

Vegetation Management Post Wildfire Standard

SUMMARY

This utility standard describes the expectations, roles, and responsibilities of the Vegetation Management (VM) department to coordinate necessary actions and support Pacific Gas & Electric Company’s (PG&E) response and restoration efforts following wildfires. PG&E responds to wildfires that impact company electrical assets or create conditions that require off-cycle inspection and mitigation of vegetation.

VM is integral to providing public and responder safety by mitigating vegetation that is an imminent threat to electric facilities. Additional work is often necessary to support electric crews by removing vegetation for access to restore services to customers capable of receiving power.

TARGET AUDIENCE

- Vegetation Asset Strategy and Analytics (VASA)
- VM Operations
- Quality Management

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REQUIREMENTS

1 Regulatory Requirements and Commitments

- 1.1 As part of its 2022 Wildfire Mitigation Plan (WMP), the Office of Energy Infrastructure Safety (OEIS) required PG&E to develop a standard to be used in a post-wildfire response.
- 1.2 PG&E recognizes and requires compliance with the following regulatory requirements and recommendations:
 - Public Utilities Code (PUC) 8386
 - California Public Utilities Commission (CPUC) [General Order \(G.O.\) 95, Rule 35](#)
 - G.O 166
 - [G.O. 95, Rule 35 in Appendix E](#), which recommends a minimum 12-feet of clearance at time of trim in High Fire-Threat District (HFTD). Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances.
 - [G.O. 95, Rule 18 in Appendix I](#), which outlines Priority Levels and Safety Hazards
 - [State of California Public Resources Code \(PRC\) 4293](#) and [4295.5](#)
 - California Code of Regulation (CCR) [Title 14 Sections 1250, 1251, 1252, 1253, 1256, 1257 and 1258](#)
 - NERC-regulated transmission lines, the North American Electric Reliability Corporation (NERC) Reliability Standard [FAC-003-4](#)

2 PG&E Requirements and Expectations

- 2.1 After a wildfire occurs, PG&E is responsible for restoring service to impacted customers, rebuilding damaged assets, and mitigating vegetation that is hazardous or potentially hazardous to the restoration and operation of PG&E electric facilities.
- 2.2 Each fire event is different in location, intensity, and severity, as well as impacted assets, vegetation density, vegetation type, response required, and more. Therefore, the plan to restore service is likely to be different for each fire event.
- 2.3 Because each wildfire event is unique, VM's response will also be unique. An effective restoration and rebuild requires an adaptable scope of work for VM that aligns with PG&E's short- and long-term objectives. When a wildfire results in the activation of either the Operations Emergency Center (OEC) or the Emergency Operations Center (EOC), PG&E must determine the fire event VM response plan based on collaboration with key stakeholders (Plan).

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- 2.4 The stakeholders within the VM planning section of the Incident Command System (ICS) structure reviews the impact of the fire and develops a scope of work for VM that is in alignment with the organizational objectives at PG&E. Stakeholders should include, but not be limited to, the following:
- VM OEC Representative
 - VM Planning (Financial Reporting)
 - VASA
 - VM Operations Management (Support and Planning)
 - Registered Professional Forester or Certified Arborist
- 2.5 Each Plan is comprised of two phases. Below are the considerations that must be considered when the stakeholders within the VM planning section develop the scope of work:
1. **Initial Phase** is the initial response, support, and restoration activities to restore service to customers who can receive power. VM is focused on providing public and responder safety by mitigating vegetation that is an imminent threat to electric facilities or worker safety. Additional work is often necessary to support electric crews, such as clearing and removing vegetation.
 - a. The Initial Phase ends once work to mitigate imminent threat to electric facilities or worker safety has been completed. This typically occurs when the OEC is closed.
 2. **Extended Phase** is focused on rebuilding the electric system to restore service to all customers who had service before the fire. Consider what are the optimal restoration methods and the vegetation management activities needed to support the rebuild method. These methods include, but are not limited to, the following:
 - Restoring assets with alternative interim construction while grid design and/or undergrounding targets can be designed, engineered, and constructed.
 - Restoring assets using like-for-like locations and construction.
 - Rebuilding to system hardening standards.
 - Undergrounding powerlines.
 - Transitioning to microgrids/remote grids.
 - Realigning and/or removal of assets.

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2.5.2 (continued)

- Combining of any of the above.
- During the Extended Phase, PG&E will follow normal operating practices as outlined in Section 2.8.

2.6 The rebuild method used will drive the VM activities needed to support the rebuild. In addition, the rebuild method used will dictate if, when, and where vegetation work needs to be done to mitigate burned hazard trees that have the potential to impact electric facilities. The rebuild method used will also influence the VM work needed to support construction activity, such as the following:

- Clearing roads and access routes.
- Creating working space for construction activities.
- Mitigating hazard trees for worker protection.

2.7 The assessment of vegetation within the wildfire-impacted area that have potential to impact electric facilities should follow the guidelines and thresholds outlined in [Appendix A, Vegetation Assessment Within the Wildfire Footprint](#).

2.8 Trees listed for work should be mitigated by following all applicable safety standards, state and federal regulations, and environmental best management practices (BMP). Scoping needs to consider conformance with applicable Forest Practice Rules and potential tree protection ordinances.

1. Exception is when the Governor has declared an emergency exemption to certain activities. In such case, PG&E will follow the guidelines of the exemption.

2.9 For each wildfire event, the need for wood management will be evaluated in alignment with PG&E's agreements and commitments. Wood from trees felled during post wildfire work must be left in a safe manner that conforms to applicable laws, regulations, or other requirements. The length of logs will be based on safe work practices used, location, or mill requirements when practical, or landowner request where applicable. When possible and practical customers should be notified of post wildfire vegetation management work following normal inspection procedures and when applicable, follow PRC 4295.5.

