/coordinates Quality Control.
  - Assigns supervisors to geographic areas – as span of control requires.
  - Assigns work to Pre-Inspection, Tree Crews and Ground Crews.
  - Attempt to assign the same field resources to the same Task Force Lead.
  - Excess resources can be assigned to the Compliance Phase.

- Positioning of water trucks.
- Resource and Equipment tracking starts as Contractors are on-boarded.
  - Daily Reporting defined in Chapter 7 – Financial Process are entered by DMS Lead.
- Stagger crew assignment to meet time-off requirement and ensure adequate coverage through weekends.
- Ongoing oversight of Safety and Quality Control.

Dispatching crews to fill vegetation requests, typically begin with M&C calling Central Dispatch or the VBD or Task Force Lead directly (preferred). Initial phone calls will come into the centralized number. As the event progresses M&C leads will become familiar with the Task Force Leads and then go directly to that person. Establish a centralized dispatch number utilizing one of the “Burner” phones. These phones can be handed off during shift changes. The individual answering the centralized phone will need to establish a dedicated log book for calls.

**NOTE: THE KEY TO THE RESTORATION PHASE IS THE ASSIGNMENT OF STRONG TASK FORCE LEADS TO GEOGRAPHIC AREAS.**

## 5 COMPLIANCE PHASE

This phase is concentrated on listing and removing hazard trees and does overlap with the Restoration Phase. For the most part this is done independent of M&C. The Task Force Lead(s) should prioritize line segments based on where M&C will be performing restoration next. It is safer and easier to fell trees before the conductors are put up. Utilize excess crews, not supporting the Restoration Phase, for this phase. Assessment and Tree Crew Work consists of:

- 1) **PRE-INSPECTION** Identifying, marking and listing trees that need to be removed (Pre-Inspection).
  - Tree Tracking process – see Chapter 10 - Technology Applications.
  - Collector must be used to record inspection and tree work identified. Refer to EVM program guidance documents on the use of Collector. EXCEPTIONS MUST BE APPROVED BY THE VM REGIONAL MANAGER.
- 2) **TREE WORK** Removing listed trees (Tree Crews – Fellers, Climbers and Aerial Lift).
  - Tree Crews priority is to remove or top listed trees.
  - Avoid utilizing crews that can remove trees from debris cleanup.
  - Collector must be used to record tree work completion. Refer to EVM program guidance documents on the use of Collector. EXCEPTIONS MUST BE APPROVED BY THE VM REGIONAL MANAGER.
- 3) **DEBRIS REMOVAL**
  - Utilize Ground Crews to follow behind Tree Crews to perform this work (chipping, loop and scatter).
  - They should follow a safe distance behind the tree crews but should clean up debris within 24-48 hours.
  - Collector must be used to record tree work completion. Refer to EVM program guidance documents on the use of Collector. EXCEPTIONS MUST BE APPROVED BY THE VM REGIONAL MANAGER.
- 4) **QUALITY CONTROL**
  - Utilize Collector to identify work and perform audits of pre-inspection, tree work, and debris clean up.

- Refer to Appendix 3.9 Quality Control Plan – Template and consult with VM Quality Control to tailor QC to the event.

VBD & Task Force Lead(s) should focus on:

- Quality Control - have an experienced arborist/RPF review listing practice. Perform additional tailboards and training. Expect some customer issues on listing practices when property owners return.
- Safety continues to be a priority; flagging and traffic control will become more important.
- Initiate VM logistical support after the Base Camp is de-mobilized (see Chapter 4 – Logistics).

## 6. WWRP PHASE

This phase is dependent of executive management approved see Chapter 9 - Wood Removal for guidelines.

- Recommended to assign one Contractor to oversee all wood removal work by fire event.

## 7. VEGETATION DEMOBILIZATION PHASE

Understand that VM will not be demobilizing on the same schedule as M&C. See Chapter 4 (Logistics) for guidelines. Demobilize routine crews first. If routine schedule is being impacted, then focus on less productive crews. Maintain a good balance between Tree Crews and Ground Crews.

## 8. OFF-BOARDING

Most contractors supporting wildfire response will be returning to their normal duties working for PG&E. However, new contractors that were brought on to support wildfire response need to be off-boarded. Vegetation Branch Director and the VM Safety Branch Lead are responsible for off-boarding contractors who will no longer be working for PG&E. Refer to HR-9108P, Off-boarding A Non-Employee Worker Procedure.

### KEY REVIEW ITEMS:

- Routine resources can be utilized for the entire event if it doesn't impact routine operations.
- Tree Crews are a specialized resource for mitigating trees, avoid utilizing for debris cleanup.
- To the extent possible assign the same individuals to a Strike Team for consistency.
- Make your PI, Tree and Ground Crews efficient.
  - Establish start time.
  - Establish report to field time to eliminate crews sitting in the yard.
  - Have adequate Span of Control with Task Force Leads.
  - Make production rates transparent.
  - If field personnel report to the PG&E base camp they will be less efficient.
- Leverage the CEMA Extended Debris Management (EDM) team for setting up the Wood Removal Program.
- Fluidity - make adjustments to the organization.
- Establish VM Processes (Contacts/Phone #s).
- Logistical Considerations - Chapter 4.
- Review Staff Roles & Responsibilities with attention to incident phase changes.
- Adherence to work plan is critical for correct dispatching to requested areas.

- The temptation is to rush and put Pre-Inspectors in the field (TRAIN/QC/TRAIN/QC).
- By training and a good QC program you can be in a defensible position when calls are disputed.

