PacifiCorp
2026-2028 Wildfire Mitigation Base Plan

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On the cover: Work on the Mount Shasta system resiliency projects. These projects will result in about 46 miles of covered conductor, with nearly 15 miles of spacer cable and 31 miles of tree wire. These enhancements will help adapt PacifiCorp's system to the growing threat of wildfire in the West.

Table of Contents

Energy Safety Tables

PacifiCorp Tables

Energy Safety Figures

PacifiCorp Figures

Acronyms and Glossary

Abbreviation	Definition
AFN	Access and Functional Needs
ANSI	American National Standards Institute
ADO	Azure Dev Ops
BES	Bulk Electric System
BHE	Berkshire Hathaway Energy
BLF	Building Loss Factor
CA	California
CAL Fire	California Department of Forestry and Fire Protection
CFCI	Communicating Fault Current Indicators
CFSR	Climate Forecast System Reanalysis
CoRE	Consequence of risk event
CPUC	California Public Utilities Commission
CR	Conditional Risk
DCC	Downstream Customer Counts
DFA	Distribution Fault Anticipator
DMS	Distribution Management System
ECC	Emergency Coordination Center
EDDI	Evaporative Demand Drought Index
EFD	Early Fault Detection
EFR	Elevated Fire Risk
EMS	Energy Management System
ER	Expected Risk
ERC	Energy Release Component
ERP	Emergency Response Plan
ESA	European Space Agency
ESRB	Public Utilities Commission Energy Safety and Reliability Branch
ESF	Emergency Support Function
FireSight	Wildfire Risk Model
ESS	Enhanced Safety Settings (PEDS)
FPI	Fire Potential Index
FPI	Facility Point Inspection
GACC	Geographic Area Coordination Center
GFS	Global Forecast System
GHG	Greenhouse Gas
GISMO	Geographic Information Systems Maintenance Organizer
GMTED	Global Multi-resolution Terrain Elevation Data
GO 95	California General Order 95
GPS	Global Positioning System

Abbreviation	Definition
GRC	General Rate Case
HDW	Hot Dry Windy Index
HFRA	High Fire Risk Area
HFTD	High Fire Threat District
HPCC	High Performance Computing Clusters
HWW	High Wind Warning
IDE	Integrated Development Environment
ICP	Incident Command Post
IL	Ignition Likelihood
IOU	Investor-Owned Utility
IR	Infrared
IRWIN	Integrated Reporting of Wildland-Fire Information
ISA	International Society of Arboriculture
JIT	Joint Information Team
KM	Kilometer
LoRE	Likelihood of risk event
LRA	Local Responsibility Area
M	Meter
MAVF	Multi Attribute Value Framework
MDMS	Mobile Data Management System
MRIS	Moderate Spectrum Imaging Spectroradiometer
MVCD	Minimum Vegetation Clearance Distance
MYNN	Mellor-Yamada-Nakanishi-Niino
NASA	National Aeronautics and Space Administration
NCEP	National Center for Environmental Prediction
NDVI	Normalized Differential Vegetation Index
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NFDRS	National Fire Danger Rating System
NGO	Non-governmental Organization
NIFS	National Incident Feature Services
NIMS	National Incident Management System
NLCD	National Land Cover Database
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
P95	95^{th} Percentile
PB	Petabytes
PBL	Planetary Boundary Layer
POF	Probability of Fault
POI	Probability of Ignition

Abbreviation	Definition
PSP Portal	Public Safety Partner Portal
PTT	Pole Test and Treat
PVM	PacifiCorp Vegetation Management
QA/QC	Quality Assurance/Quality Control
RAIL	Risk Associated with Ignition Location
RAMP	Risk Assessment Mitigation Phase
RAVE	Risk Associated with Value Exposure
RAWS	Remote Automated Weather Station
RBM	Regional Business Manager
RF	Radio Frequency
RMS	Root Mean Square
RMWG	Risk Modeling Working Group
RSE	Risk-Spend Efficiency
SCADA	Supervisory Control and Data Acquisition
SCAN	Substation Control Advanced Network
S-MAP	Safety Model and Assessment Proceeding
SME	Subject Matter Expert
SMS	Short Message Service
SOE	Sequence of Event
SOMs	Self-Organizing Maps
SRA	State Responsibility Area
T&D	Transmission and Distribution
TCC	Time Current Characteristic
US	United States
USFS	United States Forest Service
USGS	United States Geological Survey
VIIRS	Visible Infrared Imaging Radiometer Suite
WC	Wildfire Consequence
WCAG	Web Content Accessibility Guidelines
WECC	Western Electricity Coordinating Council
WFA-E	Wildfire Analyst-Enterprise
WL	Wildfire Likelihood
WMP	Wildfire Mitigation Plan
WRF	Weather Research and Forecast
WSAB	Wildfire Safety Advisory Board
WUI	Wildland-Urban Interface
ZOP	Zone of Protection

1. Executive Summary

In the opening section of the Base WMP. The electrical corporation must provide an executive summary that is no longer than ten pages. The electrical corporation must summarize the primary goal, plan objectives, and framework for the development of the Base WMP for the three-year cycle.

Wildfires and extreme weather are growing threats that affect the health, safety and livelihoods of everyone in the West, the result is an increased risk to the communities PacifiCorp serves. In 2024, California experienced over 8,000 wildfires burning over one million acres[1], and the risk of wildfires is now a year round concern, with the January 2025 fires in Southern California burning over 48,000 acres[2]. Wildfires can damage the company's systems and health of the company, jeopardizing PacifiCorp's ability to deliver safe, reliable, low-cost power to the people who depend on us.

PacifiCorp's Wildfire Mitigation Plan (WMP) is designed to systematically address the risk of utility-related wildfires by outlining robust preventative and responsive strategies. The primary objective of this plan is to reduce the likelihood and impact of wildfires associated with utility infrastructure, with a focus on safeguarding communities. This overview summarizes the plan's key components, strategic objectives, and the continuous improvement framework established to adapt to evolving wildfire risks and interest. This plan is designed to align with the requirements set forth in California Public Utilities Code 8386 (c) and includes a structured approach to addressing the unique wildfire challenges faced by utility operations.

1 CalFire. 2024 Incident Archive. Sourced March 10, 2025.

2 CalFire. 2025 Incident Archive. Sourced March 10, 2025.

PacifiCorp's WMP addresses the growing wildfire threats concerning utility-related causes. Long-term investments are highlighted as essential for reducing these wildfire risks, especially in developed areas. Key strategies within the WMP focus on constructing, maintaining, and operating electrical systems designed to minimize wildfire risks. Core principles include reducing the frequency of ignition events through resilient system design, minimizing fault impacts with advanced equipment and well-prepared personnel, and enhancing situational awareness and operational readiness to mitigate energy release risks effectively.

The WMP provides a comprehensive summary of wildfire mitigation focusing investments with the highest wildfire risk, such as the High Fire Theat Districts (HFTD) and High Fire Risk Area (HFRA) and targeting long-term investments to mitigate these risks and ensure public safety. Adaptive in nature, the WMP evolves by integrating new analyses, technologies, and environmental considerations, ensuring it remains responsive to emerging risks.

For the 2026-2028 cycle, the utility aims to build on previous successes, address identified opportunities for improvement, and reinforcing its wildfire mitigation strategies based on areas of success and lessons learned in the 2023-2025 WMP cycle:

Areas of success during the 2023-2025 WMP cycle include:

- Implementation of FireSight risk modeling to calculate wildfire risk. The implementation of the FireSight model data provides PacifiCorp with the capability to identify the highest risk circuits in its service area based on a consistent scoring methodology to support prioritization of mitigation efforts.
- Implementation of situational awareness tools such as Wildfire Risk Analyst-Enterprise (WFA-E) to provide improved situational awareness capabilities to support wildfire risk analysis and run simulations to understand the potential impacts of a wildfire to support operational practices.

- Installation of eight wildfire cameras and 108 weather stations for situational awareness.
- Increased throughput of covered conductor installation which improves system resiliency and mitigates the risk of an ignition from contact with electrical lines. As of the end of 2024, the company has rebuilt approximately 256 miles of bare conductor with insulated covered conductor to mitigate the risk associated with contract related faults.[3]
- Upgraded or replaced 176 reclosers, relays and circuit breakers to enable advanced protection and control schemes, incorporate greater customization and more complex logic, and provide additional event data.
- Installed 545 communicating fault current indicators (CFCIs) to support identification of the locations of faults.
- Replaced over 9,000 expulsion fuses with non-expulsion fuses to reduce the potential for ignition associated with fuse operations.

The 2026-2028 WMP builds upon these successes and lessons learned during the 2023-2025 WMP. In addition to the lessons learned during the 2023-2025 WMP cycle, PacifiCorp has increased its efforts to apply the maturity survey results to identify opportunities for improvement and, where feasible, establish initiatives and activities to continue to progress the Company's maturity in wildfire mitigation. Alignment of initiatives to the 2025 maturity survey are summarized in Appendix D: PC-25U-11. Actions Resulting from Reduced Projected Maturity

As a result of the progress from the 2023-2025 WMP cycle, lessons learned, and application of the maturity survey, the 2026-2028 WMP is intended to continue PacifiCorp's work to reduce the

3 Covered conductor may also be called spacer cable, aerial cable, or tree wire.

likelihood and impact of wildfires associated with utility infrastructure, with a focus on safeguarding communities and ensuring operational continuity.

The application of the FireSight risk model data serves as the framework for PacifiCorp's mitigation strategy through identification of the locations with the highest risk and impact from a wildfire associated with utility infrastructure informs where to prioritize mitigation efforts such as system hardening and enhanced equipment inspections and vegetation management.

As new risks, technologies, and insights emerge, the plan is structured to evolve with emerging risks and technological advancements. Regular evaluations ensure that strategies are adapted. Annual updates to the 2026-2028 plan will be submitted as required by the Office of Energy Infrastructure Safety (Energy Safety). The plan is scheduled for comprehensive updates every three years, with the next full review scheduled in 2028 for the 2029-2031 WMP cycle.

2. Responsible Persons

The electrical corporation must list those responsible for executing the Base WMP, including:

Executive-level owner with overall responsibility.

Program owners with responsibility for each of the main components of the plan.

As applicable, general ownership for questions related to or activities described in the Base WMP.

Table PAC 2-1 below lists the persons responsible for the 2026-2028 WMP:

Table PAC 2-1: Responsible Persons

Name	Title	Contact Information	Component(s)
Curt Mansfield	Senior Vice President, Power Delivery	Email: Curtis.Mansfield@pacificorp.com Phone: 801-220-4433	Executive Level Owner with Overall Responsibility
Joshua Jones	Vice President, Asset Management and Wildfire Strategy	Email: Joshua.jones@pacificorp.com Phone: 801-220-4212	Wildfire Mitigation Planning and Strategy
Melissa Swenson	Director, Wildfire Mitigation Program Delivery	Email: Melissa.swenson@pacificorp.com Phone: 503 320-8941	Sections 1, 2, 3-3.3, 3.5, 3.6, 4-4.2, 6, 6.2, 6.2.2, 8.1-8.1.2, 13-13.3, Appendix C, Appendix D, Appendix F, Appendix G, PC-25U-11
Aaron Hickey	Director, Field Ops/Distribution	Email: Aaron.hickey@pacificorp.com Phone: 971-242-6209	Sections 8.7.3, 8.7.4
Alex Vaz	Director, Asset Investment Strategy and Policy	Email: Alex.vaz@pacificorp.com Phone: 801-220-2112	Sections 6.1-6.1.2
Amanada Lindsey	Director, Business Operations	Email: Amanada.lindsey@pacificorp.com Phone: 503-813-5346	Sections 12-12.2, ACI PC-25U-08
Carrie Laird	Managing Director, Power Delivery Support	Email: Carrie.laird@pacificorp.com Phone: 503-813-5409	Sections 10-10.2.4, 10.5-10.6.3
Eddie Summit	Director, Asset Maintenance and Compliance	Email: Eddie.summit@pacificorp.com Phone: 801-220-4010	Section 8.3.4

Name	Title	Contact Information	Component(s)
Hallie Frazee	Wildfire Mitigation Communications Program	Email: Hallie.frazee@pacificorp.com Phone: 503-813-5590	Sections 11.4-11.4.3, 11.4.5, 11.4.6, 11.5
Jon Connelly	Director, Real Time Grid Engineering	Email: Jonathan.connelly@pacificorp.com Phone: 503-813-6152	Sections 8.4, 8.7, 8.7.1,8.7.2,10.3,10.3.1, Table 8-7, ACIs PC-25U-09, PC-23B-20
Jon Moulton	Managing Director, Asset Management	Email: Jonathan.moulton@pacificorp.com Phone: 801-220-2360	Sections 8.3-8.3.3, 8.3.5-8.3.7, 8.5-8.5.7, 8.6, ACIs PC-25U-06, PC-25U-07,
Josh Hooley	Director, Vegetation	Email: Josh.Hooley@pacificorp.com Phone: 541-955-7941	Sections 9-9.5.4, 9.7-9.13.2, ACI PC-23B-16
Kevin Benson	Managing Director, Asset Risk and Performance	Email: Kevin.benson@pacificorp.com Phone: (541) 213-1990	Sections 3.4, 4.3, 5-5.7, 6.2.1, Appendix B, ACIs PC-25-01, PC-23B-02, PC-25U-02, PC-25U-03, PC-25U-04, PC-25U-05, PC-25U-03
Kevin Schiedler	Wildfire Mitigation Delivery Director	Email: Kevin.Schiedler@pacificorp.com Phone:503-813-5595	Sections 6.2.1.3, 8.28.2.13
Megan Buckner	Director, Wildfire Mitigation Program Delivery	Email: megan.buckner@pacificorp.com Phone: 503-813-5209	Sections 6.1.3, 10.4-10.4.4
Elenore Yotsov	Director of Emergency Management	Email: Elenore.yotsov@pacificorp.com Phone: (503) 319-6819	Sections 7, 11-11.3.3, 11.4.4
Pooja Kishore	State Regulatory Affairs Manager	Email: Pooja.kishore@pacificorp.com Phone: 503-813-7314	Appendix E
Rohit Nair	Managing Director, T & D Innovation and Strategy	Email: Rohit.nair@pacificorp.com Phone: 801-220-4352	Sections 10.3.2-10.3.4
Stephanie Beall	Director, Meteorology	Email: Stephanie.beall@pacificorp.com Phone: 385-515-1232	Section 3.7
Tim Barry	Director, Field Ops/Substation	Email: Timothy.barry@pacificorp.com Phone: 541-776-5481	Sections 9.6-9.6.4

Name	Title	Contact Information	Component(s)
Tom Eide	Vice President, Operations	Email: Thomas.eide@pacificorp.com Phone: 541-776-5467	ACI PC-25U-10

3. Overview of the WMP

3.1 Primary Goal

Each electrical corporation must state the primary goal of its Base WMP. The primary goal must be consistent with California Public Utilities Code section 8386(a).

The primary goal of PacifiCorp's WMP is to reduce the likelihood and impact of wildfires associated with utility infrastructure, with a focus on safeguarding communities. PacifiCorp's plan describes mitigation of wildfire risks from utility infrastructure through four areas as shown in Figure PAC 3-1 below and described further below the figure.

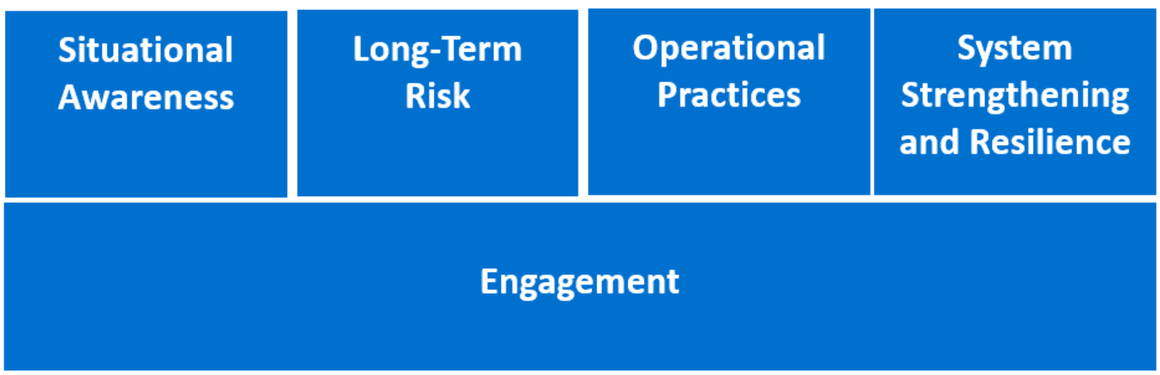

Figure PAC 3-1: PacifiCorp's Wildfire Mitigation Approach

Situational Awareness is supported by short-term risk modeling provides a daily risk forecast that looks out over the next five days and looks at the weather and fuels conditions and what the potential is for an ignition. This short-term view informs PacificCorp's operational practices.

Long-Term Risk Modeling combines over 30 years of historical weather and fire data with advanced simulations to highlight areas of concern. This long-term risk modeling helps the company understand should there be an ignition, there are characteristics of historical and geographic data which indicate it could have a significant impact on an area. This view of risk modeling can inform where there are areas of high fire risk which support program strategy, such as where to focus system hardening, expedited inspection, finding corrections from equipment inspections, or where to do vegetation management more frequently

Operational Practices are informed by situational awareness and PacifiCorp's approach is that fire risk escalates, so does the company's response. Responses can range from work practices such as deferring non-essential work or deferring work in windy or other high-risk conditions, if possible.

Operational practices can also include implementation of alternate protection and control schemes, referred to as Enhanced Safety Settings (ESS) which will deenergize lines in fractions of a second if an interference is detected. For fires burning near or towards our utility assets the company has increased its capability to reduce risk by proactively de-energizing based on the weather and fuel conditions based on the reported distance from our utility assets. As a last resort operational practices may result in a Public Safety Power Shutoff (PSPS).

System Resilience and Strengthening is informed by the long-term risk and includes activities such as equipment inspection programs and accelerated correction of conditions that may cause an ignition and enhanced vegetation management practices.

Increasing resilience can also be accomplished through system hardening. This strategy aims to retrofit the system and protect against the impacts of incidental contact with powerlines, which in turn reduces the risk that the electric line can become a source of a fault or spark. Hardening also involves installation and upgrades of relays and reclosers which support ESS and the communications that help narrow down the source to help decrease the time from an outage to restoration.

Engagement: Underlying all of this is engagement with customers, public safety partners, Tribal Nations, the Utility Commission and Energy Safety as well as utilities in California and across the United States (US) and Canada. This engagement can come in multiple forms: webinars and meetings presenting PacifiCorp's WMP, bill messaging for customers, advertising in local media, or preparedness exercises with safety partners. Engagement is multi-directional to support continuous improvement.

3.2 Plan Objectives

In this section, the electrical corporation must summarize its plan objectives over the three-year WMP cycle. Plan objectives are determined by the portfolio of activities proposed in the Base WMP.

Plan objectives must address the electrical corporation's most highly prioritized categories of wildfire risk drivers, as listed in Section 3.4.

Electrical corporations must tie plan objectives to targets (both quantitative and qualitative) and performance metrics.

PacifiCorp's 2026-2028 WMP objectives support the goal to reduce the likelihood of ignition and impact of wildfires caused by utility infrastructure in the broad categories shown above in Figure PAC 3-1 and discussed further in this plan.

Risk Assessment: Long term risk modeling continues to be an area of development for PacifiCorp with the objective of integration of the likelihood and consequence of PSPS events and Protection Equipment Device Settings (PEDS) outages, also known as ESS outages, into the risk model to provide a holistic view of risk, this is discussed in Section 5. With this information, PacifiCorp can understand the degree to which the risks presented in Table 3-1 impact each of these components and use this information to apply develop the appropriate strategy and programs to mitigate the risk as described in Section 6.

Situational Awareness: The objective for Situational Awareness is to continue developing the models and tools to provide detailed and timely forecasts with a high degree of confidence to support operational decision-making such as adjusting work practices or when to enable ESS or, as a last resort, a PSPS. Situational Awareness initiatives and activities are discussed in Section 10.

Operational Practices: Apply risk-based operational practices to mitigate the risk of an ignition based on the forecasted conditions. These risk-based practices include adjusting work practices as discussed in Section 8.7.3, adjusting settings to make them more sensitive as described in Section 8.7.1, or as a last resort a PSPS as described in Section 7.

System Resiliency: Continue the regular programs of equipment inspection accelerated correction of conditions that may cause an energy release or safety risk and enhanced vegetation management practices in areas of elevated risk as described in Sections 8.3 and 9.

In system hardening, continue the plan to harden the system through the line hardening program and continue to install fault detection and communication devices to make the system more sensitive to faults to reduce the risk of an ignition and quickly identify the area where the fault occurred to support timely restoration. System resiliency is discussed in Sections 8.2 and 10.3.

Engagement: Continue outreach to Public Safety Partners, customers, communities, and Tribal Nations in PacifiCorp's service area to ensure wildfire preparedness and educated on the operational practices the Company may take to reduce the risk of ignition and how they can stay informed and prepared this is discussed in Section 11.

3.3 Utility Mitigation Activity Tracking ID

Each electrical corporation must use "Utility Mitigation Activity Tracking IDs" (Tracking IDs) throughout its WMP. Each electrical corporation must implement a tracking system using Tracking IDs, as specified in the applicable Energy Safety Data Guidelines, to tie targets, narratives, initiatives, and activities together throughout its WMP. The electrical corporation must use consistent Tracking IDs in its WMP submission and data submissions. Each Tracking ID must remain consistent across the three-year WMP.

Below in Table PAC 3-1 is the list of Utility Initiative Tracking IDs (Tracking IDs) used by PacifiCorp and referenced in the WMP to track targets, narratives, initiatives, and activities.

Table PAC 3-1: PacifiCorp Tracking IDs for the 2026-2028 WMP

Initiative Tracking ID	Initiative/ Program
AI-01	Transmission Patrol Inspections
AI-02	Distribution Patrol Inspections
AI-03	Transmission Detail Inspections
AI-04	Distribution Detail Inspections
AI-05	Transmission Intrusive Pole Inspections
AI-06	Distribution Intrusive Pole Inspections
AI-07	Enhanced IR Inspections on Transmission Lines
AI-08	Enhanced IR Inspections on Distribution Lines
AI-09	Transmission Drone Inspections
AI-10	Distribution Drone Inspections
AI-11	Substation Inspections
AI-12	Quality Assurance / Quality Control (Asset Inspections)
AI-13	Work Orders (Asset Management)
CO-01	Public Outreach and Education Awareness Program
CO-02	Engagement with Access and Functional Needs Populations
CO-03	Collaboration on Local Wildfire Mitigation Planning
CO-04	Best Practice Sharing with Other Utilities
EP-01	Emergency Preparedness Plan
EP-02	External Collaboration and Coordination
EP-03	Public Emergency Communication Strategy
EP-05	Customer Support in Wildfire and PSPS Emergencies
ES-01	Enterprise Systems Development
GH-01	Line Rebuild - Covered Conductor Installation
GH-02	Distribution Pole Replacements and Reinforcements
GH-03	Transmission Pole/Tower Replacements and Reinforcements
GH-04	Installation of System Automation Equipment
GH-05	Expulsion Fuse Replacement
GH-12	Microgrids
GH-13	Line Removals (in HFTD)
GH-14	Workforce Planning (Grid Hardening)
GH-15	Pole Wraps
GO-01	Equipment Settings to Reduce Wildfire Risk (Grid Ops): ESS and Fault Indicators
GO-02	Grid Response Procedures and Notifications (Grid Ops): Patrols
MA-01	Maintenance: Weather Station
PS-01	Protocols on PSPS
RA-01	Risk and Risk Component Calculation
RA-02	Top Risk Areas within the HFRA

Initiative Tracking ID	Initiative/ Program
RA-03	Other Key Metrics
RA-04	Enterprise System for Risk Assessment
SA-01	Environmental Monitoring Systems
SA-02	Grid Monitoring Systems
SA-03	Smoke and Air Quality Sensors
SA-04	Wildfire Detection Cameras
SA-05	Weather Forecasting
SA-06	Fire Potential Index
VM-01	Vegetation Inspections: Detailed Inspection – Distribution
VM-02	Vegetation Inspections: Detailed Inspection - Transmission
VM-03	Vegetation Inspections: Patrol Inspection - Distribution
VM-04	Vegetation Inspections: Patrol Inspection - Transmission
VM-05	Pole Clearing
VM-06	Clearance - Distribution
VM-07	Clearance - Transmission
VM-11	Quality Assurance / Quality Control (Vegetation)
VM-12	Wood and Slash Management
VM-13	Substation Defensible Space
VM-14	Integrated Vegetation Management
VM-15	Workforce Planning (Vegetation Management)
WP-01	Wildfire Mitigation Strategy Development
WP-02	Identifying and Evaluating Mitigation Initiatives

3.4 Prioritized List of Wildfire Risks and Risk Drivers

The electrical corporation must provide a list that identifies and prioritizes all wildfire risks, and drivers for those risks, throughout its service territory.

PacifiCorp quantifies risk per risk driver by taking the percentage of faults categorized by risk driver its California service area. This percentage is then modified to account for ignitions within the HFTD. To emphasize the impact of the different factors, a weighted sum formula was used. The most critical factor, ignitions in the HFTD, was multiplied by three. The second most critical factor, faults within PacifiCorp's service area were multiplied by two. Each of the weighted factors was added together to identify the priority of the risk drivers. The result is that each risk driver is amplified based on HFTD geography as well as ignition rate to obtain an informed view of ignition driver risk within PacifiCorp's service territory. The final product is sorted in descending order and then ranked to assign the Priority column in Table 3-1. The top risk driver is Unknown, which is indicative of an unknown risk in the field that PacifiCorp will seek to clarify and understand in order to categorize appropriately.

PacifiCorp utilized subject matter experts (SME) to identify the topographical and climatological risk factors column. At this time, there is no link between outage records and weather data, which is necessary for identifying trends in outages relating to weather phenomena. Additional analysis is also required to examine the topographical issues relating to risk drivers and to understand any trends that are co-incident with certain drivers.

At the time of the 2026-2028 WMP filing, PacifiCorp has limited data as there were only 21 ignitions tracked in the HFTD. PacifiCorp does not track all ignition causes using the same categories as presented required in Table 3-1, and those are noted as "Not tracked" in the table.

Table 3-1: List of Risks and Risk Drivers to Prioritize

Priority	Risk	Risk Driver	x% of ignitions in HFTD	Topographical and Climatological Risk Factors
1	Unknown	Unknown	24%	Unknown
2	Vegetation Contact	Outside Clearance Zone	14%	Wind-Driven Risk Fuel/Terrain Driven Risk
3	Fire	Fire	14%	Wind-Driven Risk Fuel/Terrain Driven Risk
4	Contact from object	Unknown	0%	Not Tracked
5	Equipment / facility failure or damage	Degradation-Line Element	5%	Wind-Driven Risk Fuel/Terrain Driven Risk

Priority	Risk	Risk Driver	x% of ignitions in HFTD	Topographical and Climatological Risk Factors
6	Equipment / facility failure or damage	Degradation-Protective/Control Device	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
7	Equipment / facility failure or damage	Equipment Error-Line Element	10%	Wind-Driven Risk Fuel/Terrain Driven Risk
8	Other	Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
9	Equipment / facility failure or damage	Transformer	0%	Not Tracked
10	Contact from object	Foreign Contact-Land vehicle contact	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
11	Equipment / facility failure or damage	Cutout	0%	Not Tracked
12	Equipment / facility failure or damage	Connector device	0%	Not Tracked
13	Contact from object	Other contact from object	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
14	Contamination	Contamination	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
15	Equipment / facility failure or damage	Equipment Error-Other	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
16	Equipment / facility failure or damage	Other - Unknown	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
17	Equipment / facility failure or damage	Equipment Error-Protective/Control Device	5%	Wind-Driven Risk Fuel/Terrain Driven Risk
18	Contact from Object	Bird	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
19	Equipment / facility failure or damage	Fuse	0%	Not Tracked
20	Lightning	Lightning	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
21	Equipment / facility failure or damage	Degradation-Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk

Priority	Risk	Risk Driver	x% of ignitions in HFTD	Topographical and Climatological Risk Factors
22	Equipment / facility failure or damage	Conductor	0%	Not Tracked
23	Equipment / facility failure or damage	Other-Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
24	Wire-to-wire contact	Wire-to-wire contact	0%	Not Tracked
25	Contact from Object	Animal Contact	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
26	Equipment / facility failure or damage	Insulator and bushing	0%	Not Tracked
27	Other	Utility Error/Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
28	Vegetation Contact	Within Clearance Zone (right-of-way)	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
29	Equipment / facility failure or damage	Cross arm	0%	Not Tracked
30	Vandalism/ theft	Vandalism/ theft	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
31	Equipment / facility failure or damage	Degradation-Structural Elements	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
32	Protective device operation	Protective device operation	0%	Not Tracked
33	Equipment / facility failure or damage	Voltage regulator /booster	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
34	Contact from Object	Third-party contact	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
35	Equipment / facility failure or damage	Lightning arrestor	0%	Not Tracked
36	Equipment / facility failure or damage	Degradation-Voltage Control	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
37	Dig-in	Dig-in	0%	Wind-Driven Risk Fuel/Terrain Driven Risk

Priority	Risk	Risk Driver	x% of ignitions in HFTD	Topographical and Climatological Risk Factors
38	Equipment / facility failure or damage	Splice	0%	Not Tracked
39	Equipment / facility failure or damage	Pole	0%	Not Tracked
40	Equipment / facility failure or damage	Equipment Error-Unknown	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Other-Structural Elements	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Equipment Error-Structural Elements	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Environmental-Protective/Control Device	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Environmental-Structural Elements	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Other-Line Element	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Environmental-Line Element	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Degradation-Unknown	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Environmental-Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Emergency Repairs	Emergency Repairs	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Contact from Object	Aircraft Vehicle contact	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Contact from Object	Balloon contact	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Customer Request	Customer Request	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Environmental-Unknown	0%	Wind-Driven Risk Fuel/Terrain Driven Risk

Priority	Risk	Risk Driver	x% of ignitions in HFTD	Topographical and Climatological Risk Factors
40	Equipment / facility failure or damage	Other-Protective/Control Device	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Anchor/guy	0%	Not Tracked
40	Equipment / facility failure or damage	Capacitor bank	0%	Not Tracked
40	Vegetation Contact	Other	0%	Wind-Driven Risk Fuel/Terrain Driven Risk
40	Equipment / facility failure or damage	Sectionalizer	0%	Not Tracked
40	Equipment / facility failure or damage	Switch	0%	Not Tracked
40	Equipment / facility failure or damage	Relay	0%	Not Tracked
40	Equipment / facility failure or damage	Recloser	0%	Not Tracked
40	Equipment / facility failure or damage	Tie wire	0%	Not Tracked
40	Equipment / facility failure or damage	Tap	0%	Not Tracked
40	Vegetation contact	Blow-in	0%	Not Tracked
40	Equipment / facility failure or damage	Unknown	0%	Not Tracked
40	Vegetation contact	Fall in (branch failure)	0%	Not Tracked
40	Vegetation contact	Fall in (root failure)	0%	Not Tracked
40	Vegetation contact	Fall in (trunk failure)	0%	Not Tracked
40	Vegetation contact	Grow-in	0%	Not Tracked

3.5 Performance Metrics

In this section, the electrical corporation lists the performance metrics, beyond those required by Energy Safety, that the electrical corporation uses to evaluate the effectiveness of the plan in reducing wildfire and outage program risk. Table 3-2 below presents PacifiCorp's performance metrics for the 2026-2028 WMP.

Table 3-2: Self-Identified Performance Metrics Table

Performance Metric	Assumption that underlies the use of the metric	Section associated with the Performance Metric (state "WMP" if the metric applies to entire plan)
PSPS Customer Minutes Interrupted	This metric helps the company understand the Customer exposure to PSPS as mitigations are implemented . This metric will be annualized.	WMP
PSPS Events	This metric helps the company understand if there are changes in PSPS as mitigations designed to reduce the frequency of them are implemented. This metric will be annualized.	WMP
Enhanced Safety Settings (ESS) (PEDS) Customer Minutes Interrupted	This metric helps the Company understand the Customer exposure to ESS as mitigations are implemented. This metric will be annualized.	WMP
Risk Events	Total number of risk events that are presented in Table 3 of the Quarterly Data Reporting (QDR).	WMP
Ignition Events	Total number of risk events that is presented in Table 3 of the Quarterly Data Reporting (QDR) and the data source is outage reporting system in which outage refers to fire in comment or outage cause . Assumption is that with mitigation activities described in the WMP, the number of ignition events will decrease. This metric will be annualized.	WMP
Equipment Inspection Findings	With regular equipment inspections, over time PacifiCorp expects to see a decrease in findings of conditions that could cause an energy release risk. This will be annualized.	8.3

3.6 Projected Expenditures

The electrical corporation must summarize its projected expenditures in thousands of U.S.

dollars per year for the activities set forth in its three-year WMP cycle in both tabular and graph form. For tabular form, the electrical corporation must follow the provided format in

Table 3-3. Energy Safety's WMP evaluation, resulting in either approval or denial, is not an approval of, or agreement with, costs listed in the WMP.

Table 3-3 below summarizes planned spend for the 2026-2028 cycle.

Table 3-3: Summary of WMP Projected Expenditures

Year	Spend (thousand $USD)
2026	$187,648
2027	$183,115
2027	$183,905

Figure 3-1 below visually summarizes the planned spend for the 2026-2028 WMP cycle.

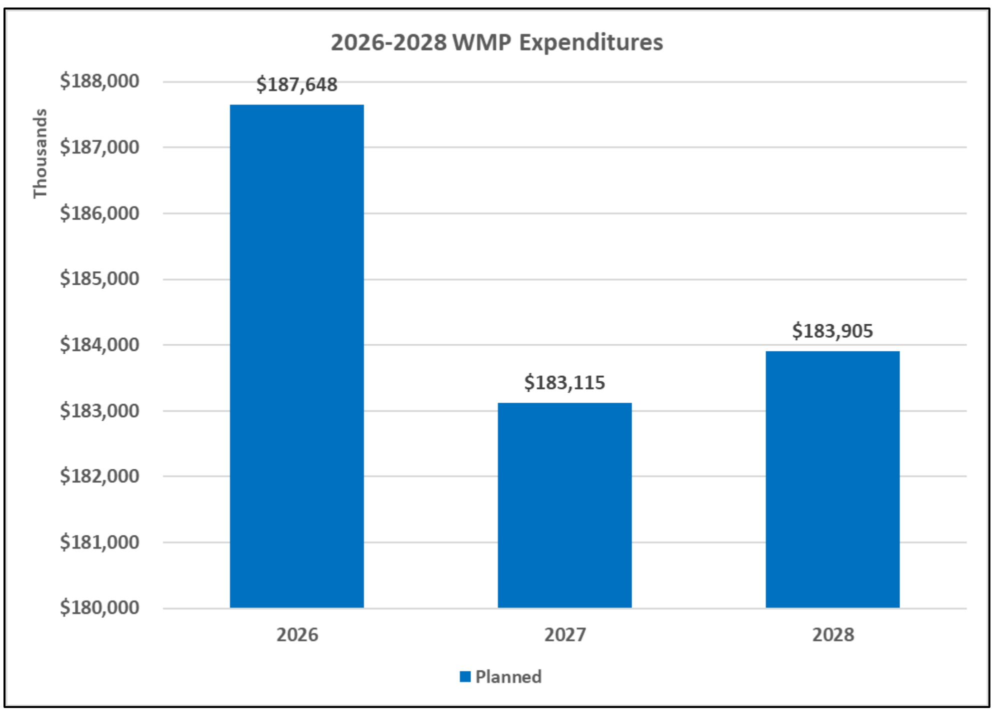

Figure 3-1: WMP Expenditures

3.7 Climate Change

In this section, the electrical corporation describes how it has considered dynamic climate change risks in writing its WMP. This description includes reference to the electrical corporation's most recent climate vulnerability assessment addressing new or exacerbated risks related to wildfire.

PacifiCorp has not performed a climate vulnerability assessment regarding new or exacerbated risks related to wildfire. PacifiCorp is actively participating in the EPRI Climate READi study and with Argonne National Labs to assess climate change impacts within its service territory. This third party vendor will generate climate impact information metrics based on a mid-century timeframe (2045-2054) and RCP8.5 emission. The outcomes will be based on 12km by 12km dynamically downscaled climate model projections. This initiative is in Table 10-1.

PacifiCorp Meteorology annually reviews climate data which feeds into determination of risks for wildfire criteria and PSPS thresholds. This data driven approach ensures that the latest data is built into assessing short-term weather-related risk. PacifiCorp's in house Weather Research Forecast (WRF) Model historical reanalysis data is updated annually to ensure the entire dynamic 30-year climatological history is always current for assessment of vulnerabilities related to risks, new or exacerbated.

4. Overview of the Service Territory

In this section of the WMP, the electrical corporation must provide a high-level overview of its service territory and key characteristics of its electrical infrastructure. This information must provide Energy Safety with an understanding of the physical and technical scope of the electrical corporation's WMP.

4.1 Service Territory

The electrical corporation provides a high-level description of its service territory.

PacifiCorp provides electricity to approximately 47,396 customers via 3,245 overhead transmission and distribution line miles, and 640 underground line miles across approximately 11,292 square miles in California. See Table 4-1 and Figure 4-1 below. A service area map may also be viewed online at PacifiCorp 2026-2028 WMP Additional Maps.

Table 4-1: High-Level Service Territory Components

Characteristic	HFTD Tier 2	HFTD Tier 3	Non-HFTD	Total
Area Served (sq. mi.)	7,015	129	4,149	11,292
Number of Customers Served	18,718	1,189	27,489	47,396
Overhead Transmission Tines (circuit miles)	319	23	386	729
Overhead Distribution Lines (circuit miles)	770	40	1,706	2,516
Underground Transmission Lines (circuit miles)	0	0	0	0
Underground Distribution Lines (circuit miles)	348	55	236	640

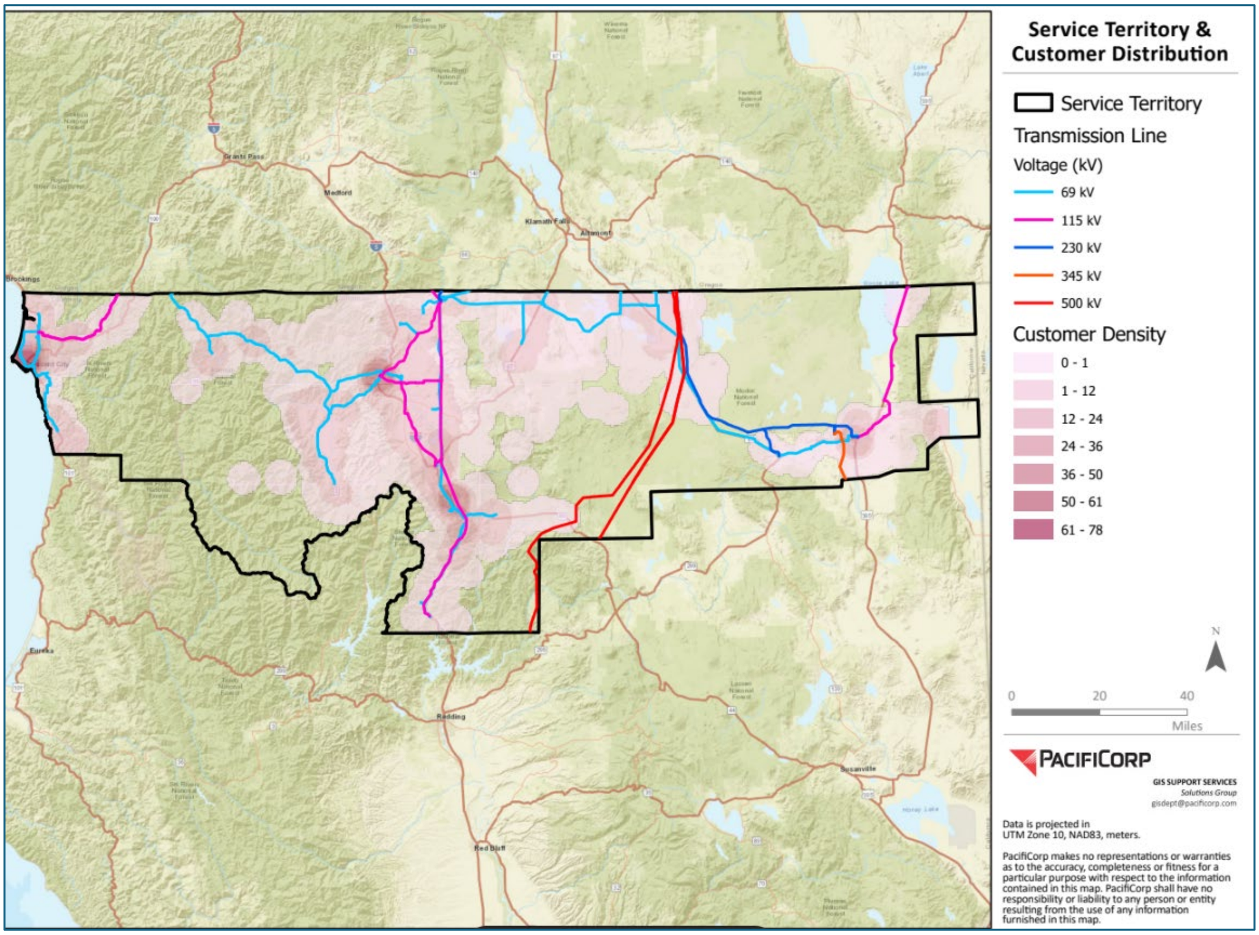

Figure 4-1: Service Territory and Customer Distribution

4.2 Catastrophic Wildfire History

The electrical corporation provides a brief narrative summarizing its wildfire history for the past 20 years as recorded by the electrical corporation, CAL FIRE, or another authoritative government sources. For this section, wildfire history is limited to electrical corporation ignited catastrophic fires (i.e., fires that caused at least one death, damaged over 500 structures, or burned over 5,000 acres). This includes catastrophic wildfire ignitions reported to the PUC that may be attributable to facilities or equipment owned by the electrical corporation and where the cause of the ignition is still under investigation by the CAL FIRE, and/or other authoritative government sources. The electrical corporation clearly denotes those ignitions as still under investigation.

