



Distribution Line HFTD/HFRA Annual Inspection Plan Creation

SUMMARY

This utility procedure summarizes how the Distribution Line HFTD/HFRA Detailed Inspection Work Plan is created.

Level of Use: Informational Use

TARGET AUDIENCE

PG&E personnel in System Inspections, Distribution Asset Strategy, and Asset Knowledge Management.

SAFETY

This procedure describes administrative tasks that do not expose personnel to any significant hazards.

BEFORE YOU START

NA

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PROCEDURE STEPS

1 Milestone 1. Base Plan Identification

- 1.1 The distribution High Fire Threat District (HFTD) inspections strategy is based on wildfire risk. PG&E's Wildfire Distribution Risk Model (WDRM v3) indicates that the riskiest support structures are found throughout PG&E's high fire areas across Tier 2 and Tier 3, as well as in High Fire Risk Areas (HFRA's).

Table 1. Distribution Inspection Strategy (HFTD/HFRA)

	HFTD Inspection Strategy
Baseline Inspection Frequency	1–3 years based on wildfire consequence of each plat map
Basis for Inspection Frequency	WDRM v3 consequence score
Inspection Unit	Plat map-based maintenance plans
Risk-Based Additions to Work Plan	Add top 10% of risk structures on areas of concern (AOC)
Other Considerations	Balances Eyes on Risk and structure count across years

- 1.2 PG&E's HFTD/HFRA inspection plan ensures that plat maps and structures meet the criteria in [Table 2](#) based on their wildfire consequence scores.

Table 2. Inspection Cycles Based on Plat Map Consequence

Type of Plat Maps	Inspection Cycle
Extreme	Annual inspections by July 31.
Severe	
High	Every other year by July 31.
Medium	Every 3 years by September 30.
Low	Every 3 years by December 31.
Compliance Minimum	Every 5 years by their GO-165 due date.



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- 1.3 INSPECT any poles discovered in HFTD or HFRA after the inspection plan is approved in accordance with their Wildfire Mitigation Plan (WMP)-indicated frequency. SEE [Table 3](#) below.

Table 3. Pole Inspections in HFTDs and HFRA

Consequence of Plat Map	Frequency of Inspection (in years)	Must Add to Current Year Inspection Plan if Year Last Inspected is Before...
Extreme, Severe	1	Current Year
High	2	1 Year Ago
Medium, Low	3	2 Years Ago

1. IF new or replacement poles have a field installation date in less than a year prior to the current inspection year,

THEN DO NOT ADD them to the current year inspection plan.
- 1.4 INSPECT any poles discovered in non-HFTDs/non-HFRA after the inspection plan is approved with a GO-165 last inspection date 60 months or later by its GO-165 compliance date.
 1. IF new or replacement poles have a field installation date less than a year prior to the current inspection year,

THEN DO NOT ADD them to the current year inspection plan.
- 1.5 IF an asset changes plat maps within the inspection year and the map has not yet been assigned,

THEN the asset is reassigned to its new location with its new consequence.
 1. However, if the update is made after the inspection has taken place, it will maintain its original consequence for the given year.

2 Milestone 2. Plan Creation – Detailed HFTD/HFRA Distribution Inspections Scope

PERFORM the following steps in the Foundry tool to create a pole-by-pole inspection work plan:

- 2.1 PREPARE a data set for analysis.
- 2.2 GENERATE the initial population of inspectable structures by applying the definition of an inspectable pole to all structures in the asset registry. SEE [TD-8123P-201-B001](#) for the definition of an inspectable pole.
- 2.3 ADD a Risk and Data Analytics (RaDA)-provided wildfire consequence category for each plat map based on wildfire consequence scores of the inspectable HFTD and HFRA structures within that plat map.



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2.3 (continued)

Wildfire consequences scores are from Wildfire Distribution Risk Model version 3 (WDRMv3). SEE [Section 4, "Source Data,"](#) on Page 6 for how consequence scores were assigned.

1. PROVIDE this list of plat maps to SI.
- 2.4 GENERATE a list of plat maps that contain P90 poles based on Risk and Data Analytics (RaDA)-provided list of P90 poles.
 1. PROVIDE this list of plat maps to SI.
- 2.5 CALCULATE the next inspection year in Foundry for each plat map.
 1. VALIDATE all structures from the Inspectable Support Structure Database which are within the HFTD area of the plat.
 2. BALANCE the structure count and Eyes on Risk across the next 3 years, so that approximately 1/2 of high, 1/3 of medium, and 1/3 of low plat maps get inspected each year. REFER to [Table 4](#) below.