### Chapter 3 - APPENDIX:

Ref #	Document Title	Document Link
3.1	Daily Schedule	<i>Daily Schedule - Template</i>
3.2	Report Email - Template	<i>Report Out Email - Template</i>
3.3	Daily Contractor Roster Check In-Out	<i>Daily Contractor Roster Check In-Out</i>
3.4	USFS Marking Guidelines	<i>USFS Marking Guidelines</i>
3.5	Wildfire Tree Marking Guidance	<i>Wildfire Tree Marking Guidance</i>
3.6	Debris Management	<i>Debris Management - Tailboard</i>
3.7	Wildfire Felling – Cleanup BMP Tailboard	<i>Wildfire Felling – Cleanup BMP Tailboard</i>
3.8	Assessing Fire Damaged Trees	<i>Assessing Fire Damaged Trees</i>
3.9	Quality Control Plan - Template	<i>Quality Control Plan - Template</i>

## Chapter 4 - LOGISTICS

### WHAT IS IMPORTANT

- 1) Plan ahead.
- 2) Engage vendors to resolve logistical requirements.

### 1. OVERVIEW

- Category 1 & 2 fires will require minimal logistical support due to the smaller amount of tree work and number of mobilized individuals. Category 3 fires will normally be supported by an established Base Camp for the first 10 – 20 days. If a Base Camp is established, immediately start looking for logistical support options for when it is de-mobilized. Experience shows that VM will be responsible for logistical support after the Base Camp is de-mobilized.

### 2. CATEGORIES

- The logistics activities can be grouped into three categories: Staging Areas, Lodging, and Office Work Space.

#### 2.1 Staging Areas

- Determine what VM needs are without the PG&E Base Camp.
- Locate staging area(s) as close as possible to the work.
- Preference is for Contractors to find their own staging areas.
  - Potential for one Contractor to “run” a VM staging area for all VM Contractors.
  - Engage PG&E Logistics early in the process for their assistance.
- Define items required for VM staging areas:
  - Lighting.
  - Sanitation (porta-potties).
  - Security.
  - Mud rails at entry and exit points.
  - Rock or chips.
  - Water truck for dust control and field support.
- Consult with VM Environmental Lead, if any questions.
- Costs incurred by Contractor are negotiated as a “Pass Through.”

#### 2.2 Lodging

- Contractor’s responsibility to find as close to staging area as possible.
- Lodging costs are included in Contractor’s Per Diem rate.
- Travel time to and from staging area is not billable as defined in Contractors CWA.

#### 2.3 Office Space

- Preference would be to utilize a PG&E facility(s) such as a designated conference room in a service center.

- Some contractors have mobile offices that can be contracted for use by VM.
- Airbnb / Vacation Homes can double as office space and lodging.
  - DO NOT EXPENSE OFFICE SPACE ON YOUR C/P CARD.
  - Have a contractor lease the space and pass through expense cost.
- Utilize sourcing if no other office space can be found.

### **3. AVAILABILITY OF SUPPLIES**

VM supplies must be ready to roll out immediately for tree work to begin. Supplies are pre-staged in Northern (Chico) and Southern (Merced) locations. Each location should be managed by the three Regional Managers associated with that depot as follows:

- Regional Managers of the Sierra, North Valley, and North Coast regions will control the Chico depot. A clerk in the North Valley region will be responsible for making sure supplies are stocked and replenished in the Chico depot.
- Regional Managers of the Central Valley, Central Coast, and Bay regions will control the Merced depot. A clerk in the Central Valley region will be responsible for making sure supplies are stocked and replenished in the Merced depot.

A full list of all materials stored in both locations will be provided at the start of wildfire season. The following list the core materials currently stored:

- Paint
- Flagging Tape
- A-Frame for community outreach
- Brochures
- Signage and sign boards
- White board / cork boards
- Folding chairs
- Burner Phones
- Filing Cabinet
- On-Boarding Material
- Wood Removal Forms
- Various general office supplies

#### **KEY REVIEW ITEMS:**

- If PG&E sets up a Base Camp, start planning during restoration phase before it is demobilized
  - Work with PG&E Logistics/Sourcing at the start of the event
- Logistics lead is not a fulltime responsibility and can be combined with another position such as the DMS or Admin Lead.

## Chapter 5 - SAFETY

### WHAT IS IMPORTANT

- 1) Establish a safety culture by early implementation of safety oversight.
- 2) Build your team and coordinate your different safety assets.
- 3) Ensure ongoing evaluation and communication of safety observations (see Safety Wheel).

### 1. VM SAFETY OVERVIEW

The first priority of PG&E and VM Operations is the safety of the public, employees and contractors. Establish a safety culture by:

- Mobilizing your safety team early.
- Ensure safety tailboards are included for all contract's onboarding (see Appendix).
- Set logistics for frequent safety observations.
- Analysis of observations and incidents to identify trends throughout the event.
- Communicate trends / event issues with new tailboard during the event.

### 2. BUILDING VM BRANCH SAFETY TEAM

Safety team size is directly related the size of the event.