PacifiCorp tracks fire events that involve its infrastructure consistent with regulatory requirements. To meet the request for information and fulfill this WMP requirement, wildfires that meet the definition of "catastrophic" as provided by the Office of Energy Infrastructure Safety are included in the narrative and Table 4-2 below. The narrative and table below were populated based on the catastrophic wildfire events experienced in the company's service territory as captured and recorded by CalFire. PacifiCorp is in pending litigation regarding the Slater and McKinney fires and the financial loss cannot be quantified until that litigation is resolved and is noted as "TBD" in Table 4-2.

- The Slater Fire ignited on September 8, 2020, and had a burn perimeter of 157,270 acres, causing two fatalities and damaging or destroying 377 structures[4]. The official cause is under investigation.
- The McKinney Fire ignited on July 29, 2022, and had a burn perimeter of 60,138 acres, causing four fatalities and damaging or destroying 196 structures[5]. The official cause is under investigation.

Table 4-2: Catastrophic Company Wildfires

Ignition Date	Fire Name	Official Cause	Fire Size (acres)	No of Fatalities	No of Structures Destroyed and Damaged	Financial Loss (US$)	Lesson(s) Learned
9/8/2020	Slater	Under Investigation	157,270	2	377	TBD	Under Investigation

4 CalFire. 2020 Wildfire Activity Statistics. Page 12. Sourced March 10, 2025.

5 CalFire. McKinney Fire Incident page. Sourced March 10, 2025.

Ignition Date	Fire Name	Official Cause	Fire Size (acres)	No of Fatalities	No of Structures Destroyed and Damaged	Financial Loss (US$)	Lesson(s) Learned
7/29/2022	McKinney	Under Investigation	60,138	4	196	TBD	Under Investigation

4.3 Frequently Deenergized Circuits

The electrical corporation must populate Table 4-3 and provide a map showing its frequently deenergized circuits. Frequently deenergized circuits are circuits which have had three or more PSPS events per calendar year. The table and map must include frequently deenergized circuits from the previous six calendar years.

PacifiCorp had two PSPS events in its California service area in the last six years, in 2020 and 2021. No circuits have been deenergized three or more times in a calendar year due to a PSPS and there are no circuits to present in Table 4-2 or Figure 4-2 and are noted as "N/A.". Figure 4-2 can also be viewed online at PacifiCorp 2026-2028 WMP Additional Maps

Table 4-3: Frequently Deenergized Circuits

Entry #	Circuit ID	Name of Circuit	Date of Outages	Number of Customers Hours of PSPS per Outage	Measures Taken, or Planned to Be Taken, to Reduce the Need for and Impact of Future PSPS of Circuit	Estimated Annual Decline in PSPS Events and PSPS Impact on Customers
1	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A

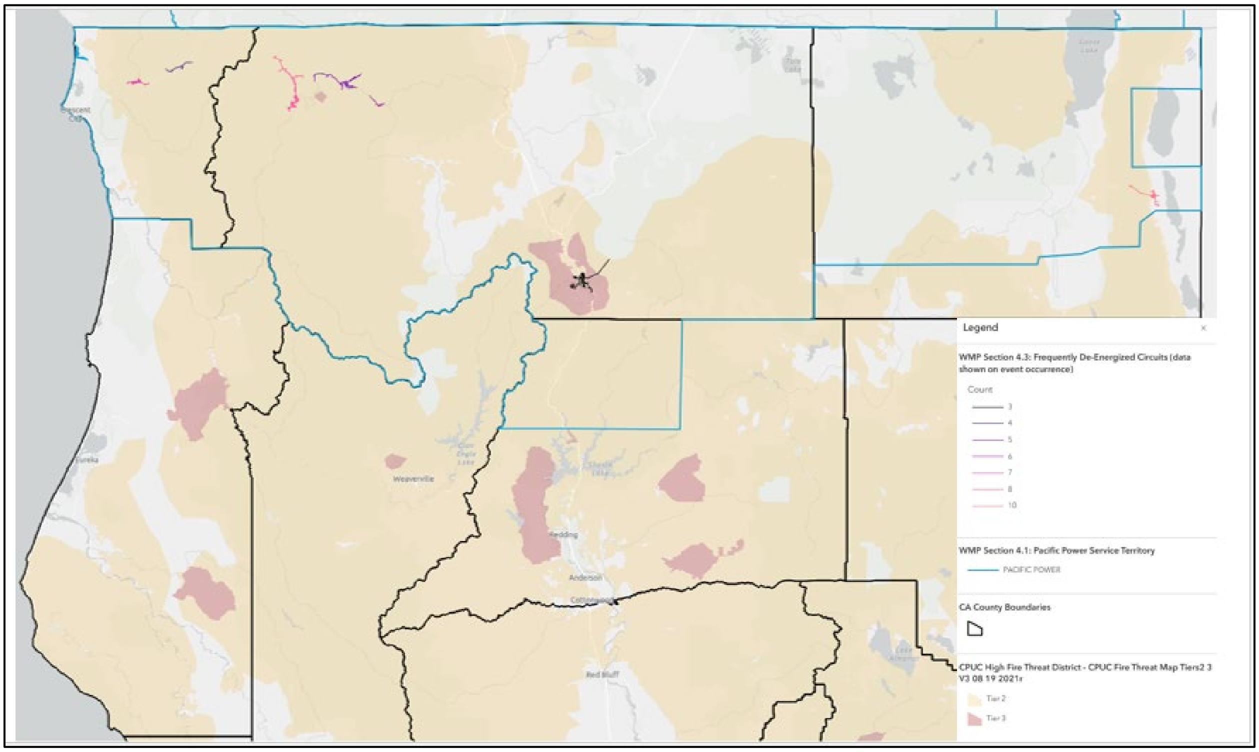

Figure 4-2: Map of Frequently Deenergized Circuits

5. Risk Assessment and Methodology

In this section of the WMP, the electrical corporation must provide an overview of its risk methodology, key input data and assumptions, risk analysis, and risk presentation (i.e., the results of its assessment). This section must provide the information necessary to understand the foundation for the electrical corporation's wildfire mitigation strategy. Sections 5.1–5.7 below provide detailed instructions.

The electrical corporation does not need to perform each calculation and analysis indicated in Sections 5.2, 5.3, and 5.6. However, if the electrical corporation does not perform a certain calculation or analysis, it must describe why it does not do so, its current alternative to the calculation or analysis (if applicable), and any plans to incorporate those calculations or analyses into its risk methodology and assessment in the future.

5.1 Methodology

In this section, the electrical corporation must present an overview of its risk calculation approach. This includes a concise narrative explaining key elements of the approach, one or more graphics showing the calculation process, and definitions of different risks and risk components.

5.1.1 Overview

The electrical corporation must provide a brief narrative describing its methodology for quantifying its overall utility risk, wildfire risk, and outage program risk (as described in Section 5.2.1 and defined in Appendix A). This methodology will help inform the development of its wildfire mitigation strategy (see Section 6). The electrical corporation must describe the methodology and underlying intent of this risk assessment in no more than five pages, inclusive of all narratives, bullet point lists, and any graphics. The electrical corporation must indicate and describe any industry-recognized standards, best practices, or research used in its methodology.

PacifiCorp continues to build upon existing models to enhance data driven decision making that uses quantifiable evidence resulting from state-of-the-art modeling techniques to quantify the likelihood and impact of wildfires associated with utility infrastructure. The goal of this transition is to ensure the maximum risk reduction while maintaining affordability for its customers. PacifiCorp is dedicated to ever-improving, transparent, traceable, and reproducible analytics in support of wildfire mitigation projects that improve the safety of its customers in the most efficient way possible. In this chapter, the details of PacifiCorp's risk quantification will be described in detail. Furthermore, a description of how PacifiCorp's risk quantification will evolve over the course of the current WMP cycle will be provided.

The risk assessment in this WMP is based on a quantified risk approach using a range of industry-recognized standards, best practices, and research to determine the PacifiCorp's overall utility risk from wildfires, PSPS, and PEDS for its service territory. The intent of performing this risk analysis is to:

- Understand the overall utility risk and associated risk components of wildfires outage program events spatially and temporally across the company's service territory
- Use this understanding of risk to inform the development of a comprehensive wildfire mitigation strategy in Section 6 that achieves the goals and plan objectives stated in Sections 3.1 and 3.2.

The risk analysis approach consists of the following:

- Identifying key wildfire, PSPS, and PEDS hazards and risk components across the company's service territory
- Identifying key modeling tools, inputs, and assumptions to quantify the likelihood and consequence of the company's overall utility risk

- Identifying credible scenarios that would expose surrounding people, assets, and natural resources (PAR) to wildfire, PSPS, or PEDS risks
- Summarizing the overall utility risk and key metrics
- Presenting the quality assurance and quality control procedures for the company's risk assessment
- Improving the risk analysis approach based on lessons learned during the WMP cycle

PacifiCorp's baseline risk analysis framework consists of four main components as depicted in Figure PAC 5-1 below. The framework is a cycle consisting of data collection and analysis, risk evaluation, risk treatment, and risk monitoring and evaluation and is represented as a cycle to depict a process geared to make continuous improvement. For example, data collection and analysis support inputs to risk evaluation in a repeatable, transparent way to identify areas of risk. This in turn supports development and updates to risk evaluation tools, such as mapping of the HFRA to inform risk mitigation programs such as vegetation management and asset inspections. Finally, risk is monitored, and programs are evaluated to enable continuous improvement. The framework is a cycle consisting of data collection and analysis, risk evaluation, risk treatment, and risk monitoring and evaluation.

Figure PAC 5-1: Baseline Risk Assessment Framework

Data Collection and Analysis provide enhanced data collection and analytics for incident tracking, trend analysis, and measurement of mitigation effectiveness. This capability is discussed below in Section 5.2.1.

Risk Evaluation includes the development of tools and models to support location-specific risk identification to inform mitigation programs. These risk evaluation tools and models include the delineation of geographic areas of heightened risk of wildfire, designated as the HFRA as described in Section 5.5.1 as well as the asset-specific risk modeling tool, FireSight, explained further in Section 5.4.

Risk Treatment involves the development and implementation of mitigation programs informed by the data analysis and risk evaluation as explained in Section 6.

Risk Monitoring and Review supports quantitative evaluation of the effectiveness of mitigation strategies using a consistent framework and process as explained in Section 6.2. Continuous monitoring of programs is also summarized

PacifiCorp analyzes the components of risk associated with utility facilities. An understanding of risk drivers informs specific mitigation tactics or strategies that can be used to reduce the total amount of risk associated with utility operations. For example, if a risk of utility-related-wildfire exists due to potential equipment failure, an increase in inspections or maintenance activities might help to mitigate the risk. If a risk exists due to potential contact between power lines and third-party objects, installing conductor more resilient to contact with objects might help to mitigate that particular risk.

The company's risk evaluation models, processes, and tools employ the concept that risk is a combination of likelihood and consequence. The likelihood, or probability, of an event is an estimate of a particular event occurring within a given timeframe. The consequence of an event is generally expressed in terms of potential impacts to customers, public safety partners, communities, and utility facilities when an event occurs.

While situational awareness tools and models evaluate weather driven types of risk in the short term and inform operational protocols and decision making, PacifiCorp's overall risk methodology and assessment evaluates risk more broadly over longer-term planning horizons to inform strategies and programs that may be deployed over many years.

To achieve PacifiCorp's long-term risk reduction strategy, the company has implemented the first version of a Planning model. There are two primary use cases for the Planning model. The first is to identify the assets most at-risk from wildfire and assess the cost efficiency of grid hardening initiatives, such as undergrounding and covered conductor. The second use case is to build and modify the HFRA by identifying the geographic areas in PacifiCorp's service territory subject to the greatest risk of wildfire should an ignition occur.

The planning model is built using Technosylva's FireSight model and considers topography, vegetation-based fuels data, climatology, demographics, historic fire weather days, live and dead fuel moisture estimates, and the presence of structures. Both the Expected and Conditional risk are utilized in the Planning model for the two use cases addressed in the above paragraph. Expected risk is primarily used to assess grid hardening initiatives, while Conditional risk is used to modify the HFRA boundaries.

In addition to wildfire risk, PacifiCorp is currently developing models to assess the utility's overall risk and potential consequence of both PSPS, and PEDS. Through collaboration and sharing of best practices with other utilities and leading companies in the industry, the company is continually working towards improving its risk quantification capabilities. The resulting planning model will allow the utility to:

- Assess the level of risk associated with the asset in a specific location, including the probability of an ignition from a utility asset and the impacts of an ignition on an asset's location.
- Understand the consequence of an ignition to a location based on the built environment and community demographics.
- Evaluate the likelihood of a PSPS or PEDS event in a location.
- Determine the vulnerability and exposure of a location of a PSPS or PEDS because of a PSPS to economic, social, or physical consequences; and
- Calculate a utility risk that is the result of this analysis to identify the high-risk locations.

PacifiCorp's development strategy for its wildfire and outage program risk assessment is to ultimately quantify PSPS and PEDS risk as additional input to the overall utility risk model. PacifiCorp has been participating in the Energy Risk Modeling Workshops and is closely following the best developing practices guidelines with the intent of quantifying Wildfire, PSPS, and PEDS risk in the anticipated holistic context defined by the Risk Modeling Working Group's (RMWG) Best Practices document.

5.2 Risk Analysis Framework

In this section of the WMP, the electrical corporation must provide a high-level overview of its risk analysis framework. This includes a summary of key modeling assumptions, input data, and modeling tools used.

PacifiCorp's overall risk quantification strategy is road-mapped to obtain an eventual level of maturity that will provide a comprehensive view of wildfire, and outage risk in a benefit cost framework. While PacifiCorp does not have risk quantified for PSPS and PEDS, two of the improvements outlined in Section 5.7, PC-25U-02: PSPS and Wildfire Risk Trade-Off Transparency and Creation of PEDS Risk Model are designed to overcome this deficiency by the end of 2025. Likewise, the improvement Monetization of risk events for use in RSE calculations is expected to support a successful benefit cost framework implementation.

The current risk analysis framework focuses on Wildfire risk, which is comprised of both a Wildfire Likelihood of Risk Event (LoRE) component and a Wildfire Consequence of Risk Event (CoRE) Component. The Wildfire LoRE and CoRE are obtained via the FireSight model. The CoRE consists of the Conditional Impact model and the LoRE consists of the Probability of Fault (POF) and Probability of Ignition (POI) models. The POF and POI are combined with the Conditional Impact model to obtain the Expected Impact model. The Expected impact adjusts the Conditional Impact scores to account for the probability of fault and ignition for each simulated ignition point in

PacifiCorp's service territory. The results of the ignition points are appended to a segment of a Primary Overhead Conductor.

The units PacifiCorp uses to quantify risk vary from segment to circuit. PacifiCorp's segment units consist of a portion of a primary overhead conductor that has a unique ignition point associated with it, PacifiCorp's data model categorizes a primary overhead conductor record as the conductor between two devices, which may include multiple spans. Because of this configuration, PacifiCorp's primary overhead conductor records are typically larger than a traditional span and must be split to obtain the optimal distance between ignition points. The FireSight model ensures that a segment does not exceed 100 meters in length.

PacifiCorp uses the FireSight Expected Impact output based on eight-hour simulations to create its Wind and Fuel/Terrain risk scores. The Wind and Fuel/Terrain risk scores are a novel approach to account for PacifiCorp's service territory which can experience high fire situational days from a variety of wind directions as well as days where wind is not the driver of the fire risk. This situation is in stark contrast to other California IOU's who are primarily impacted by hot, dry, easterly winds, such as the Santa Ana winds. By using the FireSight output components of Risk Associated with Ignition Locations (RAIL) and Risk Associated with Value Exposure (RAVE), PacifiCorp has identified unique risk characteristics endemic to each situation to compose the Wind and Terrain risk scores.

The transformation of FireSight's RAIL and RAVE output is shown in Figure PAC 5-2 below . These scores have been tested with SME's to ensure each score is accurately representing their respective qualities appropriately.

$$\text{Wind Risk} = (0.3 * \text{Rate of Spread (95}^{th}\text{ percentile)}) + (0.25 * \text{Population Impacted (95}^{th}\text{ percentile)}) + (0.25 * \text{Buildings Destroyed (95}^{th}\text{ percentile)}) + (0.10 * \text{Terrain Difficulty Index}) + (0.05 * \text{Disabled Population}) + (0.05 * \text{Poverty Population})$$

$$\text{Fuel / Terrain Risk} = (0.20 * \text{Fire Behavior Index (95}^{th}\text{ percentile)}) + (0.20 * \text{Fire Size Potential (95}^{th}\text{ percentile)}) + (0.20 * \text{Flame Length (95}^{th}\text{ percentile)}) + (0.25 * \text{Terrain Difficulty Index}) + (0.10 * \text{Fire Station Density}) + (0.05 * \text{Fuel Model Majority})$$

Figure PAC 5-2: Wind Risk and Fuel/Terrain Risk Calculation

Wind Risk

The factors affecting Wind Risk include the RAIL variables: Rate of Spread (95th percentile), Population Impacted (95th percentile), and Buildings Destroyed (95th percentile). These variables are combined with RAVE factors of Terrain Difficulty Index, Disabled Population, and Poverty Population. The combination of these factors was determined to be the most indicative indicator of segments subject to Wildfire risk resulting from Wind driven causes. The equation was workshopped with PacifiCorp SME's.

The composition of the Wind Risk Score utilizes a weighted sum formula and is designed to use the FireSight RAIL and RAVE output attributes to indicate a wind driven fire risk. c The Rate of Spread in the 95th percentile was determined to appropriately account for fast moving fires that are observed with wind driven fire risk events. Utilizing the Population Impacted and Buildings Destroyed attributes at their 95th percentiles provides an assessment of the negative impact that wind driven fires will have on the surrounding areas population and structures. These variables are both weighted at 25% and account for half of the Wind risk equation. *Note: The actual term applied to the RAIL output is structure, not building.* The Terrain Difficulty index is used a proxy for fire suppression success. The assumption used in this equation is that higher the Terrain Difficulty Index values will lead to less effective fire suppression. The weight of Terrain Difficulty Index is 10%, which is substantially lower than the 25% weight used in the Terrain risk score. The assumption of using a lower value for the Wind risk score is that fire suppression for wind driven fires is overall less effective than it is for terrain driven fires in the first 8 hours of a fire that is modeled in FireSight. To account for issues based on customer type including resiliency and the ability to evacuate from a fast moving wind driven fire, the Disabled Population and Poverty Population are factored into the equation at 5% each. The attributes selected from FireSight all play a critical part in the Wind risk assessment.

Fuel/Terrain Risk

Similar to the Wind risk score, the Fuel/Terrain risk score leverages FireSight's RAIL and RAVE model output to appropriately show the severity of fuel/terrain driven wildfire risk events in PacifiCorp's service territory. The Fuel/Terrain risk score is likewise a sum of weighted variables but uses those variables in such a way that indicates a terrain driven fire as opposed to a Wind driven fire. The heaviest weighted variable in the Fuel/Terrain risk score is the Terrain Difficulty Index at 25%. The Terrain Difficulty Index is weighted this way to account for the difficulty in suppressing fuel driven wildfires with severe conditions such as topography. The 95^{th} percentile Fire Behavior Index is utilized with a 20% weight to give a sense of how the fire will spread regardless of the presence of wind. The 95^{th} percentile for Fire Size Potential is likewise utilized at a 20% weighting to understand the potential growth of an ignition. The 95^{th} percentile Flame Length variable is weighted at 20% to help understand the intensity of terrain driven fire situations. The RAVE variable of Fire Station Density is also used as a proxy for suppression efficacy. Fuel Majority Model is used in the current production model to help identify fuel types that will contribute to wildfire severity.

5.2.1 Risk and Risk Component Identification

In this section, the electrical corporation must provide a brief narrative and one or more simple graphics describing the framework that defines its overall utility risk. At a minimum, the electrical corporation must define its overall utility risk as the comprehensive risk due to both wildfire risk and reliability risk across its service territory. This includes several likelihood and consequence risk components that are aggregated based on the framework shown in Figure 5-1 below. The following paragraphs define each risk component.

While the overall utility risk framework and associated risk components identified in Section 5.2 are the minimum requirements for determining overall utility risk, the electrical corporation may elect to include additional risk components as needed to better define risk for its service territory. Where the electrical corporation identifies additional terms as part of its risk framework, it must define those terms. The electrical corporation must include a schematic demonstrating its adopted risk framework, including any components beyond minimum requirements.

PacifiCorp's risk assessment model is in

Figure 5-2 below. The ID number in each box corresponds to the Risk ID number. The company is developing new PSPS and PEDS risk assessment solutions to quantify PSPS and PEDS risk and consequence, therefore, the PSPS and PEDS risk drivers are included as placeholders and not described in detail. Figure 5-1 shows the mapping of the risk components to their names in FireSight. FireSight also groups the risk components into RAIL and RAVE that are discussed further below.

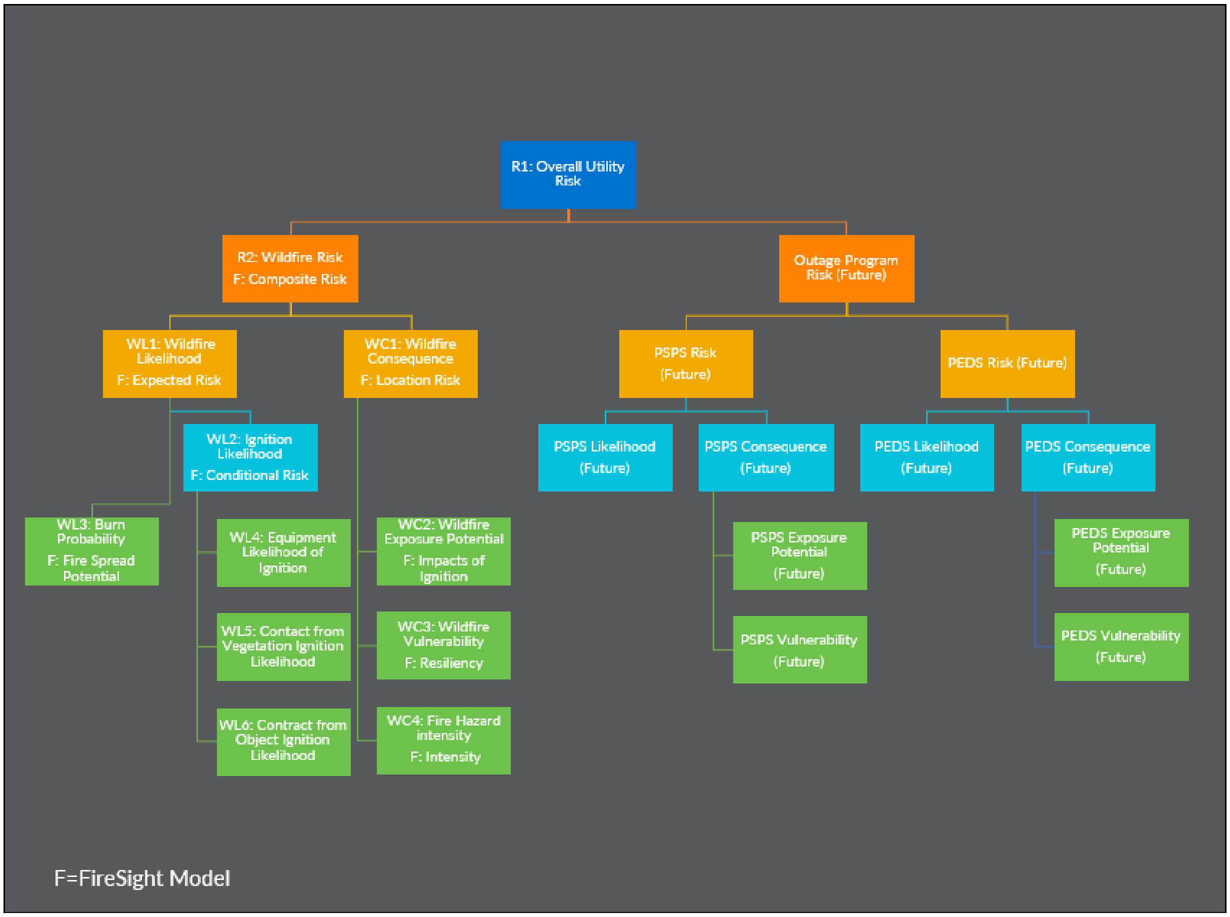

Figure 5-1: PacifiCorp's Risk Assessment Model

PacifiCorp's overall risk profile is composed of three main parts: Wildfire risk, PSPS risk, and PEDS risk. While PSPS and PEDS risk components are in development, Wildfire risk has reached a base level of maturity comprised of Wildfire LoRE and CoRE. These components are derived from Technosylva's FireSight model.

Overall Utility Risk: PacifiCorp currently uses the Composite Risk score as the quantified Overall Utility Risk. To quantify Wildfire Risk, the company has deployed FireSight. Upon completion of the PSPS and PEDS risk models, the Overall Utility Risk will combine Wildfire Risk and Outage Risk. Figure PAC 5-3 shows the components and granularity of the FireSight model and how those components determine the Ignition Risk.

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Figure PAC 5-3: FireSight Model Components

R2 Ignition Risk: PacifiCorp describes its ignition risk calculations in Section 5.2.2.

WL1 Wildfire Likelihood (F: Probability of Fault): The company describes its Wildfire Likelihood calculations in Section 5.2.2.1.

RAIL Outputs

WL2 Ignition likelihood (F: Probability of Fault): This is the result of potential asset equipment fault, drivers causing that fault and/or ignition, and the damage that may lead to an ignition.

Ignition Likelihood has the following subcomponents:

- WL4 Equipment Likelihood of Ignition: This considers the likelihood of an equipment fault under certain weather conditions causing an ignition.
- WL5: Contact From Vegetation Ignition Likelihood: This considers probability of contact from vegetation causing an ignition.

- WL6: Contact from Object Ignition Likelihood: This considers probability of contact from another object causing an ignition.

WL3 Burn Probability (F: Fire Spread Potential): The spread potential of fires originating at an ignition location is a function of the fire environment such as fuel, topography, and weather in the area surrounding the ignition location. The fire spread model defines where possible ignitions will spread across the landscape. This definition of spread is critical for defining vulnerability, i.e., potential impacts due to a utility-asset caused fire. The risk associated with each possible ignition provides the basis for evaluating the best opportunities for reducing risk by implementing mitigation projects.

WC2 Wildfire Exposure Potential (F: Impacts of Ignition): Vulnerability refers to the exposure and susceptibility of values-at-risk (VAR), such as population, buildings, and critical facilities. Exposure is the location of VAR with respect to wildfire hazard, while susceptibility refers to the level of impact caused by wildfires of different intensities. For FireSight, the vulnerability captures a baseline risk for population impacted, number of buildings impacted, estimated number of buildings destroyed, and acres burned. Flame length, Rate of Spread (ROS), and Fire Behavior Index metrics are also included.

WC1 Wildfire Consequence (F: Location Risk): In FireSight, the Risk Associated with Value Exposure (RAVE) represents the locational risk factors calculated from all the surrounding assets, environmental characteristics, and demographics. Community demographics, topography, and the built environment influence how at risk or resilient a community is to wildfire over an eight-hour and 24-hour period from the initial ignition.

The eight-hour period is the typical period used by utilities to model risk, but there is growing interest in 24-hour modeling risk to understand how that changes the risk profile. Therefore, PacifiCorp is modeling both to better understand if there are significant differences in the results that may impact mitigation efforts. PacifiCorp is closely following the development of the Benefit Cost Ratio (BCR) framework. As indicated in the Risk Modeling Workshop from March 2025, the

24 hour expected risk is being adopted by one of the large California utilities. PacifiCorp will continue to evaluate each simulation duration as its RSE framework matures.

RAVE Subcomponents Include

WC3 Wildfire Vulnerability (F: Community Resiliency): How vulnerable a community is to a wildfire and the ability to respond quickly to fight the fire and/or people to evacuate.

WC4 Fire Hazard Intensity (F: Fire intensity): How a fire is expected to behave and what area may be impacted from the point of ignition.

PSPS Risk: PacifiCorp is developing a PSPS risk assessment solution to quantify PSPS risk as an additional input to the Overall Utility Risk model. Requirements have been defined, and development has commenced on the PSPS risk model. PSPS Risk will be an aggregation of the PSPS likelihood and consequence scores.

PSPS Likelihood: PacifiCorp is developing a PSPS risk assessment solution to quantify PSPS Likelihood aligned with the Energy Safety definition of PSPS Likelihood as "The likelihood of the Company requiring a PSPS given a probabilistic set of environmental conditions."

PSPS Consequence: PacifiCorp is developing a PSPS risk assessment solution to quantify PSPS Consequence aligned with the Energy Safety definition of PSPS Consequence as "The total anticipated adverse effects from a PSPS for a community. This considers the PSPS exposure potential and inherent PSPS vulnerabilities of communities at risk (Exposure Potential + Vulnerability)."

PSPS Exposure Potential: PacifiCorp is developing a PSPS risk assessment solution to quantify PSPS Exposure Potential aligned with the Energy Safety definition of PSPS Exposure Potential as "The potential physical, social, or economic impact of a PSPS event on people, property, critical infrastructure, livelihoods, health, local economies, and other high-value assets."

PSPS Vulnerability: PacifiCorp is developing a PSPS risk assessment solution to quantify PSPS Vulnerability aligned with the Energy Safety definition of PSPS Vulnerability as "The susceptibility of people or a community to adverse effects of a PSPS event, including all characteristics that influence their capacity to anticipate, cope with, resist, and recover from the adverse effects of a PSPS event (e.g., high AFN population, poor energy resiliency, low socioeconomics)."

PEDS Risk: PacifiCorp is developing a PEDS risk assessment solution to quantify PEDS risk consistent with Energy Safety's definition of PEDS risk as "The total expected annualized impacts from PEDS enablement at a specific location."

PEDS Likelihood: PacifiCorp is developing a PEDS risk assessment solution to quantify PEDS likelihood consistent with Energy Safety's definition of PEDS likelihood as "The likelihood of an outage occurring while increased sensitivity settings on a protective device are enabled at a specific location given a probabilistic set of environmental conditions."

PEDS Consequence: PacifiCorp is developing a PEDS risk assessment solution to quantify PEDS likelihood consistent with Energy Safety's definition of PEDS consequence as "The total anticipated adverse effects from an outage occurring while increased sensitivity settings on a protective device are enabled at a specific location, including reliability and associated safety impacts."

Below is an evaluation of the impact of the factors on the quantification of risk that are reflected in the risk model.

WL4, WL5 Equipment/Assets: PacifiCorp analyzes the components of risk associated with utility facilities. In particular, an understanding of risk drivers informs specific mitigation tactics or strategies that can be used to reduce the total amount of risk associated with utility operations. For example, if a risk of utility-related-wildfire exists due to the potential for equipment fault, an increase in inspections or maintenance activities might help to mitigate the risk. If a risk exists due to potential contact between power lines and third-party objects, installing conductor more resilient to contact with objects might help to mitigate that particular type of risk. Information on transmission and distribution equipment, including type of equipment, location, installation date, and material is captured and used during analysis, where available.

In determining the potential risk drivers, PacifiCorp employs a data driven approach that references certain categories of historical outage records as a proxy for risk events. Outage data is the best available data to correlate an identifiable event on the electrical network to the risk of a utility-related-wildfire. There is a logical physical relationship: if a fault creates a spark, there is a risk of fire. An unplanned outage—which is when a line is unintentionally de-energized—is most often rooted in a fault.

The analysis of risk drivers incorporates outage data collected through PacifiCorp's normal outage response systems and is an input to the FireSight model. As the company's risk modeling efforts evolve, there may be opportunities to gather more detailed data regarding outages, which may further refine the analysis of such data, to support the modeling and correlations between outages, risk events, and ignition probabilities.

PacifiCorp tracks fires potentially originating from the company's equipment. An initial report of a fire can be obtained through a variety of sources. It is common for an initial report to come via a call to the company's system operations center from an emergency response agency or local government. Other times, PacifiCorp field personnel may observe fire or fire damage while performing work in the field. If certain regulatory criteria are met, information about the fire is reported to Energy Safety or the CPUC.

When PacifiCorp receives an initial report of a fire incident, the incident is recorded in a fire incident tracking database. The company gathers other information, as available, to record in the database. Fields maintained in this database include fire start date and time; location, with a latitude and longitude reference; land use in the area; fire size; suppression agency; facility identification; voltage; associated equipment; outage information; and the suspected initiating event. Data fields are organized to align with regulatory reporting requirements. Information is often estimated based on known available information. For example, a recorded fire start time may be the time when the fire is first observed or when a report of fire is first received; but the precise time that the fire was ignited may not be known. Fields are sometimes populated as "unknown" when there is insufficient available information. Fire incidents have been tracked since 2020, and the data is an input to the risk model. PacifiCorp performs analysis of incidents using engineering analysis practices. Based on the results of the analysis, there may be updates to the company's material or construction standards, updates to asset management policies and procedures, or no additional action if it was determined the equipment performed as expected.

In conjunction with the Fire Incident Tracking Database implementation employees are receiving updated training on reporting outages and ignitions. This training is anticipated to reinforce data collection practices to support trend analysis of outage events and ignitions associated with the events to support the incident analysis process described above.

Based on the data collected in the Fire Incident Tracker, PacifiCorp will assess if there is a trend of increased ignition incidents that may require developing specialized processes. Given the limited ignition history, there may be no discernable trends in the short term, but the company will monitor and continue assessing if there is a need.

WL3, WL2, WL4 Weather: PacifiCorp has provided over 30 years of data from the Weather Research and Forecast (WRF) Model to Technosylva to calculate the 600 historical fire weather days in each area that best represent the days when weather and fuel conditions can lead to increased risk of ignition. FireSight uses historical fire weather days to best represent days when and where the weather and fuel conditions will most likely lead to increased risk of ignition. The model used to select the fire weather days is probabilistic and is not intended to provide a deterministic weather forecast. The fire weather days are selected using the following inputs:

- The Hot, Dry, Windy (HDW) Index

- Energy Release Component (ERC) for fuel conditions
- Wind Gusts Percentile (Gust)

R1, R2, WL1, WL3, WL2, WL4, WL5, WL6, WC1 Climate Change: PacifiCorp has provided over 30 years of the Weather Research and Forecast (WRF) Model to Technosylva to calculate the historical weather days that best represent the days when weather and fuel conditions can lead to increased risk of ignition. PacifiCorp has now moved to an annual cadence to capture new days that should be incorporated into the historical weather days to account for changing weather conditions.

The FireSight model accounts for climate change in the fuels moisture model that impacts the Composite Risk Score. The model also forecasts mid-range and long-range vegetation conditions to account for changes in vegetation over time.

PacifiCorp has an initiative, Implement a Climate Change Planning Model Component that is in Table 5-6 and discussed further in Section 5.7.

As a BHE utility, PacifiCorp is participating in a Climate Vulnerability Assessment. This initiative for climate assessment is being conducted by Argonne National Labs. This third party vendor will generate climate impact information for BHE affiliated utilities for various metrics all based on a mid-century timeframe (2045-2054) and RCP8.5 emission. The outcomes will be based on 12km by 12km dynamically downscaled climate model projections. This initiative is in Table 10-1.

R1, R2, WL1, WL2, WL4, WL4, WL5, WL6, WC1, WC2 Topography, Fuel, Vegetation: In FireSight, the Risk Associated with Ignition Locations (RAIL) represents the wildfire risk associated to ignitions from utility asset risk based on the characteristics of the asset, including age and materials. RAIL assesses the asset risk by associating the ignition impact over an eight-hour period to an ignition location. RAIL does not consider the characteristics of an asset location that may impact the resiliency of the location to wildfire. Factors considered in RAIL calculations include:

- Surface and canopy fuel

- Topography
- Wind speed and direction
- Fuel Moisture
- Historical fire occurrence identifying time of data, typical weather conditions, and duration
- Fire encroachment into urban areas

R1, WC1, WC2, WC3, WC4 Social Vulnerability, Physical Vulnerability, Coping Capabilities: In FireSight, the Risk Associated with Value Exposure (RAVE) represents the locational risk calculated from all the surrounding assets, environmental characteristics, and demographics. Community demographics, topography, and the built environment influence how at risk or resilient a community is to wildfire or an eight-hour period from the initial ignition. RAVE is calculated independently of the asset risk calculated in RAIL and considers the following:

- Population density
- Socially vulnerable populations: elderly, people with disabilities, or people in poverty
- Infrastructure: major and minor roads, location of fire stations, and building density
- Suppression difficulty: Terrain and fuels
- Fire history: burn history at the location
- Historic weather
- Crown fire: The amount the fire can spread through crowning in continuous spread through the tree crown

Wildfire Likelihood consists of both Probability of Failure and Probability of ignition. Technosylva employs a Probability of Fault model to examine the probability that a fault will occur along the overhead Transmission and Distribution (T&D) system. This model examines outage types that are assumed to contribute to ignitions. Contact from objects, equipment failure, vegetation contact are examples of the types of faults that are assumed to play a part in asset ignitions. The outage data is compared with historical wind data to develop fragility curves at the circuit level. “The curves display the probability of failure, in windless conditions with the increased probability of failure as the wind speeds increase.” This model uses a Hierarchical Bayesian approach, which allows for an inherent measure of uncertainty and variation at different levels of asset aggregation. This approach can also accommodate subject matter expertise and utilize group level attributes to avoid over and underfitting the data.

Ignition Likelihood: The POI model evaluates environmental conditions, such as fuel availability, and dryness to assess the probability of a wildfire resulting from an ignition. The POI model is used in lieu of statistically significant wildfire incident data resulting from electric utility assets. Probability of ignition is multiplied by probability of failure to assess the probability of a wildfire igniting from a company asset. The POI, POF, and conditional impact are multiplied together to obtain the Expected risk scores used to derive the Wind and Terrain risk metrics.

Wildfire Consequence (Conditional Impact): At the current stage of risk modeling maturity, PacifiCorp’s risk modeling methodology has no monetary values with associated weights. Monetization and weighting for wildfire, PSPS, and PEDS consequences are currently being explored and is expected to be implemented within the current WMP cycle as referenced in Table 5-5. Attributes of Safety, Reliability, and Financial impact will be monetized and weighted according to industry’s best practices and implemented within PacifiCorp’s Planning model.

Wildfire Consequence is derived from the FireSight model, the Conditional Impact model is used by PacifiCorp to understand the potential impacts should an ignition occur along the T&D system. The model utilizes PacifiCorp’s T&D assets to simulate ignition points. Ignition points are designed to be no longer than 100m from one another. A multitude of wildfire spread simulations are performed from each ignition point to derive distributions of impacts that are available in the FireSight RAIL output. The RAIL output attributes include informative ignition impacts such as acres affected, destroyed buildings, flame length, rate of spread, and others. Conditional Risk values are effective at demonstrating risky areas along the T&D system, assuming that an ignition will occur and that the probability of fault and ignition are uniform within the service territory. The FireSight model is updated annually using refreshed electric T&D infrastructure supplied by PacifiCorp's GIS department. Upon receipt of the FireSight deliverable, data validation scripts are run against the new data to check for logical progression of RAIL percentiles and for expected correlation between variables. These tests are employed to catch any anomalous issues that may arise during the FireSight development cycle.

PSPS Risk: PSPS risk is the expected impacts resulting from PSPS events calculated on an annual basis. PSPS risk consists of PSPS LoRE and PSPS CoRE. PSPS Risk will be used within the Planning model to understand associated PSPS benefits resulting from Wildfire Risk driven mitigations. PacifiCorp is exploring the incorporation of PSPS risk into a mitigation decision framework so that future portfolios will be able to optimize risk reduction to include PSPS risk reduction. PSPS risk is currently in development and is expected within the current 2023-2025 WMP cycle.

PSPS Likelihood: PSPS Likelihood assesses the anticipated annual events that assets will experience a PSPS event. PSPS LoRE is based on a defined scenario from PacifiCorp's Meteorology team. A limiting factor in the calculation of PSPS Likelihood is that PacifiCorp has not initiated any PSPS events in California at the time of this writing and cannot use past PSPS events to quantify a PSPS LoRE component. Considering this limitation, the risk modeling team is working closely with Meteorology to understand the scenarios (wind gust speed, ERC, HDW Index) that lead to PSPS events. PSPS Likelihood is currently in development and is expected within the current 2023-2025 WMP cycle.

PSPS Consequence: The PSPS consequence is currently based on Reliability impacts to customers on an annual basis. Safety, Reliability, and Financial impacts and weightings are being strategized at this time of writing. PSPS Consequence is currently in development and is expected within the current 2023-2025 WMP cycle.

PEDS Outage Risk: PEDS Outage risk is the expected impact resulting from PSPS events calculated on an annual basis. PEDS risk consists of PEDS LoRE and PEDS CoRE. Peds Outage Risk PEDS Outage Risk is currently in development and is expected within the current 2023-2025 WMP cycle.

PEDS Outage Likelihood: PEDS Outage Likelihood assesses the anticipated annual events that assets will experience an automated enhanced electricity shutoff event PEDS LoRE will be based on a study to compare the difference in Likelihood of outages for devices prior to having PEDS settings configured and after the settings have been implemented. PEDS Outage Likelihood is currently in development and is expected within the current 2023-2025 WMP cycle.

PEDS Outage Consequence: PEDS Consequence consists of the annualized impacts of enhanced safety settings implemented for wildfire safety. The PEDS CoRE will be similarly based on customer impacts like PSPS CoRE. PEDS Outage Consequence is currently in development and is expected within the current 2023-2025 WMP cycle.

PacifiCorp tracks the eleven fundamental risk components as defined by Energy Safety. Their usage in risk models is described below:

Equipment caused ignition likelihood: Equipment caused ignitions contribute to the dataset that is used to create the POF component of the Planning model. Outages are compared to wind speed to develop fragility curves for each segment.

Contact from vegetation ignition likelihood: Vegetation contact contributes to the dataset that is used to create the POF component of the Planning model. Outages are compared to wind speed to develop fragility curves for each segment.

Contact from object ignition likelihood: Object contact contributes to the dataset that is used to create the POF component of the Planning model. Outages are compared to wind speed to develop fragility curves for each segment.

Burn likelihood: The POI model serves to indicate burn likelihood and is used in conjunction with the POF to obtain the wildfire LoRE.

Wildfire hazard intensity: Wildfire hazard intensity is evaluated at PacifiCorp in the FireSight RAIL output through the Flame Length and Fire Burn Index attributes. These attributes contribute to the Terrain Risk Index described in Section 5.2.2.