2.10 Constraints that arise from customers, agencies, weather conditions, environmental issues, and more should be documented in the appropriate system of record and resolved according to VM standard practices.

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3 Roles and Responsibilities

3.1 The VM Operations team is responsible for:

1. Leading the stakeholders within the VM planning section.
 - a. After directive from the OEC/EOC, the VM Incident Lead is responsible for identifying and engaging the necessary individuals to form a stakeholder team to develop a scope of work and operational tasks for post fire event.
2. Performing the operation tasks to meet the expectations in this standard. This includes, but is not limited to, the following:
 - Engaging appropriate stakeholders from other lines of business.
 - Creating the task list.
 - Ensuring production and quality goals are safely obtained.
 - Managing VM personnel in their assigned regions.
 - Contacting refusal customers to resolve non-compliances.
 - Maintaining data integrity for inspection and work orders and project oversight.

3.2 The Vegetation Asset Strategy and Analytics (VASA) team is responsible for:

1. Prioritizing the task list.
2. Participating in the stakeholder team to assess each unique wildfire event and help develop the scope of work for VM, in coordination with other stakeholders.

3.3 The Quality Management team conducts work performance reviews and assessments, verification of work completion, and quality assurance audits.

4 Records Management and Data Integrity

4.1 The Post Wildfire Program is required to document its work and to create and maintain all records per the [Records and Information Management](#) section of this document.

END of Requirements

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DEFINITIONS

Facility/Facilities:

Distribution: The components of the electric distribution overhead system, including pole/support structure, primary conductors [4 kilovolts (kV) and less than 60 kV – with the majority being between 4 kV to 21 kV], voltage regulating equipment, switching equipment, transformers, and secondary conductors (operates under 600 V and supply ranging from 120 V to 480 V). Refer to TD-8105, "Distribution Line Overhead Asset Management Plan" for additional details.

Transmission: The components of the electric transmission overhead system, including conductors (60 kV, 70 kV, 115 kV, 230 kV, and 500 kV), steel structures, non-steel structures, insulators and switches. Refer to TD-8101, "Transmission Line Overhead Asset Management Plan" for additional details.

Task List: The list of actions to be performed post-wildfire to support the initial and extended phase of the event response.

IMPLEMENTATION RESPONSIBILITIES

The Vegetation Asset Strategy and Analytics team is responsible for the development and communication of this standard to VM Operations leadership, as well as the periodic review of this document. VM Execution is responsible for the distribution of this standard by providing training and conducting regular reviews to ensure adherence.

GOVERNING DOCUMENT

TD-05, "Vegetation Management Policy"

COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

Records and Information Management:

PG&E records are company assets that must be managed with integrity to ensure authenticity and reliability. Each Line of Business (LOB) must manage Records and Information in accordance with the Enterprise Records and Information (ERIM) Policy, Standards and Enterprise Records Retention Schedule (ERRS). Each Line of Business (LOB) is also responsible for ensuring records are complete, accurate, verifiable and can be retrieved upon request. Refer to [GOV-7101S, "Enterprise Records and Information Management Standard"](#) for further records management guidance or contact ERIM at Enterprise_RIM@pge.com.

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REFERENCE DOCUMENTS

Developmental References:

- GO 95 Rule 35 and Rule 18
- PRC 4293
- PRC 4295.5
- PRC 4292
- CCR Title 14
- PUC 8386

Supplemental References:

- [Utility Arborist Association \(UAA\) Best Management Practices for Tree Risk Assessment and Abatement](#)
- [CAL FIRE Power Line Fire Prevention Field Guide](#)
- PG&E Vegetation Management Wildfire Response Guide

APPENDICES

Appendix A, "Vegetation Assessment Within the Wildfire Footprint"

ATTACHMENTS

NA

DOCUMENT REVISION

NA

DOCUMENT APPROVER

██████████, Director, Vegetation Asset Strategy and Analytics

In concurrence:

██████████, Director, Vegetation Management

DOCUMENT OWNER

██████████, Principal Asset Management Specialist, Vegetation Asset Strategy and Analytics

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DOCUMENT CONTACT

██████████, Principal Asset Management Specialist, Vegetation Asset Strategy and Analytics

REVISION NOTES

Where?	What Changed?
NA	Original publication.

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Appendix A, Vegetation Assessment Within the Wildfire Footprint

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The assessment of vegetation within the wildfire-impacted area, aka footprint, should follow the guidelines and thresholds identified in the documents below. The assessment needs to include a minimum of the following criteria:

- Species identification (genus or common name)
- Crown condition assessment
- Visual cambium condition assessment

Smith, Sheri L; Cluck, Daniel R. (2011). *Marketing Guidelines for Fire-Injured Trees in California*. US Forest Service, Region 5, Forest Health Protection.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5331724.pdf

McCreary, Doug; Nadar, Glenn (2011). *Burned Oaks: Which Ones Will Survive?* University of California Agriculture and Natural Resources. <https://anrcatalog.ucanr.edu/pdf/8445.pdf>

Kolb (PhD), Peter (n.d.). *Wildfire Severity Photo-guide for Assessing Damage and Aiding Recovery of Trees and Forests across the Northern Rockies*. Montana State University (MSU) Extension Forestry.

<https://forestry.msuextension.org/publications/Fireseverity%20assessment%202020.pdf>

Hood, Sharon; Ragenovich, Iral; Schaupp, Bill (n.d.). *Post-fire Assessment of Tree Status and Marking Guidelines for Conifers in Oregon and Washington*. United States Department of Agriculture. <https://bark-out.org/wp-content/uploads/2021/10/Post-fire-Assessment-of-Tree-Status.pdf>