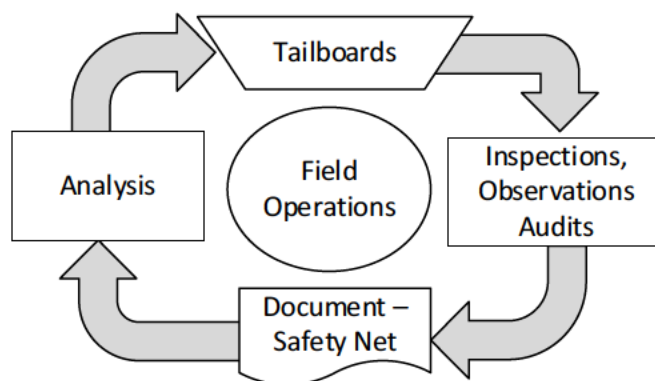
- Establishing a Safety Lead should be a priority, particularly in a Category 3 fire (see Safety Lead Roles and Responsibilities).
- There are several resources that can be available during an event. To the extent possible it is important to coordinate their efforts and observations.
  - VM Routine auditors (i.e. DRG), are the first line of defense as they are easily mobilized.
  - PG&E Corporate Field Safety.
  - PG&E Corporate Contractor Safety.
  - 3rd Party Emergency Contractors (i.e. Atlas Field Services, NATS).
  - Contractor imbedded Safety Specialist.
- There are five distinct Safety positions that may be mobilized during the event are listed in the below table. This matrix may assist in sizing your team based on the fire category level.

Positions	Define	Resources	Ratio*	Category		
				Small	Medium	Large
VM - Safety Branch Lead	Supports Vegetation branch organization	VM Safety Team	1 / 100		X	X
Core Safety Inspector	Check safety standards with routine safety audits	DRG, PG&E or 3rd Party	1 / 20	X	X	X
Specialized Safety Inspector	Review climbing, rigging or chainsaw work practices	Certified Tree Care Safety Professional	1 / 20		X	X
Lead Trainer / On-Boarder	Coordinates all Safety training for one event	DRG or Atlas	1 / 50		X	X
Traffic Safety Inspector	Review all safety procedure with traffic control in place	Local County resources	1 / 100			X

Note: Ratio is per all Ground and Tree Crew individual contractors not per Crews

### 3. COORDINATE SAFETY TEAMS WORK

The Safety Wheel begins and end with Tailboards.



- Start with standard and event specific tailboards during onboarding.
- Begin field inspections, observations and safety audits.
- Establish and train on a standard auditing platform (i.e. Audit Sheets, Safety Net) to ensure proper documentation and trending analysis.
- Review all safety incidents and observations to identify trends and develop tailboards.
- Communicate lessons learned through new event tailboards.

### 4. SAFETY REQUIREMENTS

The Contractor is responsible for evaluating all aspects of the work, including site risks, minimizing or eliminating exposure to those risks, and completing the work in a safe manner. Ensure proper rest periods by defining working hours and days.

Although it is the responsibility of the Contractor to manage their crews' work schedules, PG&E must have control in and govern the number of hours worked. The following working practices should be enforced:

- Typically, crews can safely work up to 12-hour days and the first 10-14 days consecutively.
- Stagger non-working days within your workforce if support is expected 7 days a week.

During previous wildfires incidents have been found whereby contractors have worked back-to-back shifts of 16 hours or more.

#### KEY REVIEW ITEMS:

- Know the distinct safety duties required throughout the different incident phases.
- Ensure proper rest periods by defining working hours and days.
  - Typically, crews can safely work 10-hour days and the first 10-14 days consecutively.
  - Stagger non-working days within your workforce if support is expected 7 days a week.
- Document tailboards and contractor attendees.
- Focus audits on areas of concern based on audit results.
- Contractor shall be required to ensure that crews have appropriate PPE in good working order.
- Verify Contractors / Subcontractors have proper certifications/qualifications.
- Agency communications with Public Safety Specialist [REDACTED]



**Chapter 5 - APPENDIX:**

Ref #	Document Title	Document Link
5.1	Fire Risk On-Board – includes Wildfire Hazard Tree Awareness - Tailboard	<i>Fire Risk On-Board Tailboard</i>
5.2	Wildfire Smoke – Tailboard	<i>Wildfire Smoke - Tailboard</i>
5.3	Smoke Protection use of Mask or Respirators - Tailboard	<i>Smoke Prevention use of Masks or Respirators - Tailboard</i>
5.4	Heat Illness Prevention – Tailboard	<i>Heat Illness Prevention - Tailboard</i>
5.5	Burned Out Stumps – Tailboard	<i>Burned Out Stumps - Tailboard</i>
5.6	Fatigue – Tailboard	<i>Fatigue - Tailboard</i>
5.7	Contractor Qualifications and Training Form	<i>Contractor Qualifications and Training Form</i>

## Chapter 6 – CUSTOMER OUTREACH

### WHAT IS IMPORTANT

- 1) Identify and build your team.
- 2) Know the message we are trying to communicate.
- 3) Know the methods we utilize to communicate the messages.

### 1. OVERVIEW

Communications and customer outreach are a critical aspect of VM's wildfire response. In order to be efficient and effective both internal and external communications need to be clear and aligned.

### 2. IDENTIFY AND BUILD TEAM

Staffing will be driven by the impact of the fire and Category Level (1, 2 or 3) - see STAFFING Chapter 2. The recommended staffing levels and candidates are shown in Appendix # 6.1.

### 3. FIELD COMMUNICATIONS PLAN

A Communications plan should be prepared for each operational period and should include:

- Daily Incident Action Plan
- Incident Radio Communications Plan (if/when available)
- List of command staff should include name, role/title, and cell phone number

### 4. CENTRAL COMMAND CENTER FOR CREW DISPATCH

Implement one central command center by utilizing a single mobile telephone in order to dispatch VM crews immediately to the required site. In the past, nearby VM crews were utilized, which at times was inefficient; however, the use of a single mobile phone to receive texts and calls from responders identifying areas where veg work is required can lead to greater control and management of crews.