Wildfire exposure potential: Wildfire exposure potential is accounted for in the Wind Risk Index described in Section 5.2.2. The attribute that informs the wildfire exposure potential is Poverty Population, which is part of the FireSight RAVE model output.

Wildfire vulnerability: Wildfire vulnerability is accounted for in the Wind Risk Index described in Section 5.2.2. The attribute that informs the wildfire exposure potential is Disabled Population, which is part of the FireSight RAVE model output.

PSPS exposure potential: PSPS exposure potential will be a component of the PSPS Consequence score, which is currently under development with results expected within the current 2023-2025 WMP cycle.

Vulnerability of community to PSPS (PSPS vulnerability): Vulnerability of community to PSPS will be evaluated as part of the PSPS Consequence score, which is expected within the current 2023-2025 WMP cycle.

PEDS outage exposure potential: PEDS outage exposure potential will be a component of the PEDS likelihood score, which is currently under development with results expected within the current 2023-2025 WMP cycle.

PEDS outage vulnerability: PEDS outage vulnerability will be evaluated as part of the PEDS Consequence score, which is expected within the current 2023-2025 WMP cycle.

PacifiCorp's Risk Assessment

PacifiCorp's unique service territory lends itself to potentially catastrophic wildfires resulting from both wind-driven events and events propelled from fuel and terrain conditions independent from wind events. As such, the Company uses the FireSight RAIL and RAVE output to distinguish assets susceptible to wind related wildfire risk and assets more at risk from fuel and terrain driven fires. The Wind and Fuel/Terrain risk scores are subsequently combined to create the Composite Risk Score, which is used to rank risk in the service territory.

The Wind Risk Score is used to assess the severity of a wind driven wildfire event in PacifiCorp's service territory. The attributes used in the Wind Risk Score are sourced from Technosylva's FireSight RAIL and RAVE models. The Expected Risk component in the RAIL model is used in the creation of Wind Risk

The Fuel/Terrain Risk Score identifies PacifiCorp assets that are subject to wildfires based on fuel and terrain issues rather than wind susceptibility. This metric is important for identifying assets that cannot be mitigated by PSPS or ESS.

Table PAC 5-1 below displays the input, design scenarios, data sources, output, and units for each model component.

Table PAC 5-1: Risk Model Components

Model	Risk Component	Design Scenarios	Key Inputs	Source of Inputs	Key Outputs	Units
Planning Model	Wind Risk	Rate of Spread 95th percentile, Population Impacted	Rate of Spread 95th percentile, Population Impacted	Technosylva FireSight RAIL and RAVE models,	Wind Risk score	Natural units per segment

Model	Risk Component	Design Scenarios	Key Inputs	Source of Inputs	Key Outputs	Units
		95th percentile, Buildings Destroyed 95th percentile,	95th percentile, Buildings Destroyed 95th percentile, Terrain Difficulty Index, Disabled Population, Poverty Population	December 2023 – Expected Risk		
Planning Model	Terrain Risk	Fire Behavior Index 95th percentile, Fire Size Potential 95th percentile, Flame Length 95th percentile	Fire Behavior Index 95th percentile, Fire Size Potential 95th percentile, Flame Length 95th percentile, Terrain Difficulty Index, Fire Station Density,	Technosylva FireSight RAIL and RAVE models, December 2023 – Expected Risk	Terrain Risk score	Natural units per segment
Planning Model	Composite Risk	Rate of Spread 95th percentile, Population Impacted 95th percentile, Buildings Destroyed 95th percentile, Fire Behavior Index 95th percentile, Fire Size Potential 95th percentile, Flame Length 95th percentile	Wind Risk score, Terrain Risk score	Technosylva FireSight RAIL and RAVE models, December 2023 – Expected Risk	Composite Risk score	Natural units per segment

Model	Risk Component	Design Scenarios	Key Inputs	Source of Inputs	Key Outputs	Units
Planning Model			PSPS Risk: In development			
Planning Model			PEDS Risk: In development			

5.2.2 Risk and Risk Components Calculation

The electrical corporation must calculate each risk and risk component defined in Section 5.2.1. Additional requirements for these calculations are located in Appendix B "Calculation of Risk and Risk Components." These are the minimum requirements and are intended to establish the baseline evaluation and reporting of all electrical corporations.

Tracking ID: RA-01

Wildfire Risk

The Wind and Fuel/Terrain Risk scores are built from the FireSight output as shown in Figure PAC 5-4 below.

$$\text{Wind Risk} = (0.3 * \text{Rate of Spread (95}^{th}\text{ percentile)}) + (0.25 * \text{Population Impacted (95}^{th}\text{ percentile)}) + (0.25 * \text{Buildings Destroyed (95}^{th}\text{ percentile)}) + (0.10 * \text{Terrain Difficulty Index}) + (0.05 * \text{Disabled Population}) + (0.05 * \text{Poverty Population})$$

$$\text{Fuel / Terrain Risk} = (0.20 * \text{Fire Behavior Index (95}^{th}\text{ percentile)}) + (0.20 * \text{Fire Size Potential (95}^{th}\text{ percentile)}) + (0.20 * \text{Flame Length (95}^{th}\text{ percentile)}) + (0.25 * \text{Terrain Difficulty Index}) + (0.10 * \text{Fire Station Density}) + (0.05 * \text{Fuel Model Majority})$$

Figure PAC 5-4: Wind Risk and Fuel/Terrain Risk Calculation

Figure 5-2 below is the schematic for FireSight calculations with the mapping of the risk components to their names in FireSight.

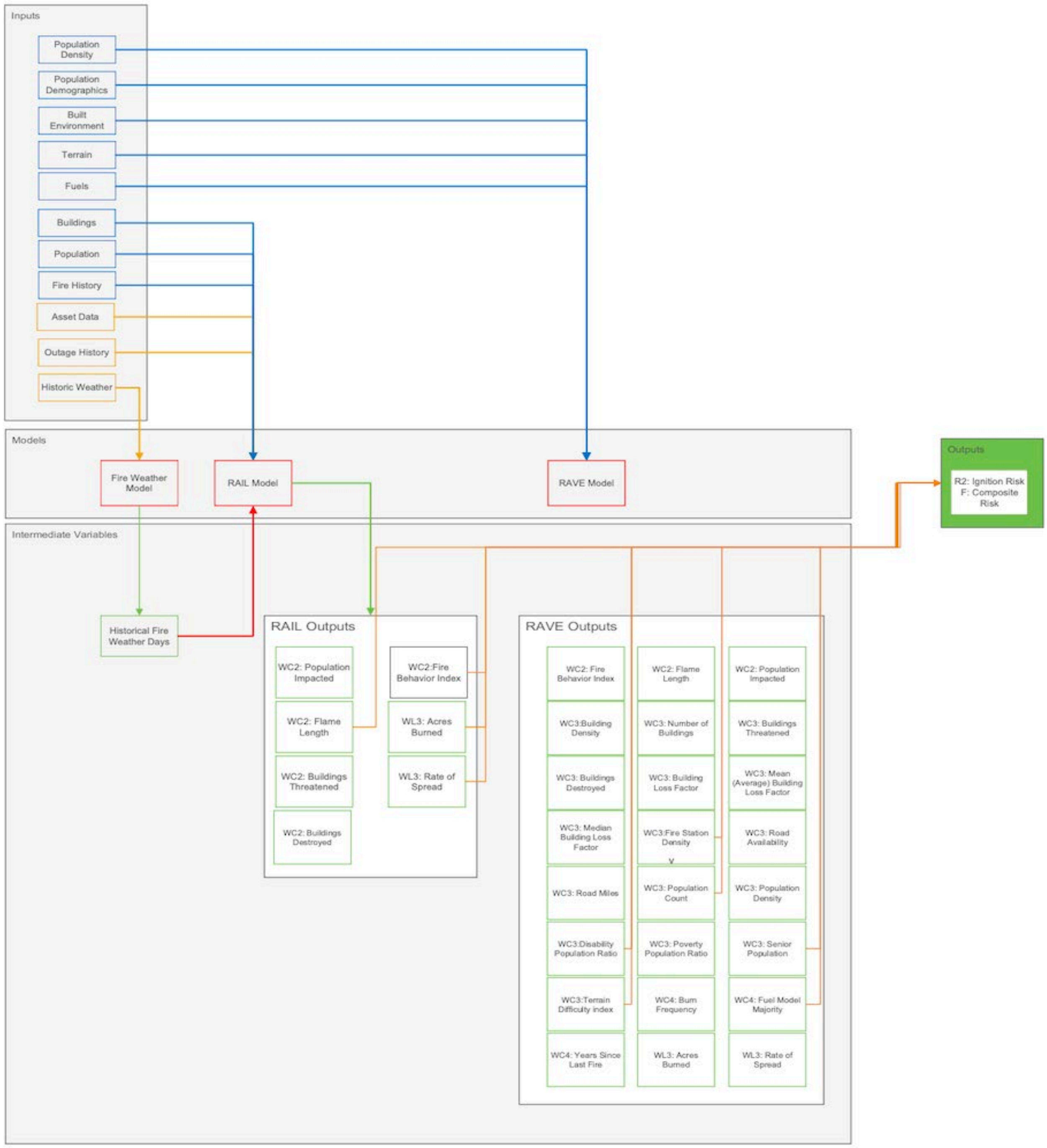


Figure 5-2: FireSight Calculation Schematic

5.2.2.1 Likelihood of Risk Event

The electrical corporation must discuss how it calculates the likelihood that its equipment (through normal operations or failure) will result in a wildfire and the likelihood of issuing an outage event.

Ignition Likelihood (Probability of Fault): FireSight includes a probability of fault (POF) which predicts at the hourly level fault probabilities using wind and asset attributes across all circuits. The POF model examines all sustained outages with the potential to cause ignition including equipment fault, contact from object, vegetation contacts and integrates them with historical weather data to create dynamic circuit fragility curves. The fragility curves have two components: a static probability of fault that represents the POF in the absence of wind and the dynamic exponential increase due to wind. These curves are then used to calculate fault probabilities for each circuit on a given historical weather day within FireSight. The POF ranges on a scale from 0 to 1 and is calculated at ignition points approximately every 100 meters along distribution and transmission circuits.

Burn Likelihood (Probability of Ignition): FireSight includes a probability of ignition (POI) uses the National Fire Danger Rating System (NFRDS) model. The NFRDS model utilizes fuel dryness and wind to estimate the probability of a fire starting from an ignition source. POI determines the probability that burning material will create a wildfire that requires suppression. The POI ranges on a scale from 0 to 1 and is calculated at ignition points along distribution and transmission circuits.

Wildfire Likelihood (Expected Risk): Both POF and POI contribute to overall wildfire likelihood. These two components together give PacifiCorp a robust picture of the ignition likelihood and burn probability with POF informing the *ignition likelihood* and POI informing the *burn probability* as shown in Figure PAC 5-5 below.

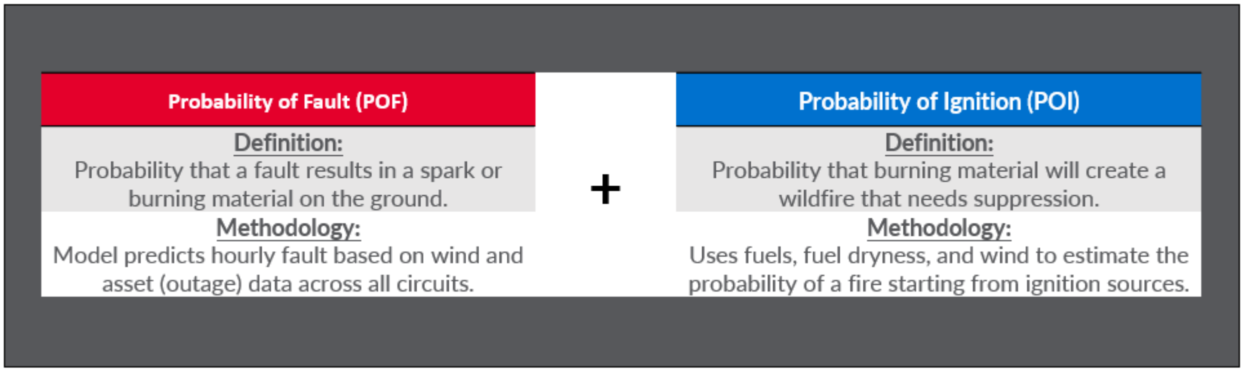


Figure PAC 5-5: Schematic showing the Two Probability Calculations for Ignition Likelihood and Burn Probability (Fire Spread Potential)

FireSight calculates Expected Risk (ER) by combining the Probability of Fault (POF) outputs with the environmental Probability of Ignition (POI). By combining the POF and POI, FireSight estimates the probability of a specific line segment starting a wildfire that requires suppression on any given day in the selected weather history.

The Wildfire Likelihood calculation is:

$$WL = IL + (Att\ (Percentile * Weighting))$$

Where:

WL=Wildfire Likelihood

IL=Ignition Likelihood. This is the expected risk and utilizes POF and POI.

Att=Selected attribute. The attributes could include Fire Spread, Fire Behavior, and Fire Size Potential. One attribute or multiple attributes may be selected for the calculation.

Percentile. The percentile is based on expected weather conditions at each percentile with better weather days (low wind, wet) at lower percentiles and fire weather days (hot, dry, and windy) at higher percentiles.

Weighting. This is the weighting assigned to a specific attribute.

PSPS Likelihood: PSPS Likelihood assesses the anticipated annual events that assets will experience a PSPS event. Because PacifiCorp has limited PSPS history, past PSPS events cannot be used for the LoRE component. PSPS Likelihood is currently in development and is expected within the 2023-2025 WMP cycle.

PEDS Outage Likelihood: PEDS Outage Likelihood assesses the anticipated annual events that assets will experience an automated enhanced electricity shutoff event PEDS LoRE will be based on a study to compare the difference in likelihood of outages for devices prior to having PEDS settings configured and after the settings have been implemented. PEDS Outage Likelihood is currently in development and is expected within the 2023-2025 WMP cycle.

5.2.2.2 Consequence of Risk Event

The electrical corporation must discuss how it calculates the consequences of a fire originating from its equipment and the consequence of implementing an outage event.

Wildfire Consequence

The wildfire consequence model implemented within FireSight calculates the following impacts:

Number of Buildings Threatened: Risk metric based on total number of buildings impacted assigned to every ignition point.

Number of Buildings Destroyed: An estimate of the number of buildings destroyed for each fire spread simulation derived using the Building Loss Factor (BLF) data assigned to each building and calculated at every ignition point.

Total Population: Risk metric based on population impacted assigned to every ignition point.

Fire Size Potential: Risk metric based on number of acres burned assigned to every ignition point. Based on the spread of a fire predicted for each ignition point, fire spread predictions are run for each weather scenario day. This results in different risk values for each ignition point and asset for each weather scenario run.

To achieve this, fire ignition points are defined along assets, and impacts from fire spread predictions are associated back to the source ignition points and assets, For FireSight, simulations are run for each asset ignition point for each weather scenario (selected weather day). Impacts are calculated for each simulation resulting in hundreds of sets of impacts for each asset.

A set of summary outputs is calculated from the consequence model outputs. These include:

- Standard Deviation values for all simulations
- Average impact value for all simulations
- Percentiles for each impact output for all simulations (0, 20, 40, 50, 60, 80, 90, 95, 98, 100)
- These summary values are calculated for each consequence model output, i.e. number of buildings threatened, estimated buildings destroyed, population impacted, and acres burned.

The Wildfire Consequence Calculation:

WC=(SUM((Att1(Percentile*Weighting)), (Att2(Percentile*Weighting)), (Att3(Percentile*Weighting)), (Att4((Percentile*Weighting)), (Att5(Percentile*Weighting)))

Where:

WC=Wildfire Consequence

Att=Selected Attribute

Percentile=The selected percentile

Weighting=Weighting assigned to the attribute

To account for the unique characteristics of its service territory, PacifiCorp is using the attributes in the RAVE and RAIL sub models to develop a Wildfire Consequence score for each circuit based on wind-driven and terrain-driven fire events. By modeling consequences for each type of fire, the company expects to have a better understanding of the highest risk circuits and risk drivers to apply to mitigation selection and prioritization. The attributes selected are shown below.

Wildfire Hazard Intensity (Intensity): Wildfire Intensity is how a fire is expected to behave and what area may be impacted from the point of ignition. Wildfire Hazard Intensity considers:

- Suppression difficulty: Terrain and fuels
- Fire History: Burn history at the location
- Historic Weather
- Crown fire: The amount the fire can spread through crowning in continuous spread through the tree crown

To account for the unique characteristics of its service territory, PacifiCorp is using the attributes in the RAVE and RAIL sub models to develop a Wildfire Hazard Intensity score for each circuit based on wind driven fire and terrain driven fire events. The behavior of the fire in each type of event may create different intensities. By modeling Wildfire Hazard Intensity for each type of fire, the company expects to have a better understanding of the highest risk circuits and risk drivers to apply to mitigation selection and prioritization. The attributes selected are shown in Figure PAC 5-6.

Wildfire Exposure Potential (Impacts): Exposure is the location of Values at Risk (VAR) with respect to wildfire hazard.

To account for the unique characteristics of its service territory, PacifiCorp uses the attributes in the RAVE and RAIL sub models to develop a Wildfire Exposure Potential score for each circuit based on wind driven fire and terrain driven fire events.

By modeling Wildfire Exposure Potential for each type of fire, PacifiCorp expects to have a better understanding of the highest risk circuits and risk drivers to apply to mitigation selection and prioritization.

Wildfire Vulnerability (Resiliency): Vulnerability refers to the susceptibility of values-at-risk (VAR), such as population, buildings, and critical facilities.

Wildfire Vulnerability is part of the RAVE sub model in FireSight and includes the following attributes:

- Disability: Percent of population identified as disabled within the plexel
- Poverty: Percent of population identified as under the poverty level within the plexel
- Fire Stations: Stations per square mile using a 20-mile search distance.

PSPS Consequence: The total anticipated adverse effects from a PSPS for a community. This considers the PSPS exposure potential and inherent PSPS vulnerabilities of communities at risk (Exposure Potential + Vulnerability). The PSPS Consequence is in development and will be completed within the 2023-2025 WMP cycle.

PSPS Exposure Potential: The potential physical, social, or economic impact of a PSPS event on people, property, critical infrastructure, livelihoods, health, local economies, and other high-value assets – PSPS Exposure Potential will be evaluated as part of the PSPS Consequence score, which is expected within the 2023-2025 WMP cycle. PSPS Exposure Potential will be calculated based on the customer impact to the PSPS segment on an annual basis.

PSPS Vulnerability: The susceptibility of people or a community to adverse effects of a PSPS event, including all characteristics that influence their capacity to anticipate, cope with, resist, and recover from the adverse effects of a PSPS event (e.g., high Access and Functional Needs (AFN) population, poor energy resiliency, low socioeconomics). PSPS Outage Vulnerability is expected to comprise any combination of AFN customers, Medical Baseline, Life Support, Sensitive and Vulnerable Customers (SVI).

PEDS Outage Consequence: The total anticipated adverse effects from PEDS outages on an annual basis. This considers the PEDS exposure potential (population) and inherent vulnerabilities of communities at risk (Exposure Potential and Vulnerability). PEDS Consequence is in development and will be completed within the 2023-2025 WMP cycle.

PEDS Outage Exposure Potential: PEDS Outage Exposure Potential includes the population susceptible to PEDS outages per segment per year. PEDS Outage Exposure Potential is in development and will be completed within the 2023-2025 WMP cycle.

PEDS Outage Vulnerability: PEDS Outage Vulnerability calculates the vulnerable population to PEDS outages. This includes any combination of Access and Functional Needs (AFN) customers, Medical Baseline, Life Support, Sensitive and Vulnerable Customers (SVI). PEDS Outage Vulnerability is in development and will be completed within the 2023-2025 WMP cycle.

5.2.2.3 Risk

The electrical corporation must discuss how it calculates each risk, and the resulting overall utility risk defined in Section 5.2.1.

PacifiCorp's overall risk calculation is below:

Overall Risk = Wildfire Risk + PSPS Risk + PEDS risk

Wildfire Risk = Wildfire LoRE x Wildfire CoRE

PSPS Risk = PSPS LoRE x PSPS CoRE (in development)

PEDS Risk = PEDS LoRE x PEDS CoRE (in development)

Wildfire Risk: PacifiCorp uses FireSight Expected and Conditional risk values for the wildfire risk scores. The Expected risk scores are comprised of a Probability of Fault (POF) score multiplied by a

Probability of Ignition score multiplied by Conditional Impact score. As stated in Section 5.5.1, the Expected risk values are used for grid hardening assessment, while the Conditional risk is used for HFRA development.

Outage Program Risk: Consisting of PSPS and PEDS, PacifiCorp's outage program risk assessment is currently in development.

PSPS Risk: PSPS risk is composed of PSPS LoRE multiplied by PSPS CoRE. For expected calculations, see Sections 5.2.2 and 5.2.2.2.

PEDS Risk: Is composed of PEDS LoRE multiplied by PEDS CoRE. For expected calculations, see Sections 5.2.2 and 5.2.2.2.

PacifiCorp Risk Estimates: PacifiCorp estimates three indices to help inform the grid hardening scoping process. The indices are: Wind Risk, Terrian Risk, and Composite Risk and are detailed below.

Composite Risk: Composite Risk is the likelihood of an ignition from a utility asset given certain conditions and the consequence if a wildfire were to occur. Composite Risk is calculated from the Wind and Terrain risk scores shown in Section 5.2.2. The FireSight model outputs a set of attributes that can be selected to calculate the ignition risk, and the utility determines which attributes to use in the ignition risk score.

Table PAC 5-2 below shows the list of attributes available in FireSight, whether they are associated with RAIL, RAVE, or both, and the attributes PacifiCorp selected for use in the ignition risk score. Integrating RAVE with RAIL risk metrics allows for calculation of a composite risk metric for electric utility assets that incorporates local risk factors that can substantially increase risk for possible fires caused by an asset. Attributes with no percentiles as denoted with a "N/A."

Table PAC 5-2: FireSight Attributes

RAIL (Circuit Level)	RAVE (Plexel)	Attribute	Description:	Percentiles	Used in the Composite (Wildfire) Risk Score
Yes	Yes	Acres Burned	Number of Acres Burned	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	Yes	Building Density	Building Density per Plexel	N/A	No
Yes	Yes	Buildings Destroyed	Number of Buildings Destroyed	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	Yes	Building Loss Factor	Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	Yes	Building Loss Factor (Average-Mean)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	Yes	Building Loss Factor (Median)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
Yes	Yes	Buildings Threatened	Number of Buildings Threatened	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	Yes	Burn Frequency	Burn Frequency is the number of times a plexel is touched from all assets ignited simulations run for the selected weather days. It is similar to traditional burn probability although this only represents a frequency, not a probability.	N/A	No
	Yes	Disability Population	Disability Population Ratio	N/A	Yes
Yes	Yes	Fire Behavior Index	Fire Behavior Index	N/A	Yes
	Yes	Fire Station Density	Density of Fire Stations in a location	N/A	Yes
Yes	Yes	Flame Length	Feet	N/A	Yes

RAIL (Circuit Level)	RAVE (Plexel)	Attribute	Description:	Percentiles	Used in the Composite (Wildfire) Risk Score
	Yes	Fuel Model Majority	Majority Fuel in Each Plexel	N/A	Yes
	Yes	Number of Buildings	Number of Building per Plexel	N/A	No
	Yes	Population Count	Population Count per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
	Yes	Population Density	Population Density per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100	No
Yes	Yes	Population Impacted	Population Count	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	Yes	Poverty Population	Poverty Population Ratio	N/A	Yes
Yes	Yes	Rate of Spread	66 Feet/Hour	0, 20, 40, 60, 80, 90, 95, 98, and 100	Yes
	Yes	Road Availability- With Social Vulnerability Population	Availability of Roads in a Location with Consideration of Social Vulnerability Population	N/A	No
	Yes	Road Availability- With No Population	Availability of Roads in a Location with No Consideration of Social Vulnerability Population	N/A	No
	Yes	Road Miles	Total Miles (Major + Minor)	N/A	No
	Yes	Senior Population	Senior Population Ratio	N/A	No
	Yes	Terrain Difficulty Index	Terrain Difficulty per Plexel	N/A	Yes
	Yes	Years Since Last Fire	Years Since Last Fire per Plexel	N/A	No

To account for the unique characteristics of its service territory, PacifiCorp models ignition risk for each circuit based on wind-driven fire and terrain-driven fire events. By modeling likelihood and consequence for each circuit for each type of fire, the company expects to have a better understanding of the highest risk circuits, and the drivers to the risk, in order to apply the appropriate mitigation. Table PAC 5-3 below shows the unique characteristics of each modeled wildfire type.

Table PAC 5-3: Comparison of General Characteristics of Wind-Driven and Fuel/Terrain-Driven Wildfires

Category	Wind-Driven Wildfires	Fuel/Terrain-Driven Wildfires
Locational Risk	More likely in areas subject to PSPS (Public Safety Power Shutoff)	Confined to areas of complex fuels and terrain with difficult access
Frequency	Some years have none; others several	Annually during peak fire season
Event Duration	One-three days per event	Can persist several weeks or months
Outage Risk	Wind-driven and somewhat predictable	Difficult to predict
Consequence	Immediately catastrophic	May be catastrophic over time

Figure PAC 5-6 below shows the inputs and weightings for the composite risk for wind-driven and Fuel/Terrain-driven wildfires. On the left side of the table are the RAIL inputs with the selected input for the type of wildfire, the percentile selected, and the weighting for each variable. On the right side of the table are the RAVE inputs with the weightings for each variable, there are no percentiles for these inputs as they are relatively static values, for example the number of fire stations, the number of disabled people in geographic area, etc. The attributes selected were selected based on input from internal subject matter experts and reviews of other utilities risk models. A sensitivity analysis was performed on the selected inputs and weightings to validate that the selected percentiles and weightings identified circuits expected to be higher risk for fuels or wind/terrain-driven wildfires based on subject matter expertise. PacifiCorp selects the attributes, percentiles, and weightings used in the composite risk score calculation for wind-driven and Fuel/Terrain-driven events and then performs the calculation.

Fuel/Terrain

Risk Associated with Ignition Location (RAIL)
Component: 60%

RAIL Inputs	Percentile	Weight (%)
Fire Behavior Index	95	20%
Fire Size Potential	95	20%
Flame Length	95	20%

+

Risk Associated with Value Exposure (RAVE)
Component: 40%

RAVE Inputs	Percentile	Weight (%)
Terrain Difficulty Index	N/A	25%
Fire Station Density	N/A	10%
Fuel Model Majority	N/A	5%

Wind

Risk Associated with Ignition Location (RAIL)
Component: 80%

RAIL Inputs	Percentile	Weight (%)
Rate of Spread	95	30%
Population Impacted	95	25%
Buildings Destroyed	95	25%

+

Risk Associated with Value Exposure (RAVE)
Component: 20%

RAVE Inputs	Percentile	Weight (%)
Terrain Difficulty Index	N/A	10%
Disability Population	N/A	5%
Poverty Population	N/A	5%

Figure PAC 5-6: Attributes, Percentiles and Weightings Selected for Risk Calculations

Figure PAC 5-7 below is an example of the difference in the Fuel/Terrain-Driven and Wind- Driven Composite Risk Score on PacifiCorp circuit in Seiad Valley, California. The terrain here is steeper and has more fuels, which is reflected in an average Fuel/Terrain-Driven Composite Risk score of 0.56 compared to an average Wind-Driven Composite Risk score of 0.30.

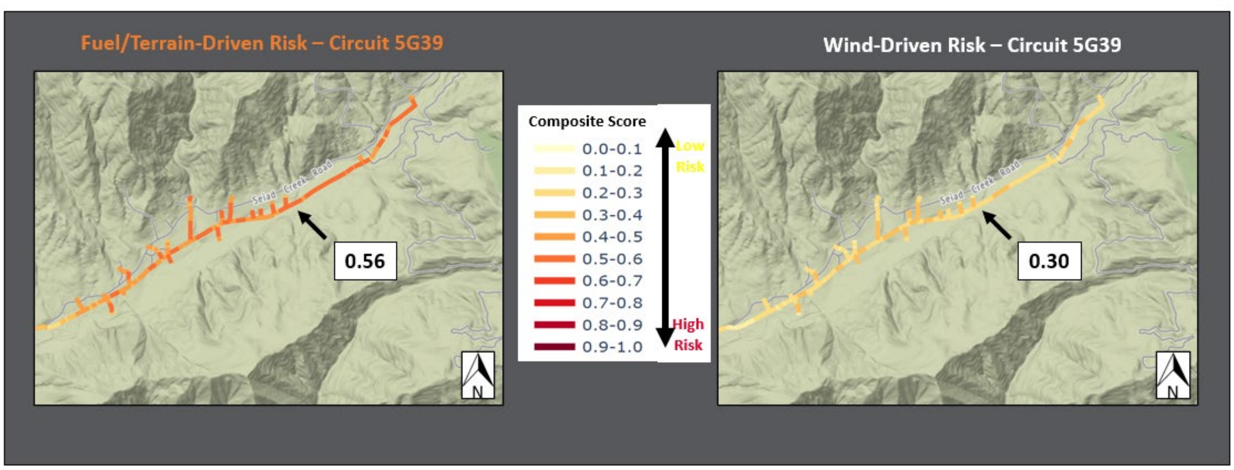


Figure PAC 5-7: Illustrative Example of Fuel/Terrain-Driven Composite Risk Compared to the Wind-Driven Composite Risk in Seiad Valley, California

Figure PAC 5-8 below is an example of the difference in the Fuel/Terrain-Driven and Wind- Driven Composite Risk Score on the PacifiCorp circuit near Montague, California. Here the terrain is flatter, and the Wind-Driven Composite Risk is significantly higher than the Fuel/Terrain- Driven Composite Risk score.

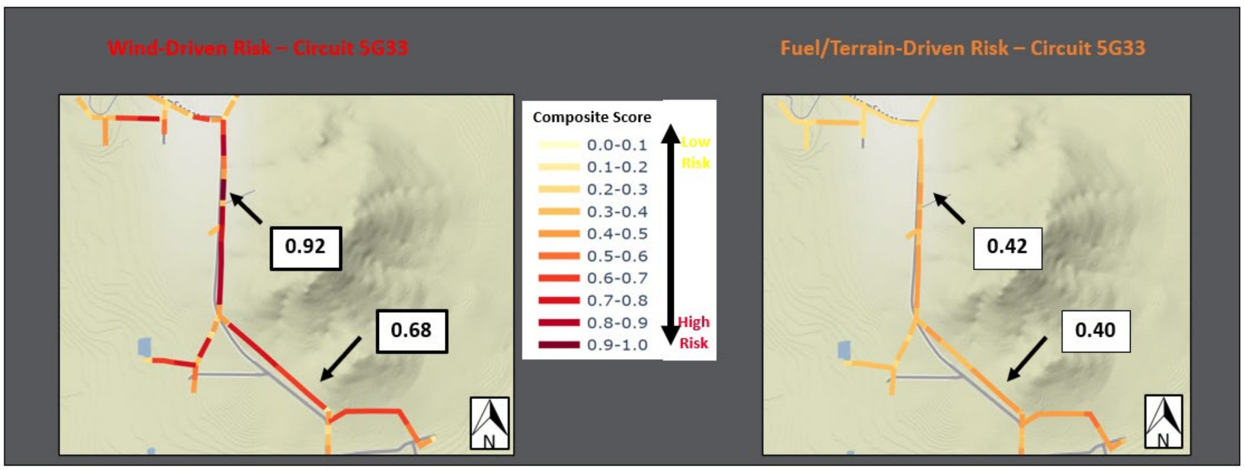


Figure PAC 5-8: Illustrative Example of Wind-Driven Composite Risk Compared to the Fuel/Terrain Driven Composite Risk Near Montague, California

As seen in Figure PAC 5-7 and Figure PAC 5-8 above, the composite risk scores can vary along a circuit due to changes in fuels, terrain, built environment, assets, and community demographics that affect the risk score inputs. This variation is seen below in the change in composite risk score for a circuit segment as well as visually in the change in color along the circuits. The composite score is calculated for each circuit segment using an equation that calculates a wind-driven and terrain-driven risk as shown in Figure PAC 5-9 below.

Figure PAC 5-9: Calculation of Wind-Driven and Fuel/Terrain-Driven Composite Risk

The calculation for the combined composite risk score is shown in Figure PAC 5-10. Each composite score is on a scale of 0-1. PacifiCorp calculates the final composite risk score for each circuit and/or circuit segment.

Figure PAC 5-10: Combined Composite Risk Score Calculation

5.2.3 Key Assumptions and Limitations

Because the individual elements of risk assessment are interdependent, the interfaces between the various risk models and activities must be internally consistent. In this section of the WMP, the electrical corporation must discuss key assumptions, limitations, and data standards for the individual elements of its risk assessment.

Table 5-1 below shows the assumptions and limitations of the risk model.

Table 5-1: Risk Model Assumptions and Limitations

Assumption	Justification	Constraints/Limitations	Applicable Model(s)
POF score calculated at the circuit level is relatively evenly distributed amongst each circuit's segments	The Hierarchical Bayes modeling approach generalizes the conditions per segment at the circuit level	May underestimate or overestimate the POF for specific segments within each circuit.	Expected Wildfire Risk, Terrain Risk, Wind Risk, Composite Risk
POF score captures intrinsic nuances of outage profiles	In the absence of detailed faulted equipment data, the Hierarchical Bayes modeling approach intrinsically shows nuanced differentiation of equipment conditions that lead to outages	Outage conditions of equipment and environmental factors are not explicitly modeled`	Expected Wildfire Risk, Terrain Risk, Wind Risk, Composite Risk
Weather day selection appropriately captures the full asset risk spectrum	Technosylva bases weather day selection on a full risk spectrum rather than using the worst fire weather days	Risk profile covers all weather conditions, not just the important high fire weather days	Expected Wildfire Risk, Terrain Risk, Wind Risk, Composite Risk
PSPS Likelihood can be based on standardized Meteorological conditions	Without a dataset of historical PSPS events in California, PacifiCorp is planning to use a set of conditions to base PSPS risk per segment on.	Conditions are relative to each segment and not based on wind speed thresholds	PSPS Risk, PSPS LoRE
Circuit Segments are not predefined in PacifiCorp's Distribution network topology.	PacifiCorp does not have the amount of SCADA sectionalizing needed to define grid hardening, PSPS, and PEDS risk units	Risk is quantified at the Technosylva (100 m) segment units and must be rolled up to a project level to understand RSE value and risk reduction over time. This issue will need to be rectified to optimize a grid hardening portfolio of risk reduction with associated cost.	Overall Risk, Wildfire Risk, PSPS Risk, PEDS Risk, Wildfire Lore, Wildfire CoRE, PSPS LoRE, PSPS CoRE, PEDS LoRE, Peds CoRE

5.3 Risk Scenarios

In this section of the WMP, the electrical corporation must provide a high-level overview of the scenarios to be used in its risk analysis in Section 5.2. These must include at least the following:

• Design basis scenarios that will inform the electrical corporation's long-term wildfire activities and planning

• Extreme-event scenarios that may inform the electrical corporation's decisions to provide added safety margin and robustness

PacifiCorp leverages the 95th percentile values from the FireSight RAIL attributes to capture wildfire characteristics within its Wind and Fuel/Terrain risk scores. For the Wind risk score, these variables include Rate of Spread, Population Impacted, and Buildings Destroyed. The rationale for using the 95th percentiles is to provide a perspective view of the tail risk while mitigating the impact of outliers in the RAIL simulations. Thus, PacifiCorp's use of the 95th percentiles for RAIL attributes captures highly impactful events without being too conservative. Understanding the tail risk is important because the conditions that lead to large wildfire events typically occur during unusual weather that is conducive to ignitions growing into large-scale wildfires.

For Fuel/Terrain risk calculations, PacifiCorp uses the 95th percentiles for wildfire characteristics including Fire Behavior Index, Flame Length, and Fire Size Potential (acres). Similar to the Wind risk equation composition, the 95th percentile values in the Fuel/Terrain risk score indicate a tail risk situation absent the impacts of outliers.

The RAVE attributes in the FireSight model are not grouped per percentile, but rather per hexagonal H3 plexel. The values from the RAVE data are associated with PacifiCorp's assets via a spatial join. Duplicates resulting from the spatial join are dropped based on the practice of keeping the larger value of attributes. For instance, if a segment happens to intersect two Terrain Difficulty Index plexel, one of which is labeled as "high" and the other of which is labeled "Low", the plexel with the "Low" value will be dropped to ensure that the higher risk values are retained with the asset. The assumption is that if part of a segment has elevated risk, the record for the segment needs to account for this value. Averaging the values would falsely display a lower risk and might mislead mitigation efforts to overlook risky segments. RAVE values utilized for the Wind risk model include of Terrain Difficulty Index, Disabled Population, and Poverty Population. RAVE values participating in the Terrain risk score are Terrain Difficulty Index, Fire Station Density, and Fuel Majority Model.

As noted in Section 5.7, improvement PC-23B-02 Move From Using 95th Percentiles to Probability Distributions, PacifiCorp will be adopting the recommended approach of utilizing probability distributions instead of the 95th percentiles by the end of year 2027.

5.3.1 Design Basis Scenarios

Fundamental to any risk assessment is the selection of one or more relevant design basis scenarios (design scenarios) that inform long-term activities and planning. In this section, the electrical corporation must identify the design scenarios it has prioritized from a comprehensive set of possible scenarios. The design scenarios identified must be based on the unique wildfire risk and reliability risk characteristics of the electrical corporation's service territory and achieve the primary goal and stated plan objectives of its WMP. The design scenarios must represent statistically relevant weather and vegetative conditions throughout the service territory.

Table 5-2 below shows the design basis scenarios used in FireSight. As discussed in Section 5.2.1 failure winds speeds are modeled to identify at what point a specific transmission or distribution circuit may fail in windy conditions based on the 30 years of WRF history discussed above in Weather WL3, WL2, WL4 and not the specific design scenarios WLC1-WLC4.

Table 5-2: Summary of Design Scenarios

Scenario ID	Design Scenario	Purpose
WLC1	Wind Load	Baseline wind load used in design, construction, and maintenance
WLC2	Wind Load	95th percentile wind gusts based on maximum daily values over the 30-year history
WLC3	Wind Load	Wind gusts with a probability of exceedance of five percent over the three-year WMP cycle (i.e. 60-year return interval)
WLC4	Wind Load	Wind gusts with a probability of exceedance of 1 percent over the three-year WMP cycle (i.e. 300-year return interval)
WLC5	Wind Load	FireSight models wind speeds to identify at what point a specific transmission or distribution circuit may fail in windy conditions. The results are based on three-hour aggregated probabilities based on the maximum wind gust during that three-hour period
WC1	Weather Condition	Anticipated weather conditions over the next three years. This is based on historical weather days that best represent the days when weather and fuel conditions can lead to increased risk of ignition.
WC2	Weather Condition	Long term conditions. PacifiCorp has provided 30 years of the 30-Year Weather Research and Forecast (WRF) Model to Technosylva to calculate the 600 historical weather days that best represents the days when weather and fuel conditions can lead to increased risk of ignition. PacifiCorp is now providing the WRF annually to capture new days that should be incorporated into the historical weather days to account for changing conditions in locations
VC1	Vegetation Condition	Modeling of current vegetation conditions to identify where current vegetation fuels risk
VC2	Vegetation Condition	Modeling of projected 2025 vegetation conditions to identify potential mid-range vegetation fuels risk
VC3	Vegetation Condition	Modeling of projected 2025 vegetation conditions to identify potential mid-range vegetation fuels risk

5.3.2 Extreme-Event/High Uncertainty Scenarios

In this section, the electrical corporation must identify extreme-event/high-uncertainty scenarios that it considers in its risk analysis.

As stated in Section 5.3, PacifiCorp currently incorporates the 95th percentiles of the RAIL attributes into its models. The goal of using the 95th percentiles is to identify the large scale fire events for the purpose of identifying assets to mitigate via a grid hardening program such as undergrounding or covered conductor. Using the 95th percentile attributes gives a reasonable assessment of the large scale events without the inclusion of extreme values that may exist because of statistical anomalies. Extreme events beyond the 95th percentiles are not planned for at this time; however, with the upcoming shift to Benefit Cost ratios, the limitation of FireSight's eight-hour duration may necessitate using higher percentile risk scores to account for wildfire impacts beyond the initial eight-hour spread. PacifiCorp intends to evaluate the FireSight 24-hour simulation percentiles in conjunction with the eight-hour extreme tail risk to assess how the modeling scenarios correspond to PacifiCorp's expected monetized impacts from extreme wildfire events.

As PacifiCorp continues to work with the FireSight model and implements the PSPS and PEDS Risk Models, it may consider additional extreme-event high uncertainty scenarios to integrate into the risk model. Table 5-3 below presents the extreme event scenarios currently considered in the models.

Table 5-3: Extreme-Event Scenarios

Scenario ID	Extreme Event Scenario	Purpose
ES1	Climate Change 1 Weather Condition 2 Vegetation Condition 3	Impact of climate change on long-term weather and vegetation conditions that impact fire behavior.

5.4 Summary of Risk Models

In this section, the electrical corporation must summarize the calculation approach for each risk and risk component identified in Section 5.2.1. This documentation is intended to provide a quick summary of the models used.

Table 5-4 summarizes PacifiCorp's risk models. Additional information can be found in Appendix B.