Table 4. Assigning the Next Inspection Year: Plat Maps with HFTD/HFRA Structures

Wildfire consequence_rank	Next_prescribed_year
Extreme	Current Year
Severe	Current Year
High	Current Year
	Current Year + 1
Medium	Current Year
	Current Year + 1
	Current Year + 2
Low	Current Year
	Current Year + 1
	Current Year + 2

- 2.6 ADD Plat Maps that contain P90 structures.
- 2.7 GENERATE a pole-by-pole plan based on the plat-map level plan.
- 2.8 CONDUCT a quality check by having multiple PG&E team members in Asset Strategy and RaDA review the steps above for completeness and correctness.



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2.8 (continued)

1. VERIFY that the Foundry script operates as intended.
2. IF a plat map appears to be a duplicate or has multiple district IDs in Foundry,
THEN REVIEW the plat map AND USE correct division information from the Electric Distribution Geographic Information System (EDGIS), if necessary.
3. DELETE all duplicates.
4. VERIFY prescribed years on all structures against last inspection dates.

2.9 CREATE Maintenance Plans and Work Orders in SAP based on the pole-by-pole inspection work plan.

1. VALIDATE data AND CONVERT it to a loadfile.
 2. GENERATE maintenance plans (MPs) in SAP.
 3. VERIFY that MPs pass Foundry data readiness checks.
 4. VERIFY SAP equipment numbers exist in Geomart.
 5. GENERATE orders in SAP.
- 2.10 CONDUCT a monthly inspection plan discrepancy review in Foundry to identify structures added to the Asset Registry in the Geographical Information System (EDGIS) that are not included in the inspection plan.
1. System Inspections personnel VALIDATE the discrepancy report (System Inspections).

3 Milestone 3. Plan Approval and Communication

3.1 Milestone 3 obtains approval and communicates the approved plan to the relevant stakeholders.

3.2 Approvals

1. As the inspection plan is being finalized, PRESENT the plan to the Wildfire Governance Steering Committee for approval.
2. After the Wildfire Governance Steering Committee approves the inspection plan, ROUTE the plan in EDRS.
 - a. ASSIGN the following roles as EDRS Reviewers:
 - Senior Manager, Distribution Asset Maintenance and Inspections



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3.2 (continued)

- Director, System Inspection PMO
- Senior Manager, Wildfire Risk Management
- b. ASSIGN the following roles as EDRS Approvers:
 - Senior Director, System Inspections Distribution
 - Senior Director, Distribution Asset Strategy

4 Source Data

The following information serves as inputs to the plan creation process.

4.1 ACCESS Foundry data set “support structure v2” at [supportstructure_v2_enriched \(palantirfoundry.com\)](https://supportstructure_v2_enriched.palantirfoundry.com).

1. The WDRMv3 provides wildfire consequence scores at the structure level. For HFTD and HFRA areas, these consequence scores are the basis for plat map consequence scores and inspection frequencies.

The planning model calculates wildfire probabilities of ignition, consequence, and risk scores for structures in the overhead distribution system in areas of PG&E's service territory.

- a. WDRM v3 produces these values for all wooden support structures. The RaDA team provides documentation [at this link](#). The data used for inspection planning leverages WDRM v3, as well as the latest version of EDGIS available at the time of inspection plan development.
- b. [Table 5](#) on Page 7 summarizes the WDRM v3 output that was provided to Asset Strategy. RaDA assigned consequence scores to inspectable structures as follows:
 - (1) FOR inspectable support structures that were omitted from the WDRM v3, CALCULATE “consequence_version_3_4_backstop” as a proxy wildfire consequence scores per [Table 5](#).
 - (2) CALCULATE “consequence_version_3_4_backstop” of each plat map by averaging the wildfire consequence for all support structures in the plat map.
 - (3) CALCULATE “consequence_percent_rank” of each plat map as the percentage of the total plat maps whose consequence scores are lower than that value.



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4.1 (continued)

2. CATEGORIZE AND ASSIGN plat maps to an inspection cycle according to [Table 5](#).

Table 5. Inspectable Pole Definition Comparison

consequence_percent_rank	Wildfire consequence_rank	Inspection_cycle_year
> 0.99	extreme	1
≤0.99 and >0.98	severe	1
≤0.98 and >0.90	high	2
≤0.90 and >0.80	medium	3
≤0.80	low	3

4.2 About the Proxy Risk Data Set from RaDA

1. Due to differences in the asset registry at the time of the model build and the movement of structures throughout the year, the WDRMv3 model does not include all inspectable structures.

The RaDA team assigned omitted structures proxy scores for probability of ignition, consequence, and overall risk. A summary of these proxy scores is provided in [Table 6](#) on Page 8.

The resulting proxy scores are considered a conservative estimate of the risk of the structure.