### 5. COORDINATION OF OUTGOING COMMUNICATIONS

It is important we have a consistent message. The most frequently asked questions have been pre-scripted. Pre-scripted questions fall into two categories: Standard and Incident Specific Materials.

**Standard Materials:** Apply to any incident and need no editing.

Material Type	Topic	Details
Brochure	VM Wildfire Response	Brief VM Overview
		Wildfire hazard tree identification
		Services/Programs provided: wildfire hazard tree identification, wood management, wood chips.
		What customers can expect
	Wildfire Hazard Tree Identification	How trees are identified and marked
		What Customers can expect

	Wildfire Wood Removal Program (WWRP)	Wood qualifications
		Wood treatment options
		What Customers can expect
	Know Your Overhead Lines	Learn what lines are overhead; transmission, distribution, service wire, cable and phone.
	Replanting After A Wildfire	Right tree right place, plan before you plant
		Transmission and distribution planting, both within and outside of High Fire Threat Districts
A-Frame	Signs with five brochure racks	Specific to created brochures
Placards	Hazardous Tree work	Informs customer tree falling in area
Fact Sheets	VM Wildfire Response	Same content as wildfire response brochure, formatted for posting in communities or basecamps.
<a href="http://www.pge.com/treesdroughtandwildfire">www.pge.com/treesdroughtandwildfire</a> -- need to request URL		

**Incident Specific Materials:** Apply to a specific incident that requires editing to the template.

Material Type	Details
VM Incident Report (for internal reporting)	Where work is occurring; circuit and communities
	Estimate of damaged trees
	Inspection in progress (Y/N)
	Tree Work in progress (Y/N)
	Wildfire Wood Removal Program activated (Y/N)
	Wood Chips available (Y/N)
	Customer Outreach in progress (Y/N)
	Coordination with which LOBs (list A-Frames, customer contacts, customer letters, etc.)
Customer Letter	LCE
Customer Email	LCE
Talking Points	External Communications
News Release	External Communications
<a href="http://www.pge.com/treesdroughtandwildfire">www.pge.com/treesdroughtandwildfire</a> -- or coordination with Wildfire Commitment page owners.	

Q&A Document for vetted questions and answers are shown in appendix 6.2. Any questions outside of these should be vetted through the appropriate stakeholder(s).

## 6. COMMUNICATION METHODS

VM has several different methods in which to communicate our message depending on the audience and stakeholder communicating the message. The different methods fall into two categories: Pre-printed and Templated.

**Pre-printed:** applies to any incident.

Material Type	How VM Communicates Our Message
Brochure	VM Wildfire Response
	Tree Identification
	Wildfire Wood Removal Program
	Know Your Overhead Lines
	Replanting After Wildfires
A-Frame (4 versions each)	VM Wildfire response with 4-5 brochure racks
	Wildfire Wood Removal Program (WWRP)

	Tree Identification
	Replanting After Wildfires
Placards	Hazardous tree work in area
Talking Points	For Contractor use

**Templated:** Requires some modification for the specific incident.

Material Type	How VM Communicates Our Message
PG&E Web Site	Update with incident specifics Coordination with Wildfire Commitment page owner
Call Center	Call Scripts developed
Customer Emails	Customized for each incident
Customer Letters	Customized for each incident
News Release	Communicate to VBD the timing of each
Talking Points	Used by VM Branch (Community Meeting) and Contractors (in the field)

A description of each method and timing of when it would be utilized is shown in appendix 6.3.

## 7. CORE MESSAGING

Need to ensure a standard message is being communicated out across all delivery method.

What we want to communicate	Collateral													
	Talking Points	PG&E Website	News Release	Brochures Q&A	Brochure Wood Removal	Signage	Contractor talking points	GenRef	Community Meetings	Flyers/Handouts	Social Media	YouTube	Letter (Generic)	Letter (Wood Removal)
What PG&E is doing	X	X		X		X	X	X	X				X	
Why PG&E is doing it	X	X		X		X	X	X	X				X	
What can you expect	X	X		X		X	X	X	X				X	
When you can expect it to happen	?	?				?	X	?	X				?	
How can you get more information	X	X		X		X	X		X				X	
Services Available	X	X		?		X	X	X	X				X	
Concerns with powerlines	X	X		X		?	X	X	X			?	X	X
How PG&E evaluates & marks trees	X	X		X		X		?	X				X	
Who PG&E is working with									X				?	
PG&E's wood removal program	X	X			X			X	X					
Where PG&E is working									X				?	X
How much work is PG&E doing									X				?	X
Who is doing the work for PG&E						?			X				?	

### Who owns and uses the material

External Communications (Media)	O		O				O				O	O			O
Public Affairs (GovRel)	X								O						
Field Personnel	X			X		X	X		X	X				X	
VM Communications (Lisa Randle)		O		O		O								O	
Call Center	X							O							
Local Customer Experience										O			O	O	

**KEY REVIEW ITEMS:**

- Consider scheduled calls with your communications team (i.e. every Wed.).
- Calls will increase in CASEs from customers calling in worried about trees in the wires.
  - To the extent possible avoid utilization of Routine PI.
  - May need to authorize T&M from Routine PI to assist and OT afterhours and weekends.
  - VM clerical can assist with increased case load and can charge to event orders.
  - Routine PI and VM clerical can bill fire related CASE time to the fire order.
- Consider the timing of News Releases and the impact it will have on Operations.