Table 5-4: Summary of Risk Models

ID	Risk Component	Design Scenario(s)	Key Inputs	Source of Inputs (Data and/or Models)	Key Outputs	Units
R1	Overall Utility Risk	WC1, WC2, VC1, VC2, VC3, WLC5	Ignition Risk	See Appendix B, FireSight Model	Composite Risk Score Wildfire Risk Associated with ignitions from Utility Assets Locational risk calculated from all surrounding assets, environmental characteristics, and demographics	Composite risk score is a 1 to 5 rating based on normalization of combined outputs.
R2	Wildfire Risk	WC1, WC2, VC1, VC2, VC3, WLC5	Wildfire Likelihood Wildfire Consequence	See Appendix B, FireSight Model	Possible Acres burned Number of buildings threatened Estimated number of buildings destroyed Population in area Population at risk	Acres/Fire simulation Buildings/Fire simulation Buildings Destroyed /Fire simulation Population Impacted/Fire simulation Population at Risk/Fire simulation
WL1	Wildfire Likelihood	WC1, WC2, VC1, VC2, VC3, WLC5	Burn Probability Ignition Likelihood	See Appendix B, FireSight Model	Probability of a wildfire	Wildfires/ Year

ID	Risk Component	Design Scenario(s)	Key Inputs	Source of Inputs (Data and/or Models)	Key Outputs	Units
WL3	Burn Probability	WC1, WC2, VC1, VC2, VC3, WLC5	Historic Weather Conditions Terrain Surface Fuels WUI and Non-Forest Fuels Land Use Canopy Fuels Hydrography Croplands Fuel Moisture	PacifiCorp's 30 Year Weather Research & Forecast (WRF) input to FireSight Model See Appendix B Technosylva provides land characteristics and fuels moisture information, see Appendix B	Probability of a wildfire burning a specific location (POI from FireSight model)	Value between 0 and 1.0 representing the percent probability.
WL2	Ignition Likelihood	WC1, WC2, VC1, VC2, VC3, WLC5	Probability of Fault Historic wind conditions Likelihood of vegetation contact Likelihood of an object contact	See Appendix B, FireSight Model	Probability of ignition occurring (POF from FireSight Model	Ignitions/ Year
WL4	Equipment Likelihood of Ignition	WC1, WC2, WLC5	Asset location and attributes Historic weather conditions	GREATER, provided by PacifiCorp PacifiCorp's 30 Year Weather Research & Forecast (WRF) Inputs provided to Wildfire Risk Reduction Module-See Appendix B	Probability of equipment in extreme weather conditions	See PoF discussion in Section 5.2.1

ID	Risk Component	Design Scenario(s)	Key Inputs	Source of Inputs (Data and/or Models)	Key Outputs	Units
WL5	Contact from Vegetation Likelihood	WC1, WC2, VC1, VC2, VC3, WLC5	Fire incidents near PacifiCorp's assets Asset location and attributes Surface Fuels WUI and Non-Forest Fuels Land Use Canopy Fuels	PacifiCorp Fire Incident Database PacifiCorp: GREATER PacifiCorp inputs provided to Technosylva for FireSight- See Appendix B Technosylva provides terrain and fuels information, see Appendix B	Likelihood of a vegetation contacts	Contacts/ Year
WL6	Contact from Object Ignition Likelihood	WC1, WC2, WLC5	Fire incidents near PacifiCorp assets	PacifiCorp: Fire Incident Database PacifiCorp: GREATER PacifiCorp inputs provided to Technosylva for FireSight- See Appendix B	Likelihood of an object contact	Contacts/ Year
WC1	Wildfire Consequence	WC1, WC2, WLC5	Wildfire Exposure Potential Wildfire Vulnerability Fire Hazard Intensity	See Appendix B, FireSight Model	Number of buildings threatened Estimated number of buildings destroyed Population at risk Community Resilience	Plexels / 8-hour

ID	Risk Component	Design Scenario(s)	Key Inputs	Source of Inputs (Data and/or Models)	Key Outputs	Units
WC2	Wildfire Exposure Potential	N/A	Buildings Damage Inspection Dataset (DINS) Building loss factor Critical Facilities Population	Supplied/managed by Technosylva, see Appendix B	Buildings at risk Population a risk	Polygon footprints/ 8-hour 90 meters/ 8-hour
WC3	Wildfire Vulnerability	N/A	Suppression Difficulty Population Density Roads Socially Vulnerable Population Fire Stations	Supplied/managed by Technosylva, see Appendix B	Socially vulnerable populations at risk Egress difficulty Suppression difficulty	Plexels/ 8-hour
WC4	Fire Hazard Intensity	WC1, WC2, WLC5	Fire Growth Flame Length Crown Fire Acres Burn Frequency	Supplied/managed by Technosylva, see Appendix B	Fire Behavior Area Impacted	Acres/8-hour

5.5 Risk Analysis Results and Presentation

In this section of the WMP, the electrical corporation must present a high-level overview of the risks calculated using the approaches discussed in Section 5.2 for the scenarios discussed in Section 5.3.

5.5.1 Top Risk Areas with the HFRA

In this section, the electrical corporation must identify top risk areas within its self-identified HFRA, compare these areas to the CPUC's current HFTD, and discuss how it plans to submit its proposed changes to the CPUC for review.

Tracking ID: RA-02

Using the ignition risk scoring described in Section 5.2.2 above PacifiCorp has identified areas of heightened risk of wildfire, with delineated geographic areas as HFRAs. More specifically, the company leveraged FireSight to model risk scores for wind-driven and Fuel/Terrain-driven risk on each circuit assuming a probability factor of one, as described in Section 5.2.2, to focus on the consequence of potential ignitions. Expressed as percentiles, the HFRA reflects areas with FireSight model risk scores in the 85-100 percentile for either wind-driven or Fuel/Terrain driven risk. As discussed in Section 6 PacifiCorp prioritizes mitigation efforts in the HFTD and HFRA.

5.5.1.1 Geospatial Maps of Top-Risk Areas within the HFRA

The electrical corporation must evaluate the outputs from its risk modeling to identify top risk areas within its HFRA (independent of where they fall with respect to the HFTD).

In Figure 5-3 below are the top risk areas within the HFRA:

- Top five percent of overall utility risk values in the HFRA
- Top five to ten percent of overall utility risk values in the HFRA
- Top ten to 15 percent of overall utility risk values in the HFRA
- Top 15 to 20 percent of overall utility risk values in the HFRA
- Bottom 80 percent of overall utility risk values in the HFRA

Consistent with Energy Safety guidelines, these maps are accessible publicly at PacifiCorp 2026-2028 WMP Additional Maps

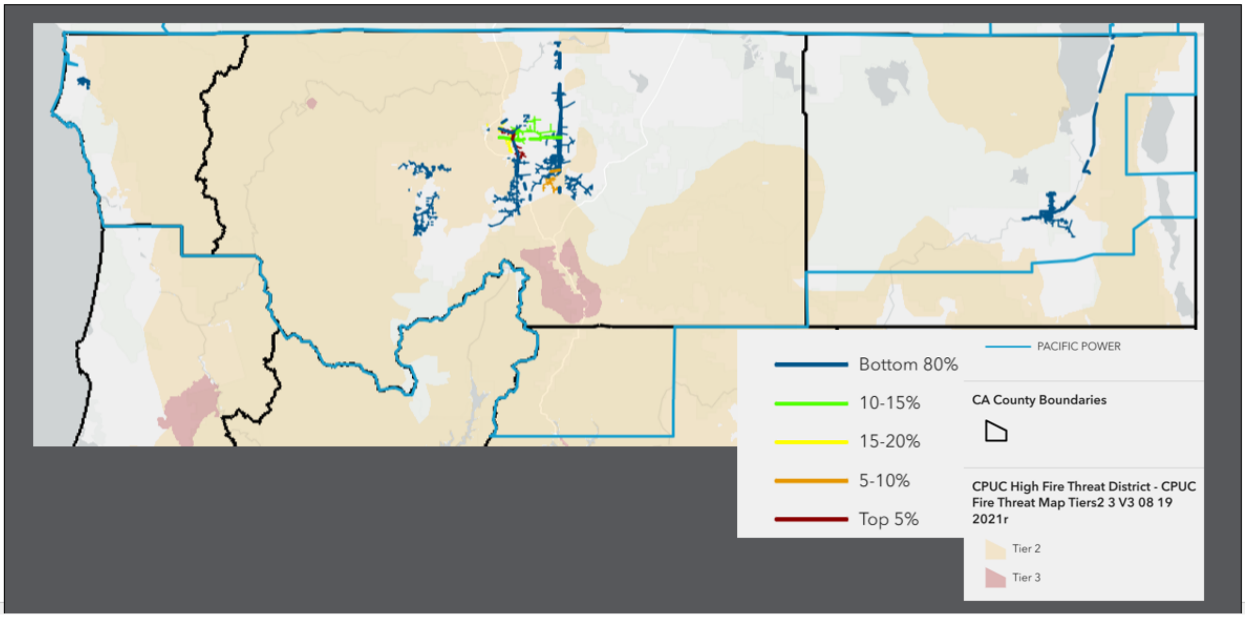


Figure 5-3: Geospatial Map of Top Risk Areas within the High Fire Risk Area (HFRA)

5.5.1.2 Proposed Updates to the HFTD

In this section, the electrical corporation must discuss the differences between the electrical corporation-identified top-risk areas within the HFRA and the existing CPUC-approved HFTD. The HFRA must be comprised of areas identified by the electrical corporations that its risk analysis indicates are at a higher risk than indicated in the current HFTD. Any proposed changes to the HFTD must be mapped in accordance with the requirements in the previous sub-section.

This discussion at a minimum must include:

• A discussion of how the electrical corporation analyzed additional areas in HFRA compared to HFTD

• What criteria electrical corporations used to incorporate additional areas into the HFRA

• Associated mitigation changes expected, as applicable

• A description of the electrical corporation's process for submitting proposed changes to the HFTD to the CPUC, if such changes are desired

PacifiCorp has developed a HFRA for its California service territory. This boundary was based on the top 85% of wind or terrain risk from its wildfire risk model that is not currently included within the HFTD boundary. To address ACI PC-25U-01. Proposed Changes to the HFTD, PacifiCorp plans to file a request with the CPUC no later than 2026 for inclusion of the HFRA into the HFTD using the established protocol for HFTD updates. The company plans to continue evaluating the HFRA and update its boundaries on a regular cycle, as needed, using its most updated wildfire risk models. In determining the planned update frequency of the HFRA, PacifiCorp considered both the duration of the update itself as well as the intended use of the assessment and the impacts to corresponding programs or projects. Because the HFTD and HFRA will be used to inform multiyear programs, such as asset inspections and vegetation management, modifying geographic boundaries too frequently would be disruptive to making and tracking progress on these programs. As a general baseline, the company plans to evaluate annual nominal cycle, coinciding with each annual model release.

Table PAC 5-4 below displays the Conditional Risk attributes from the FireSight RAIL output within the HFTD compared to the HFRA. The metrics below demonstrate that the HFRA boundary contains considerably more risk when comparing the mean of the 95th percentiles (P95) for each attribute. While the HFRA has only 55% of the number of assets compared to the HFTD, it has 1.86 times the impact on acres affected, 2.26 times the impact on structures affected, 2.05 the impact on structures destroyed, and 1.73 times the impact on population affected. With the exception of flame length, the fire condition variables are higher in the HFRA as well.

Table PAC 5-4: Comparison for FireSight Risk Metrics In the HFTD and HFRA at the 95th Percentile

Network	Fire Area Boundary	Quantity	Mean of Acres Impacted (P95)	Mean of Structures Impacted (P95)	Mean of Structures Destroyed (P95)	Mean of Population Impacted (P95)	Mean of Fire Behavior Index (P95)	Mean of Flame Length (P95)	Mean of Rate of Spread (P95)
Distribution	HFRA	11,142	863.85	27.37	9.36	19.35	2.61	5.07	26.94
Distribution	HFTD	18,085	596.19	14.29	5.35	13.04	2.36	6.00	18.38
Transmission	HFRA	1,974	1,292.03	20.71	6.95	15.08	2.83	5.75	28.99
Transmission	HFTD	5,654	565.61	6.98	2.60	6.87	2.39	6.53	16.73
HFRA Divided by HFTD		0.55	1.86	2.26	2.05	1.73	1.15	0.86	1.59

5.5.2 Top Risk-Contributing Circuits/Segments/Spans

The electrical corporation must provide a summary table showing the highest-risk circuits, segments, or spans within its service territory. The table should include the following information about each circuit:

• Circuit, Segment, or Span ID: Unique identifier for the circuit, segment, or span.

• Overall utility risk scores: Numerical value for each risk.

• Top risk contributors: The risk components that lead to the high risk on the circuit. The electrical corporation must rank its circuits, segments, or spans by circuit-mile-weighted overall utility risk score and identify each circuit, segment, or span that significantly contributes to risk. A circuit/segment/span significantly contributes to risk if it:

1. Individually contributes more than one percent of the total overall utility risk; or

2. Is in the top five percent of highest risk circuits/segments/spans when all circuits/segments/spans are ranked individually from highest to lowest risk

In Table 5-5 below are the top-risk circuits based on circuit-mile-weighted overall wildfire risk score and if the risk contributor is the maximum wind-drive risk composite risk score for the circuit or the maximum Fuel/Terrain driven risk score for a circuit. As described in Section 5.7, PacifiCorp is still quantifying Overall Utility Risk Score and Outage Program Risk Score and those scores are noted as "TBD" until they are calculated.

Table 5-5: Summary of Top-Risk Circuits, Segments, or Spans

Risk Ranking	Circuit, Segment, or Span ID	Overall Utility Risk Score	Wildfire Risk Score	Outage Program Risk Score	Top Risk Contributors	Total Miles	Version of Risk Model Used
1	5G31	TBD	192.71	TBD	Max Wind Score: 0.93, Max Terrain Score: 0.73	15.99	0.1.0
2	5G33	TBD	76.04	TBD	Max Wind Score: 0.90, Max Terrain Score: 0.79	6.40	0.1.0
3	5G21	TBD	74.55	TBD	Max Wind Score: 0.79, Max Terrain Score: 0.82	6.68	0.1.0
4	5G83	TBD	53.16	TBD	Max Wind Score: 0.81, Max Terrain Score: 0.66	4.77	0.1.0
5	4G1	TBD	48.52	TBD	Max Wind Score: 0.78, Max Terrain Score: 0.74	4.60	0.1.0
6	5G149	TBD	45.92	TBD	Max Wind Score: 0.82, Max Terrain Score: 0.64	4.19	0.1.0
7	5G5	TBD	32.24	TBD	Max Wind Score: 0.88, Max Terrain Score: 0.71	2.78	0.1.0
8	5L87	TBD	20.07	TBD	Max Wind Score: 0.81, Max Terrain Score: 0.55	1.92	0.1.0
9	5L83	TBD	19.35	TBD	Max Wind Score: 0.92, Max Terrain Score: 0.57	1.65	0.1.0
10	5G45	TBD	11.34	TBD	Max Wind Score: 1.00, Max Terrain Score: 0.88	0.69	0.1.0
11	5G151	TBD	10.77	TBD	Max Wind Score: 0.89, Max Terrain Score: 0.76	0.84	0.1.0
12	5G23	TBD	9.83	TBD	Max Wind Score: 0.78, Max Terrain Score: 0.51	0.93	0.1.0
13	5L97	TBD	7.81	TBD	Max Wind Score: 0.72, Max Terrain Score: 0.72	0.67	0.1.0
14	7G81	TBD	4.84	TBD	Max Wind Score: 0.78, Max Terrain Score: 0.60	0.42	0.1.0
15	7G73	TBD	1.30	TBD	Max Wind Score: 0.64, Max Terrain Score: 0.64	0.12	0.1.0
16	7G75	TBD	1.27	TBD	Max Wind Score: 0.50, Max Terrain Score: 0.73	0.12	0.1.0

5.6 Quality Assurance and Quality Control

The electrical corporation must document the procedures it uses to confirm that the data collected and processed for its risk assessment are accurate and comprehensive. This includes but is not limited to model, sensor, inspection, and risk event data used as part of the electrical corporation's WMP program. In this section of the WMP, the electrical corporation must describe the following:

• Independent review: Role of independent third-party review in the data and model quality assurance (QA).

• Model controls, design, and review: Overview of the quality controls (QCs) in place on electrical corporation risk models and sub-models

5.6.1 Independent Review

The electrical corporation must report on its procedures for independent review of data collected (e.g., through sensors or inspections) and generated (e.g., through risk models and software) to support decision making. In this section of the WMP, the electrical corporation must provide the following:

• Independent reviews: The electrical corporation's procedures for conducting independent reviews of data collection and risk models.

• Additional review triggers: The electrical corporation's internal procedures to identify when a third-party review is required beyond the routinely scheduled reviews.

• Results, recommendations, and disposition: The results and recommendations from the electrical corporation's most recent independent review of its data collection and risk models. This includes the electrical corporation's disposition of each comment.

• Routine review schedule: The electrical corporation's routine review schedule.

Independent Review of the Electric Corporation's Provided Data

At the time of this filing, PacifiCorp is not soliciting external, independent reviews of its data, but in response to ACI PC-23-05, the company anticipates engaging a third-party reviewer in or after 2026, once the Wildfire and Outage Risk models are both implemented and have both gone through a cycle of being used congruently. PacifiCorp has engaged a third-party to perform an independent review of the methodology and approach used to develop the HFRA discussed in Section 5.5.1 above.

The models used by Technosylva in WFA-E, including FireSight are described in detail in Appendix B, including the following information on independent review results:

"The core models implemented in WFA-E form the basis of most operational propagation models in use today (Andrews et al 1980, Gould 1991). They have been implemented in well-known software like NEXUS (Scott and Reinhardt 2001), Fire and Fuels Extension to Forest Vegetation Simulator (FFE-FVS) (Reinhardt and Crookston 2003), FARSITE (Finney 2004), Fuel Management Analyst (FMAPlus) (Carlton2005), FlamMap (Finney 2006) and BehavePlus (Andrews et al.2008). Nevertheless, forest fires are a very difficult phenomenon to simulate which depends on many different factors and typical simulations are able to predict the source dataset with mean absolute percent errors between 20 and 40% (Cruz et al. 2013)

"One of the important facts in fire simulation is the definition of the fuel models, with analysis providing different results for different fuels and regions. For example, Sanders (2001) observed a pattern of over-prediction by FARSITE in fuel models 1,2, 5 by a large margin, moderate in fuel 10 and some underprediction for fuel model 8. Zigner et al (2020) used two case studies during strong winds revealing that FARSITE was able to successfully reconstruct the spread rate and size of wildfires when spotting was minimal. However, in situations where spotting was an important factor in rapid downslope wildfire spread, both FARSITE and FlamMap were unable to simulate realistic fire perimeters. Ross et al. (2006) used measurements from temperature sensors during prescribed burn in the Appalachian Mountains to recreate the fires and compared fire behavior simulated by FARSITE. They obtain a set of ROS adjustment factors that better represented the observed fire behavior obtaining a ROS adjustment factor of 1.5 and 2 for fuels 9 and 11 respectively, and a decreasing factor of 0.2 to the fuel type 6.

"Apart from these reviews Technosylva has been constantly improving the accuracy and performance of the published fire models to better adjust the results to observed fire behavior. This includes a better definition of the fuel types, improved forecast of live fuel moisture content, modifications to the crown fire modelling initialization scheme, and automatic fire adjustment based on data assimilation techniques using ROS adjustment factor. In addition, Technosylva has implemented more than 21 additional models into the WFA-E platform to enhance accuracy and address know limitations of published fire models. These improvements include crown fire analysis, ember and spotting, urban / non- burnable area encroachment, consequence and impact quantification, etc. It is important to note that improvement of the fire modeling platform of choice necessitates not only improvements in mathematical algorithms but substantial improvements in the accuracy and resolution of input data sources. These work in concert to enhance the modeling and outputs to match observed and expected fire behavior. A robust operationalization of fire models requires constant and on-going research, testing, validation and implementation of both models and data sources."

"Fire model validations are performed both internally and during operational scenarios in California in collaboration with CALFire. Technosylva assessed the performance of fire spread models for initial attack incidents (either surface or crown) currently used in operational environments in California through the analysis of the rate of spread (ROS) of 1,853 wildfires. The work is going to be published in a high-impact peer review scientific journal. The paper states that the fire spread model's performance for California is in line with previous studies developed in other regions and the models are accurate enough to be used in real-time operations to assess initial attack fires. However, Technosylva identified how some environmental variables may bias the ROS predictions, especially in timber areas where the Scott and Burgan (2005) fuel models clearly underestimated ROS. New improvements in the fuel families and crown fire spread models have allowed us to improve the accuracy and performance of the fire models to better adjust the results to observed fire behavior."

5.6.2 Model Controls, Design, and Review

An electrical corporation's risk modeling approaches are complex, with several layers of interaction between models and sub-models. If these models are designed as a single unit, it can be difficult to evaluate the propagation of small changes in assumptions or inputs through the models. The requirements in this section are designed to facilitate the review of models by the stakeholders and Energy Safety, and to allow for more comprehensive retrospective analysis of failures in the system.

WFA-E and the models such as FireSight are developed and maintained by Technosylva, a third-party software provider. Standard software development practices are followed to test and release software changes and release versions following a standardized numbering system. Quality Assurance and Quality Control are performed on model outputs regularly and, especially when a real fire is spreading across the service territory. The WFA-E module named FireSim allows analyzing single fire events on demand to evaluate model's performance.

Technosylva's Data Validation Department also performs data quality reviews before model outputs are delivered to PacifiCorp. This involves developing and enforcing data quality standards, cleaning, and scrubbing data to rectify errors and inconsistencies, implementing validation procedures and automated tools to detect anomalies, and providing training to staff on data quality best practices.

The Technosylva team reviews the data quality before delivery to customers and uses test plans to check that applications work correctly. The department also monitors data quality metrics, collaborates with stakeholders to better understand data needs, and continuously improve data quality standards and processes.

PacifiCorp provided asset information, and the models use the characteristics unique to its service territory such as weather, terrain, and vegetation, however there was no customization of the software to accommodate these changes. See Appendix B for the model inputs.

In the past year, PacifiCorp has incorporated best practices for reproducible research into its risk modeling framework. A major part of this effort was to revamp the development strategy from a siloed, disconnected environment to a collaborative based Python coding platform. To achieve this, PacifiCorp's risk modeling team onboarded Azure Dev Ops (ADO) for project management utilizing Agile methodology for model updates. In this capacity, data scientists create features and user stories for each road-mapped model update. ADO's code repositories and branch versioning have also been adopted whereby branches of repos are created directly from user stories thus connecting project management components directly with their associated code. Checking in completed model updates has been implemented with requirements for peer reviews via the pull request process in ADO.

In order to implement this process, the current production model was migrated from its siloed environment to the new development platform in the Spring of 2025. Traceability from source data to final risk scores was backwards engineered to reproduce the model as authentically as possible. Subsequent updates are managed via a version control methodology that utilizes taxonomic tags consisting of three figures in the format x.x.x, e. g. 3.2.1.

The first component of the of the tag indicates a major model version. In the example above, 3.2.1, the "3" would indicate the third major release of the model. A Major release includes a major architectural shift or a change in the risk quantification strategy or algorithm. The second number indicates a Minor release. A Minor release is used to note model changes that replace existing components or add/remove components to portions of the risk quantification framework. These changes will alter risk scores; however, it will not change the base risk quantification methodology. The third number indicates a Patch update, which is any update that does not change the risk output values. This includes code refactoring, renaming columns, etc. This methodology is being refined and is part of the improvement in Section 5.7 Implement a standardized model taxonomy to track release versions.

5.7 Risk Assessment Improvement Plan

A key objective of the WMP review process is to drive year-over-year continuous improvement. In this section, the electrical corporation must provide a high-level overview of its plan to improve both programmatic and technical aspects of its risk assessment in at least four key areas:

• Risk assessment methodology: Wildfire and PSPS risk assessment methodology and its documentation, including both quantitative and qualitative approaches.

• Design basis: Justification of design basis scenarios used to evaluate the risk and its documentation.

• Risk presentation: Presentation of risk to stakeholders, including dashboards and statistical assessments.

• Risk event tracking: Tracking and reconstruction of risk events and integration of lessons learned.

Table 5-6 presents PacifiCorp's risk assessment improvement plan with a summary of each initiative discussed below.

Table 5-6: Utility Risk Assessment Improvement Plan

Key Risk Assessment Area	Proposed Improvement	Type of Improvement	Expected Value Add	Timeframe and Key Milestones
Risk Presentation	PC-25U-02: PSPS and Wildfire Risk Trade-Off Transparency	Technical	Quantification and understanding PSPS risk along its system in comparison to wildfire risk	EOY 2025
Risk Assessment Methodology	Monetization of risk events for use in RSE calculations	Programmatic	More accurate assessment of RSE/BCR	EOY 2025
Design Basis	Creation of PEDS Risk Model	Programmatic	Ability to understand PSPS risk buydown over the wildfire mitigation portfolio	EOY 2025
Model Architecture	Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources.	Technical	Ability to create reproducible models, archive release versions, and scale logic.	EOY 2025
Model Architecture	Implement a standardized model taxonomy to track release versions	Technical	Ability to track model versions. Ability to run new model with historic data as well as run an old model with new data	EOY 2025
Design Basis	Dynamic Grid Hardening Efficacy Rates	Programmatic	Update the constants used for grid hardening program efficacy with ranges based on localized conditions	EOY 2025

Key Risk Assessment Area	Proposed Improvement	Type of Improvement	Expected Value Add	Timeframe and Key Milestones
Risk Assessment Methodology	Develop a grid hardening portfolio optimization model component	Programmatic	Automation of maximizing risk reduction considering targets, constraints (budgets), construction limitations, and project timeline	EOY 2026
Model Validation	Implement data validation and verification plan	Technical	Quality assurance	EOY 2026
Climate change	Implement a climate change planning model component	Programmatic	Anticipation of climate change impacts on risk scores	EOY 2026
Risk Assessment Methodology	Conduct a 3rd party review of planning model upon completion of 2025 upgrades	Technical	Validation of methodology and best practices by unbiased 3rd party	EOY 2026
Risk Presentation	PC-25U-01: Establish formal process of recognition of high-risk areas beyond the CPUC-established HFTD	Technical	A systematic approach for adding high-risk areas to the HFTD	EOY 2027
Risk Presentation	PC-23B-02: Move from using 95th percentiles to probability distributions	Programmatic	Alignment with fundamental mathematical standards and optimization of mitigation prioritization decisions	EOY 2027

Tracking ID for all improvements listed below: RA-01

PC-25U-02 - PSPS and Wildfire Risk Trade-Off Transparency

Problem Statement: PacifiCorp has not yet developed its PSPS risk assessment within its risk modeling, which is necessary for quantifying and understanding PSPS risk along its system in comparison to wildfire risk.

Planned improvement: PacifiCorp is currently developing its PSPS risk model with an anticipated rollout date prior to end of the year 2025. At this current stage of development, the risk modeling team is creating network connectivity that will allow for the logical roll up of PSPS risk to PSPS operable devices. Also in development is the quantification of PSPS consequence to customers and customer types should a PSPS event occur. The risk analytics team is currently working with Meteorology to create a historical lookback or backcast of PSPS events based on the current PSPS criteria to develop a PSPS likelihood score for its assets.

Anticipated benefit: This improvement will provide an annual rate of PSPS risk and will provide a means to understand the associated PSPS benefits that are achieved through grid hardening programs.

Region prioritization: All regions

Monetization of Risk Events for Application in Mitigation Alternatives Analysis

Problem Statement: PacifiCorp does not file a RAMP report and as such does not have a history of monetizing risk events that can be used with Risk Spend Efficiencies or Benefit Cost Ratios for the assessment of mitigation alternatives analysis.

Planned improvement: PacifiCorp is engaging a consultant to create a reproducible framework for the generation of monetized risk impacts specific to PacifiCorp's service territory. Included in the framework discussion will be an evaluation to include Timber loss in the framework. This evaluation addresses ACI PC-25U-04 regarding risk improvement "Evaluate Adding Timber Loss as a Consideration to FireSight RAVE Calculation" that was deferred in the 2023-2025 WMP.

Anticipated benefit: This improvement will improve the accuracy of RSE calculations by exposing the monetary impacts incurred through wildfire risk simulations, which will ultimately allow PacifiCorp to make improved grid hardening decisions based on economic efficiencies.
Region prioritization: N/A

Creation of PEDS Risk Model

Problem Statement: PacifiCorp has not yet completed a PEDS risk model.

Planned improvement: PacifiCorp is developing a PEDS risk model that will assess the likelihood and consequence of PEDS outages in its system. This model will build upon existing PEDS outage tracking and reporting capabilities to provide data on the location, frequency, and duration of PEDS outages.

Anticipated benefit: This improvement will expose the additional risk that customers are exposed to due to increased outages as a result of PEDS enablement for the purpose of wildfire mitigation. This enhancement will furthermore serve PacifiCorp in its ability to understand PSPS risk buydown over the duration of the wildfire mitigation portfolio construction timeline.
Region prioritization: N/A

Model Architectural Improvements

Problem Statement: PacifiCorp's current development environment is not optimized for reproducibility or conducive to software development best practices.

Planned improvement: PacifiCorp is currently building out its reproducible model development environment based on software development best practices. This development environment will focus on using the Python programming language in conjunction with Visual Studio Code as the integrated development environment (IDE). Version control and project management will be managed through Azure Dev Ops (ADO). Data will be sourced from Azure Cloud resources via Databricks.

This evaluation addresses ACI PC-25U-04 regarding risk improvement "Centralized Solution to track Wildfire and PSPS Risks" that was deferred in the 2023-2025 WMP.

Anticipated benefit: The benefits associated with the deployment of a reproducible development environment are many.

Benefits include:

- Complete source code for each model from data source to predictions
- The ability to track changes from version to version
- Accommodation of multiple editors at the same time
- Single source data platform for risk models

Region prioritization: N/A

Model Taxonomy and Versioning

Problem Statement: PacifiCorp has not adopted a standard taxonomy to classify its model versions

Planned improvement: PacifiCorp will adopt a standard model release taxonomy that will classify each model version according to three categories, *Major, Minor, and Patch.*

- Major: A Major release indicates that a key component of the risk quantification framework has changed. For instance, the addition of PSPS risk to the overall risk score would modify how overall risk is quantified and would initiate a Major release update.
- Minor: A Minor release indicates that a component of a model has been updated or changed out. An example of a Minor release update would be the act of swapping out the planning model's 2023 vintage FireSight risk scores with an updated version.
- Patch: A Patch is a typical break-fix type of operation. For instance, the addition of doc strings or a correction that does not change risk scoring at all would result in a Patch release.

Anticipated benefit: The benefits associated with the deployment of a reproducible development environment are many.

Benefits include:

- The ability to run different vintages of data in the same model.
- The ability to revert to a previous model vintage
- Detailed documentation via code and project management components of differences between model versions

Region prioritization: N/A

Dynamic Grid Hardening Efficacy Rates

Problem Statement: PacifiCorp's current efficacy rates for grid hardening initiatives is based on SME judgement and is constant per mitigation type over its entire service territory.

Planned improvement: PacifiCorp is currently undergoing an evaluation of measured effectiveness for various mitigation programs, such as covered conductor and undergrounding. The measured effectiveness rates will be evaluated to adjust the SME defined efficacy constants and provide a range of efficacy values that could vary depending on adverse conditions for certain mitigations. For instance, the efficacy of covered conductor might be lower for a circuit with a high tree fall-in risk and higher for a circuit with low tree fall-in risk.

Anticipated benefit: The new efficacy rates will be grounded more in observed reality than based on SME judgement. Also, the dynamic rates will indicate a more realistic assessment of a program's effectiveness based on conditions in the field.

Region prioritization: N/A

Portfolio Optimization and Grid Hardening Recommendations

Problem Statement: While PacifiCorp's planning model currently shows wildfire risk and relative RSE values, it does not have a function to recommend mitigations or optimize a grid hardening portfolio.

Planned improvement: PacifiCorp will onboard a mitigation decision making framework to indicate the optimal mitigation per project. The mitigation decisions will optimize parameters such as risk reduction, cost, program efficacy, annual construction targets, and budget constraints.

Anticipated benefit: The mitigation decision framework will provide model-based mitigation recommendations that can be used by scoping engineers to plan grid hardening projects. The mitigation decisions will be adjustable to optimize over different constraints, which will accommodate changes, such as budgets for assumed vs. actual GRC outcomes, annual construction target changes, and others.

Region prioritization: N/A

Model Validation and Verification

Problem Statement: PacifiCorp's vendor currently validates the underlying FireSight model; however, the derived risk scores do not have an automated validation and verification module.

Planned improvement: PacifiCorp will implement a verification module that will track model changes from version to version and report the extent of such changes upon the initiation of a pull request. PacifiCorp will furthermore automate standard validation checks for each model release

Anticipated benefit: The verification tests will provide a lucid and detailed list of any and all changes observed in the model between versions. This is useful for developers who need to understand the impact of their intended changes and whether those changes coincide with expectations. The validation component will provide a means for checking model outcomes with accepted conventions and real-world expectations.

Region prioritization: N/A

Implement a Climate Change Planning Model Component

Problem Statement: PacifiCorp currently has not implemented a strategy to adjust risk scores based on projected climate change impacts.

Planned improvement: PacifiCorp is actively participating in the EPRI Climate READi study and with Argonne National Labs to assess climate change impacts within its service territory. PacifiCorp will evaluate the outcomes of this engagement and adjust its model output appropriately.

Anticipated Benefit: Understanding climate change impacts will provide PacifiCorp a way of identifying circuits that will show increased risk, which can be prioritized for future grid hardening projects.

PC-25U-03 - Independent Review Transparency

Problem Statement: In response to PC-23B-05, PacifiCorp did not provide a detailed plan for implementing review procedures and contracting with an independent third-party reviewer for its risk model, which is necessary for model validation.

Planned improvement: Upon completion of its next risk model evolution, which encompasses the addition of PSPS risk, PEDS risk, as well as a major architectural overhaul, PacifiCorp will engage with third-party consultants to review and interrogate the current modeling strategy. Accuracy and efficiency in wildfire risk mitigation is a top priority at PacifiCorp. As such, PacifiCorp will engage with consultants proven to perform similar wildfire mitigation model reviews. This engagement is expected to commence early in 2026.

Anticipated benefit: This improvement will expose strengths and weaknesses within the model framework and will provide a path towards meaningful model improvement.

Region prioritization: N/A

PC-25U-01 - Establish formal process of recognition of high-risk areas beyond the CPUC-established HFTD

Problem Statement: PacifiCorp has not undergone the formal process of getting additional high-risk areas recognized beyond the CPUC-established HFTD.

Planned improvement: PacifiCorp has undergone the establishment of its HFRA by analyzing the top 85% of wind and terrain risk outside of the HFTD's. This risk assessment is based on the conditional impact risk assessment in Technosylva's FireSight model. PacifiCorp performs this analysis annually and will work with the CPUC to formalize the process of adding the HFRA to the HFTD.

Anticipated benefit: This improvement will provide a means of proactively adding areas to the HFTD when improved science exposes new areas that have high wildfire risk.

Region prioritization: PacifiCorp prioritizes areas identified as HFRA in its analysis.

PC-23B-02 - Calculating Risk Scores Using 95th Percentile Values

Problem Statement: PacifiCorp's use of 95th percentile values, as opposed to probability distributions, to aggregate risk scores is not aligned with fundamental mathematical standards and could lead to suboptimal mitigation prioritization decisions.

Planned improvement: PacifiCorp will evaluate and implement a solution towards using probability distributions instead of the 95th percentile to calculate risk scores.

Anticipated benefit: This improvement will provide a more flexible approach to modeling the complex relationships that exist between variables by elucidating the complete range of results and probabilities inherent to wildfire risk.

Region prioritization: N/A

6. Wildfire Mitigation Strategy

In this section, the electrical corporation must provide a high-level overview of the risk evaluation processes that inform its selection of a portfolio of activities, as well as its overall wildfire mitigation strategy. The electrical corporation's processes and strategy must be designed to achieve maximum feasible risk reduction and meet the goal(s) and plan objectives stated in Sections 3.1–3.2.

6.1 Risk Evaluation

6.1.1 Approach

In this section, the electrical corporation must provide a brief narrative of its risk evaluation approach, based on the risk analysis outcomes presented in Section 5. This narrative helps inform the development of a wildfire mitigation strategy that meets the goal(s) and plan objectives stated in Sections 3.1–3.2. The electrical corporation must indicate and describe in the narrative whether its risk evaluation approach meets or uses any industry-recognized standards (e.g., ISO 31000), best practices, and/or research.

As described in Section 3 of the Wildfire Mitigation Plan, PacifiCorp's objective is to reduce the likelihood and impact of wildfires associated with utility infrastructure. The objectives of situational awareness, operational practices, system resiliency, and outreach and engagement support progress towards this objective.

In this section, PacifiCorp describes its approach to development of the strategy to mitigate this risk including:

- How programs and projects are developed and evaluated
- The governance for approved programs and projects
- How individual system hardening projects are prioritized and scheduled

- The company's approach to measuring estimated and actual effectiveness.

The risk assessment described in Section 5 informs where the circuits with the highest risk of ignition are, this informs the baseline risk which defines areas such as the HFRA. It also identifies where these areas that PacifiCorp prioritize system resiliency mitigation such as vegetation management, equipment inspections, and system hardening.

New programs develop a business case are evaluated by the Wildfire Risk Governance Committee, which determines if new programs should be approved for wildfire mitigation.

Circuits are selected for the System Hardening program based on their maximum Fuel/Terrain risk score. The proposed scope and mitigation for these circuits are reviewed by the Wildfire Scope Governance Committee, which also prioritizes the work. These circuits are then scheduled for construction.

6.1.2 Risk-Informed Prioritization

In making decisions involving risk mitigation, the electrical corporation must identify and evaluate where it can make investments and take actions to reduce its overall utility risk. The electrical corporation must develop a prioritization list based on overall utility risk.

PacifiCorp uses the risk scores derived from the modeling described in Section 5 to inform where the circuits with the highest risk of ignition are which informs the baseline risk which defines areas such as the HFRA. It is within these areas that the company prioritizes wildfire mitigations such as system hardening, vegetation management, and asset inspections.

Circuit risk scores are utilized to prioritize system hardening efforts for line rebuild projects, which involve replacing overhead bare conductors with covered conductor or undergrounding. The maximum circuit Fuel/Terrain risk scores are used to determine prioritization because there are operational mitigations available to address wind driven risk. While risk scores may vary along different segments of a circuit, once a circuit is selected, the portion of the circuit within the HFTD and/or HFRA is planned to be mitigated. Circuit prioritization can be further impacted by other factors that allow for more efficient completion of the work including working adjacent or co-located circuits concurrently or aligning the line rebuild project on the schedule of other required projects. The Wildfire Governance Scoping Committee reviews all approved project scopes and will vote on any required deviations in priority selection or if mitigation extends beyond the HFTD or HFRA. During the scoping process, each circuit is evaluated to determine whether undergrounding certain sections may be a more practical and effective option than using covered conductor.

Table 6-1 below shows the prioritized areas based on overall utility risk with their circuit's individual fuel/train and wind-driven risk scores, these scores help the PacifiCorp understand what the driver for the risk is and support prioritization. As described in Section 5, PacifiCorp is still quantifying PSPS and PEDS risk and cannot provide an outage program or overall utility risk at this time and are noted as "TBD" in Table 6-1.

Table 6-1: Prioritized Areas in PacifiCorp's Service Territory Based on Overall Utility Risk

Priority	Circuit Segment and/or Span ID	Length (Circuit miles)	Overall Utility Risk	Wildfire Risk	Outage Program Risk	Percent of Overall Utility Risk	Associated Risk Drivers
1	5G31	15.99	TBD	192.71	TBD	2%	Max Wind Score: 0.93, Max Terrain Score: 0.73
2	5G33	6.40	TBD	76.04	TBD	0.62%	Max Wind Score: 0.90, Max Terrain Score: 0.79
3	5G21	6.68	TBD	74.55	TBD	0.61%	Max Terrain Score: 0.82, Max Wind Score: 0.79
4	5G83	4.77	TBD	53.16	TBD	0.44%	Max Wind Score: 0.81, Max Terrain Score: 0.66
5	4G1	4.60	TBD	48.52	TBD	0.40%	Max Wind Score: 0.78, Max Terrain Score: 0.74

Priority	Circuit Segment and/or Span ID	Length (Circuit miles)	Overall Utility Risk	Wildfire Risk	Outage Program Risk	Percent of Overall Utility Risk	Associated Risk Drivers
6	5G149	4.19	TBD	45.92	TBD	0.38%	Max Wind Score: 0.82, Max Terrain Score: 0.64
7	5G5	2.78	TBD	32.24	TBD	0.26%	Max Wind Score: 0.88, Max Terrain Score: 0.71
8	5L87	1.92	TBD	20.07	TBD	0.16%	Max Wind Score: 0.81, Max Terrain Score: 0.55
9	5L83	1.65	TBD	19.35	TBD	0.16%	Max Wind Score: 0.92, Max Terrain Score: 0.57
10	5G45	0.69	TBD	11.34	TBD	0.09%	Max Wind Score: 1.00, Max Terrain Score: 0.88
11	5G151	0.84	TBD	10.77	TBD	0.09%	Max Wind Score: 0.89, Max Terrain Score: 0.76
12	5G23	0.93	TBD	9.83	TBD	0.08%	Max Wind Score: 0.78, Max Terrain Score: 0.51
13	5L97	0.67	TBD	7.81	TBD	0.06%	Max Wind Score: 0.72, Max Terrain Score: 0.72
14	7G81	0.42	TBD	4.84	TBD	0.04%	Max Wind Score: 0.78, Max Terrain Score: 0.60
15	7G73	0.12	TBD	1.30	TBD	0.01%	Max Wind Score: 0.64, Max Terrain Score: 0.64
16	7G75	0.12	TBD	1.27	TBD	0.01%	Max Terrain Score: 0.73, Max Wind Score: 0.50

6.1.3 Activity Selection Process

After the electrical corporation creates a list of top-risk contributing circuits/segments/spans (Section 5.5.2) and prioritized circuit segments based on overall utility risk (Section 6.1.2), the electrical corporation must then identify potential mitigation strategies. It must also evaluate the benefits and drawbacks of each strategy at different levels of application (e.g., circuit, circuit segment, system-wide). In this section of the WMP, the electrical corporation must provide the basis for its decisions regarding which activities to pursue.

PacifiCorp identifies and evaluates potential mitigations by examining current industry practices and technologies. The company collaborates with other utilities across multiple states to learn from their experiences and apply these insights to its mitigation programs. By leveraging these learnings and analyzing completed projects, the company identifies proven solutions as a mitigation program. Where feasible, assessing multiple mitigation options to ensure the most cost-effective solution relative to risk reduction is selected. When information on a potential mitigation is limited, PacifiCorp may conduct pilot programs to evaluate cost-effectiveness before broader implementation.

Starting in 2025, PacifiCorp requires all new wildfire programs, and expansions to existing initiatives, to go through a formal approval process. All programs require formal review and approval by a governance committee as defined in Section 6.1.3.4. These programs are reviewed and approved by the committee's voting members and documented. The full process overview is shown in Figure PAC 6-1 below.