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4.2 (continued)

Table 6. Proxy Risk Assignments for Structures Omitted from WDRMv3

Structure Type	Variable	Methodology
Tree Connection	Probability of Ignition	Nearest support structure with a WDRM v3 risk score
	Wildfire Consequence	Nearest consequence pixel in 500-meters
	Wildfire Risk	Product of proxy wildfire consequence and probability of ignition
Non-Wood Pole	Probability of Ignition	Median probability of ignition from all HFRA/HFTD structures with a WDRM v3 probability of ignition score
	Wildfire Consequence	Nearest consequence pixel in 500-meters
	Wildfire Risk	Product of proxy wildfire consequence and probability of ignition
Wood Pole	Probability of Ignition	Nearest support structure with WDRM v3 risk score in 500-m radius that was installed within 10 years of the structure
	Wildfire Consequence	Nearest consequence pixel in 500-meters
	Wildfire Risk	Product of proxy wildfire consequence and probability of ignition
All other structures that were not joined spatially to a nearby structure	Probability of Ignition	90th percentile of probability of ignition proxy scores
	Wildfire Consequence	Nearest consequence pixel in 500-meters; or 90th percentile of wildfire consequence proxy scores if no consequence pixel in 500-meters.
	Wildfire Risk	Product of proxy wildfire consequence and probability of ignition

END of Instructions



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DEFINITIONS

Eyes on risk (EOR): A calculated percentage of total wildfire risk that is evaluated as part of an inspections program, with a goal of continued risk awareness rather than risk mitigation.

High Fire Risk Area (HFRA): A purpose-built map for use in scoping Public Safety Power Shutoff events identifying areas where risk factors for the potential of catastrophic fire from utility infrastructure ignition during offshore wind events is higher.

High Fire Threat District (HFTD): Areas adopted by the California Public Utilities Commission (CPUC) with elevated or extreme wildfire risk and in proximity to communities at risk.

Inspectable pole: Asset Strategy uses an inspectable pole dataset in Foundry. Information in Foundry is pulled from GIS and SAP. If there is a mismatch between data, Foundry uses GIS data, and notes the mismatch between GIS and SAP.

Top 10% of wildfire risk (P90): Structures in the top 10% of wildfire risk are the structures with the largest WDRM v3 wildfire risk values that, combined, account for 10% of the total wildfire risk.

Wildfire risk score: The wildfire risk score is the quantification of wildfire risk, represented by the probability of ignitions associated with electric grid infrastructure, combined with the consequences if that ignition propagates into a wildfire.

IMPLEMENTATION RESPONSIBILITIES

Asset Strategy personnel are responsible for implementing this procedure.

GOVERNING DOCUMENT

[Utility Standard TD-8123S, "Electric System \(T/S/D\) Patrol, Inspection, and Maintenance Program"](#)

COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

[California Public Utilities Commission \(CPUC\) General Order \(GO\) 165, "Inspection Requirements for Electric Distribution and Transmission Facilities"](#)

Information and Records Management:

PG&E Data, Information, and Records are company assets that must be traceable, verifiable, accurate, and complete and can be retrieved upon request. Functional Areas are responsible for complying with the Information & Records Governance Policy, Standards, and the Information and Records Retention Schedule. Refer to [GOV-7101S, "Enterprise Records and Information Management Standard."](#) for further guidance or contact Information & Records Governance at Information&RecordsGovernance@pge.com.



Utility Procedure: TD-8123P-201

Publication Date: 04/01/2024 Effective Date: 04/01/2024 Rev: 2

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REFERENCE DOCUMENTS

Developmental References:

[Electric Distribution Preventive Maintenance Manual \(TD-2305M\)](#)

[Utility Procedure TD 8123P-100, "Transmission Patrols and Enhanced Inspection Frequency Guidelines"](#)

Utility Standards:

- [TD-2305S, "Electric Distribution Maintenance Requirements"](#)
- [TD-8124S, "Detailed System Inspections Framework"](#)

[Wildfire Mitigation Plan \(WMP\)](#)

Supplemental References:

[Utility Bulletin TD-8123P-201-B001, "GO 165 Detailed Ground and Aerial Inspectable Pole Definition"](#)

[Utility Standard EMER-4102S, "Preventing and Mitigating Fires While Performing PG&E Work"](#)

APPENDICES

NA

ATTACHMENTS

NA

DOCUMENT RECISION

This utility procedure cancels and supersedes Utility Procedure TD-8123P-201, "Distribution Line Enhanced Annual Inspection Plan Creation," Rev. 1, dated 11/28/2023.

DOCUMENT APPROVER

██████, Senior Director, Asset Strategy

██████████, Senior Director, System Inspections

DOCUMENT OWNER

██████, Senior Director, Asset Strategy



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DOCUMENT CONTACT

██████████, Program Manager, Principal, Distribution Asset Strategy
██████████, Senior Manager, Asset Maintenance and Inspection

REVISION NOTES

Where?	What Changed?
Entire document	This entire procedure was revised to reflect the strategic changes in creating the 2023 Distribution Line Detailed Inspection Work Plan.