#### Chapter 6 - APPENDIX:

Ref #	Document Title	Document Link
6.1	Customer Outreach Team Matrix	<i>Customer Outreach Team Matrix</i>
6.2	Wildfire Questions & Answers	<i>Wildfire Q&amp;A</i>
6.3	Communications Methods & Material Description	<i>Delivery Method and Material</i>
6.4	Customer Fire Letter Template (Updated per incident)	<i>Customer Fire Letter Template</i>
6.5	Defensible Space Brochure (Recreating as a flier for posting in areas and add message point to Tree Identification Brochure)	<i>Defensible Space Brochure</i>
6.6	Emergency Work Communications (Old talking points use as Reference ONLY)	<i>Emergency Work Communications</i>
6.7	Emergency Work Notice (Need to update)	<i>Emergency Work Notice - Written</i>
6.8	Emergency Notice – Placard (New version in draft form)	<i>Emergency Work Notice</i>
6.9	Know Your Overhead Lines	<i>Know Your Overhead Lines</i>

## Chapter 7 – ENVIRONMENTAL

### WHAT IS IMPORTANT

- 1) Understand where VM work creates the most potential for risk.
- 2) Know the resources available to assist in mitigating risks.

### 1. OVERVIEW

VM work should be conducted in a manner that avoids or minimizes the impact on the environment.

### 2. ENVIRONMENTAL CONSIDERATIONS

For larger wildfire events, PG&E establishes an Environmental Support team. Their contacts are available through the OEC. The VM Environmental Lead should utilize these resources to coordinate all environmental event issues. For smaller sized events, the VM Environmental Lead should contact [REDACTED] (VM Environmental and Agency Liaison) directly to address the below Environmental Risks.

These resources can confirm a records check has been performed for ALL fire events. Known or newly discovered Cultural & Historically sensitive areas should have an environmental specialist evaluate the site to avoid damage. Reference VM BMP numbers 8 to 12 for Water Quality /Sediment Control and numbers 13 to 22 for the Environmental / Biological BMPs (Appendix 7.1).

**Debris in Riparian Areas:** Crews are trained during the onboarding process not to fell trees into or leave debris in riparian areas and adhere to BMP 16. Constant QC to review work is required to ensure riparian areas are kept clear. If trees or debris must be temporarily dropped or felled into riparian areas, they must be removed immediately.

**Cultural & Historically Sensitive Areas:** This is a resource that must be protected on private and agency lands. PG&E construction may engage a cultural specialist to identify sensitive areas within the fire footprint. If so consult with them for sensitive resources near work areas. Many Professional Service Contractors (PSC) overseeing fire restoration work are trained in cultural resource identification and protection measures. They may be tasked with conducting cultural tailboards – see BMP 20.

**Erosion:** Normally VM hand work activities do not create new erosion risks. Erosion control measures must be implemented in areas where dozers or skidding equipment are used to move or deck logs.

**Sensitive Plant Species:** This is normally not a serious consideration because the fire has most likely destroyed ground vegetation in the area trees are being worked. However, this may be tailboard on USFS lands.

**Endangered Species:** This is normally not a serious consideration because the fire has most likely expelled most animals. If there are sensitive resources or issues the local, VBD will be notified.

### 3. POTENTIAL RESOURCES

The following resources are available during fires:

- VM Environmental and Agency Liaison [REDACTED]
- VM Environmental Support Group [REDACTED]
- PG&E Base Camp Cultural and Environmental Specialist.
- Registered Professional Foresters (RPF) assigned to support the fire.

### 4. QUALITY CONTROL (QC)

Incorporate environmental reviews into the overall QC plan.

#### KEY REVIEW ITEMS:

- This position would most likely not require fulltime support.
- RPF is a good candidate for this position.

#### Chapter 7 - APPENDIX:

Ref #	Document Title	Document Link
7.1	Environmental BMPs (English)	<i>Environmental BMPs</i>
7.2	Environmental BMPs (Spanish)	<i>Environmental BMPs (Spanish)</i>
7.3	Cultural Resources	<i>Cultural Resources</i>

## Chapter 8 – FINANCIAL PROCESS

### WHAT IS IMPORTANT

- 1) Understand and adhere to financial process.
- 2) Utilize only approved Primary and Secondary Contractors.
- 3) Review VBD/VPM responsibilities for invoice review and approvals.
- 4) Know the Contractor Emergency CWA numbers and event order numbers.
- 5) Review Capital and Expense guidance with field operations.

### 1. OVERVIEW

This chapter provides an overview of the financial process for VM Contractor work performed under the Electric Distribution Major Emergency program – from start (Contractor authorization) to finish (Contractor payment). The PG&E Contract Management Team must be engaged from the beginning of the wildfire. Historically, Primary Contractors with a Master Service Agreement (MSA) have not had enough resources to respond to fires greater than 10-15 days - Secondary Contractors are then required.

### 2. MASTER SERVICE AGREEMENT (MSA)

A Contractor typically has a current Master Service Agreement (MSA) that authorizes the Contractor to perform Work for PG&E. The MSA defines the vegetation work types and equipment required by the Contractor.

### 3. TREE CREW (TC) CHARGING GUIDANCE BY PROGRAM

PG&E “Programs” are managed separately and typically have their own Contract Work Authorization (CWA) document that authorizes the Contractor up to a maximum dollar amount.

- VM Tree Crews Charging Guidelines (*APPENDIX A – FORMS AND ADDITIONAL INFORMATION 8.1*) provided as a program reference.