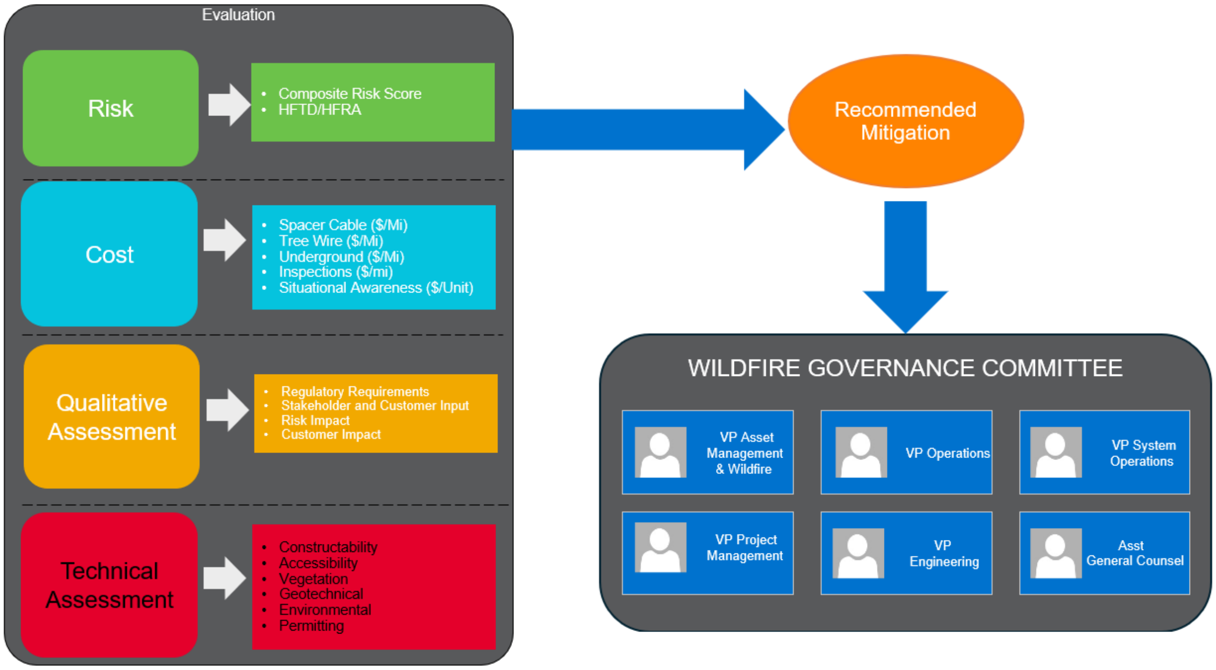


Figure PAC 6-1: Current Project Evaluation and Selection Process

6.1.3.1 Identifying and Evaluating Activities

The electrical corporation must describe how it identifies and evaluates options for mitigating wildfire and outage program risk at various analytical scales, consistent with the CPUC guidelines associated with the Risk-Based Decision-Making Framework (RDF)established in the RDF Proceeding. The electrical corporation must present the risk mitigation identification procedure it plans on using during the course of the three years filed in the Base WMP. If the electrical corporation is required to submit a RAMP filing to the CPUC, the risk mitigation procedure provided must be consistent with either its most recent RAMP filing or its upcoming RAMP filing.

The company employs a structured, risk-based decision-making approach to identify and evaluate wildfire mitigation initiatives. The evaluation of mitigation initiatives follows a process including risk identification, qualitative evaluation, technical feasibility review, cost analysis, and effectiveness assessment. The overall process is overseen by the Wildfire Governance Committee.

Risk Identification

Mitigation projects related to inspections and vegetation management utilize the HFTD and HFRA to identify where prioritization and focus should take place. With the implementation of wildfire risk scores, the system hardening projects utilize the terrain-driven risk scores to identify the specific circuits and segments at elevated risk. The difference in initiative approach ensures that initiatives are planned and prioritized appropriately.

Qualitative Evaluation

There are also qualitative criteria that are evaluated for proposed projects which include:

- Regulatory requirements: To ensure alignment and compliance, regulatory requirements are considered when identifying and implementing projects.
- Stakeholder and customer input: Initiative identification and evaluation is coordinated with various stakeholder groups within the company that participate in the development and selection of initiatives that align with risk reduction goals.
- Wildfire risk impact: Mitigation initiatives are evaluated to align with industry practices and programs in place at other utilities that have shown to reduce wildfire risk. Mitigation initiatives are prioritized based on the established risk which could include the fire risk area (HFTD and HFRA) and the circuit risk scores.
- Customer impact: The evaluation and identification of initiatives considers customer impact in elevated risk areas and their location or overlapping of local communities to determine prioritization and urgency of initiative selection. Customer impact may include an example

such as re-routing an existing line that may interfere with the customers' ability in the future to construct a building.

Technical Feasibility: Feasibility analysis is performed as a qualitative input to mitigation selection. Technical analysis may indicate that the most effective mitigation is not feasible due to other considerations. Technical feasibility is also used to evaluate mitigations that currently do not have effectiveness measures. Technical feasibility considers the following:

- Constructability: Ease of implementation and constructability are factors in selecting the final mitigation technique. For example, commercially available solutions such as covered conductor may be widely implemented as a mitigation technique while new and emerging technologies, such as Early Fault Detection may be implemented as pilot projects with limited application.
- Accessibility: Access to the location to perform the work. For example, undergrounding in a steep terrain may be inadvisable due to the equipment needed and the ability to safely operate equipment in the terrain.
- Vegetation: Impacts on vegetation because of the proposed project are considered, including mitigation efforts during the project and any potential remediation needed after the project due to removal of vegetation.
- Geotechnical: Subsurface geology is an important consideration that may affect mitigation selection. For example, solid rock or rocky soil may not be conducive to undergrounding due to technical feasibility or cost, and covered conductor may be a more cost-effective solution.
- Environmental: Impacts to air, soil, or water of a proposed mitigation.
- Permitting: The ability to successfully acquire permits as well as the number of permits required is a consideration. For example, a covered conductor project may be selected over undergrounding in certain circumstances because permitting can be completed more quickly

with fewer barriers. Conversely, undergrounding may be moved forward where alignment with other utilities, such as telecom, presents an opportunity for cost sharing and joint location to a new trench or underground infrastructure.

Cost

In conjunction with the above factors, the project costs are considered when planning, evaluating, and selecting initiatives. For example, inspection and vegetation management projects can be compared to Grid Hardening initiatives to determine cost effectiveness.

Effectiveness

Estimated effectiveness criteria are being developed for initiatives approved by the governance committee. Each project might have slightly different criteria to determine if the initiative was effective at accomplishing the objective. An example of evaluating the effectiveness could be reviewing the outage data before and after the initiative was implemented.

Governance Committee Approval

After a project has been identified, evaluated, and has an estimated cost associated with the initiative, the proposed project will go through a review process to seek approval from the wildfire governance committee. Two governance committees have been established. The Wildfire Risk Governance Committee and the Wildfire Scoping Governance Committee. The Wildfire Risk Governance Committee will review program proposals to ensure the objective, benefit and cost is aligned for wildfire mitigation and the company budget. The Wildfire Scoping Governance Committee will review line rebuild scopes to ensure that the line rebuild scopes are appropriately mitigating the wildfire risk while balancing the circuit risk with the cost. Once the proposed initiatives and scopes have been approved by the respective governance committee, the work will move forward for implementation.

6.1.3.2 Activity Prioritization

The electrical corporation must seek to implement the best integrated portfolio of activities using its project prioritization framework to meet its plan objectives, optimize its resources, and maximize risk reduction. Objectives may be based on quantified risk assessment results (see Section 5), or other values prioritized by the electrical corporation or broader stakeholder groups (e.g., Tribal interests, environmental protection, public perception, resilience, cost).

Once programs are selected, they are prioritized. Figure PAC 6-2 shows the high-level process.

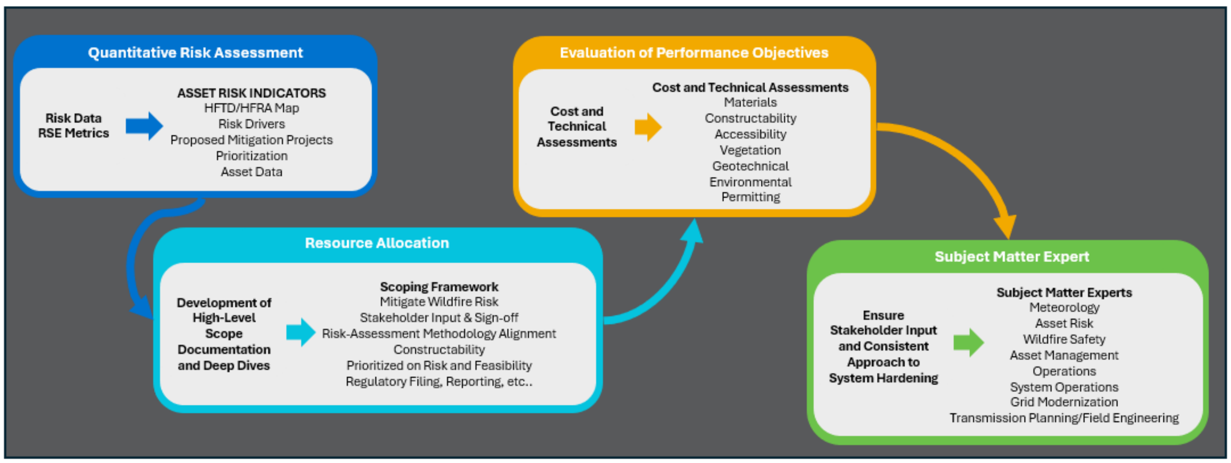


Figure PAC 6-2: Activity Prioritization Process

Currently, system hardening programs are prioritized by their maximum terrain risk score on the circuit. Other programs are primarily prioritized in locations with a high fire risk area first which, generally, occur within the HFTD and HFRA. Section 6.1.3 describes PacifiCorp's high-level decision-making process and Figure PAC 6-2 above below shows the high-level considerations described above to prioritize initiatives to mitigate wildfire risk.

After prioritization is determined, the program will move to the design stage. The design stage can take on many different forms depending on the program, ranging from schematics and process design to a complete engineering design. Once the scope, prioritization, and design have been completed the program is ready to be implemented. As the program is implemented, it is monitored for adherence to scope, schedule, budget, and installation dates.

6.1.3.3 Activity Scheduling

The electrical corporation must report on its schedule for implementing its portfolio of activities. The electrical corporation must describe its preliminary schedules for each activity and its iterative processes for modifying activities (Section 6.1.3.1).

After work is prioritized, it is sequenced to execute on the highest priority work first while understanding that constraints may impact when work can begin. Examples of constraints that impact sequencing include:

- Other utility work in the area. If proposed work requires planned outages or switching to alternate sources, other utility work in the area may impact when that can occur to manage service interruptions to customers.
- Weather conditions. For example, work occurring at higher elevations may need to take place during summer and fall due to snow and access constraints. Consideration of critical fire weather is important during the summer. As described in Section 8.7.3, work procedures may change based on the fire risk.
- Community impacts. This could range from municipal projects that have priority in a community to feedback from the local, state, and federal partners about timing to minimize impacts on residents.
- Project lead times such as ordering and receiving equipment and permitting.

PacifiCorp programs may be scheduled based on a combination of factors including regulatory requirements, constructability, and risk. For example:

- Infrared inspections on transmission lines are scheduled in time intervals that match the peak loading on each line.
- Certain vegetation management activities are planned to occur before the fire season.
- Weather station maintenance and wildfire camera installations start in spring due to limited access to some locations during winter months.
- Asset inspections are performed during specific times of the year so that they meet inspection cycle timing required by regulatory requirements.
- Construction of grid hardening projects occurs year-round, however some projects are located away from roads with year-round access and cannot take place during wet seasons due to limited access.
- Grid hardening project scheduling has been impacted by permitting in two major ways. First, permit agencies have experienced a significant increase in permit submissions from PacifiCorp due to the volume of projects increasing review times. Second, permits include specific conditions specifying time of year for construction activities to minimize impacts to the environment.

Once projects are selected, they move to the implementation and monitoring stage. Figure PAC 6-3 below shows the high-level process described further below:

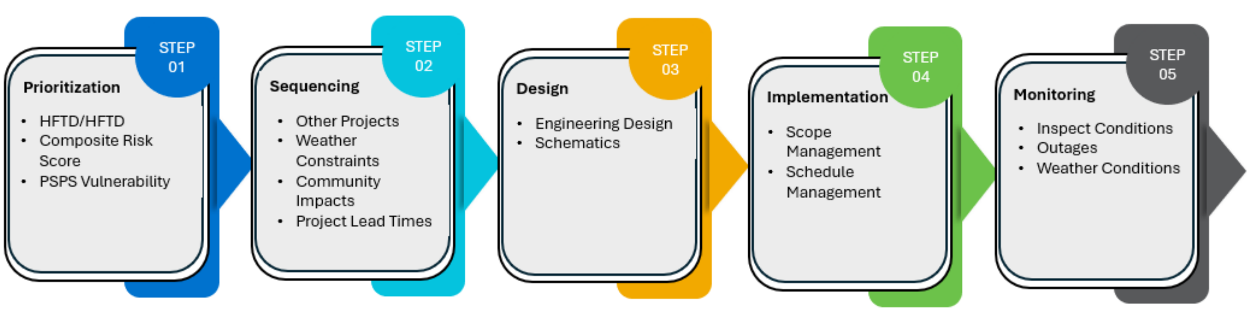


Figure PAC 6-3: Project Implementation and Monitoring Process

Implementation: Once the scope, prioritization, and design are completed, the project is ready to be implemented. Prior to implementation, key performance metrics will be established to enable measurement of results to inform mitigations' effectiveness for future modeling. Key metrics examples include installation dates, completion dates, conditions, and outages reported.

Monitoring: As the work is completed, the updated asset information will be updated annually in FireSight and over time the outage history for the asset will inform the composite risk score for the circuit to identify if the risk has been reduced and if the risk driver has been mitigated.

Progress Tracking

Initiatives and activities with quantifiable targets provide monthly updates via tracker that shows the cumulative progress towards annual and multi-year targets so work that falls behind can be identified quickly and action taken to identify if action needs to be taken to bring the initiative back on track. This report is provided monthly to PacifiCorp executives.

6.1.3.4 Key Stakeholders for Decision Making

In this section, the electrical corporation must identify all key stakeholder groups that are part of the decision-making process for developing and prioritizing activities.

Initiatives go to the Wildfire Risk Governance Committee or Wildfire Scoping Governance Committee, meeting for approval. As described in Section 6.1, new programs are evaluated by the Wildfire Risk Governance Committee, which determines if new programs should be approved for wildfire mitigation. The proposed scope and mitigation for circuits selected for hardening are reviewed by the Wildfire Scope Governance Committee, which also prioritizes the work. The governance committees meet regularly when items seeking approval are brought forward. Table 6-2 below outlines the stakeholder roles in the decision-making process.

Table 6-2: Stakeholder Roles and Responsibilities in the Decision-Making Process[6]

Stakeholder	Stakeholder Point of Contact	PacifiCorp Point of Contact	Stakeholder Role	Engagement Methods	Activity	Level of Engagement for Activity
Power Delivery	SVP, Power Delivery	SVP, Power Delivery	Executive sponsor	Meeting	All	Executive sponsor of Wildfire Risk Governance Committee and Wildfire Scoping Governance Committee
Asset Risk	Managing Director, Asset Risk	Managing Director, Asset Risk	Define Companies' wildfire risk areas and the composite risk scores.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Facilitator of Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Asset Management	Managing Director, Asset Management	Managing Director, Asset Management	Propose new initiatives, plan initiatives, track initiative progress.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening.	Advisor in Wildfire Scoping Governance Committee

6 Stakeholder, role and responsibilities as of the time of Base WMP filing.

Stakeholder	Stakeholder Point of Contact	PacifiCorp Point of Contact	Stakeholder Role	Engagement Methods	Activity	Level of Engagement for Activity
Operations	VP, System Operations	VP, System Operations	Provide input into system hardening scopes and proposed initiatives for company's states.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee
Operations	VP, T&D Operations	VP, T&D Operations	Provide input into system hardening scopes and proposed initiatives for company's states.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee
Operations	VP, T&D Operations, Rocky Mountain Power	VP, T&D Operations, Rocky Mountain Power	Provide input into system hardening scopes and proposed initiatives for Rocky Mountain Power states.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee
Project Management	VP, Project Management	VP, Project Management	Provide input into system hardening initiatives.	Meeting, Phone, Email	System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee

Stakeholder	Stakeholder Point of Contact	PacifiCorp Point of Contact	Stakeholder Role	Engagement Methods	Activity	Level of Engagement for Activity
Engineering	VP, Engineering & T&D Standards	VP, Engineering & T&D Standards	Provide input into system hardening and new initiatives.	Meeting, Phone, Email	System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee
Wildfire Program Delivery	VP, Asset Management & Wildfire	VP, Asset Management & Wildfire	Provide input into initiatives with alignment to the wildfire mitigation plan.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Voting member in Wildfire Risk Governance Committee Voting member in Wildfire Scoping Governance Committee
Asset Investment Strategy & Policy	Director, Asset Investment Strategy and Policy	Director, Asset Investment Strategy and Policy	Provide input into the alignment of initiative to asset strategy and policy.	Meeting, Phone, Email	Inspections, System Hardening	Advisor in Wildfire Risk Governance Committee Facilitator of Wildfire Scoping Governance Committee
Legal	Assistant General Counsel	Assistant General Counsel	Provides legal consult	Meeting, Email	All	Voting member in Wildfire Risk Governance Committee Advisor in Wildfire Risk Governance Committee

Stakeholder	Stakeholder Point of Contact	PacifiCorp Point of Contact	Stakeholder Role	Engagement Methods	Activity	Level of Engagement for Activity
Field Engineering	Director, Field Engineering	Director, Field Engineering	Provide input into system hardening scopes.	Meeting, Phone, Email	System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Delivery Assurance	Managing Director, Delivery Assurance	Managing Director, Delivery Assurance	Provide input into the alignment of initiative cost with the company budget.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Technical Services & Training	Managing Director, Technical Services and Training	Managing Director, Technical Services and Training	Provide input into the alignment of initiative to services and training support.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Project Management Office	Director, Wildfire PMO	Director, Wildfire PMO	Provide input into the alignment of initiative cost with the company budget.	Meeting, Phone, Email	System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee

Stakeholder	Stakeholder Point of Contact	PacifiCorp Point of Contact	Stakeholder Role	Engagement Methods	Activity	Level of Engagement for Activity
Wildfire Mitigation Program Delivery	Director, Wildfire Program Delivery	Director, Wildfire Program Delivery	Provide input into initiatives with alignment to the wildfire mitigation plan.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Asset Risk	Director, Asset Risk	Director, Asset Risk	Provide input into the alignment of initiative to asset risk.	Meeting, Phone, Email	Inspections, System Hardening	Advisor in Wildfire Risk Governance Committee Advisor in Wildfire Scoping Governance Committee
Wildfire Mitigation Planning	Director, Wildfire Plan	Director, Wildfire Plan	Provide input into initiatives with alignment to the wildfire mitigation plan.	Meeting, Phone, Email	Inspections, Situational Awareness, System Hardening	Advisor in Wildfire Risk Governance Committee

6.2 Wildfire Mitigation Strategy

Each electrical corporation must provide an overview of its proposed wildfire mitigation strategies based on the evaluation process identified in Section 6.1.

6.2.1 Anticipated Risk Reduction

In this section, the electrical corporation must present an overview of the expected risk reduction of its wildfire activities.

6.2.1.1 Projected Overall Risk Reduction

In this section, the electrical corporation must provide a figure showing the projected overall utility risk in its service territory as a function of time, assuming the electrical corporation meets the planned timeline for implementing the activities. The figure is expected to cover at least ten years.

PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction. The company expects to complete this work in 2025 for use beginning in 2026. Initially, this estimate of risk reduction will include only line rebuilds and system hardening through covered conductor, undergrounding, and related capital investments to account for the higher upfront cost and longer lead time of those projects. Later, based on evaluation of the work completed, lessons learned from peer utilities, and best practices for quantifying overall risk reduction identified through participation in joint IOU working groups, this overall risk reduction estimate may include operational controls like ESS/PEDS or PSPS and programmatic activities like more frequent equipment inspections and accelerated correction timelines or vegetation management.

To assess overall risk reduction, PacifiCorp initially expects to assess risk reduction from its grid hardening initiatives and their impacts to wildfire, PSPS, and ESS/PEDS risk. The company expects to apply a apply a constant mitigation effectiveness value for undergrounding and utilize a range of mitigation effectiveness values for covered conductor. These values will be applied to completed and planned work spanning the expected duration of the mitigation portfolio. Due to the varied environmental topography of PacifiCorp's California service territory, it is anticipated that covered conductor will be more effective in certain settings than others. Varying the efficacy of certain mitigations is anticipated to give scoping engineers the information needed to apply the most effective mitigation based on real-world conditions in the field. The risk reduction will utilize the program measured effectiveness rate to calculate the total risk reduced per project. For example, if the PacifiCorp expects to achieve a 10% risk reduction per circuit from an initiative, the company will multiply the risk scores for circuits where the work is completed or planned by 0.1, thus reducing the overall risk score for those circuits. This would then be reflected in a reduced summation of the risk scores for wildfire, PSPS, and ESS/PEDS across the entire service territory year-to-year. Figure 6-1 depicts the projected risk reduction across the service territory over a ten year period as overall risk and estimated and actual effectiveness are quantified. PacifiCorp has not quantified overall risk reduction to present in Figure 6-1. As described above in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction. The company expects to complete this work in 2025 for use beginning in 2026.

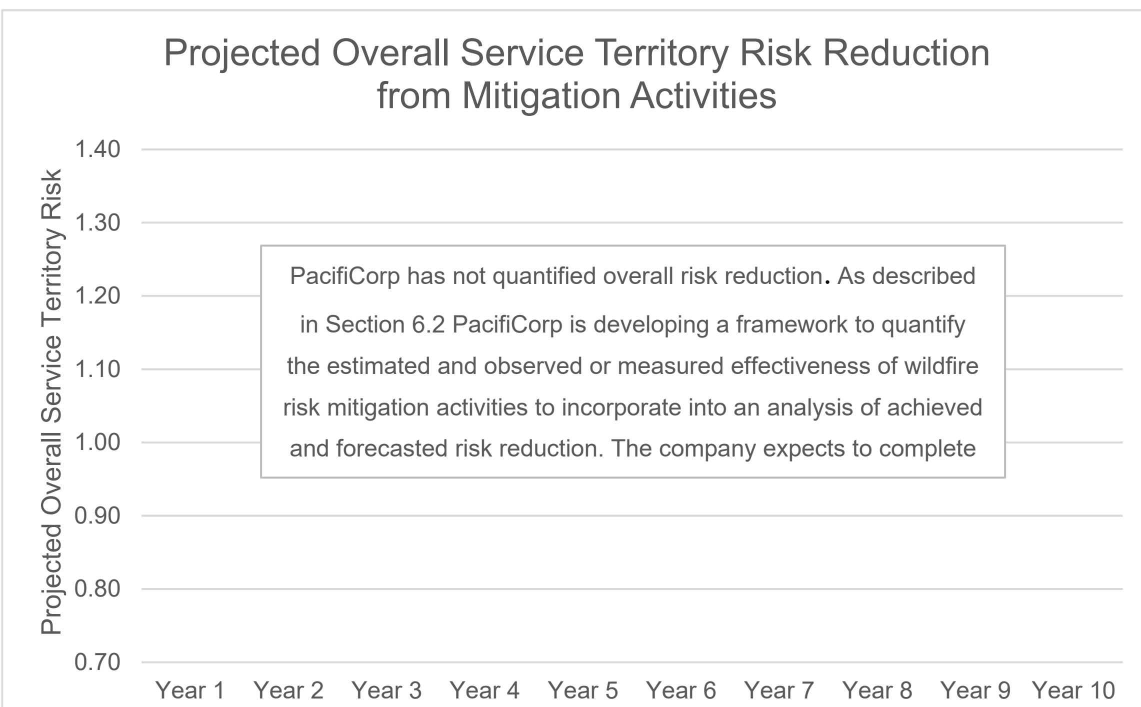


Figure 6-1: Projected Overall Service Territory Risk

6.2.1.2 Risk Impact of Activities

The electrical corporation must calculate the overall expected effectiveness for risk reduction of each of its activities. The overall expected effectiveness is the expected percentage for the average amount of risk reduced by the activity. This must be calculated for overall utility risk, being a summation for wildfire risk and outage program risk, as well as wildfire risk and outage program risk respectively.

Projected risk reduction has been described in Section 6.2.1.1. A component of that calculation is planned integration of future measured effectiveness values, or measured outputs of the system after a significant percentage of the mitigation has been completed for the scope evaluated. An overview of the connection between risk assessments and measured effectiveness is shown below. As this time, it is planned that measured effectiveness will provide a range of values for each included mitigation that can be integrated into future effectiveness projections. Due to location specific variations in the effectiveness of any wildfire mitigation, and the uncertainty associated with this analysis, a range provides a more accurate indication of the potential risk reduction than a single point value. Figure PAC 6-4 below describes how mitigation effectiveness will be estimated before implementation and measured after implementation.

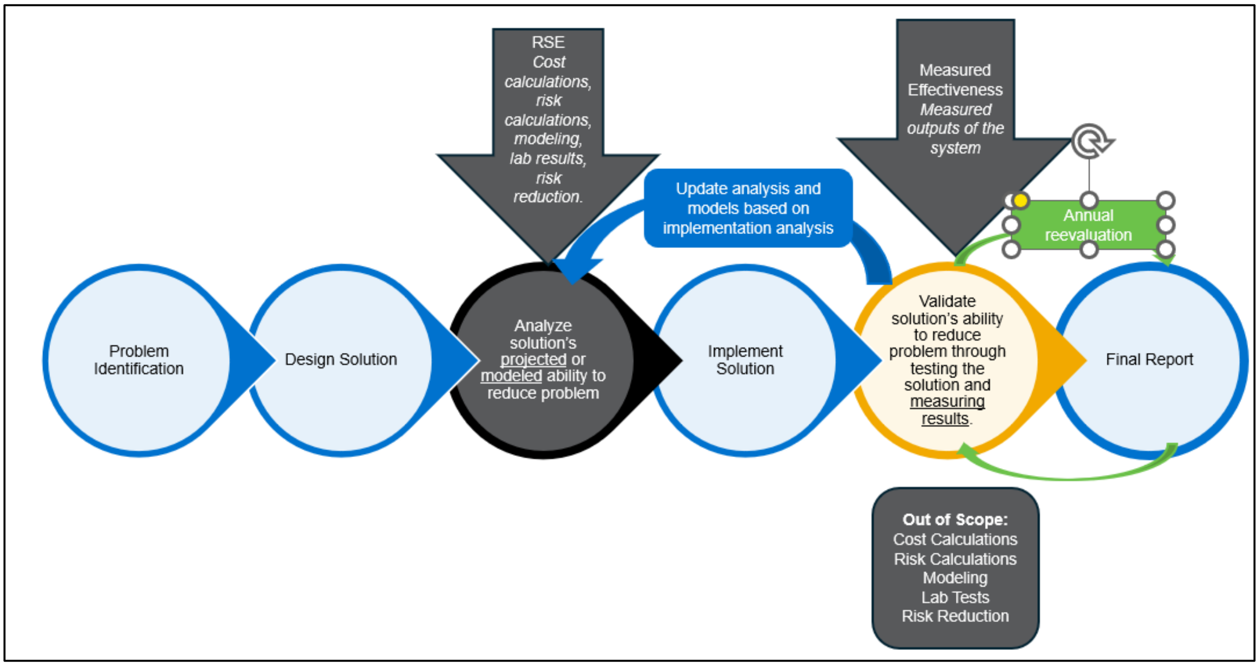


Figure PAC 6-4: Process to Estimate and Measure Effectiveness

Due to the nature of multi-year programs and piloting programs, it can take several years to identify the data attributes necessary for the evaluation and then gather that information to perform the evaluation. There are few mitigations which have mature data and enough data to begin preliminary evaluations. Small values can require decades of data collection to statistically prove something, therefore this effectiveness is not statistically significant but an indication of measured effectiveness. Measured effectiveness is evaluated against one of the key objectives of the Wildfire Mitigation Portfolio:

- Reduce Wildfire Likelihood
- Reduce ESS(PEDS) / PSPS Likelihood
- Reduce ESS (PEDS) / PSPS Scope
- Reduce ESS (PEDS) / PSPS Impacts

Because multiple factors including weather and environmental conditions outside of utility control can influence the frequency of utility-caused wildfires, PacifiCorp instead targets its mitigations based on the underlying ignition risk drivers, recognizing that the company can change how the system responds to a fault that could potentially cause a wildfire ignition. PacifiCorp does so by using historical outage records, mapped by a panel of subject matter experts to potential ignition risk as there is a relationship to operating equipment. Wildfire mitigations may not eliminate a risk driver entirely, as shown in Figure PAC 6-5, but they are designed to significantly reduce the frequency of a risk driver. Many risk drivers, such as vegetation contact by object, are mitigated through a combination of programs, as there is not a 1:1 relationship. If mitigation programs are effective, then the frequency of ignition risk drivers will decrease over time. This may in turn result in a reduction of utility-caused wildfire ignitions, although this lagging indicator of mitigation effectiveness may yield misleading results due to variations in other factors like, for example, the return of drought conditions or a decline in fuel treatments in managed areas adjacent to utility rights-of-way.

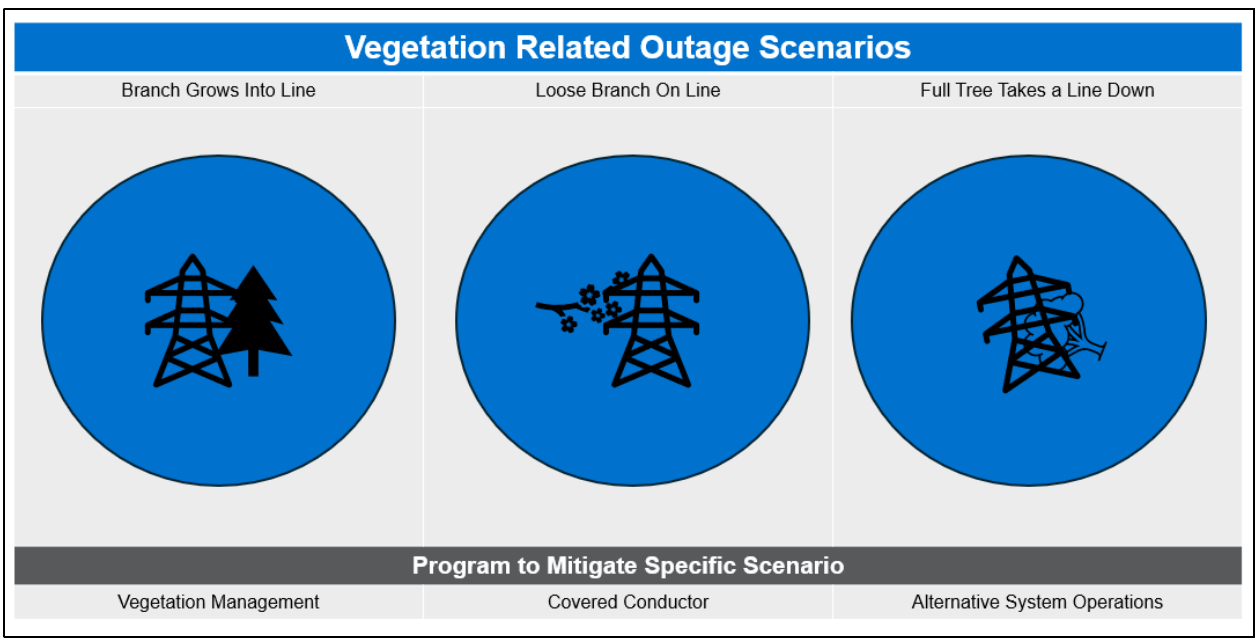


Figure PAC 6-5: Example of Actions that Could be taken to Reduce Vegetation Outage Risk

The graphic above illustrates that there is more than one action that can be taken to mitigate a risk. Vegetation management will not fully eliminate the risk unless the vegetation is removed from a sufficient distance from the line. For example, even if the company removed all the vegetation that may overhang a facility, there are still branches on a tree that pose a risk during wind events, covered conductor helps address this risk. Vegetation management is a tool in the mitigation toolbox and when coupled with other mitigation actions sees an increased benefit.

Utilities across the globe are engaged in an evolving discussion, seeking the best methods to assess their programs and initiatives. There is no single solution that stands out as the favored approach; instead, the landscape is diverse and dynamic. A promising approach involves the grouping of metrics and the evaluation of similar programs. By grouping metrics in this manner, utilities can better understand the relative effectiveness of their initiatives and make informed decisions. Grouping evaluated metrics and similar programs allows for a cost benefit alignment to address a broad array of risk drivers and compare programs.

The evaluation process is categorized into three primary areas:

1. Effectiveness of wildfire likelihood reduction
2. Wildfire spread reduction
3. ESS/PEDs / PSPS impact, scale, and scope reduction

Each of these categories has a set of common metrics that are used to assess program performance. This structured approach allows for a more detailed and targeted evaluation of specific risk drivers and program outcomes.

For effectiveness evaluations, it is planned to take every effort for an evaluation of a single mitigation application. When isolating mitigations is not feasible, such as with broadly applied enhanced vegetation management and expedited asset management corrections, it is important to indicate which other mitigations were applied and their completion dates. Data evaluation can be influenced by confounding variables like weather or system changes, or enhanced safety settings. While PacifiCorp currently does not have a normalization methodology developed, groups are exploring how to systematically account for weather and system changes over time.

Reporting requirements of the outputs of the evaluation include a range percentage of effectiveness of the mitigation strategy that can be used to inform program adjustments and / or risk models.

PacifiCorp will update the scoping process annually to avoid disrupting projects mid-task as shown in Figure PAC 6-6 below. New information will be applied in the next scoping cycle, not during ongoing projects. This approach prevents increased costs, extended timelines, and workflow disruptions. Projects already in scoping will not be stopped due to changes in mitigation effectiveness.

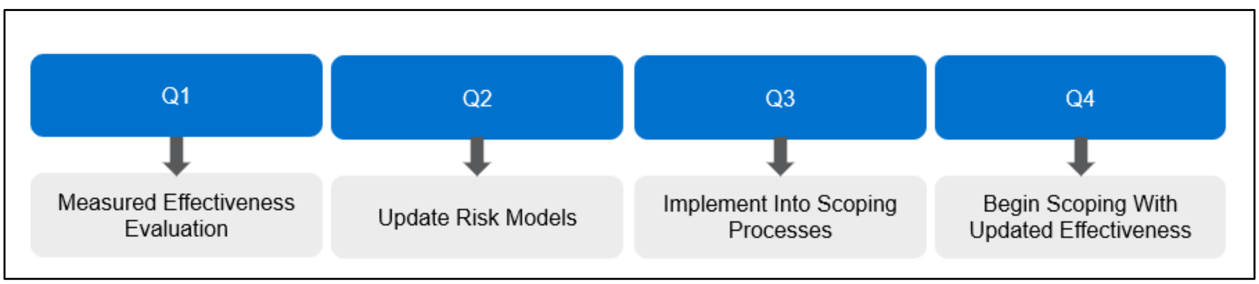


Figure PAC 6-6 : Annual Process for Incorporation into Wildfire Mitigation Work

Measured effectiveness evaluates performance or customer experience and includes multiple mitigations. It is reviewed with risk models, during the wildfire risk governance committee meeting to decide on adjustments.

Table 6-3 below summarizes PacifiCorp's estimated risk reduction from mitigation activities. As discussed previously in Section 5, the company is developing its PSPS and PEDs models to estimate risk and as described above in Section 6.2, the company is developing the process to quantify overall risk and risk reduction and estimate and measure mitigation effectiveness, therefore effectiveness scores, and cost benefit scores are noted as "TBD." . As the models, methodologies, and processes are developed. PacifiCorp will be able to provide more information on the impact of specific mitigations on overall risk and wildfire, PSPS, and ESS/PEDS risk and the impact on those activities specifically to risk in the HFTD and HFRA. PacifiCorp has not quantified the percent of HFTD an HFTD/HFRA covered through mitigation activities and have noted this as "TBD."

Table 6-3: Risk Impact of Activities

Activity	Activity Section	Activity Effectiveness – Overall Risk	Activity Effectiveness – Wildfire Risk	Activity Effectiveness – Outage Program Risk	Cost-Benefit Score - Overall Risk	Cost-Benefit Score – Wildfire Risk	Cost-Benefit Score – Outage Program Risk	% HFTD Covered	% HFTD/HFRA Covered	Expected % Risk Reduction	Model(s) Used to Calculate Risk Impact
Covered Conductor Installation	8.2.1	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	FireSight, TBD
Undergrounding of Electric Lines and/or Equipment	8.2.2	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	FireSight, TBD
Distribution Pole Replacements and Reinforcements	8.2.3	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Installation of System Automation Equipment	8.2.8	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Line Removal in the HFTD	8.2.9	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Other Technologies and Systems	8.2.12	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Asset Inspections	8.3.1, 8.3.2	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Intrusive Pole Inspections	8.3.3	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Substation Inspections	8.3.4	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Infrared Inspections of Distribution Electric Lines and Equipment	8.3.5	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Infrared Inspections of Transmission Electric Lines and Equipment	8.3.6	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Equipment Settings to Reduce Wildfire Risk	8.7.1	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Vegetation Pruning and Removal	9.3	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Pole Clearing	9.4	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Wood and Slash Management	9.5	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Defensible Space	9.6	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Grid Monitoring Systems	10.3	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Ignition Detection Systems	10.4	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

6.2.1.3 Projected Risk Reduction on Highest-Risk Circuits Over the Three-Year WMP Cycle

The objective of the service territory risk reduction summary is to provide an integrated view of wildfire risk reduction across the electrical corporation's service territory

Table 6-4 below shows the mitigation activities PacifiCorp plans for the highest risk circuits during the 2026-2028 WMP cycle. As discussed previously in Section 5, the company is developing its PSPS and PEDs models to estimate risk and the overall utility risk is "TBD" as the company does not have this component at this time. and as described above in Section 6.2, the company is developing the process to quantify overall risk and risk reduction and estimate and measure mitigation effectiveness.

Table 6-4: Summary of Risk Reduction for Top-Risk Circuits

Circuit, Segment, or Span ID	Initial Overall Utility Risk	2026 Activities	2026 Overall Utility Risk	2027 Activities	2027 Overall Utility Risk	2028 Activities	2028 Overall Utility Risk
4G1	TBD	No 2026 Activities GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	GH-01 Line Rebuild	TBD	No 2028 Activities	TBD
5G149	TBD	No 2026 Activities GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Planned for 2025	TBD	GH-01 Line Rebuild	TBD	No 2028 Activities	TBD
5G151	TBD	No 2026 Activities GH-04 System Automation Completed in 2024 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Initial Overall Utility Risk	2026 Activities	2026 Overall Utility Risk	2027 Activities	2027 Overall Utility Risk	2028 Activities	2028 Overall Utility Risk
5G21	TBD	No 2026 Activities GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Completed in 2023	TBD	No 2027 Activities	TBD	GH-01 Line Rebuild	TBD
5G23	TBD	No 2026 Activities GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	GH-01 Line Rebuild	TBD	No 2028 Activities	TBD
5G31	TBD	No 2026 Activities GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Planned for 2025	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G33	TBD	GH-01 Line Rebuild GH-05 Expulsion Fuse Replacement GH-04 System Automation Completed in 2023	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Initial Overall Utility Risk	2026 Activities	2026 Overall Utility Risk	2027 Activities	2027 Overall Utility Risk	2028 Activities	2028 Overall Utility Risk
5G45	TBD	GH-01 Line Rebuild Planned for 2025 GH-05 Expulsion Fuse Replacement Planned for 2025 GH-04 System Automation Completed in 2019	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G5	TBD	No 2026 Activities GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Planned for 2025	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G83	TBD	GH-01 Line Rebuild Planned for 2025 GH-04 System Automation Planned for 2025 GH-05 Expulsion Fuse Replacement Completed in 2019	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5L83	TBD	No 2026 Activities GH-04 System Automation Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Initial Overall Utility Risk	2026 Activities	2026 Overall Utility Risk	2027 Activities	2027 Overall Utility Risk	2028 Activities	2028 Overall Utility Risk
5L87	TBD	GH-04 System Automation GH-05 Expulsion Fuse Replacement Planned for 2025	TBD	No 2027 Activities	TBD	GH-01 Line Rebuild	TBD
5L97	TBD	No 2026 Activities GH-04 System Automation Completed in 2022 GH-05 Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
7G73	TBD	No 2026 Activities GH-01 Completed 2022 GH-04 System Automation Completed in 2021 GH-05 Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
7G75	TBD	No 2026 Activities GH-01 Completed 2022 GH-04 System Automation Completed in 2020 GH-05 Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
7G81	TBD	No 2026 Activities GH-01 Planned for 2025 GH-04 System Automation Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

As discussed in Section 6.1.2, PacifiCorp selects circuits are selected for mitigation such as GH-01 System Hardening based on the maximum Fuel/Terrain wildfire risk score on the circuit. In Table PAC 6-1 below are the circuits PacifiCorp has prioritized for the 2026-2028 WMP cycle based on the maximum Fuel/Terrain wildfire risk score and the mitigation activities. Circuits in Table PAC 6-1 that are also in Table 5-5 and Table 6-4 are highlighted in orange. As described above in Section 6.2. PacifiCorp is developing the process to quantify overall risk and risk reduction and estimate and measure mitigation effectiveness, therefore the 2026, 2027, and 2028 Maximum Fuel/Terrain risk scores are "TBD" at this time.