### 4. CONTRACT WORK AUTHORIZATION (CWA)

Major Emergency program CWAs are created for each Contractor historically utilized to respond to emergency events.

- Annual CWAs allow VM to mobilize Contractor resources immediately as the OEC activates.
- CWA numbers will be communicated to Contractors at the beginning of the next annual cycle.
- 2018-2019 Annual Cycle begins on June 1, 2018 and end on May 31, 2019.

#### 4.1 Pricing Rates:

- **Primary Contractors:** support VM work and utilize defined MSA billing codes and rates for emergency invoicing.
- **Secondary Contractors:** will provide Emergency ONLY billing codes and rates that will be directly referenced in their emergency CWA.
- **Emergency Contractor Pricing:** Unit pricing vs. Time & Materials – Restoration work or imminent threat work will be T&M and remaining units are contractual FPT unit rates.



- See VM Tree Crews Charging Guidelines (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 3.2) provided as a program reference.
- **Out of cycle** CWA request require the VBD to follow the Approval Process Flow Chart (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 8.2).
  - Contractor is required to have a fully executed CWA **BEFORE** approved to mobilize resources.
  - Utilize Major Emergency CWA Request Form (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 8.3) to provide the required Contractor information in a uniform format.

## 5. INVOICE PROCESS:

Contractors are responsible for accurately tracking and documenting their time associated with emergency response. Adherence by all Contractors to the standard process will reduce the time to receive, approve and process invoices for payments.

- Contractor invoices need to be submitted weekly via email to the local VBD for approval.
- Invoices submitted greater than **one month** from the work date are subject for rejection.
- Invoice Process Flow Chart is provided for reference in (Appendix #8.4).
- Contractor CWA and Invoice guidance document (Appendix #8.5) defined this process.

**5.1 VBD RESPONSIBILITIES:** Major Emergency Expense and Capital orders are created for each county impacted by the event when an individual OEC is activated. The expectation is that these Contractor invoices are approved and submitted weekly. If the VBD discovers discrepancies in the invoice submission, they will follow up with the Contractor and VM Emergency Preparedness and Response (EP&R) manager [REDACTED] to resolve timely. This will allow for proper monthly and year-end cost recognition.

The VBD invoice review must include the following;

- Invoice summation page correctly references the Contractors CWA number.
- Cost totaled on summation page matches the detailed backed cost summation.
- List correct Event Name and major emergency Order number(s).
  - Check resource hours and billing rates by position compared to Resource Tracking database.
  - Check equipment hours and billing rates compared to Resource Tracking database.
  - Capital and Expense work is invoiced separately.
  - Capital invoices require Contractor Capital Charging Justification form (APPENDIX A – FORMS AND ADDITIONAL INFORMATION 8.6).
  - Approvals are emailed to [MajorEventsMailbox@pge.com](mailto:MajorEventsMailbox@pge.com).

## 6. CAPITAL AND EXPENSE GUIDANCE

VM Contractor work is primarily considered cost category Expense because the work does not directly involve installing or replacing PG&E assets, which are classified as Capital work.

VM Contractor's work can be classified as Capital **ONLY if BOTH** of the following criteria are met:

- 1) Vegetation work **MUST** directly support PG&E Capital work (equipment replacement work such as broken poles or cross arms, etc.)

**AND**

2) Vegetation work is required for PG&E construction crews to access a job site. This may include vegetation work required to remove hazardous trees or debris that are preventing PG&E construction crews from completing or accessing Capital work.

**KEY REVIEW ITEMS:**

- Review CWA to know Contractor responsibilities.
- Review VBD Responsibilities at the start of each event.
- Ensure that Capital and Expense Guidance is covered in Contractor tailboards.

**Chapter 8 - APPENDIX:**

Ref #	Document Title	Document Link
8.1	VM Tree Crew Charging Guidelines	<i>VM Tree Crew Charging Guidelines</i>
8.2	CWA Request – Approval Process Flow Chart	<i>CWA Request – Approval Process Flow Chart</i>
8.3	Major Emergency CWA Request Form	<i>Major Emergency CWA Request Form</i>
8.4	Invoice Process Flow Chart	<i>Invoice Process Flow Chart</i>
8.5	Contractor CWA and invoice Guidance	<i>Contractor CWA and Invoice Guidance</i>
8.6	Contractor Capital Charging Justification form	<i>Contractor Capital Charging Justification Form</i>

## Chapter 9 – WILDFIRE WOOD REMOVAL PROGRAM (WWRP)

### WHAT IS IMPORTANT

- 1) Know the reason why and when PG&E offers a Wildfire Wood Removal Program (WWRP).
- 2) Know how the WWRP is approved.
- 3) Understand the difference between the “normal” wood management.
- 4) Known how customers qualify for the WWRP.

### 1. OVERVIEW

PG&E may offer the WWRP to help residents and communities recover from devastating wildfire events by removing felled trees that meet an established criterion. This program will require close coordination with media and customer outreach.

### 2. PG&E EXECUTIVE APPROVAL

Each significant fire event will be evaluated to determine if a WWRP is merited. The WWRP must obtain senior operations executive authorization before any Work may begin. The evaluation process begins with VM providing the qualification criteria and suggested duration of the program. VM must also provide a WWRP unit forecast and cost estimate.

- Unit Forecast = tree forecast X percentage of qualified trees X customer “opt-in” percentage.
- Cost Estimate = (Unit Forecast X removal cost per unit) plus Assessment and Support cost.

### 3. WWRP CWA ADDENDUM

The EP&R Manager will work with the local VBD and VM to select the Contractors and solicit bids to perform the Work. In addition to the Major Emergency Program Work described in the Contractor’s CWA, Contractor must fully execute the WWRP CWA addendum **BEFORE** Work can begin (*APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9.1*). EP&R Manager will submit the CWA addendum request with Sourcing to obtain a fully executed CWA addendum for the successful bidding Contractors. The key Contractor responsibilities are listed below.

- Contractor disposes of wood safely and legally (salvage timber sale, bio mass, fire wood, chips).
- Contractor will be responsible for all permits.
- Contractor shall keep Units removed and how disposed of (i.e. Cal Fire exemption number, to non-co-generation facilities, export markets, lumber mills & particle board facilities).
- Contractor is responsible for providing Timber Yield Tax information to State Board of Equalization and for Timber Yield Tax payment on a quarterly basis.

### 4. PROJECT MANAGEMENT

VBD will assign a Project Manager, normally a local contractor to coordinate and oversee the project. The Project Manager must first obtain a “Utility” Timber Harvest Exemption (*APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9.2*) and communicate this with the successful contractor(s):

- Identify and train Assessment and Tree Crew workforce on how to interact with customers.
- Assign VM Customer Communication Lead.
- After the customer's wood has qualified for the WWRP, VM must obtain the customer's signatory authorization on the WWRP Customer Authorization Form (*APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9.3*).

## 5. WWRP ORDER CREATION AND USE

EP&R Manager will request Business Finance to create WWRP expense orders for each fire event. Project Manager will communicate with Contractors to use these orders for all future WWRP Work.

## 6. CUSTOMER OUTREACH

The VM Customer Outreach Lead begins the customer outreach process by obtaining an impacted customer list.

- The WWRP Customer Letter (*Appendix #9.4*) explains why PG&E is offering the program, what to expect and how they can participate in the program.
- Expect that there will be various print and social media outreach efforts.
- VM Customer Outreach lead communicates media pushes to acting VBD, so field operations expectations are set accordingly.
- If assessment Contractor visits a property and the owner is not at home, they will leave the WWRP Pamphlet (*APPENDIX A – FORMS AND ADDITIONAL INFORMATION 9.5*) in their front door or mailbox.

## 7. WWRP CRITERIA FOR ELIGIBILITY

For customer's wood to qualify for the WWRP it must meet one of the two below criteria.

### CRITERIA ONE

- Wood is located on property within the fire affected area and was felled by PG&E Contractors.
  - Other entities in the fire area also cut down hazard trees which may threaten their facilities or as a result of firefighting efforts: AT&T, Comcast, Sonic, cities, counties, CAL FIRE, and US Forest Service. Wood felled under these efforts does not qualify for the WWRP.
- Wood is reasonably accessible by equipment/machinery.
- Wood is greater than 4 inches in diameter and 6 feet in length.
- Wood is within 50 feet of a permanent structure.
  - This does not include moveable or temporary sheds and outbuildings or carports.

~OR~

### CRITERIA TWO

- Wood has the ability to impede traffic or roll into roads or road drainage structures or watercourses.

## 8. WWRP TRACKING WORK DOCUMENTATION

Starting with the October 2017 Northern California fire events, the VM ITS database is the system of record for tracking WWRP Units and Locations and utilized for any Cal Fire reporting. This database will also be utilized as a reporting tool during the event and thus needs to be updated timely. At a minimal the work completed in the week is updated by the following Monday by noon. See Technology Applications – Chapter 10 for additional details.

- EP&R Manager will contract VM IT to set up Debris Sub-types by fire event in ITS.
- VM IT and EP&R Manager will provide ITS training on data input process per event.

## 9. WWRP UNIT MARKING GUIDANCE

During the event Tree Crews were given tailboards to leave merchantable lumber in logs as long as possible, lengths could have been cut shorter for environmental or safety reasons. When the PI is assessing wood to determine if the wood qualifies, they must;

- Obtain GIS coordinates and mark the wood for removal per guidance (Appendix 9.6).
- One Unit is one Tree (debris unit are 6-foot cubic truck loads.
- List of qualified wood must include the name of the circuit affected for Cal Fire exemption.

### KEY REVIEW ITEMS:

- VM begins WWRP request by providing WWRP Unit and Cost forecast.
- Recommend one Contractor per event for greater efficiency.
- Licensed Timber Operator (LTO).

### APPENDIX:

Ref #	Document Title	Document Link
9.1	WWRP – CWA Addendum	<i>WWRP - CWA Addendum</i>
9.2	Utility Exemption Form	<i>Utility Exemption Form</i>
9.3	WWRP Customer Authorization Form	<i>WWRP - Customer Authorization Form</i>
9.4	WWRP Customer Letter	<i>WWRP - Customer Letter</i>
9.5	WWRP Pamphlet	<i>WWRP - Pamphlet</i>

## Chapter 10 – TECHNOLOGY APPLICATIONS

### WHAT IS IMPORTANT

- 1) Ensure adherence to daily record keeping.
- 2) Use of smart device applications is critical to efficient field operations.
- 3) Integration of daily tailboards as a resource check with daily record keeping.

## 1. OVERVIEW

This chapter outlines the use of application tools to track VM resources, equipment and tree work. Utilizing these applications at the beginning of an emergency event ensures one system of record delivering benefits such as:

- Accurate cost forecast and monthly recognition.
- Enablement of a clearly defined process for responding to CPUC request.
- Enablement of clean audit reporting and CEMA filings.
- Production metric reporting (by contractor) facilitating management of contractors.