Table PAC 6-1: Summary of Risk Reduction for Circuits With Maximum Fuel/Terrain Wildfire Risk Scores

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
5G39	0.97	0.64	GH-01 Line Rebuild GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5R165	0.96	0.61	GH-01 Line Rebuild GH-04 System Automation Planned to Complete in 2025 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
8G95	0.94	0.46	GH-01 Line Rebuild Planned to Complete in 2025 GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2023	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5R171	0.9	0.68	GH-01 Line Rebuild GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5R170	0.89	0.49	GH-01 Line Rebuild GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
5G97	0.89	0.36	GH-01 Line Rebuild Planned to Complete in 2025 GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5R96	0.88	0.48	GH-01 Line Rebuild Planned to Complete in 2025 GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
7G75	0.84	0.78	GH-01 Line Rebuild Completed in 2022 GH-04 System Automation Completed in 2020 GH-05 Expulsion Fuse Replacement Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G16	0.83	0.42	GH-01 Line Rebuild GH-05 Expulsion Fuse Replacement Completed in 2021 GH-05 Expulsion Fuse Replacement Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
7G73	0.8	0.62	GH-01 Line Rebuild Completed in 2022 GH-04 System Automation Completed in 2021 GH-05 Expulsion Fuse Replacement Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
5G83	0.79	0.99	GH-01 Line Rebuild Planned to Complete in 2025 GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Planned to Complete in 2025	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G41	0.78	0.8	GH-01 Line Rebuild GH-05 Expulsion Fuse Replacement Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
5G79	0.77	0.41	GH-01 Line Rebuild Planned to Complete in 2025 GH-04 System Automation Completed in 2022 GH-05 Expulsion Fuse Replacement Completed in 2023	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

Circuit, Segment, or Span ID	Max Terrain Score	Max Wind Score	2026 Activities	2026 Overall Maximum Fuel/Terrain Risk	2027 Activities	2027 Overall Maximum Fuel/Terrain Risk	2028 Activities	2028 Overall Maximum Fuel/Terrain Risk
5G23	0.77	0.96	GH-01 Line Rebuild Planned for 2030[7] GH-04 System Automation Completed in 2023 GH-05 Expulsion Fuse Replacement Completed in 2024	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD
7G71	0.76	0.37	GH-01 Line Rebuild Completed in 2022 GH-04 System Automation Completed in 2021 GH-05 Expulsion Fuse Replacement Completed in 2022	TBD	No 2027 Activities	TBD	No 2028 Activities	TBD

7 GH-01 schedule in conjunction with planned substation replacement.

6.2.2 Interim Activities

For each activity that will require more than one year to implement, the electrical corporation must evaluate the need for interim activities that will reduce risk until the primary or permanent activity is in place.

Grid hardening initiatives take several years to complete. PacifiCorp does not have a specific interim risk reduction targeted program; however, the system wide application of some programs provides interim risk reduction while long term projects are in progress. Interim risk reduction is part of the system wide situational awareness programs that inform the targeted application of additional patrols and enhanced safety settings as described in Sections 8.7.1 and 8.7.2. While these initiatives could be seen as interim measures until grid hardening is completed, the company does not consider them temporary. Instead, their continuation will be considered as more lines are replaced with covered conductor.

7. Public Safety Power Shutoff

In this section, the electrical corporation provides an overview narrative of planned initiative actions to reduce the impacts of PSPS events.

PacifiCorp recognizes the best way to reduce the impact of PSPS events is to reduce the number, geographic scope, and duration of PSPS events. The application of all mitigation initiatives will help reduce the impact of PSPS, however, certain initiatives are directly tied to the PSPS program.

Improved situational awareness initiatives support the PSPS decision-making process. PacifiCorp's situational awareness plans include the installation of additional weather stations to access localized weather risk data. To leverage this weather data and other key information, PacifiCorp will invest in a range of new modeling capabilities as described in Section 10 including the development of an operational weather forecast model that will utilize fully redundant High Performance Computing Clusters (HPCC) capabilities to process and deliver a twice daily 96-hour forecast as described in Section 10.5. PacifiCorp uses Technosylva's WFA-E modeling suite as described in Section 10 including FireRisk to model fire spread risk across its service territory and FireSim to model on demand fire spread potential. This additional data and sophisticated situational awareness will better inform decision making which reduces PSPS impacts by reducing the likelihood that a PSPS will be unnecessarily executed facilitating a more surgical application of PSPS thereby reducing its scope.

Many of PacifiCorp's initiatives are structured to reduce wildfire ignition risk which, by association, can reduce the impact of PSPS including the line rebuild program described in Section 8.2. The installation of covered conductor will increase grid resiliency against wind-driven vegetation contacts, which can lead to wildfire ignitions. The mitigation benefits of covered conductor when combined with other grid hardening efforts implemented as part of a rebuild effort can decrease PSPS event impacts.

Other initiatives specifically implemented to reduce the impact of a PSPS event include the portable battery program and generator rebate program (backup power rebate program). Additionally, PacifiCorp continues to review its process for the opening of community resource centers (CRC) for any communities impacted by a PSPS.

8. Grid Design, Operations, and Maintenance

In this section, the electrical corporation provides qualitative and quantitative targets for each year of this three-year cycle. The electrical corporation provides at least one qualitative or quantitative target for the following initiatives:

Grid Design and System Hardening (Section 8.2)

Asset Inspections (Section 8.3)

Equipment Maintenance and Repair (Section 8.4)

Quality Assurance / Quality Control (Section 8.5)

Work Orders (Section 8.6)

Grid Operations and Procedures (Section 8.7)

8.1 Targets

In this section, the electrical corporation must provide qualitative and quantitative targets for vegetation management and inspections for each year of the three-year WMP cycle.

8.1.1 Qualitative Targets

The electrical corporation provides qualitative targets for its three-year plan for implementing and improving its grid design, operations, and maintenance.

Please see Table 8-1 below.

8.1.2 Quantitative Targets

The electrical corporation must list all quantitative targets it will use to track progress on its grid design, operations, and maintenance in its three-year plan, broken out by each year of the WMP cycle. Electrical corporations will show progress toward completing quantitative targets in subsequent reports, including data submissions and WMP Update.

Table 8-1 below presents PacifiCorp's 2026-2028 grid design, operations, and maintenance targets. Estimated risk reduction in Table 8-1 is TBD because PacifiCorp has not quantified risk reduction. As described in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction.

2026-2028 Target Status, % Planned in HFTD, and % Planned for HFRA are "TBD" for initiatives AI-08: Distribution Infrared Inspections, AI-09: Transmission Drone Inspections, and AI-10 Distribution Drone Inspections as these are currently pilots, and the targets will be set when the pilots are completed. Target units and 2026-2028 , % Planned in HFTD, and % Planned for HFRA for GH-14 are "N/A" as this is a qualitative initiative. % of circuits in the HFTD for GO-01 ESS Circuit Hardening is TBD due to the reactive nature of this work. The specific circuits that will be hardened for ESS hardening are identified at the end of wildfire season. Similarly the targets for GH-15 Distribution Pole Wrap and Transmission Pole Wrap and the locations of the poles are TBD as this is reactive work.

Table 8-1: Grid Design, Operation, and Maintenance Targets by Year

Initiative	Quantitative or Qualitative Target	Activity (Tracking ID #)	Target Unit	2026 Target / Status	% Planned in HFTD for 2026	% Planned in HFRA for 2026	% Risk Reduction for 2026	2027 Target / Status	% Planned in HFTD for 2027	% Planned in HFRA for 2027	% Risk Reduction for 2027	2028 Target / Status	% Planned in HFTD for 2028	% Planned in HFRA for 2028	% Risk Reduction for 2028	Three-year Total	Section; Page Number
Work Orders: Quarterly Review of Past Due Level 1 and 2 Fire Threat Condition Related Work Orders and Plan for Remediation	Qualitative	AI-13	N/A	Quarterly Reviews Conducted and Plans Created	N/A	N/A	TBD	Quarterly Reviews Conducted and Plans Created	N/A	N/A	TBD	Quarterly Reviews Conducted and Plans Created	N/A	N/A	TBD	N/A	8.6 p. 240
Workforce Planning: Training for internal and contractor wires personnel on inspection and correction procedures	Qualitative	GH-14	N/A	Annual training conducted	N/A	N/A	TBD	Annual training conducted	N/A	N/A	TBD	Annual training conducted	N/A	N/A	TBD	N/A	8.8 p. 260
Transmission Patrol Inspections	Quantitative	AI-01	Facility Points	12,324	100%	100%	TBD	12,324	100%	100%	TBD	12,324	100%	100%	TBD	36,972	8.3.1 p.189-191
Distribution Patrol Inspections	Quantitative	AI-02	Facility Points	53,498	100%	100%	TBD	54,249	100%	100%	TBD	54,134	100%	100%	TBD	161,881	8.3.1 p.189-191
Transmission Detailed Inspections	Quantitative	AI-03	Facility Points	2,241	20%	20%	TBD	1,660	20%	20%	TBD	2,563	20%	20%	TBD	6,464	8.3.2 p. 191-195
Distribution Detailed Inspections	Quantitative	AI-04	Facility Points	5,996	20%	20%	TBD	6,448	20%	20%	TBD	5,621	20%	20%	TBD	18,065	8.3.2 p.191-195
Transmission Intrusive Inspections	Quantitative	AI-05	Facility Points	1,351	10%	10%	TBD	919	10%	10%	TBD	2,743	10%	10%	TBD	5,013	8.3.3 p. 195-198
Distribution Intrusive Inspections	Quantitative	AI-06	Facility Points	6,102	10%	10%	TBD	5,351	10%	10%	TBD	5,466	10%	10%	TBD	16,919	8.3.3 p.195-198
Distribution Infrared Inspections	Quantitative	AI-07	Facility Points	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	8.3.5 p.200-203
Transmission Infrared Inspections	Quantitative	AI-08	Facility Points	12,324	100%	100%	TBD	12,324	100%	100%	TBD	12,324	100%	100%	TBD	36,972	8.3.6 p.203-205
Transmission Drone Inspections	Quantitative	AI-09	Transmission Poles	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	8.3.7 p.205-207
Distribution Drone Inspections	Quantitative	AI-10	Distribution Poles	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	8.3.8 p.207-210
Substation Inspections	Quantitative	AI-11	Substations	452	100%	100%	TBD	452	100%	100%	TBD	452	100%	100%	TBD	1,356	8.3.4 p. 198-200
Line Rebuild	Quantitative	GH-01	Circuit Miles	120	75%	25%	TBD	120	60%	40%	TBD	120	50%	50%	TBD	360	8.2.1 p. 166-169
Distribution Pole Replacement and Reinforcements	Quantitative	GH-02	Distribution Poles	2,400	75%	25%	TBD	2,400	60%	40%	TBD	2,400	50%	50%	TBD	7,200	8.2.3 p.171-174
Transmission Pole Replacement and Reinforcements	Quantitative	GH-03	Transmission Poles	240	75%	25%	TBD	240	60%	40%	TBD	240	50%	50%	TBD	720	8.2.4 p.174-177
Installation of System Automation Equipment	Quantitative	GH-04	Devices	4	75%	0%	TBD	0	N/A	N/A	TBD	0	N/A	N/A	TBD	4	8.2.8 p. 179-181
Expulsion Fuse Replacement	Quantitative	GH-05	Fuse Locations	1,500	10%	90%	TBD	0	N/A	N/A	TBD	0	N/A	N/A	TBD	1,500	8.2.12 p.183-186
Distribution Pole Wraps	Quantitative	GH-15	Distribution Poles	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	8.2.3 p.171-174
Transmission Pole Wraps	Quantitative	GH-15	Transmission Poles	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	8.2.4 p. 174-177
ESS Circuit Hardening	Quantitative	GO-01	Circuits	3	TBD	TBD	TBD	3	TBD	TBD	TBD	3	TBD	TBD	TBD	9	8.7.1 p. 241

8.2 Grid Design and System Hardening

In this section the electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its distribution, transmission, and substation infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

The electrical corporation is required, at a minimum, to discuss grid design and system hardening for each of the following mitigation activities:

Covered conductor installation

Undergrounding of electric lines and/or equipment

Distribution pole replacements and reinforcements

Transmission pole/tower replacements and reinforcements

Traditional overhead hardening

Emerging grid hardening technology installations and pilots

Microgrids

Installation of system automation equipment

Line removal in the HFRA and HFTD

Other grid topology improvements to minimize risk of ignitions

Other grid topology improvements to mitigate or reduce PSPS events

Other technologies and systems not listed above

Status updates on additional technologies being piloted

8.2.1 Covered Conductor Installation

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to covered conductor installation. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-01

Overview of the activity: Historically, most medium voltage power lines in the United States were installed with bare overhead conductor. As the name "bare" suggests, the wire surface is uninsulated and exposed to the elements. For purposes of wildfire mitigation, a new covered conductor design has emerged as an industry best practice, with some variations in products, covered conductor is also called tree wire, spacer cable, or aerial cable. Most of the projects in the Line Rebuild Program will involve the installation of insulated covered conductor. PacifiCorp's overhead distribution equipment and lines are designed to meet current compliance requirements. However, under certain conditions, such as high wind speeds, these lines can become more vulnerable to the "contact by object" risk drivers. The dominant characteristic of covered conductor is manufactured with high-impact resistant extruded exterior forming an insulation around stranded hard drawn conductor. The inherent design provides insulation for the energized metal conductor. To be clear, covered conductor is not insulated enough for people to directly handle an energized high voltage power line as discussed below. The insulation layers have proven to effectively reduce the risk of wildfire by minimizing the vegetation or ground contact over bare conductor.

Variations in covered conductor products have been used in the industry for decades. Due to many operating constraints, however, use of covered conductor tended to be limited to locations with extremely dense vegetation where traditional vegetation management was not feasible or efficient.

Recent technological developments have improved covered conductor products, reducing the operating constraints historically associated with the design. These advances have improved the durability of the project and reduced the impact of conductor thermal constraints. There are still logistical challenges with covered conductor. Above all, the wire is heavier, especially during heavy snow/ice loading, meaning that more and/or stronger poles may be required to support covered conductor.

Impact of the activity on wildfire risk: The wildfire mitigation benefits of covered conductor are significant. Disruption on the electrical network, a fault, can result in emission of a spark or heat that could be a potential source of ignition. Covered conductor greatly reduces the potential of many kinds of faults. For example, contact from an object is a major category of real-world faults which can cause a spark. Whether it is a tree branch falling into a line and pushing two phases together or a Mylar balloon carried by the wind drifting into a line, contact with energized bare conductor can cause the emission of sparks. If those same objects contact covered conductor, the wire is insulated enough that there are no sparks. Likewise, many equipment failures are a wildfire risk because the equipment failure then allows a bare conductor to contact a grounded object. Consequently, covered conductor greatly reduces the risk of ignitions associated with most types of equipment failure. For example, if a cross arm breaks, the wire held up by the cross arm often falls to the ground or is low and out of position, so that the wire might be contacting vegetation on the ground or the pole itself. In those circumstances, a bare conductor can emit sparks or heat that can cause an ignition.

Covered conductor is especially well-suited to reduce the occurrence of faults linked with the worst wildfire events. Dry and windy conditions increase the wildfire risks. Wind is the primary driving force behind wildfire spread. At the same time, wind has distinct and negative impacts on a power line. The wind blows objects into lines; a strong wind can cause equipment failure; and even parallel lines slapping in the wind can cause sparks. Covered conductor specifically reduces the potential of an ignition event, because covered conductor is especially effective at limiting the kinds of faults that occur when it is windy. Taken together, these substantial benefits warrant the use of covered conductor in areas with high wildfire risk. This approach is consistent with emerging best practices, as utilities in geographic areas with extreme wildfire risk have trended heavily towards use of covered conductor. PacifiCorp is addressing this risk through the line rebuild program.

A trend analysis has shown that implementation of covered conductor reduces the risk of wildfire ignition over time. For example, this includes a reduction in vegetation contact incidents or other risk drivers, such as equipment failure, as covered conductor replaces bare conductor.

Additionally, covered conductor directly impacts the likelihood and consequence of ignitions. It reduces the likelihood of sparks caused by common wildfire ignition scenarios, such as equipment failure or wind-driven debris contact, and minimizes the consequences by preventing faults from releasing heat or sparks.

The use of covered conductor is consistent with emerging best practices, as utilities in high wildfire-risk areas have increasingly adopted this approach. PacifiCorp is addressing these risks through its line rebuild program, prioritizing high-risk areas to maximize wildfire mitigation benefits.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the Activity: Since initiation in 2019, PacifiCorp has delivered fewer circuit miles of line rebuild than planned and is currently faced with the continued challenge of ramping up to achieve targets. Line rebuild projects using covered conductor were initially viewed as similar to other distribution projects with short lead times and moderate construction needs. However, these projects generally require a 12–24-month project pipeline, depending on permitting and right of way requirements. Additionally, construction resources can often compete within the region, resulting in construction bottle necks. PacifiCorp acknowledges that these challenges are likely to continue and impact the delivery of line rebuild.

The third-party contractor hired for installation brings a significant expansion in resources including 15 engineering staff, eight project management staff, and 60 construction staff. The additional resources represent a doubling in project management resources and a 50% increase in construction staff. To manage the completion of the covered conductor installations moving forward, the contracting company will now handle the various aspects of line rebuild projects, such as project management, project controls, project reporting, engineering, estimating, permitting, surveying, material management, and construction.

PacifiCorp encountered the following constraints:

- Resources.
- Permitting.
- Material.

To address these constraints, PacifiCorp:

- Hired a contractor to manage the various aspects of the projects.
- Plans to identify and pursue permitting earlier in the project process.
- Plans to order additional material when feasible.

Compatible initiatives: GH-02, GH-03, and GH-05

8.2.2 Undergrounding of electric lines and/or equipment

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to undergrounding of electric lines and/or equipment. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-01

Overview of the activity: Under the line rebuild program, PacifiCorp is also considering undergrounding. While an underground design does not eliminate every ignition potential (i.e., because of above ground junctions), it is considered the most effective strategy for reducing the risk of any utility-related ignition. Unfortunately, the cost of underground construction often makes it difficult to apply on a widespread basis. Therefore, the company evaluates the potential to convert overhead lines to underground lines for rebuild projects on a project-by-project basis. Through the design process, each individual project is assessed to determine whether sections of the rebuild should be completed with underground construction. For example, a more remote, heavily forested location with few customer connections could be an ideal candidate for undergrounding.

Impact of the activity on wildfire risk: Undergrounding of electric lines and/or equipment significantly reduces the risk of wildfires by eliminating the exposure of power lines to environmental factors such as high winds, vegetation contact, and falling debris, which are common causes of fire ignition. Similar to covered conductor described in Section 8.2.1 underground is less susceptible to incidental contact with foreign objects. Unlike covered conductor, however, underground systems reduce the potential for contact to occur in the first place, with the exception of limited above-ground equipment. Additionally, they reduce the likelihood that any incidental contact will result in a fault event, thereby further mitigating wildfire risk. By burying power lines, the chances of sparks or equipment failure that could ignite wildfire are greatly minimized. Underground systems are also less vulnerable to damage during extreme weather events, enhancing both reliability and safety.

Trend analysis indicates a steady reduction in wildfire risk over time in areas where undergrounding has been implemented, as fault events caused by environmental factors have been eliminated. Undergrounding impacts the likelihood and consequence of ignitions by preventing many ignition scenarios outright. For example, by removing overhead lines, the likelihood of vegetation contact, windborne debris strikes, or pole collapses is effectively eliminated, along with the associated consequences.

While the upfront cost of undergrounding is substantial, its long-term benefits in mitigating wildfire risk and improving community safety make it a critical strategy in high fire-risk areas. Undergrounding helps reduce the need for PSPS events, ensuring more consistent power delivery during wildfire seasons.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the activity: N/A

Compatible initiatives: N/A

8.2.3 Distribution pole replacements and reinforcements

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to distribution pole replacements and reinforcements. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-02, GH-15

Overview of the activity: Traditionally, overhead poles are replaced or reinforced within the service territory consistent with the NESC, PacifiCorp policies, and prudent utility practice. When a pole is identified for replacement, typically through routine inspections and testing, major weather events, or joint-use accommodation projects, a new pole consistent with engineering specifications suitable for the intended use and design is installed in its place. Engineering specifications typically reflect the use of wooden poles, which is consistent with prudent utility practice as they are considered safe and structurally sufficient to support overhead electrical facilities during standard operating conditions.

The use of alternate non-wooden construction, such as steel, can provide additional structural resilience in high-risk locations during wildfire events and, therefore, aid in restoration efforts. In addition to the installation of non-wooden solutions as a part of standard replacement programs or mechanisms in priority locations with increased risk, certain wooden poles may also be replaced with non-wooden solutions in conjunction with other wildfire mitigation system hardening programs.

For example, as part of covered conductor installation, the strength of existing poles is evaluated. In many cases, the strength of existing poles may not be sufficient to accommodate the additional weight of the covered conductor. In these instances, the existing wooden pole is upgraded to support the increased strength requirements and, when present in high-priority locations, replaced with a non-wooden solution for added resilience.

Depending on the pole configuration and location, the company may also install a fire mesh wrap around both transmission and distribution wooden poles in areas of heightened wildfire risk. The wrap is applied to protect the poles from fire damage in the event of a wildfire. Pole wraps may also be applied on poles scoped for replacement with steel poles as an interim solution. This is tracked in initiative GH-15.

PacifiCorp has also included the pole replacement program with the line rebuild installations as an efficient use of resources. That being said, exclusively poles replaced under the line rebuild program are counted in the WMP. In some cases, poles need to be replaced to accommodate the additional weight of covered conductor. Replacing wooden poles with stronger non-wooden solutions such as fiberglass or steel increases grid resiliency and eliminates the need to return later. This approach also ensures that pole replacements are prioritized effectively.

Impact of the activity on wildfire risk: PacifiCorp plans to mitigate the risk associated with wood poles by replacing them with more fire resilient materials. Pole replacement and reinforcement have a significant impact on reducing wildfire risk by enhancing the structural integrity and resilience of the electrical distribution system. Replacing aging or damaged wooden poles with stronger, fire-resistant materials such as steel or fiberglass decreases the likelihood of poles failing during extreme weather events, which are often a catalyst for wildfire ignitions. Reinforcements, such as the addition of fire-retardant wraps or structural upgrades, provide further protection in high-risk wildfire zones by reducing the chance of pole ignition or collapse. These activities also ensure that poles can support the additional weight of covered conductors and other wildfire mitigation equipment, which further minimizes the risk of sparks or electrical faults that could lead to wildfires. Together, pole replacements and reinforcements play a critical role in improving system resilience and protecting vulnerable areas from wildfire events.

Trend analysis has shown that replacing and reinforcing poles in high-risk areas steadily reduces wildfire risk over time by eliminating failure points associated with aging infrastructure.

This activity directly impacts the likelihood and consequence of ignitions by addressing common fault scenarios, such as pole collapse or failure during extreme weather, which often leads to sparks or contact with vegetation. Replacing wooden poles with fire-resistant materials and adding reinforcements minimizes these risks, enhancing system reliability and protecting communities in high fire-risk areas.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the activity: PacifiCorp has previously reported transmission and distribution poles as a single value. The company will be tracking and reporting these values separately. PacifiCorp increased this target as this work is happening in conjunction with the line rebuild projects and there was a 50% increase in the line rebuild scope.

Compatible initiatives: GH-01

8.2.4 Transmission pole replacements and reinforcements

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to transmission pole/tower replacements and reinforcements. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-03, GH-15

Overview of the activity: Traditionally, overhead poles are replaced or reinforced within the service territory consistent with the NESC, PacifiCorp policies, and prudent utility practice. When a pole is identified for replacement, typically through routine inspections and testing, major weather events, or joint-use accommodation projects, a new pole consistent with engineering specifications suitable for the intended use and design is installed in its place. Engineering specifications typically reflect the use of wooden poles, which is consistent with prudent utility practice as they are considered safe and structurally sufficient to support overhead electrical facilities during standard operating conditions.

The use of alternate non-wooden construction, such as steel, can provide additional structural resilience in high-risk locations during wildfire events and, therefore, aid in restoration efforts. In addition to the installation of non-wooden solutions as a part of standard replacement programs or mechanisms in priority locations with increased risk, certain wooden poles may also be replaced with non-wooden solutions in conjunction with other wildfire mitigation system hardening programs.

For example, as part of covered conductor installation, the strength of existing poles is evaluated. In many cases, the strength of existing poles and transmission structures may not be sufficient to accommodate the additional weight of the covered conductor. In these instances, the existing wooden pole is upgraded to support the increased strength requirements and, when present in high-priority locations, replaced with a non-wooden solution for added resilience.

Depending on the pole configuration and location, the company may also install a fire mesh wrap around both transmission and distribution wooden poles in areas of heightened wildfire risk. The wrap is applied to protect the poles from fire damage in the event of a wildfire. Pole wraps may also be applied on poles scoped for replacement with steel poles as an interim solution.

PacifiCorp has also included the pole replacement program with the line rebuild installations as an efficient use of resources. That being said, exclusively poles and transmission structures replaced under the line rebuild program are counted in the WMP. In some cases, poles need to be replaced to accommodate the additional weight of covered conductor. Replacing wooden poles with stronger non-wooden solutions such as fiberglass or steel increases grid resiliency and eliminates the need to return later. This approach also ensures that pole replacements are prioritized effectively.

Impact of the activity on wildfire risk: PacifiCorp plans to mitigate the risk associated with wood poles and structures by replacing them with more fire resilient materials. Pole replacement and reinforcement have a significant impact on reducing wildfire risk by enhancing the structural integrity and resilience of the electrical distribution system. Replacing aging or damaged wooden poles with stronger, fire-resistant materials such as steel or fiberglass decreases the likelihood of poles failing during extreme weather events, which are often a catalyst for wildfire ignitions. Reinforcements, such as the addition of fire-retardant wraps or structural upgrades, provide further protection in high-risk wildfire zones by reducing the chance of pole ignition or collapse. These activities also ensure that poles can support the additional weight of covered conductors and other wildfire mitigation equipment, which further minimizes the risk of sparks or electrical faults that could lead to wildfires. Together, pole replacements and reinforcements play a critical role in improving system resilience and protecting vulnerable areas from wildfire events.

Trend analysis has shown that replacing and reinforcing poles in high-risk areas steadily reduces wildfire risk over time by eliminating failure points associated with aging infrastructure.

This activity directly impacts the likelihood and consequence of ignitions by addressing common fault scenarios, such as pole collapse or failure during extreme weather, which often leads to sparks or contact with vegetation. Replacing wooden poles with fire-resistant materials and adding reinforcements minimizes these risks, enhancing system reliability and protecting communities in high fire-risk areas.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the activity: N/A

Compatible Initiatives: N/A

8.2.5 Traditional overhead hardening

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to Traditional overhead hardening. The electrical corporation discusses how it is designing its system to reduce ignition risk.

Overview of the activity: At the time of this filing, PacifiCorp does not have a traditional overhead hardening program.

Impact of the activity on wildfire risk: N/A

Impact of the activity on outage program risk: N/A

Updates to the activity: N/A

Compatible Initiatives: N/A

8.2.6 Emerging grid technology installations and pilots

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to emerging grid hardening technology installations and pilots. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Overview of the activity: At the time of this filing, PacifiCorp does not have other grid technology installations or pilots.

Impact of the activity on wildfire risk: N/A

Impact of the activity on outage program risk: N/A

Updates to the activity: N/A

Compatible Initiatives: N/A

8.2.7 Microgrids

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to Microgrids. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-12

Overview of the activity: PacifiCorp performed feasibility studies for the implementation of utility interactive and island microgrid solutions at four remote sites serving critical radio communications infrastructure. The studies evaluated loading seasonality potential for onsite generation with photovoltaic and wind resources, storage and identified potential energy deficits requiring the use of propane, natural gas, or diesel generators. Results from the studies and unit pricing are under evaluation and may be incorporated into future evaluation matrices.

Impact of the activity on wildfire risk: N/A

Impact of the activity on outage program risk: N/A

Updates to the activity: PacifiCorp performed feasibility studies for the implementation of utility interactive and islanded microgrid solutions at four remote sites serving critical radio communications infrastructure. The studies evaluated loading seasonality potential for onsite generation with photovoltaic and wind resources, storage and identified potential energy deficits requiring the use of propane, natural gas, or diesel generators. Results from the studies and unit pricing are under evaluation and may be incorporated into future evaluation matrices.

Compatible Initiatives: N/A

8.2.8 Installation of System Automation Equipment

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to line removal. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-04

Overview of the activity: The activity involves the replacement and upgrade of system automation equipment, including electro-mechanical relays, reclosers, circuit breakers, and other protection and control devices, with modern microprocessor-based systems. These upgrades enhance the ability to detect and isolate faults quickly, reducing the duration and magnitude of fault events, which lowers the risk of ignition and wildfire occurrence. System automation provides advanced functionality, such as faster response times, greater customization through programmable settings, and the ability to execute complex logic tailored to environmental conditions, particularly during periods of elevated wildfire risk.

Impact of the activity on wildfire risk: By improving fault detection, isolation, and restoration capabilities, system automation supports the objectives of mitigating wildfire risks, enhancing grid reliability, and reducing service disruptions. The program also targets improved operational efficiency and safety by integrating advanced technology that reduces manual interventions and supports faster restoration times after outages.

Additionally, the activity impacts the likelihood and consequence of ignitions. For example, faster fault isolation reduces the duration and magnitude of fault energy, which in turn minimizes ignition potential. Customizable settings allow for more refined operations during high-risk periods, further reducing the probability of ignition and enhancing safety in wildfire-prone regions.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the activity: PacifiCorp has faced challenges in delivering system automation projects as planned, with ongoing difficulties in ramping up to meet target objectives. System automation projects within substations were initially assessed as being similar to other distribution projects with short lead times and moderate construction requirements. However, these projects typically require a 12–24-month project pipeline, depending on the scope of the rebuild. Additionally, competition for construction resources within the region has led to bottlenecks, further impacting project delivery timelines.

To address these challenges, PacifiCorp has engaged a construction management partner through a competitive bidding process. The selected partner is expected to facilitate various aspects of system automation projects, including project management, project controls, project reporting, engineering, estimating, permitting, surveying, material management, construction, and post-construction inspections. This collaboration aims to streamline project delivery and ensure timely completion of system automation initiatives.

Impact of activity on wildfire risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Compatible Initiatives: GH-01

8.2.9 Line Removal in the HFTD

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to other grid topology improvements. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-13

Overview of the activity: Line removal in the HFRA and HFTD may occur to accommodate the line rebuild program. Overhead lines may become idle facilities due to changes in customer need or construction of alternate feeds. When an overhead line is determined to no longer be needed, the line will be removed fully removing the ignition risks associated with the line.

Impact of activity on wildfire risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk.

Updates to the activity: N/A

Compatible initiatives: N/A

8.2.10 Other Grid Topology Improvements to Minimize Risk of Ignitions

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to other technologies and systems not listed above. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Overview of the activity: At the time of this filing, PacifiCorp does not have programs for other grid topology improvements to minimize the risk of ignitions.

Impact of activity on wildfire risk: N/A

Impact of activity on outage program risk: N/A

Updates to the activity: N/A

Compatible initiatives: N/A

8.2.11 Other Grid Topology Improvements to mitigate or reduce PSPS events

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to Expulsion Fuse

Replacements. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Overview of the activity: At the time of this filing, PacifiCorp does not have programs for other grid topology improvements to minimize PSPS events.

Impact of activity on wildfire risk: N/A

Impact of activity on outage program risk: N/A

Updates to the activity: N/A

Compatible initiatives: N/A

8.2.12 Other Technologies and Systems Not Listed Above

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to utility initiatives. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Tracking ID: GH-05

Overview of the activity: PacifiCorp is proactively replacing expulsion fuses in high fire-risk areas as part of a project to install new and approved non-expulsion fuses, including power fuses and current-limiting fuses, to replace existing expulsion fuse equipment. Replacements are planned to align with the line rebuilding program where feasible to optimize resource use and efficiency. Expedited replacement of expulsion fuses is prioritized for lines where covered conductor installations are planned but scheduled to occur more than 12 months in the future. Fuse replacements include lines located inside the HFTD and HFRA and those outside the HFTD and HFRA that are necessary for coordination on the circuit. Additionally, fuse replacements will encompass lines in high fire-risk areas that are not part of the current line rebuild plans. Should PacifiCorp establish new high fire-risk areas or identify additional areas requiring mitigation through enhanced fire detection and monitoring systems, the scope of this program may be adjusted or expanded in future implementation cycles.

Impact of activity on wildfire risk: This activity mitigates the risk of equipment failure associated with expulsion fuses by replacing them with upgraded, fire-resistant alternatives. The upgraded fuses are designed to prevent sparks and reduce the likelihood of ignition during fault conditions, particularly in high fire-risk areas.

Trend analysis indicates that the implementation of upgraded fuses has steadily reduced wildfire risk over time, as demonstrated by a decrease in equipment failure incidents that result in potential ignition sources. This analysis includes data on the reduction of fuse-related faults in specific high fire-risk areas, such as service territory segments, HFTDs, or HFRAs.

This activity directly impacts on the likelihood and consequence of ignitions by addressing a key risk driver: the potential for sparks generated by expulsion fuses during fault events. By replacing these fuses, the likelihood of an ignition caused by equipment failure is significantly reduced. Furthermore, the consequence of an ignition is minimized due to the improved performance of upgraded fuses, which are less likely to produce sparks even under fault conditions. Together, these efforts strengthen wildfire mitigation strategies and enhance system resilience in vulnerable areas.

As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on wildfire risk.

Impact of the activity on outage program risk: As described in Section 6 PacifiCorp has not quantified the estimated or actual risk reduction of mitigation activities on outage risk. This activity mitigates outage program risks by replacing expulsion fuses with upgraded, fire-resistant alternatives that are more reliable and less prone to failure. The improved design reduces the likelihood of fuse-related outages and enhances the overall reliability of the electrical system.

PacifiCorp evaluates the hardened status of upstream circuits, segments, and spans to determine how the replacement of fuses impacts reliability risk. This evaluation considers the condition and design of upstream infrastructure to ensure that the improvements achieved through fuse replacement are not offset by vulnerabilities in adjacent system components.

This activity impacts the likelihood and consequence of outage program events by reducing the occurrence of faults and interruptions caused by fuse failures. For example, areas currently subject to PSPS events may experience fewer outages as the upgraded fuses improve fault tolerance and reduce the likelihood of equipment-related risks triggering PSPS actions.

The activity also has a positive effect on overall reliability by decreasing the number of outages, shortening the duration of interruptions, and reducing the number of customers affected. Trend analysis of reliability data shows improvements over time in areas where fuse replacements have been implemented, with fewer fuse-related outages and faster restoration times. This demonstrates the effectiveness of the activity in mitigating outage risks and enhancing system performance in high-risk and high-priority areas.

Updates to the activity: There are no changes to the Expulsion Fuse Replacement program process. PacifiCorp increased the target by 50% due to the updated risk models identifying additional expulsion fuses for replacement due to the identification of a HFRA from PacifiCorp's wildfire risk modeling as described in Section 5. Consistent with PacifiCorp's approach to expulsion fuse replacement in Tier 2 and Tier 3 HFTD due to the risk, PacifiCorp is replacing expulsion fuses in the HFRA.

Compatible initiatives: GH-01

8.2.13 Status Updates on Additional Technologies Being Piloted

In this section, the Electric Corporation describes initiatives such as equipment upgrades, maintenance, and planning for more resilient infrastructure in regard to status updates on additional technologies being piloted. The electrical corporation discusses how it is designing its system to reduce ignition risk and what it is doing to strengthen its infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.

Overview of the activity: At the time of this filing, PacifiCorp does not have additional technologies being piloted.

Impact of activity on wildfire risk: N/A

Impact of activity on outage program risk: N/A

Updates to the activity: N/A

Compatible initiatives: N/A

8.3 Asset Inspections

In this section, the electrical corporation provides an overview of its procedures for inspecting its assets. The electrical corporation first summarizes details regarding its asset inspections in the table below, including the following:

Type of inspection: i.e., distribution, transmission, or substation

Inspection program name: Identify various inspection programs within the electrical corporation

Frequency or trigger: Identify the frequency or triggers, such as inputs from the risk model. Indicate differences in frequency or trigger by HTFD Tier or rating, if applicable

Method of inspection: Identify the methods used to perform the inspection (e.g., patrol, detailed, aerial, climbing, and LiDAR)

Governing standards and operating procedures: Identify the initiative construction standards and the electrical corporation's procedures for addressing them, and other internal protocols for work described.

% of HFRA and HFTD Covered Annually by Inspection Type: Determine the percentage of either circuit mileage or number of assets covered annually by the inspection type within the HFRA and HFTD.

Find Rate: Identify the find rate of level 1, 2, and 3 conditions over the three calendar years prior to the base WMP submission. The find rate expresses as the percentage of inspections resulting in findings and identify the inspection unit.

Clarifying information: Provide electrical corporation-specific risk informed triggers used for asset inspections and electrical corporation-specific definitions of the different methods of inspection.

Table 8-3 below presents PacifiCorp's asset inspection frequency, method, and criteria. Transmission and Distribution Infrared Inspections have no Governing Standards and Operating Procedures this is noted with "N/A." Distribution Infrared Inspections is being piloted and does not have cumulative quarterly targets, which is notes as "TBD." or condition find rates, which is noted as "N/A."

Table 8-2: Asset Inspection Frequency, Method, and Criteria

Type	Inspection Activity (Program)	Frequency or Trigger (Note 1)	Method of Inspection (Note 2)	Governing Standards & Operating Procedures	Cumulative Quarterly Target Year 1 Q1	Cumulative Quarterly Target Year 1 Q2	Cumulative Quarterly Target Year 1 Q3	Cumulative Quarterly Target Year 1 Q4	Cumulative Quarterly Target Year 2 Q1	Cumulative Quarterly Target Year 2Q2	Cumulative Quarterly Target Year 2Q3	Cumulative Quarterly Target Year 2 Q4	Cumulative Quarterly Target Year 3 Q1	Cumulative Quarterly Target Year 3 Q2	Cumulative Quarterly Target Year 3 Q3	Cumulative Quarterly Target Year 3 Q4	% of HFRA and HFTD Covered Annually by Inspection Type	Condition Find Rate Level 1 Condition Find Rate	Condition Find Rate Level 2 Condition Find Rate	Condition Find Rate Level 3 Condition Find Rate
Transmission	Patrol	1 year	Ground/Air	GO 165	616	5,972	9,783	12,324	616	5,972	9,783	12,324	616	5,972	9,783	12,324	100%	0.00%	0.02%	0.02%
Distribution	Patrol	1 year	Ground	GO 165	2,675	13,535	37,513	53,498	2,712	13,725	38,039	54,249	2,707	13,696	37,959	54,134	100%	0.00%	0.09%	0.09%
Transmission	Detailed	5 year	Ground	GO 165	67	74	1,374	2,241	50	55	1,018	1,660	77	84	1,572	2,563	20%	0.02%	1.54%	1.54%
Distribution	Detailed	5 year	Ground	GO 165	1,436	2,188	4,473	5,996	1,544	2,352	4,810	6,448	1,346	2,051	4,193	5,621	20%	0.00%	42.28%	42.28%
Transmission	Intrusive	10 year	Ground	GO 165	0	0	811	1,351	0	0	551	919	0	0	1,646	2,743	10%	0.04%	20.51%	20.51%
Distribution	Intrusive	10 year	Ground	GO 165	0	0	3,661	6,102	0	0	3,211	5,351	0	0	3,280	5,466	10%	0.01%	41.64%	41.64%
Transmission	Substation	8-12 times a year	Ground	GO 174	36	54	90	108	36	54	90	108	36	54	90	108	100%	0.03%	0.00%	0.37%
Distribution	Substation	8-12 times a year	Ground	GO 174	129	172	301	344	129	172	301	344	129	172	301	344	100%	0.00%	0.00%	0.00%
Transmission	Infrared	1 year	Air	N/A	1,400	1,400	12,324	12,324	1,400	1,400	12,324	12,324	1,400	1,400	12,324	12,324	100%	0.00%	0.04%	0.00%
Distribution	Infrared	N/A	Ground	N/A	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	N/A	N/A	N/A

8.3.1 Patrol Inspections of transmission and distribution electric lines and equipment

8.3.1.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-01, AI-02

The process of patrol inspections involves multiple teams within PacifiCorp. Below in Figure 8-1 is a flow diagram that outlines the patrol inspection process from initiation to completion.

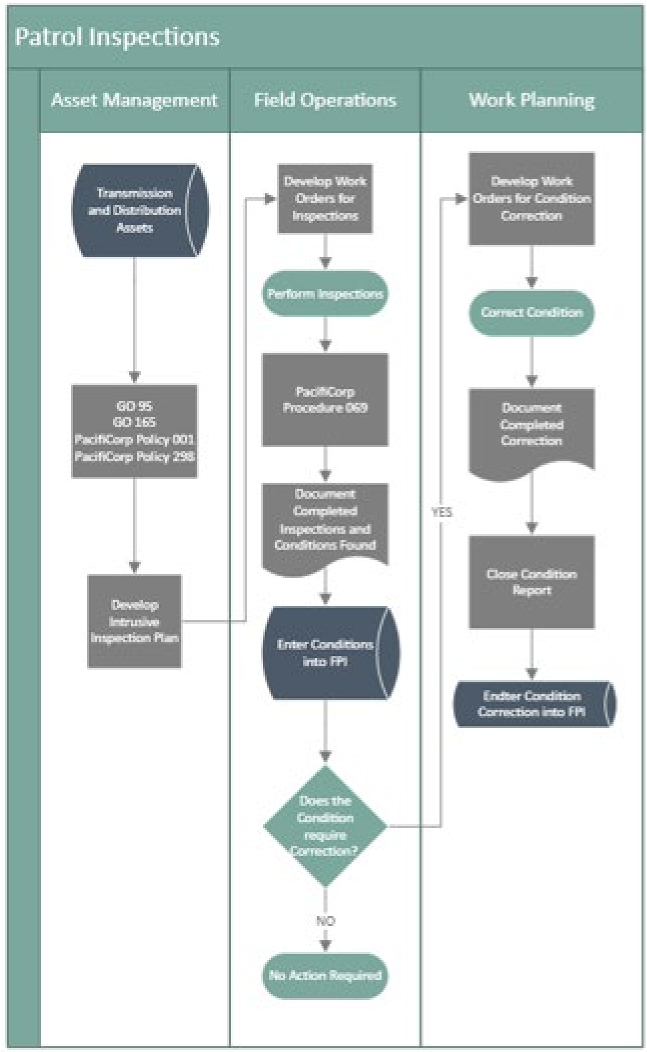


Figure 8-1: Patrol Inspections of Transmission and Distribution Electric Lines and Equipment Workflow

8.3.1.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

PacifiCorp's patrol inspections program is conducted on a planned cycle. Starting in 2025, the goal of the company is to visually inspect every overhead facility point each year, regardless of whether or not the asset is within a high fire risk area.