## 2. APPLICATIONS

The accurate tracking of resource, equipment and tree work is critical to address regulatory, safety, financial and operation issues that might arise during the fire event. The applications are as follows:

**10.2.1 Resource Tracking:** Survey123 is the tool which must be utilized by all contractors.

- Survey123 app is available for download as “Survey123 for ArcGIS” on the iOS App Store and Google Play.
- Guidance for using the Survey123 application can be found in the User Tutorials at the following locations:  
(Add Link) **[ENTER LOCATION]**

**10.2.2 Equipment Tracking Database:** All equipment provision and deployment to contractors must be recorded. It is the responsibility of the VM Logistics Lead to keep track. No database mechanism exists, and so Excel format is recommended. Details to be recorded should include equipment name, identifying item number, quantity, equipment cost, name of contractor, site location, date of provision/return.

**10.2.3 Tree Tracking:** Collector will be the prime application used to track tree work.

- The Collector app is available for download as “Collector Classic” on the iOS App Store and Google Play.  
Note: All pre-inspectors shall be equipped with a smart phone at Contractor’s cost. Contractors will allow PG&E software and applications to be downloaded on these devices to support work as requested by PG&E.
- The effectiveness of this application is dependent on;
  - The availability to all contractors to use on their own hand-held smart devices
  - VM ability to customize to application – as needed.
  - VM access to real-time data to assessment of hazard trees for timely reporting.
  - Utilization as a work management tool in the assignment of tree mitigation work to tree crews.
  - Forecast work schedules, resource needs and projected cost.

- Application data uploaded to VMD database as the system of record for fire event tree records.

**10.2.4 Wildfire Wood Removal Program Unit Tracking:** Recent large fire events had approved WWRP. Starting with the October 2017 Northern California fires, the WWRP units were tracked in the ITS database. In 2019 VM will leverage Collector Application used in the EVM program to manage debris and wood removal. An overview of the backend process is;

- VM Emergency Preparedness & Response (EP&R) Manager will request that Business Finance create WWRP orders for each fire event.
- EP&R Manager will request the VM Business Systems specialist create Debris Removal “Sub Work Types” for each fire event.
- VM Field Operations Manager will train Contractor(s) on the Collector application to ensure accurate and uniform data input for the event.

**10.2.5 Future State:** In addition, VM is working with a few Contractors to pilot the use of ARCOS for major emergency work. VM already utilizes ARCOS for Routine Emergency VM crew “call-outs.” Core PG&E emergency field resources do utilize ARCOS during major emergency events. The projection is for VM to transition to ARCOS for the 2019 fire season.

## 11 TECHNICAL SUPPORT TEAM

Adequate technical support must be in place to support the tracking applications. To ensure the base team is available contact [AWRRMapsSupport@pge.com](mailto:AWRRMapsSupport@pge.com) to coordinate the support structure. Note: The Technical Support Team should have prior training to support as part of this process as they will be working with individuals who are not PG&E employees (i.e. no LAN ID) and may not be certified arborists.

## 12 MINIMUM DATASET

The Incident Commander will communicate the decision as to whether the work is restoration or reconstruction. The data collection will be the same for both however the data set necessary to be collected may differ. Information recorded in collector are tree points for any hazard trees that could strike the lines. Data to be captured at a minimum is as follows:

- Location (correct special location in collector)
- Species
- DBH
- Height
- Prescription (top/remove, many variations of prescriptions codes)
- Comments

## APPENDIX A – FORMS AND ADDITIONAL INFORMATION

All forms and additional information listed below are located on the PG&E network at the following location:

<S:\Operations\Wildfire Response Materials\Wildfire Response Guide>

#	Document Name
2.1	Incident Report Form
2.2	Task Force Lead – Tailboard
2.3	Strike Team Lead – Tailboard
2.4	PSC Wildfire Tailboard
3.1	Daily Schedule – Template
3.2	Report Out Email – Template
3.3	Daily Contractor Roster Check In-Out
3.4	USFS Marketing Guidelines
3.5	Wildfire Tree Marking Guidance
3.6	Debris Management – Tailboard
3.7	Wildfire Felling - Cleanup BMP Tailboard
3.8	Assessing Fire Damaged Trees
3.9	Quality Control Plan - Template
5.1	Wildfire On-Boarding Tailboard
5.2	Wildfire Smoke – Tailboard
5.3	Smoke Prevention use of Masks or Respirators
5.4	Heat Illness Prevention – Tailboard
5.5	Burned Out Stumps – Tailboard
5.6	Fatigue – Tailboard
5.7	Contractor Qualifications and Training Form
6.1	Customer Outreach Team Matrix
6.2	Wildfire Q&A
6.3	Delivery Method and Material
6.4	Customer Fire Letter Template
6.5	Defensible Space Brochure
6.6	Emergency Work Communications
6.7	Emergency Work Notice – Written
6.8	Emergency Work Notice
6.9	Know Your Overhead
7.1	Environmental BMPs
7.2	Environmental BMPs (Spanish)
7.3	Cultural Resources
8.1	VM Tree Crew Charging Guidelines
8.2	CWA Request – Approval Process Flow Chart
8.3	Major Emergency CWA Request Form
8.4	Invoice Process Flow Chart
8.5	Contractor CWA and Invoice Guidance
8.6	Contractor Capital Charging Justification Form
9.1	WWRP – CWA Addendum
9.2	Utility Exemption Form
9.3	WWRP – Customer Authorization Form
9.4	WWRP – Customer Letter
9.5	WWRP – Pamphlet