8.3.1.3 *Accomplishments, Roadblocks, and Updates*

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

PacifiCorp completed 12,261 overhead transmission and 48,390 overhead distribution patrol inspections in 2024. The company plans to continue its patrol inspections on transmission and distribution per policy.

8.3.2 Detailed Inspections of Transmission and Distribution Electric Lines and Equipment

8.3.2.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-03, AI-04

PacifiCorp's detailed inspections of transmission and distribution electric lines and equipment is a type of inspection performed to maintain regulatory compliance with General Order (GO) 165. These inspections involve a careful visual inspection accomplished by visiting each structure, as well as inspecting adjacent spans between structures, which is intended to identify potential nonconformance with GO 95 or other applicable state requirements, infringement by other utilities or individuals, defects, potential safety hazards, and deterioration of the facilities that need to be corrected to maintain reliable and safe service.

During an evaluation, an inspector documents potential violations and noteworthy observations — including potential risks— by assigning a condition code and priority level. The priority levels are set based on established company policies; the condition codes are specifically designed to predetermine the potential of energy release risk as well as other types of conditions.

The process of detailed inspections involves multiple teams within PacifiCorp. Below in Figure 8-2 is a flow diagram that outlines the detailed inspection process from initiation to completion:

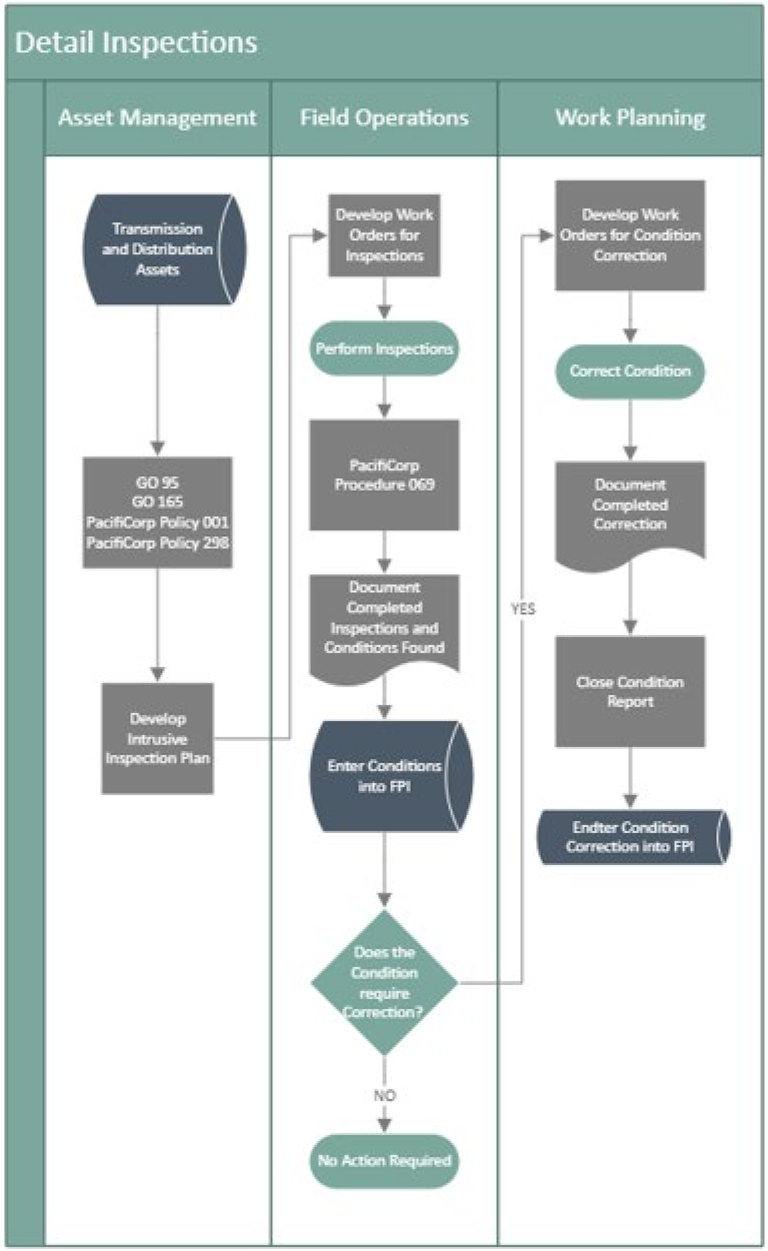


Figure 8-2: Detailed Inspections of Transmission and Distribution Electric Lines and Equipment Workflow

8.3.2.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

PacifiCorp's detailed inspections program is conducted on a planned cycle where the company inspects overhead assets located within the HFRA and HFTD more frequently than those assets located outside of the HFRA and HFTD, to mitigate higher risk areas. While all required inspections are completed within the prescribed cycle, the intent of this prioritization is to inspect facilities located in the highest fire threat areas prior to fire season where the risk is the greatest.

8.3.2.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

PacifiCorp completed 1,631 overhead transmission and 8,628 overhead distribution detail inspections in 2024. The company plans to continue this effective distribution and transmission detail inspection per policy. In the next five years, PacifiCorp plans to continue detailed inspections at current frequency levels.

To explore the frequency of detailed inspections, PacifiCorp is performing a detailed inspection on all HFTD Tier 3 locations in 2025. This pilot program will be evaluated after year end to determine if the detailed inspection frequency should be updated within the Tier 3 or Tier 2 locations.

8.3.3 Intrusive Pole Inspections

8.3.3.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-05, AI-06

PacifiCorp's intrusive pole inspection program, which may include pole-sounding, inspection hole drilling and excavation tests, is designed to identify decay, wear, or woodpecker damage, assess the condition of wood poles and identify the need for any treatment, repair, or replacement. Like other inspection programs, intrusive inspections mitigate some wildfire risk by identifying and correcting conditions. In this case, the inspections identify poles for replacement or reinforcement to prevent potential structural failure of a pole that could lead to a potential wire down event and ignition risk.

The process of intrusive inspections involves multiple teams within PacifiCorp's organization. Below in Figure 8-3 is a diagram that outlines the intrusive pole process from initiation to completion.

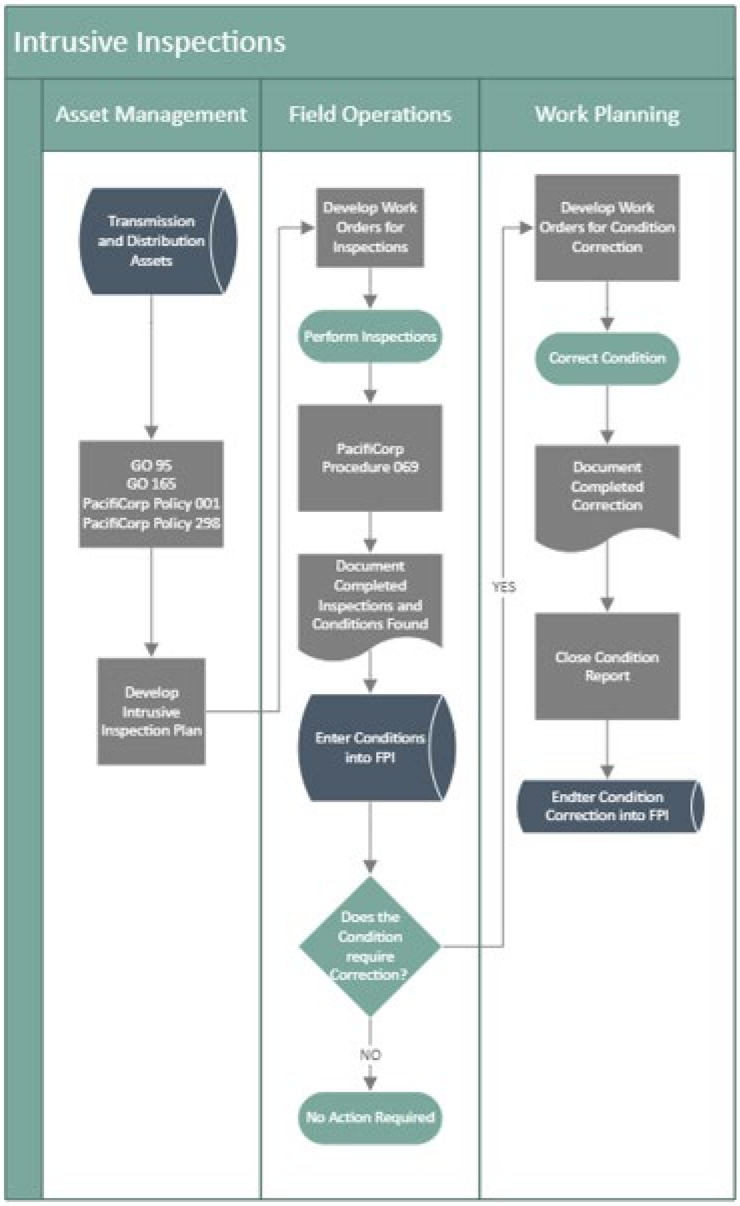


Figure 8-3: Intrusive Pole Inspections Workflow

8.3.3.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

PacifiCorp's intrusive pole inspections are performed consistent with the cycle prescribed in GO 165.

8.3.3.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

PacifiCorp completed 780 overhead transmission and 2,517 distribution intrusive inspections in 2024. The company plans to continue the intrusive inspections on transmission and distribution per policy. In the next five years, PacifiCorp plans to continue intrusive inspections at current frequency levels.

PacifiCorp maintains its system and assets consistent with GO 165 and GO 95 through a range of inspection and maintenance programs. These programs are tailored to identify conditions that could result in premature failure or potential fault scenarios, including situations in which the infrastructure may no longer be able to operate per code or engineered design, or may become susceptible to external factors, such as weather conditions. Generally, these programs focus on inspection and correction of overhead and underground transmission and distribution facilities but also include substation facilities as well.

8.3.4 Substation Inspections

8.3.4.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-11

Unlike overhead lines, substation assets are not located in public space. However, substation equipment, such as circuit breakers and relays, are critical components of protection and control schemes and system operations and can have an impact on overhead line operations. Like other inspection programs, substation inspections, which assess both the substation security and key equipment condition, identify potential correction work or maintenance needed. This corrective work and maintenance mitigate the risk of mis operation that could negatively impact system operation and protection and control schemes in place.

The process of substation inspections involves multiple teams within PacifiCorp. Below in Figure 8-4 is a process flow diagram that outlines the substation inspection process from initiation to completion.

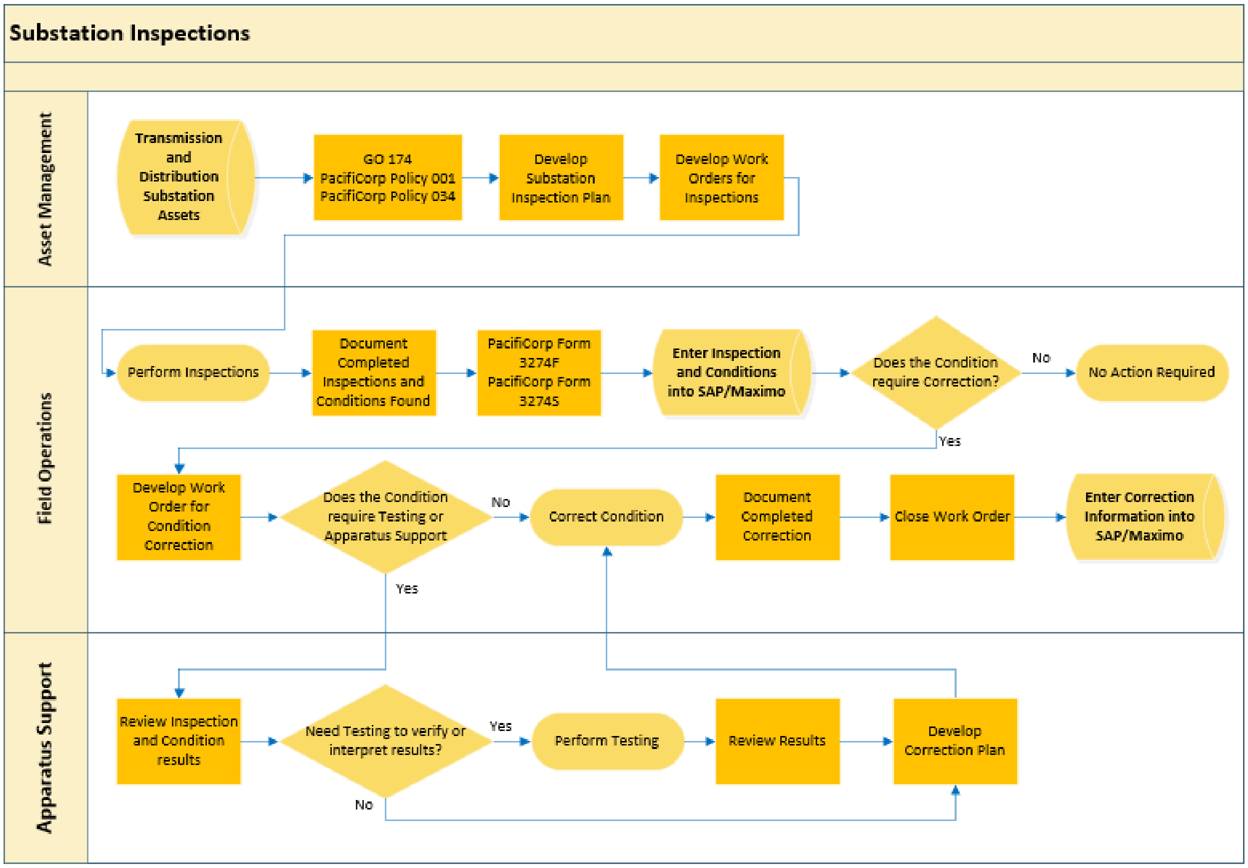


Figure 8-4: Substation Inspections Workflow

8.3.4.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

Substation inspections are planned and scheduled based on voltage class of the assets and compliance requirements. Substations associated with NERC critical paths under NERC FAC-501 should have a minimum of ten inspections annually, while other substations should have a minimum of eight inspections annually.

8.3.4.3 *Accomplishments, Roadblocks, and Updates*

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

In 2024, the PacifiCorp completed a total of 443 inspections. The company plans to continue its substation inspection program per policy. In the next five years, PacifiCorp plans to continue its substation inspections at current frequency levels.

8.3.5 Infrared inspections of distribution electric lines and equipment

8.3.5.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-08

The distribution infrared inspections have been performed as part of a pilot program with increasing scope over the pilot duration. The increase of scope was guided by the risk areas to include all the distribution lines within the HFRA and HFTD. A process is being developed to determine the effectiveness of the distribution IR inspections which will inform if the inspections are incorporated as a formal inspection program.

Figure 8-5 below is a flow diagram that outlines the infrared inspections of distribution electric lines and equipment process from initiation to completion:

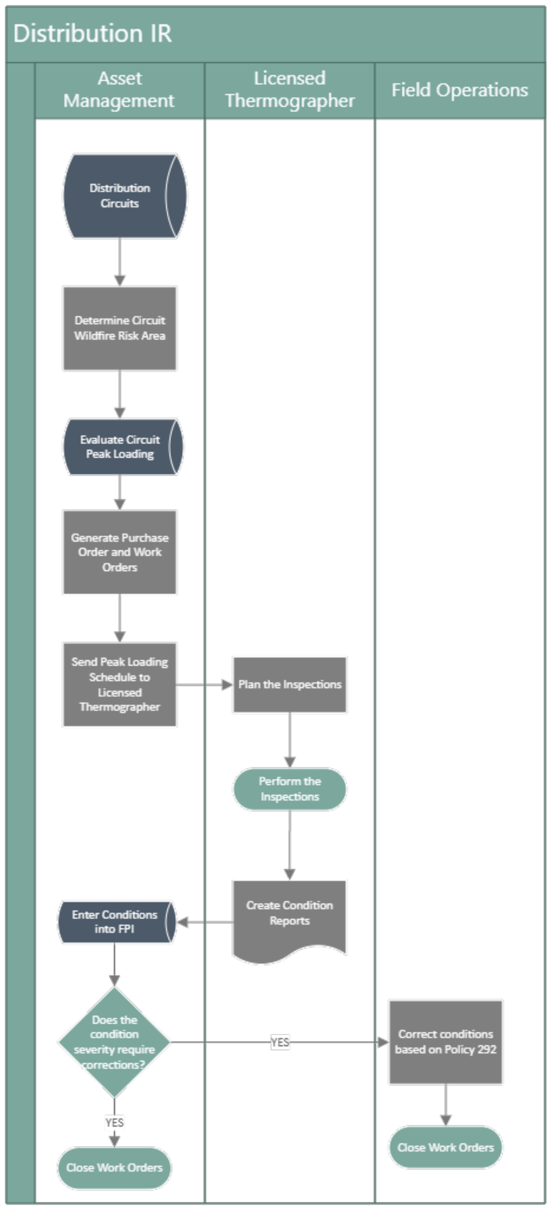


Figure 8-5: Infrared Inspections of Distribution Electric Lines and Equipment Workflow

8.3.5.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

PacifiCorp plans to perform inspections during anticipated peak loading conditions. Peak loading intervals are determined by looking at historical data, when available, or traditionally higher loading periods on the lines. Based on an initial review, peak intervals for distribution circuits within the HFRA and HFTD happen at two main periods throughout the year – winter in the morning and summer in the afternoon.

8.3.5.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

As described above, PacifiCorp performed a pilot inspection in 2023 and 2024 on 20,000 distribution poles. In 2025, the scope is expanding to inspect the entire distribution network within the HFRA and HFTD which will inspect approximately 33,000 poles. As targeting peak or near peak loading conditions is critical to successful identification of hot spots, planning, scheduling, and execution continues to be important and challenging. The company also plans to use a licensed thermographer for the inspections, as a licensed thermographer has the necessary certifications to identify issues and give input to the severity of the condition found.

8.3.6 Infrared inspections of transmission electric lines and equipment

8.3.6.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-07

PacifiCorp has implemented an enhanced transmission line inspection program with a focus on proactive identification and prevention of equipment failures. The inspections are performed annually with the inspections scheduled during peak loading intervals. Peak loading is when the equipment is under the highest potential stress increasing the probability of finding issues via infrared inspections. The inspections are conducted aerially with a helicopter and a licensed thermographer.

Figure 8-6 below is a flowchart that outlines the infrared inspections of distribution electric lines and equipment process from initiation to completion:

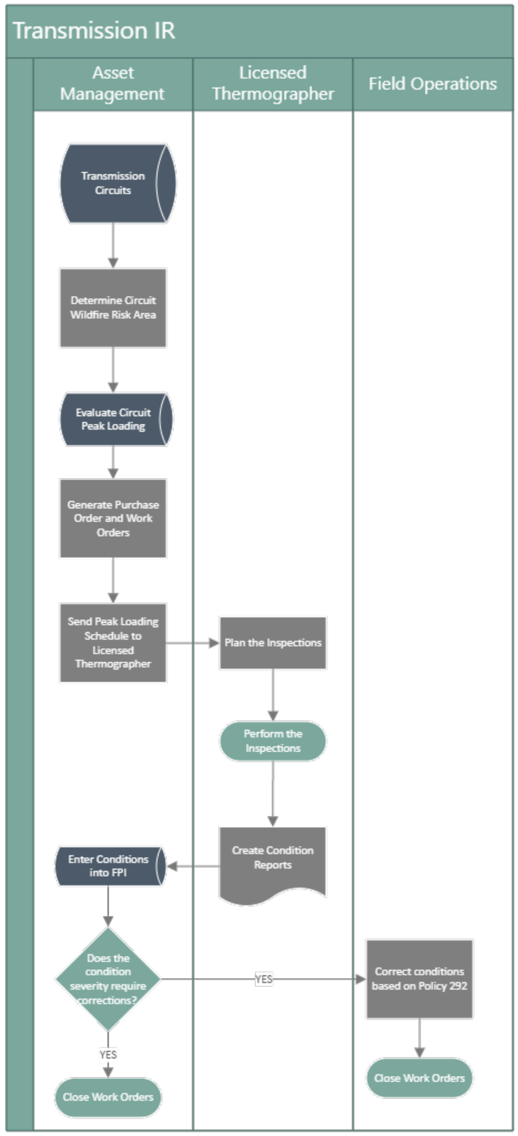


Figure 8-6: Infrared Inspections of Transmission Electric Lines and Equipment Workflow

8.3.6.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

The inspections are performed on an annual basis during periods when the lines are near peak loading.

8.3.6.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

The enhanced infrared inspection program for transmission lines has been conducted since 2021. Since then, there have been improvements made to the loading classification of the lines which allowed fewer timeframes and increased efficiency in scheduling the inspections. There have been improvements made to how conditions are reported to align better with other asset inspection and correction programs.

8.3.7 Drone inspections of transmission electric lines and equipment

8.3.6.2 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-09

The Drone on Demand inspection program is utilized for identified transmission lines. When an area is identified, a request can be made, and a pilot is assigned to perform the inspection. These inspections can also support patrols as described in Section 8.7. A proactive drone inspection program is being developed to determine how drones can be integrated into the inspection workflow and to identify any differences in requirements between transmission and distribution drone inspections. Figure 8-7 below shows the process for the drone on demand process for transmission electric lines and equipment.

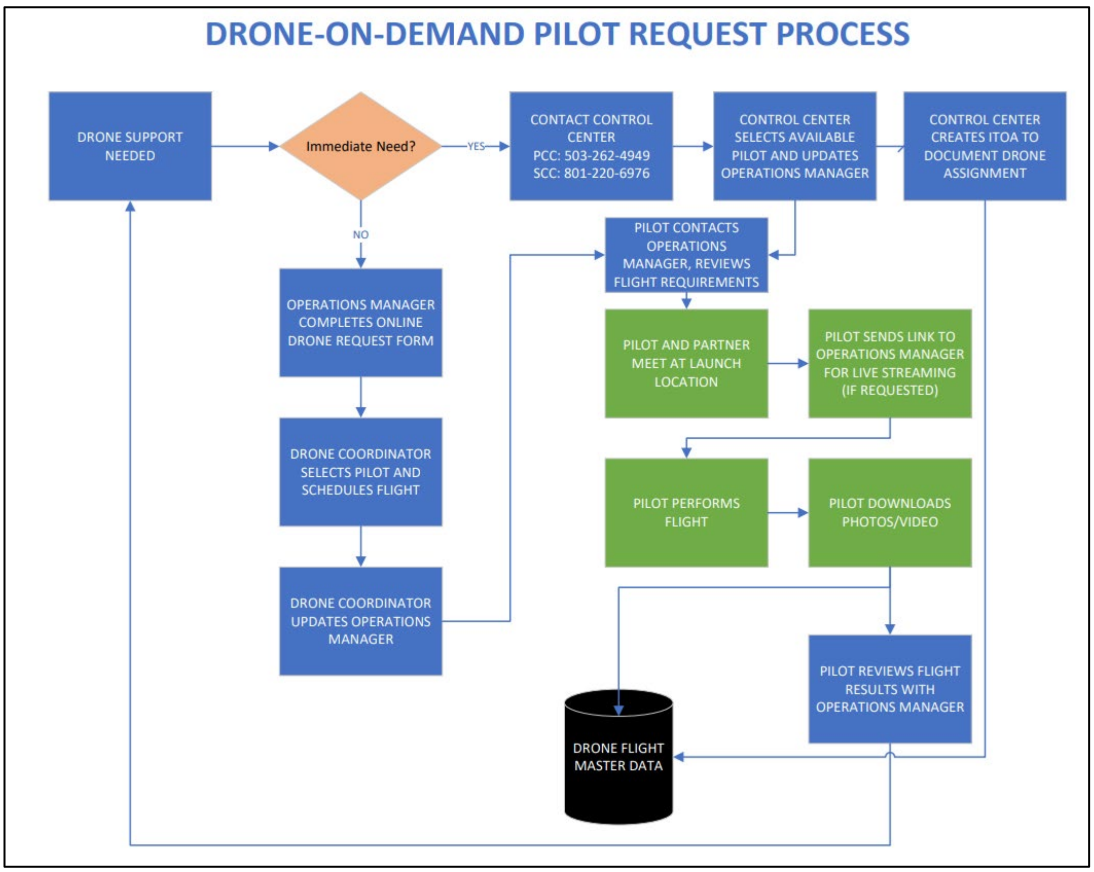


Figure 8-7: Drone on Demand Inspections of Transmission Electric Lines and Equipment Workflow

8.3.7.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

A proactive drone inspection program is being developed to determine how drones can be integrated into the inspection workflow and to identify any differences in requirements between transmission and distribution drone inspections.

8.3.7.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

A proactive drone inspection program is being developed to determine how drones can be integrated into the inspection workflow and to identify any differences in requirements between transmission and distribution drone inspections.

8.3.8 Drone inspections of distribution electric lines and equipment

8.3.8.1 *Overview*

In this section, the electrical corporation must provide an overview of the individual asset inspection activity (program), including inspection criteria and the various inspection methods used for each inspection activity (program).

Tracking ID: AI-10

The Drone on Demand program, which conducts drone inspections on distribution lines, has been completed on a reactive basis. This program supports grid response and patrols as described in Section 8.7. When additional inspections are justified, requests can be made for drone inspections in specific areas, and a pilot is assigned to complete the work. Currently, all drone inspections are performed using line-of-sight methods, but the possibility of beyond visual line-of-sight waivers is being explored. A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections. Figure 8-8 below shows the process for the drone on demand process for transmission electric lines and equipment, it is the same process as shown in Figure 8-7 above.

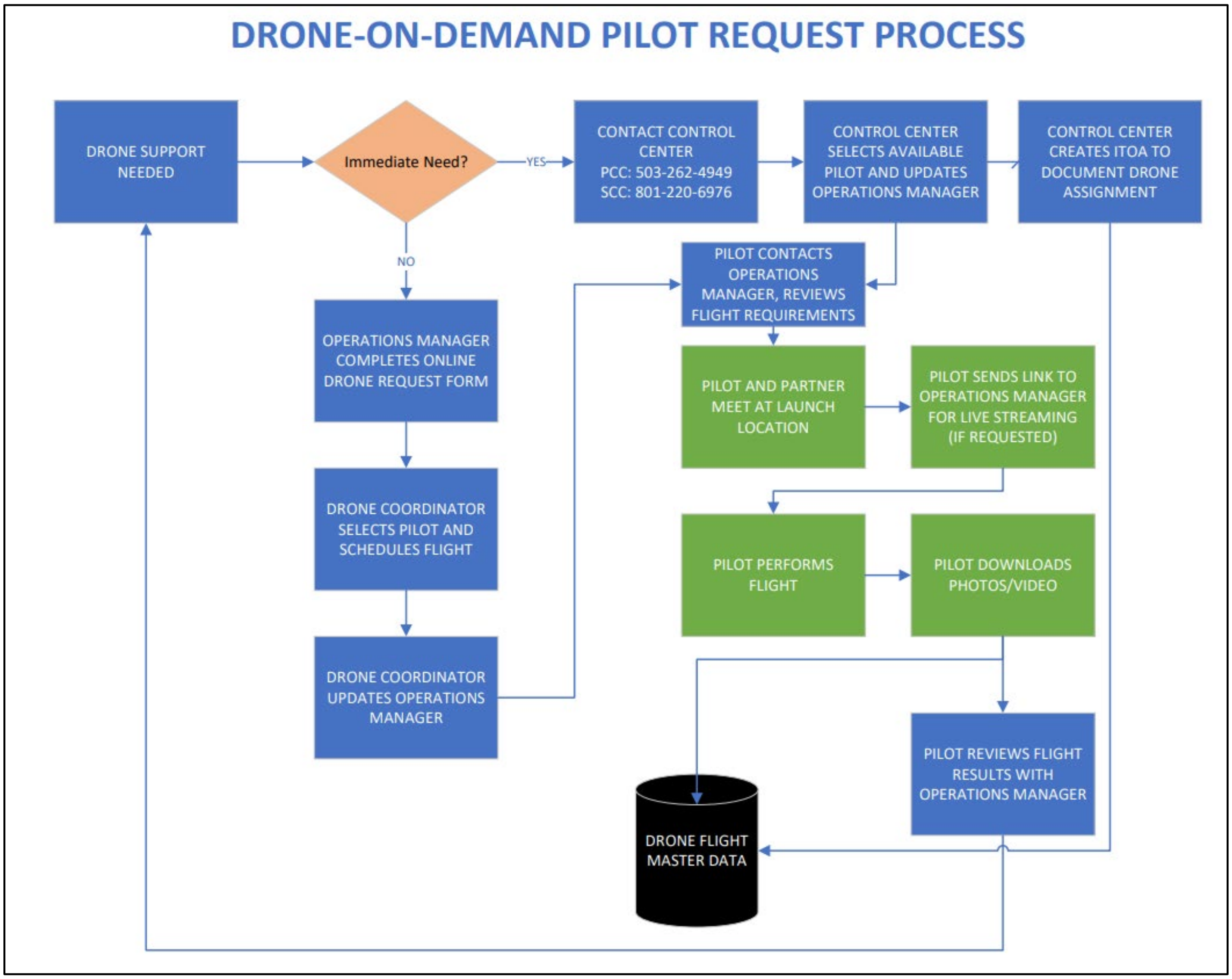


Figure 8-8: Drone on Demand Inspections of Distribution Electric Lines and Equipment Workflow

8.3.8.2 Frequency of Trigger

In this section, the electrical corporation must identify the frequency (including how frequency may differ by HFTD Tier or other risk designation[s]) or triggers used in the inspection activity (program), such as inputs from the risk model.

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

8.3.8.3 Accomplishments, Roadblocks, and Updates

In this section, the electrical corporation must discuss:

• How the electrical corporation measures success for the inspection activity (program) (excluding routine inspections)

• Roadblocks the electrical corporation has encountered while implementing the inspection activity (program) and how the electrical corporation has addressed the roadblocks

• Changes/updates to the inspection activity (program) since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years, including references to and strategies from pilot projects and research.

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

8.4 Equipment Maintenance and Repair

In this section, in addition to the information described above regarding distribution, transmission, and substation inspections, the electrical corporation must provide a brief narrative of maintenance activity (programs). As a narrative, the electrical corporation must include its strategy for maintenance, such as whether the electrical corporation replaces or upgrades facilities/equipment proactively (for example, an electrical corporation may monitor dissolved gases in its transformers to detect potential transformer failures to alert engineering and maintenance personnel or component lifecycle management) or if it runs its facilities/equipment to failure. The narrative must include, at minimum, the following types of equipment:

1. Capacitors

2. Circuit breakers

3. Connectors, including hotline clamps

4. Conductor, including covered conductor

5. Fuses, including expulsion fuses

6. Distribution pole

7. Lightning arrestors

8. Reclosers

9. Splices

10. Transmission poles/towers

11. Transformers

12. Non-exempt equipment

13. Pre-GO 95 legacy equipment

14. Other equipment not listed

For equipment types 12–14 above, the electrical corporation must include sub-categories for each relevant equipment type. For each equipment type, the electrical corporation must include sections for the following information:

Condition monitoring: a description of how the electrical corporation monitors the condition of the equipment (e.g., human visual inspection, automated visual inspection, human sensor readings, automated sensor readings).

• Maintenance strategy: identification and brief description of the maintenance strategy (e.g. reactive, preventative, predictive, reliability-centered).

• Replacement/repair condition: a description of how equipment is identified for repair or replacement (e.g., time interval, inspection finding, sensor reading, predictive maintenance, data analytics, machine learning).

• Timeframe for remediation: a list of possible conditions and findings, including the priority level and associated timeframes for remediation of each.

• Failure rate: the number of total failures attributed to the given equipment type in the HFTD and HFRA during the three calendar years prior to the base WMP submission, broken out by distribution, transmission, and substation. The failure rate must include the likelihood of failure based on the ratio of number of failures to the number of total assets in-field within the HFTD/HFRA for the equipment type.

• Ignition rate: the total number of CPUC-reportable ignitions attributed to the equipment type in the HFTD and HFRA during the ten calendar years prior to the base WMP submission, broken out by distribution, transmission, and substation. The ignition rate must include evaluation of the likelihood that an equipment failure will propagate into an ignition based on the ratio of the number of failures to the number of ignitions attributed to the equipment type.

• Failure and ignition causes: A narrative describing root cause analyses performed for failures and associated CPUC ignitions within the HFTD and HFRA, including any lessons learned and solutions implemented to decrease ignition rates

PacifiCorp performs maintenance on a routine basis that is based on federal and state- specific regulatory requirements as well as company-specific policies. When maintenance is performed on an asset, wires operations personnel utilize information gathered from inspections, tests, and operation history to inform the maintenance activities and schedule for the specific asset. Once the maintenance activities are completed, the information is recorded and used to inform future maintenance activities in addition to federal and state specific requirements as well as PacifiCorp's specific policies. This process is designed to identify and address any potential hazards to prevent mis-operation or premature failure of the equipment.

Key terms associated with the PacifiCorp's Maintenance and Repair programs are defined as follows:

- Equipment Type. The type of equipment or facility maintenance plan applies too.
- Equipment Description. Further information to describe equipment or facility in more detail.
- Equipment Use. Application equipment or facility is used for.
- Equipment Model or Manufacturer. The model, type, or manufacturer of the equipment.
- Operating Rating. The voltage rating of the equipment.
- Equipment Code. SAP/Maximo code that identifies equipment category.
- Maintenance Task. Maintenance task description.
- Maintenance ID. ID used in SAP/Maximo systems to identify the maintenance task.
- Interval. Scheduled Time period in between consecutive maintenance tasks.
- Counter (Operations/Faults). The number of recorded equipment operations or faults before maintenance order is scheduled.

Maintenance Activities and Schedule for Assets

PacifiCorp's maintenance activities and schedule for its assets is based on PacifiCorp's Policy 001 which is a result of a combination of manufacturer recommendations, failure and corrective maintenance history and experience, and input from subject matter experts within the company. Maintenance activities are determined and scheduled based on the equipment type, equipment use, operating rating, and the number of operations or faults the equipment encounters during service. PacifiCorp Policy 001, attached in Appendix F summarizes the maintenance and activities currently being performed for assets in-service on the PacifiCorp's system, including non-WMP programs.

PacifiCorp has had two CPUC-reportable ignitions attributed to equipment in the HFTD and HFRA between 2015-2024[8].

At the time of the 2026-2028 WMP filing, PacifiCorp has limited information on equipment failures or potential equipment ignitions and is unable to provide information on failures or CPUC reportable ignitions attributed to the equipment types listed above.

Field personnel have been asked to report all material failures using a form created for that purpose. When the failures are reported, they are submitted to Engineering Standards and logged into a database. The Engineering standards team then determines if the information and material provided is enough for a material failure investigation. If not, it is requested from the field, otherwise an investigation is carried out by the company, where possible. Where a material failure investigation cannot be performed by company personnel, a third-party investigator is employed.

At the end of 2024, the company implemented its fire incident tracking database. This database includes fire incidents which potentially involve or are near PacifiCorp facilities. Generally, the company becomes aware of a fire incident through monitoring of fire activity by PacifiCorp's

8 CPUC SED Staff Wildfire Investigations. Sourced May 19, 2025..

emergency management personnel; in addition, PacifiCorp may become aware of a fire incident as the result of company's normal operations response to a power outage. Once a fire incident is reported, a fire incident report is created and tracked in the Company's fire incident database.

When PacifiCorp receives an initial report of a fire incident, the incident is recorded in a fire incident tracking database. Generally, the investigation for the fire incident report includes gathering details from internal first responder to provide information for PacifiCorp's fire incident report. The company gathers other information, as available, to record in the database. Fields maintained in this database include fire start date and time; location, with a latitude and longitude reference; land use in the area; fire size; suppression agency; facility identification; voltage; associated equipment; outage information; and the suspected initiating event. Data fields are organized to align with regulatory reporting requirements. Information is often estimated based on known available information. For example, a recorded fire start may be the time when the fire is first observed or when a report of fire is first received; but the precise time that the fire was ignited may not be known.

If it is found that a protective relay device operated at the time of the incident and the incident is a CPUC reportable incident, the company performs an engineering investigation to verify protective relay device operation. The engineering investigation may include additional details regarding the event, including sequence of events and interpretation of relay event data (if available). As appropriate, the engineering investigation may also provide recommendations for corrective actions. If a corrective action is recommended, details regarding the action, assignment, and priority are provided and tracked in the company's investigation portal. Once a corrective action is assigned, there is internal coordination for completion. Additionally, as a result of the investigation, there may be updates to company material or construction standards, asset management policies and procedures, or no additional action if it was determined the equipment was performed as expected.

Non-reportable fire incidents are also captured in the company's fire incident database through the same process as reportable incidents. Currently, the company is working with internal subject matter experts to determine scope and develop processes to capture the necessary data for these incidents to inform future potential trends and root cause analysis.

Since the fire incident database was implemented in 2024, the company has not performed trending analysis for fire incidents due to insufficient data. The company plans to do this analysis when there is sufficient data available. For root cause analysis, the company has completed engineering investigations that have found certain conditions or equipment that may be more susceptible to energy release that could lead to an ignition event. For example, an incident that occurred last year involved an arrester failure that was an expulsion type arrester that emitted sparks when it operated. Replacing the expulsion type arrester with non-expulsion arrester could have prevented failure and would not have emitted sparks due to being non-expulsion.

PacifiCorp tracks fires potentially originating from the company's equipment. An initial report of a fire can be obtained through a variety of sources. It is common for an initial report to come via a call to PacifiCorp's system operations center from an emergency response agency or local government. Other times, company field personnel may observe a fire or fire damage while performing work in the field. If certain regulatory criteria are met, information about the fire is reported to Energy Safety and/or the CPUC.

PacifiCorp performs analysis of incidents using engineering analysis practices. Based on the results of the analysis, there may be updates to the company's material or construction standards, updates to asset management policies and procedures, or no additional action if it was determined the equipment performed as expected.

In conjunction with the Fire Incident Tracking Database implementation employees are receiving updated training on reporting outages and ignitions. This training is anticipated to reinforce data collection practices to support trend analysis of outage events and ignitions associated with the events to support the incident analysis process described above.

Based on the data collected in the Fire Incident Tracker, PacifiCorp will assess if there is a trend of increased ignition incidents that may require developing specialized processes. Given the limited ignition history, there may be no discernable trends in the short term, but PacifiCorp will monitor and continue assessing if there is a need.

8.5 Quality Assurance and Quality Control

8.5.1 Overview, Objectives and Targets

In this section, the electrical corporation must provide an overview of each of its QA and QC activities for grid design, asset inspections and maintenance. This overview must include the following for each program:

- Initiative/activity being audited (each initiative/activity name must correspond to an initiative/activity described in Sections 8.2–8.4)
- Tracking ID from Table 8-1 or 8-2
- Quality program type (QA or QC)
- Objective of each QA and QC program

Table 8-3 below presents PacifiCorp's QA and QC program plan objectives.

Table 8-3: Grid Design, Asset Inspections, and Maintenance QA and QC Program Objectives

Initiative/Activity Being Audited	Activity (Tracking ID #)	Quality Program Type	Objective of the Quality Program
Distribution Detailed Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies.
Distribution Intrusive Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies.
Distribution Patrol Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies.
Transmission Detailed Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies.
Transmission Intrusive Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies
Transmission Patrol Inspections	AI-12	QA/QC	Ensure that inspection was performed correctly and meet appliable policies
Line Rebuild	GH-01	QA	Ensure that new construction meets applicable standards
Distribution Pole Replacement and Reinforcements	GH-02	QA	Ensure that new construction meets applicable standards
Transmission Pole Replacement and Reinforcements	GH-03	QA	Ensure that new construction meets applicable standards
Installation of System Automation Equipment	GH-04	QA	Ensure that new construction meets applicable standards
Expulsion Fuse Replacement	GH-05	QA	Ensure that new construction meets applicable standards
ESS Circuit Hardening	GO-01	QA	Ensure that installation meets applicable standards

Table 8-4 presents the QA and QC activity targets for the 2026-2028 WMP cycle. % of circuits in the HFTD for GH-01 ESS Circuit Hardening is TBD due to the reactive nature of this work. The specific circuits that will be hardened for ESS hardening are identified at the end of wildfire season.

Table 8-4: Grid Design, Asset Inspections, and Maintenance QA and QC Activity Targets

Initiative/Activity Being Audited	Type of Audit	Population/Sample Unit	2026: Population Size	2026: Sample Size	2027: Population Size	2027: Sample Size	2028: Population Size	2028: Sample Size	Percent of Sample in the HFTD	Confidence level/MOE	2026 Pass Rate target	2027 Pass Rate target	2028 Pass Rate target
AI-12	QA	Facility Points	15,690	785	14,378	719	16,393	820	59.3%	95% / 2%	95%	95%	95%
GH-01	QA	Circuit Miles	120	120	120	120	120	120	100.0%	95% / 2%	95%	95%	95%
GH-02	QA	Distribution Poles	2,400	2,400	2,400	2,400	2,400	2,400	100.0%	95% / 2%	95%	95%	95%
GH-03	QA	Transmission Poles	240	240	240	240	240	204	100.0%	95% / 2%	95%	95%	95%
GH-04	QA	Devices	4	4	TBD	TBD	TBD	TBD	100.0%	95% / 2%	95%	95%	95%
GH-05	QA	Fuse Locations	1,500	1,500	TBD	TBD	TBD	TBD	100.0%	95% / 2%	95%	95%	95%
GO-01	QA	Facility Point	3	3	3	3	3	3	TBD	95% / 2%	95%	95%	95%

8.5.2 QA and QC Procedures

In this section, the electrical corporation must list the applicable procedure(s), including the version(s) and effective date(s), used for each grid design, operation, and maintenance QA and QC program listed in Table 8-3.

Asset Inspections

Initiatives: AI-01, AI-02, AI-03, AI-04, AI-05, AI-06

QA/QC Tracking ID: AI-12

To perform QA/QC of inspections, PacifiCorp uses a combination of process controls, software tools, company policy, and physical record checking to quickly identify inaccuracies for corrective action, evaluation, root cause analysis and system improvements. Engaging in these initiatives is a cost-effective means to minimize the risk that inspection results are inaccurate or unreliable.

Software controls that prohibit freeform condition assignment, allowing for result controls, minimizing the amount of human error capable

A quarterly review of already audited results as a secondary check, including desktop audits

Annual training with inspectors to address audit findings and improve inspection reliability and accuracy. Field Visits performed on inspection crews during QA/QC fielding to further calibrate and cultivate improvements in the inspection program.

These components are described in more detail below, including any program enhancements, costs, and evolution consistent with feedback from Energy Safety and PC-4.

All QA/QC activities are tracked across a master spreadsheet. All audit results are entered into this spreadsheet for reference for field and desktop audits for both Internal and External audits. External audits are reviewed the week they are received. Internal audits reference all available information from the external audited work and inspections performed.

In addition to these activities, PacifiCorp has evaluated current procedures and protocols in a multitude of ways. Policies and procedures are reviewed on an annual basis, including assignment of priority "I, A, B, & C" findings, this supports improvement of assessments.

These policies and procedures are reviewed on an annual basis to ensure any condition that is found in the field which could be a threat is collected for identification during the company's inspections.

PacifiCorp utilizes a priority code to identify conditions that could present a high potential impact to safety or reliability. An "I" priority condition which poses a significant present threat to human life or property is considered an imminent threat or a level "I" priority condition. Company policy requires immediate corrective action of an imminent threat, "I" priority condition. Most "A" priority conditions do not pose a significant present threat to human life or property and are, therefore, not considered imminent. If there is no imminent threat, PacifiCorp allows 30 days for the correction of "A" priority conditions.

The company performed a detailed review of all conditions to determine which conditions could be related to wildfire risk. Through this process, PacifiCorp identified condition types reflecting an energy release risk which could result in the ignition of a fire. If a condition has an energy release risk, PacifiCorp reasonably assumes that an "A" priority condition has greater wildfire risk than a "B" priority condition.

Procedures were developed to be able to capture imminent threat conditions as an "I" Priority at the time of identification along with entering the data into the official system of record, Facility Point

Inspection (FPI). All policies, procedures and training materials have been updated to reflect new policies.

PacifiCorp's strategy for performing internal and external audits is already being implemented with evaluation of inspector's accuracy in identifying and prioritizing conditions.

In addition to the company's internal audit processes, PacifiCorp is externally audited by Public Utilities Commission Energy Safety and Reliability Branch (ESRB) for GO 95 compliance. From 2020 to 2024, the company participated in 4,622 distribution audits, an average of 924 per year. During the same period, PacifiCorp participated in 409 transmission audits, an average of 82 per year.

In certain, limited circumstances PacifiCorp may use temporary corrective actions or interim measures to decrease imminent threat conditions. The company tracks such actions in its Facility Point Inspection (FPI) system. If it is decided that temporary corrective actions or interim measures are to be implemented on an imminent threat condition, PacifiCorp captures the temporary or interim measure in the comments for the imminent condition. The condition is then removed from the system and entered into the system with the same condition code but a lower priority (level 2 or level 3) in compliance with (Applicable Requirement - GO 95).

PacifiCorp has processes in place to update associated procedures, inspection practices, and training materials to correctly identify imminent threats. Generally, this review is performed on an annual basis to ensure compliance with national, state, regulatory, including general order requirements. In some instances, the policies and procedures may be updated if there are issues identified during internal and external audit activities, PacifiCorp policy changes, or improvements that are discovered from implementation of the company's existing programs.

Physical Audits

PacifiCorp's QA/QC physical audits are conducted on a random selection of inspected facilities, where corrections due to inspection results are prioritized by GO 95 priority levels, including expedited correction timelines for conditions classified as an energy release risk and in the HFTD Tier 3 and Tier 2 districts. The company emphasizes audits in wildfire risk areas by prioritizing HFTD Tier 3 and Tier 2 for inspection in the first half of the year. This means these regions go through the QA/QC process first. After a physical audit is done, the audit results are compared with the original inspection results to see if they conform to the set condition reporting criteria, data entry, and work performance in accordance with company specifications. Nonconforming results are sent to the inspection contractor for reinspection along with the required reinspection timeline.

Software Controls

In recent years, PacifiCorp began using cellphones and tablets to make inspection records and findings. A renewed focus on inspection QA/QC in 2020 led to the enhancement of the inspection programs and structure along with added software controls to ensure inspections and findings are recorded consistently with internal procedures. Nonconforming results are denied. For example, if the inspection program is designed to only allow either an "A" or "B" priority assigned to a certain type of finding, an inspector cannot enter a "C" Priority. This ensures that findings are not accidentally mischaracterized at a lower priority level.

Quarterly Desktop Reviews

Two macro-level desktop audits are conducted quarterly; one desktop audit was conducted by the wires inspection support group (standard process as per PacifiCorp internal policy) and another was conducted by a cross-functional team of asset management, work planning and operational performance management. The cross- functional team desktop audit prioritized review of "energy release risk" conditions and conditions in Tier 3 and Tier 2 regions for QA/QC and correction.

To support these ongoing reviews, a new internal tool was developed to evaluate inspection results, automatically isolate open energy release risk conditions in plots, facilitate quick data export, provide insight about trends, and drive a deeper understanding of the energy release risk conditions.

Historically, desktop reviews consisted of all open conditions generally grouped together without specific focus areas. The new tool automatically identifies potential misalignment with internal procedures, including alignment with energy release risk priorities and types. Initial rollout of this new tool proved useful and, as part of the 2021 plan, desktop review of inspection results continued to use this tool and grow to review inspection results within 30 days of input. This will ensure that potential mismatches or mischaracterization of conditions and risk can be immediately addressed. This new quick QA/QC response is projected to address issues while they are fresh in the minds of inspectors, drive continuous improvement and learning opportunities, increase record accuracy and inspection result reliability. PacifiCorp intends to continue quarterly desktop reviews, which typically include a deep dive into trends and risk.

Annual Training

PacifiCorp wire inspection support conducts annual field inspector training in January. This training includes technical content such as NESC code or GO requirements as well as program content, such as how to record findings, assess priorities, ensure effectiveness of an inspection, and facilitate corrective action. Field visits are made during the QA/QC process to further evaluate and calibrate with the inspection crews. This effort assists with cultivating the changes to the inspection program and ensures inspection crews are consistent. In January 2022, this training included additional content regarding energy release risks and broader participation from asset management to ensure alignment in content and priorities.

Substation Inspections

Initiatives: AI-11

QA/QC Tracking ID: N/A

At this time, PacifiCorp does not have a formalized Quality Assurance/Quality Control program specific to substations. While various aspects of substation inspections and maintenance are guided by internal best practices, a comprehensive and documented QA/QC program is not currently in place.

Infrared Inspections

Initiatives: AI-07, AI-08

QA/QC Tracking ID: N/A

The infrared inspections performed on the distribution and transmission lines are to identify thermal rises in equipment that may indicate conditions needing correction. Due to the variability in loading characteristics and ambient temperature, the results of these inspections can differ from day to day. Consequently, performing the same inspection on consecutive days may miss issues identified previously. Therefore, a formal QA/QC process is not feasible for these inspections. Instead, our local crews validate the identified issues on-site, ensuring that any loose connectors, broken hardware, or other problems are accurately addressed and corrected.

Transmission and Distribution Drone Inspections

Initiatives: AI-09, AI-10

QA/QC Tracking ID: N/A

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

Grid Design and System Hardening

Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

QA/QC Tracking ID: GH-01, GH-02, GH-03, GH-04, GH-05

PacifiCorp inspects grid hardening projects using the detailed inspections procedures described in Asset Management Policy 009 Detailed Inspections for T&D Lines, Revision 14 dated January 1, 2025.

ESS System Hardening

Initiatives: GO-01

QA/QC Tracking ID: GO-01

PacifiCorp inspects grid hardening projects using the detailed inspections procedures described in Asset Management Policy 009 Detailed Inspections for T&D Lines, Revision 14 dated January 1, 2025. The policy is included in the 2026-2028 WMP filing.

8.5.3 Sampling Plan

In this section, the electrical corporation must describe how it determines the sample for each QA and QC program listed in Table 8-4. This must include how HFTD tier or other risk designations affect the sampling plan, and how the electrical corporation ensure samples are representative of the population.

Asset Inspections

Initiatives: AI-12

Sampling Plan for Initiatives: AI-01, AI-02, AI-03, AI-04, AI-05, AI-06

Inspection results are reviewed continuously to confirm that inspections in the HFRA and HFTD are meeting acceptable standards of performance. PacifiCorp's main QA/QC components, including enhancements to mitigate wildfire risk, are:

Physical audits of at least 5% of planned inspections of facilities with a focus on fire threats and HFTD Tier 3 or Tier 2 prioritization. The sampling is a random sample of the inspections performed for each initiative category.

The sample size for each QA/QC activity is based on experience and history with PacifiCorp's current asset inspection programs as well as subject matter expertise. It has been found during QA/QC activities that the targets summarized in Table 8-4 have been sufficient to determine if there are any discrepancies, patterns, or issues with the inspection activity being performed and representative with PacifiCorp's inspection programs.

Substation Inspections

Initiatives: AI-11

Sampling Plan for Initiatives: N/A

At this time, PacifiCorp does not have a formalized Quality Assurance/Quality Control program specific to substations. While various aspects of substation inspections and maintenance are guided by internal best practices, a comprehensive and documented QA/QC program is not currently in place.

Infrared Inspections

Initiatives: AI-07, AI-08

Sampling Plan for Initiatives: N/A

PacifiCorp does not perform QA/QC inspections on transmission or distribution infrared (IR) inspections. Due to varying factors such as ambient temperature and loading characteristics, IR inspections at the same location on different days may yield different results, either identifying or not identifying a condition.

Transmission and Distribution Done Inspections

Initiatives: AI-09, AI-10

QA/QC Procedure for Initiatives: N/A

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

Grid Design and System Hardening

Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

Sampling Plan for Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

PacifiCorp performs quality assurance on 100% of all Grid Hardening projects through post construction inspections.

ESS System Hardening

Initiatives: GO-01

Sampling Plan for Initiatives: GO-01

PacifiCorp performs quality assurance on 100% of all Grid Hardening projects through post construction inspections.

8.5.4 Pass Rate Calculation

In this section, the electrical corporation must describe how it calculates pass rates. This description must include:

• The sample unit that generates the pass rate for each QA and QC program (e.g., for detailed distribution inspections, the sample unit that generates the pass rate may be a single inspection that passes or fails a QC audit).

• The pass and failure criteria for each initiative/activity listed in table 8-3, including a discussion of any weighted contributions to the pass rate.

Asset Inspections

Initiatives: AI-01, AI-02, AI-03, AI-04, AI-05, AI-06

Pass Rate Calculation for Initiatives: AI-12

$$\text{Pass Rate}_{\text{Asset}} = \frac{Total\ Sample\ Size - Conditions\ Found\ During\ QC}{Total\ Sample\ Size}\ x\ 100$$

QA/QC of Distribution Detailed Inspections

For detailed distribution inspections, the conditions found during the initial inspection are graded against the conditions found during the QA/QC process. The result is any modification in condition findings during the QA/QC process (such as additions, modifications, or removals) go against the overall score for the given inspection area. The number of conditions found during inspection are divided by the condition changes made during the QA/QC process. This percentage is used to determine the failure rate for that section in the audit process. The target rate for these inspections is 95 percent.

QA/QC of Wood Pole Intrusive Inspections (Transmission and Distribution)

For consistency, the QA/QC process is set to the same as detailed inspections. The conditions found during the inspection are graded against the changes made during the QA/QC process. The number of conditions is divided by the condition changes made during the QA/QC process. This percentage is used to determine the failure rate for the transmission or distribution intrusive inspection. The target pass rate for these inspections is 95 percent.

Substation Inspections

Initiatives: AI-11

Pass Rate Calculation for Initiatives: N/A

At this time, PacifiCorp does not have a formalized Quality Assurance/Quality Control program specific to substations. While various aspects of substation inspections and maintenance are guided by internal best practices, a comprehensive and documented QA/QC program is not currently in place.

Infrared Inspections

Initiatives: AI-07, AI-08

Pass Rate Calculation for Initiatives: N/A

The infrared inspections performed on the distribution and transmission lines are to identify thermal rises in equipment that may indicate conditions needing correction. Due to the variability in loading characteristics and ambient temperature, the results of these inspections can differ from day to day. Consequently, performing the same inspection on consecutive days may miss issues identified previously. Therefore, a formal QA/QC process is not feasible for these inspections. Instead, our local crews validate the identified issues on-site, ensuring that any loose connectors, broken hardware, or other problems are accurately addressed and corrected.

Transmission and Distribution Done Inspections

Initiatives: AI-09, AI-10

QA/QC Procedure for Initiatives: N/A

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

Grid Design and System Hardening

Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

Pass Rate Calculation for Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

Requirement of 95% - 100% pass rate for planned inspections and Grid Hardening audits. The pass rate is calculated as:

$$\text{Pass Rate}_{\text{Grid}} = \frac{Work\ Locations - Work\ Locations\ with\ a\ Finding}{Total\ Number\ of\ Inspections\ Completed}\ x\ 100$$

ESS System Hardening

Initiatives: GO-01

QA/QC Procedure for Initiatives: GO-01

Requirement of 95% - 100% pass rate for planned inspections and Grid Hardening audits. The pass rate is calculated as:

$$\text{Pass Rate}_{\text{ESS}} = \frac{Work\ Locations - Work\ Locations\ with\ a\ Finding}{Total\ Number\ of\ Inspections\ Completed}\ x\ 100$$

8.5.5 Other Metrics

In this section, the electrical corporation must list metrics used by the electrical corporation to evaluate the effectiveness of its QA and QC programs and procedures (e.g. audit pass rates, outage rate within six months of inspection attributed to equipment condition or failure, new construction rework rate)

No additional metrics identified.

8.5.6 Documentation of Findings

In this section, the electrical corporation must describe how it documents its QA and QC findings and incorporates lessons learned from those findings into corrective actions, trainings, and procedures. This must include a description of how the electrical corporation accounts for and documents the following when improving its inspections and maintenance QA and QC processes.

Asset Inspections

Initiative: AI-12

Documentation of Findings for Initiatives: AI-01, AI-02, AI-03, AI-04, AI-05, AI-06

All QA/QC activities are tracked across a master spreadsheet. All audit results are entered into this spreadsheet for reference for field and desktop audits for both Internal and External audits. External audits are reviewed the week they are received. Internal audits reference all available information from the external audited work and inspections performed.

For all asset inspection audit programs, the failure rate, if applicable to the program, and the types of conditions missed are reviewed by the QA/QC Team. Recurring meetings allow for discussion and ensure alignment between all QA/QC team members. If the pass rate for the audit is below the targeted pass rate, the inspection area is assigned for reinspection. Analysis is performed during the QA/QC process and reviewed against previous results to determine if there is a systemic concern, or greater focus is needed with specific individuals. Continued training, shadowing, and field meets provide improvement in the program and allow for continued growth in the maturity of the inspection program. Continuing issues with individual inspectors are monitored and reviewed frequently. The appropriate corrective action plan is taken to ensure issues do not persist.

Substation Inspections

Initiative: AI-11

Documentation of Findings for Initiatives: N/A

At this time, PacifiCorp does not have a formalized Quality Assurance/Quality Control program specific to substations. While various aspects of substation inspections and maintenance are guided by internal best practices, a comprehensive and documented QA/QC program is not currently in place.

Infrared Inspections

Initiative: AI-07, AI-08

Documentation of Findings for Initiatives: N/A

The infrared inspections performed on the distribution and transmission lines are to identify thermal rises in equipment that may indicate conditions needing correction. Due to the variability in loading characteristics and ambient temperature, the results of these inspections can differ from day to day. Consequently, performing the same inspection on consecutive days may miss issues identified previously. Therefore, a formal QA/QC process is not feasible for these inspections. Instead, our local crews validate the identified issues on-site, ensuring that any loose connectors, broken hardware, or other problems are accurately addressed and corrected.

Transmission and Distribution Done Inspections

Initiative: AI-09, AI-10

QA/QC Procedure for Initiatives: N/A

A proactive drone inspection program is being developed as a pilot project to determine how drones can be integrated into the inspection workflow and the required frequency of inspections.

Grid Design and System Hardening

Initiative: GH-01, GH-02, GH-03, GH-04, GH-05

Documentation of Findings for Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05

Findings on grid hardening are reported to the installation contractor for correction prior to close out of the grid hardening project. Completion of these corrections are reported on by the installation contractor.

ESS System Hardening

Initiative: GO-01

Documentation of Findings for Initiatives: GO-01

Findings on grid hardening are reported to the installation contractor for correction prior to close out of the grid hardening project. Completion of these corrections are reported on by the installation contractor.

8.5.7 Changes to QA and QC Since Last WMP and Planned Improvements

In this section, the electrical corporation must describe:

• A list of changes the electrical corporation made to its QA and QC procedure(s) since its last WMP submission

• Justification for each of the changes including references to lessons learned as applicable

• A list of planned future improvements and/or updates to QA and QC procedure(s) including a timeline for implementation

Asset Inspections

Tracking ID: AI-12

QA/QC for Initiatives: AI-01, AI-02, AI-03, AI-04, AI-05, AI-06

PacifiCorp strives for inspection results to be as accurate as possible and, in that sense, always has a target goal to accomplish a QA/QC pass rate of 100%. PacifiCorp manages its QA/QC process with this goal in mind. For WMP initiative reporting, the company currently uses a target and then reports on a QA/QC pass rate that was developed in reference to managing the independent inspection contractors who perform the detailed and intrusive inspections.

PacifiCorp has amended the contractual requirements relative to the asset inspection QA/QC process increasing the required pass rate to the California standard of 95% and 100% starting in the 2025 inspection year

Grid Design and System Hardening

Tracking ID: GH-01, GH-02, GH-03, GH-04, GH-05, GO-01

QA/QC for Initiatives: GH-01, GH-02, GH-03, GH-04, GH-05, GO-01

Since the implementation of Grid Hardening System Hardening projects as part of PacifiCorp's Wildfire Mitigation Program, its processes have had to evolve to ensure the projects that have been completed mitigate the associated risk. This has involved the development of pre/post energization checklists that are used to ensure the project is being constructed to meet the requirements of the PacifiCorp's latest wildfire mitigation standards and ensures the project is constructed as designed. The company plans to audit 100% of all Grid Hardening projects through post construction inspections that leverage these newly developed checklists.

8.6 Work Orders

In this section, the electrical corporation must provide an overview of the procedures it uses to manage its open work orders resulting from inspections that prescribe asset management activities.

Table 8-5 and Table 8-6 shows the number of past due asset work orders.

Table 8-5: Number of Past Due Asset Work Orders Categorized by Age[9]

HFTD Area	0-30 Days	31-90 Days	91-180 Days	181+ Days
Non-HFTD	85	65	54	148
HFTD Tier 2	0	2	5	78
HFTD Tier 3	0	3	0	1

Table 8-6: Number of Past Due Asset Work Orders Categorized by Age for Priority Levels[10]

Priority Level	0-30 Days	31-90 Days	91-180 Days	181+ Days
Priority 1	0	0	0	0
Priority 2	85	70	59	227
Priority 3	0	0	0	0

9 As of March 25, 2025.

10 As of March 25, 2025.

The work order process is initiated during asset inspections, regardless of the type of inspection being performed. The inspector conducting the inspection will notate any potential violations or noteworthy observations by assigning a condition code and Priority Level in PacifiCorp's FPI system. Priority Levels are assigned to align with GO 95 requirements.

While the same condition codes are used throughout PacifiCorp's service territory, the timeframe for corrective action varies depending on location within the HFRA and HFTD and the energy release risk. In all cases, the timeline for corrections considers the priority level of any identified condition. Conditions are planned and corrected consistently with the timeframes set forth in GO 95. Correction timeframes are accelerated for conditions in the HFRA and HFTD, as discussed in greater detail below.

The company designates certain conditions as energy release risk conditions. As the name suggests, this category includes conditions which, under certain circumstances, can correlate to increase risk of a fault event and potential release of energy at the location of the condition. Certain condition codes are categorically designated as an energy release risk. If a condition is designated as an energy release risk and the condition exists within the HFRA and HFTD, the condition is deemed a fire threat condition, which means that the condition is treated as a condition type which corresponds to a heightened risk of fire ignition. Energy Release Risk conditions will have accelerated correction time periods within HFTD Tier 2 and HFTD Tier 3 locations or the HFRA, to align with GO 95 requirements.

Once the condition is added to FPI it is considered an outstanding condition. PacifiCorp uses the Geographic Information Systems Maintenance Organizer (GISMO) application tool for identifying Suggested Correction Dates. Corrections are then planned with the intent to complete on or prior to the GISMO Suggested Correction Date. While GISMO Suggested Correction Dates are developed to facilitate prioritization in correction and align with compliance requirements, they are not meant to indicate compliance requirements and, in many cases, will not match compliance requirements exactly.

For example, PacifiCorp's C priority, which maps to a GO 95 Level 3 priority, requires correction within 60 months as per GO 95. However, to promote operational efficiency and bundle the Correction of both B priority and C priority conditions, The company plans to complete C priority conditions within 36 months. Therefore, the Suggested Correction Date in GISMO reflects this 36-month correction timeframe per business rules. The inability to correct a C priority condition within 36 months is not indicative of failure to meet compliance requirements per GO 95.

To expand on the previous example, a C priority condition found on August 20, 2019, will have a GISMO correction due date of August 20, 2022. The GO 95 Level 3 priority requires 60 months, which would correlate to a compliance correction due date of August 31, 2024. Setting the GISMO correction due date ahead of the compliance required date promotes completing the work ahead of requirements. Should corrections be completed after the GISMO date but before the compliance date, they are considered compliant.

Circumstances may also exist where, to promote operational efficiency, corrections may be bundled or prioritized in a manner that the correction is completed after the GISMO Suggested Correction Date but still before the GO 95 compliance correction date. Additional scenarios that can affect the timing of the correction include customer related issues, third party refusal, no access, permit requirements, and system emergencies, however, these circumstances should not be common. Furthermore, it is critical to note that Suggested Correction Dates may change with time to reflect changes in regulation, risk, or due to operational efficiency requirements.

Upon completion of the condition correction, FPI is updated to show the nature of the work, the completion date, and the identity of the persons that completed the work for the specific work order. Once the conditions are changed to complete, the work order is complete.

PacifiCorp's timeline for correction of Level 1 imminent threat conditions is immediate correction. There are currently no open level 1 priority imminent threat conditions in the company's FPI system for California.

Any condition that is not completed on or before the compliance date is considered a past due condition. Work orders are actively monitored and tracked so that they can be corrected as soon as possible. PacifiCorp does not currently have the capability to project trends or future targets with regards to past due work orders but has included the current number of past due work orders in Table 8-5 and Table 8-6.

Tracking ID: AI-13

As described in Table 8-1, PacifiCorp will perform a quarterly review of past due Level 1 and 2 fire threat conditions and create plans to ensure that they are addressed. While the timeline for correction of Level 1 is immediate due to the imminent threat, this review will include the Level 1 and Level 2 fire threat conditions to ensure they are addressed timely.

8.7 Grid Operations and Procedures

8.7.1 Equipment Settings to Reduce Wildfire Risk

In this section, the electrical corporation must discuss the ways in which it operates its system to reduce wildfire risk. 81 The equipment settings discussion must include the following:

• PEDS

• Automatic recloser settings

• Settings of other emerging technologies (e.g., rapid earth fault current limiters)

Tracking ID: GO-01

Adjustments to power system operations can help mitigate wildfire risk. System operations adjustments generally include the modification of relay settings for protective devices on distribution lines or changes to line re-energization protocols described further in this section. These adjustments are not universally applied to power system operations because there are certain disadvantages in their use, especially because they may increase outage frequency and duration experienced by customers. In other words, a balance is required to provide customers with reliable power while still mitigating wildfire risk. To help balance these concerns, PacifiCorp is deploying technologies such as fault indicators as discussed below.

Protective Equipment and Device Settings

Protective relay devices, such as circuit breakers and line reclosers, are currently deployed on distribution lines throughout PacifiCorp's service territory. When a line trips open due to fault activity, protective relay devices can be programmed to momentarily open, allow the fault to dissipate, then reclose in an effort to test if the fault is temporary. The reclosing function gives the ability to restore service on a line that has tripped while maintaining the option to open again if the fault persists. If the fault is permanent, the protective relay device will operate and stay open, known as the "lock out" state, until the line has been deemed ready for re-energization. Figure PAC 8-1 below generally depicts one potential configuration of a distribution circuit with multiple protective relay devices.

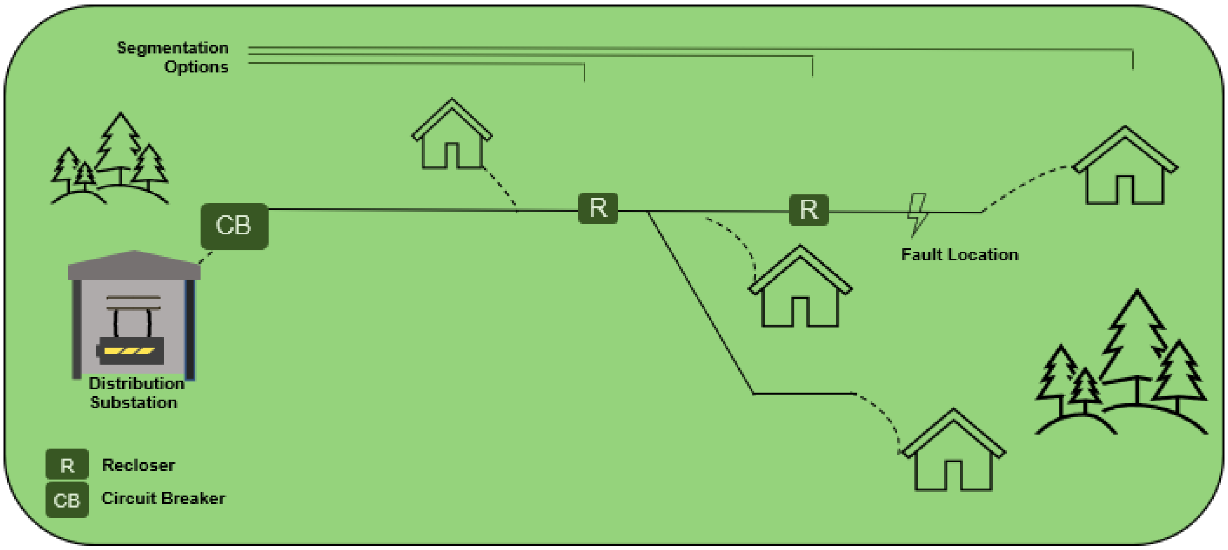


Figure PAC 8-1: Example of Distribution Circuit with Multiple Protective Relay Devices

In general, reclosing operation is beneficial because it reduces the number of sustained outages and improves customer reliability. The reclosing function, however, implies some degree of ignition risk because additional energy can be released if a fault persists. When a fault is detected on the line, a protective relay device will trip and reclose based on predetermined settings to re-energize the line. If the fault is temporary in nature and is no longer present upon the reclose operation, the line will re-energize resulting in limited impact to customers. If the fault persists, however, reclosing can, depending on the circumstances, potentially result in arcing or an emission of sparks. Accordingly, a strategic balance between customer reliability goals and wildfire mitigation goals is required.

PacifiCorp has used reclosing disabling strategies on transmission lines for many years, and it has employed more frequent reclose disabling on transmission lines in recent years because of the increased wildfire risk. PacifiCorp has been able to use these strategies with minimal impact on customer reliability. With wildfire risk continuing to increase, PacifiCorp is implementing additional strategies on the distribution network, including the use of modified protection and control schemes to reduce wildfire risk, referred to as ESS or PEDS.

Enhanced Safety Setting (ESS) Modes

ESS modes of operation are intended to reduce fault clearing times and arc energy expended during a fault event, to detect and respond to all faults on the system and to maintain an acceptable level of customer service reliability. PacifiCorp has many different intelligent electric devices in operation as protective relay devices on the distribution system. Each device has a different set of functions and limitations which may be employed to reduce risk during elevated wildfire risk conditions. At the same time, changes to the reclosing settings of devices can have significant impacts on customer service reliability, which itself implies safety concerns.

The primary method to reduce arc energy is the reduction of fault interruption time. Settings are designed to maintain coordination between the different zones of protection, as necessary. Furthermore, total arc energy expended during a system event can be reduced by limiting the number of times the arc may be established. This can be accomplished by adopting a policy of limited reclosing while in an ESS mode. Reclosing is an important tool for maintaining service reliability thus, the approach towards reclosing functionality in certain ESS modes will be influenced by wildfire risk conditions. Reliability is enhanced by deploying protective relay devices that automatically sectionalize such as line reclosers to protect downstream segments of a circuit. These devices allow selective protection modes for certain sections of the line and provide indication and direction to guide restoration efforts. In general, when these elements are in place, ESS modes limit reclose attempts at a circuit breaker; but, in the absence of downstream devices, the protective relay at the substation in ESS mode will perform a single reclose attempt to reestablish / restore service.

The use of instantaneous overcurrent and definite time protection elements limit the operation of fuses on the distribution system. This is by design, because fused elements require time to operate, and delay is undesirable in the context of wildfire risk. The limitation of fuse operation on the distribution system has a two-fold impact on system protection. First, sensitivity of the overcurrent elements on the protective relays must be evaluated so that these relay elements can provide adequate protection to the end of line. Second, additional fault indication devices are warranted to aid in locating a fault, thereby supporting quicker restoration.

System Coordination in ESS Modes

System coordination in the ESS is maintained through short time delays. This short time delay allows downstream reclosers on the system to operate before upstream devices have time to respond to the faulted system conditions. With increased sensitivity on the relays and short time delays, however, it is still not expected that a downstream fuse will have time to operate.

Substation relays and recloser controllers on the system which have not yet been upgraded to intelligent electric devices shall use existing tag and recloser control functions to mitigate wildfire risk. Below in

Table PAC 8-1 is the current common relays deployed on the PacifiCorp system, the type of ESS mode that can be used on that specific relay, together with the expected fault operation outcomes and coordination.

While the program and methods used to deploy ESS are continuously evolving, the following table describes the current ESS Modes, expected fault operation, reclosing action, coordination with reclosers, and actions to restore depending on the type of equipment installed. Note there may be variances in expected fault operation and reclosing action depending on the protective device settings. Additionally, changes to the approach outlined below are possible and generally managed through internal company policies and procedures.

Table PAC 8-1: Current ESS Mode Configurations

Relay	ESS Mode	Expected Fault Operation	Reclosing Action	Coordinates With Reclosers	Action to Restore	Notes
SEL-351	Elevated Fire Risk (EFR)	Trip, Reclose, Trip, Lockout	Yes	Yes	EFR On, Reclose Off	ESS Mode is Tagged/Reclose Off if EFR is not available.
SEL-751	EFR	Trip, Reclose, Trip, Lockout	Yes	Yes	EFR On, Reclose Off	ESS Mode is Tagged/Reclose Off if EFR is not available.
SEL-751A	Tagged/Reclose Off	Trip, Lockout	No	No	Reclose Off	ESS Mode depends on reclosing switch type: 43RT - Tagged 43R - Reclose Off
SEL-651R2	EFR	Trip, Reclose, Lockout	Yes	Yes	EFR On, Reclose Off	ESS Mode is Tagged if EFR is not available.
SEL-651RA	EFR	Trip, Reclose, Lockout	Yes	Yes	EFR On, Reclose Off	ESS Mode is Tagged if EFR is not available.
Form 3	Reclose Off	Trip, Lockout	No	No	Reclose Off	
Form 4	Reclose Off	Trip, Lockout	No	No	Reclose Off	
Form 5	Tagged	Trip, Lockout	No	No	Reclose Off	
Form 6	EFR	Trip, Reclose, Trip, Lockout	Yes	Yes	Reclose Off	ESS Mode is Tagged if EFR is not available.
Fusesaver	Tagged (Lever down)	Trip, Lockout	No	No	Lever down	
DPU	Tagged/Reclose Off	Trip, Lockout	No	No	Reclose Off	ESS Mode depends on reclosing switch type: 43RT - Tagged 43R - Reclose Off

Relay	ESS Mode	Expected Fault Operation	Reclosing Action	Coordinates With Reclosers	Action to Restore	Notes
DPU2000	Tagged/Reclose Off	Trip, Lockout	No	No	Reclose Off	ESS Mode depends on reclosing switch type: 43RT - Tagged 43R - Reclose Off
DPU2000R	Tagged/Reclose Off	Trip, Lockout	No	No	Reclose Off	ESS Mode depends on reclosing switch type: 43RT - Tagged 43R - Reclose Off
Electromechanical	Tagged/Reclose Off	Trip, Lockout	No	No	Reclose Off	ESS Mode depends on reclosing switch type: 43RT - Tagged 43R - Reclose Off

Reliability Impacts of ESS

The implementation of ESS on the distribution network can have an impact on customer reliability as depicted in Figure PAC 8-1: and PacifiCorp is exploring different strategic combinations to find the right balance. ESS settings, as discussed, leverage faster isolation scheme to reduce the amount of energy that may be released during an energy release event, which can lead to more frequent outages. Each outage correlates to a device having ESS settings enabled is considered an event where risk was mitigated through refined settings as the settings limit the amount of energy released. The correlation between ESS settings being enabled and an outage being recorded does not mean the settings caused an outage. Outages can be caused by a variety of factors, not limited to, planned work and/or environmental factors. Based on meteorological conditions related to wildfire risk, alternative ESS operating modes may be used for risk mitigation which may lead to a sustained interruption. For example, if wildfire risk increases, alternative ESS operating mode may include reducing the number of reclose attempts or locking open on a single trip event, resulting in a temporary fault becoming a sustained outage.

To mitigate impacts to reliability from ESS, PacifiCorp does not reduce number of reclose attempts or lock open on a single trip event seasonally. Instead, the company utilizes a daily risk assessment process and situational awareness reports. This allows the company to use different ESS modes, while minimizing impacts on reliability.

In 2025, PacifiCorp initiated an annual evaluation of circuits placed into ESS in 2024 and their reliability impact to identify targeted short-term mitigation projects to support reducing the total number of outages and outage duration experienced on these circuits. This evaluation included a review of the number of outages, average outage duration, frequency of outages, number of customers impacted, and average response time for outages to determine circuits that had the worst reliability impacts. Table PAC 8-2 includes an overall summary of all circuits that were activated in ESS settings in 2024 and associated reliability impacts.

Table 8-7 includes utilizing the data in Table PAC 8-2 and providing a summary of the top ten circuits impacted from changes to ESS or PEDS in the past three years.

Table PAC 8-2: 2024 Reliability Impacts for Circuits Activated in ESS settings

Metric	Number
Number of Outages	354
Average Duration of Outages (minutes)	219.62
Frequency of Outages per Circuit	6.81
Number of Customers Impacted	115,224
Average Response Time for Outages (minutes)	81.61

Table 8-7: Top Ten Impacted Circuits from Changes to PEDS in the Past Three Years

Circuit/Circuit Segment ID	Circuit/Circuit Segment Name	Circuit/Circuit Segment Length (overhead circuit miles)	Number of Outages in Past Three Years	Cumulative Outage Duration (Hours)	Cumulative number of Customers Impacted by Outages
4G1	4G1	26.0	38	141.6	10,089
6G25	6G25	52.4	35	196.8	2,766
5L82	5L82	94.7	31	99.4	6,565
5G79	5G79	33.9	30	112.3	21,496
5L87	5L87	66.3	28	87.5	10,867
5G23	5G23	78.1	23	62.9	5,126
5G21	5G21	97.1	23	59.2	7,713
5G83	5G83	78.9	23	78.7	7,582
5G41	5G41	88.2	19	83.3	3,951
5G7	5G7	49.9	17	112.7	7,300

The ESS outages on the circuits in Table 8-7 were reviewed in conjunction with seasonal risk experienced in 2024 to identify and prioritize short term mitigation projects for completion prior to the 2025 fire season to reduce wildfire risk and mitigate potential reliability impacts to customers associated with the ESS program. Examples of prioritized projects include implementing ESS on existing devices, upgrading cutouts, fuses, crossarms, and insulators on circuits that experienced ESS outages in 2024.

General Criteria for Using ESS

PacifiCorp deploys a cross-departmental approach to monitoring meteorological conditions related to wildfire risk and adjusting daily operations of distribution system assets, including implementation of ESS. The various information and departments are coordinated by leveraging situational awareness assessments that inform the operational actions across the service territory. These situational awareness reports, also known as the District-Level Wildfire Risk Matrix, are described in Section 10.6.1.

Operational Procedures for Using ESS

Figure PAC 8-2 below illustrates the operational coordination. As PacifiCorp is continuously improving and evolving its plan and programs, the process below is subject to change and is managed by internal company policies and procedures.

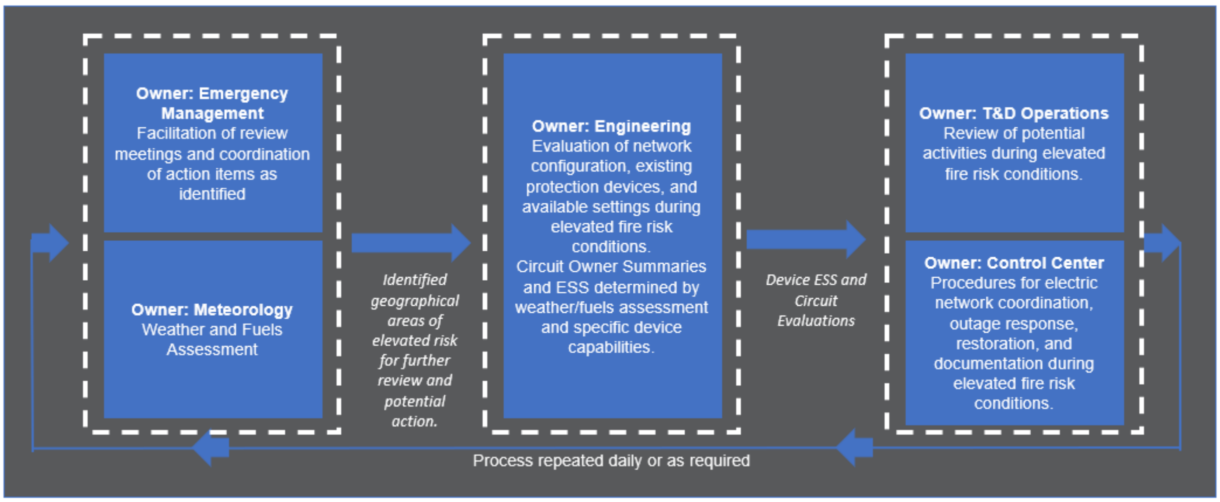


Figure PAC 8-2: Operational Process for ESS Implementation

ESS Capabilities

By leveraging the combination of configurations outlined in

Table PAC 8-1 PacifiCorp is able to implement ESS across all distribution circuits. Additionally, protective relay devices, such as line reclosers or circuit breaker relays, are currently being upgraded on various transmission and distribution lines throughout PacifiCorp's service territory to enable the more sophisticated ESS modes.

Effectiveness of ESS

Currently, PacifiCorp does not have any specific calculations or quantitative assessment of effectiveness for ESS and fire risk reduction due to implementation of ESS settings. The company is currently working with internal subject matter experts to determine the necessary data requirements so that a quantitative assessment can be conducted. The company is continuing to engage with peer utilities to identify opportunities to quantify the effectiveness of ESS at reducing wildfire risk, including joint IOU working meetings and direct benchmarking discussions.

PacifiCorp's ESS were developed through internal experience and research published by other utilities. PacifiCorp is continually monitoring research and collaborative event opportunities available to learn from others about available enhancements that could improve reliability while reducing wildfire risk. An example of a best practice that has been implemented by peer IOU's is the use of second harmonic blocking setting in certain intelligent electronic relaying devices. This allows a relay to block second harmonics that can result from re-energization of a circuit while also maintaining fast tripping capability to reduce wildfire risk.

Automatic Recloser Settings

As described above, automatic reclosing is a part of standard protection and control settings. It can be beneficial because it reduces the number of sustained outages and improves customer reliability. The reclosing function, however, implies some degree of ignition risk because additional energy can be released if a fault persists. Risk-based modifications to automatic recloser settings are considered embedded in the ESS program described above.

Settings of Other Emerging Technologies

PacifiCorp does not currently have other modified protection and control setting programs.

8.7.2 Grid Response Procedures and Notifications

The electrical corporation must provide a narrative on operational procedures it uses to respond to faults, ignitions, or other issues detected on its grid that may result in a wildfire including how the electrical corporation:

• Locates the issues

• Prioritizes the issues, including how operational models inform potential prioritization based on risk

• Notifies relevant personnel and suppression resources to respond to issues

• Minimizes/optimizes response times to issues

Tracking ID: GO-02

Issue Location

In all circumstances, PacifiCorp's System Operations is the central hub of communications of the distribution network. If an outage occurs on the distribution network, Region Operations generally manages the outage response and direct restoration efforts. Similar to the use of ESS, an operator's response may change based on the daily risk assessment. Under elevated wildfire conditions (YELLOW), the operator will coordinate with field personnel to decide if any additional actions are warranted due to particular circumstances. In significant or extreme wildfire conditions (ORANGE or RED), an operator may not restore until after additional patrols are performed as described below.

Re-energization Practices

PacifiCorp also modifies re-energization practices based on risk assessments, thereby also requiring a balance between customer reliability and wildfire mitigation. If a breaker or recloser has "locked-out" – meaning that it has opened and no longer conducts electricity – a system operator or field personnel will test a line if it meets conditions/criteria outlined in PacifiCorp operational policies and procedures. To test the line, the system operator or field personnel will close the device, thereby allowing the line to be re-energized. If the fault has cleared, then the system will run normally. If the fault is not cleared, the device will lock out again. If the device locks out again, the system operator then knows that additional investigation or work will be required before the line can be successfully re-energized. Because faults are often temporary, line-testing can be an efficient tool to maintain customer reliability similar to the use of reclosing described in the previous section. At the same time, line-testing can potentially result in arcing or an emission of sparks if a fault has not yet cleared when the line is tested. If conditions/criteria as outlined in the PacifiCorp policy are met, the line can be tested without patrol. After a line is successfully tested, a mainline patrol is required.

Response Tools to Minimize Impacts

Implementation of ESS or other operations protocols for the purpose of wildfire mitigation can result in more frequent outages to customers. While sometimes warranted to reduce the risk of wildfire, PacifiCorp recognizes the disruption this can have to customers and communities.

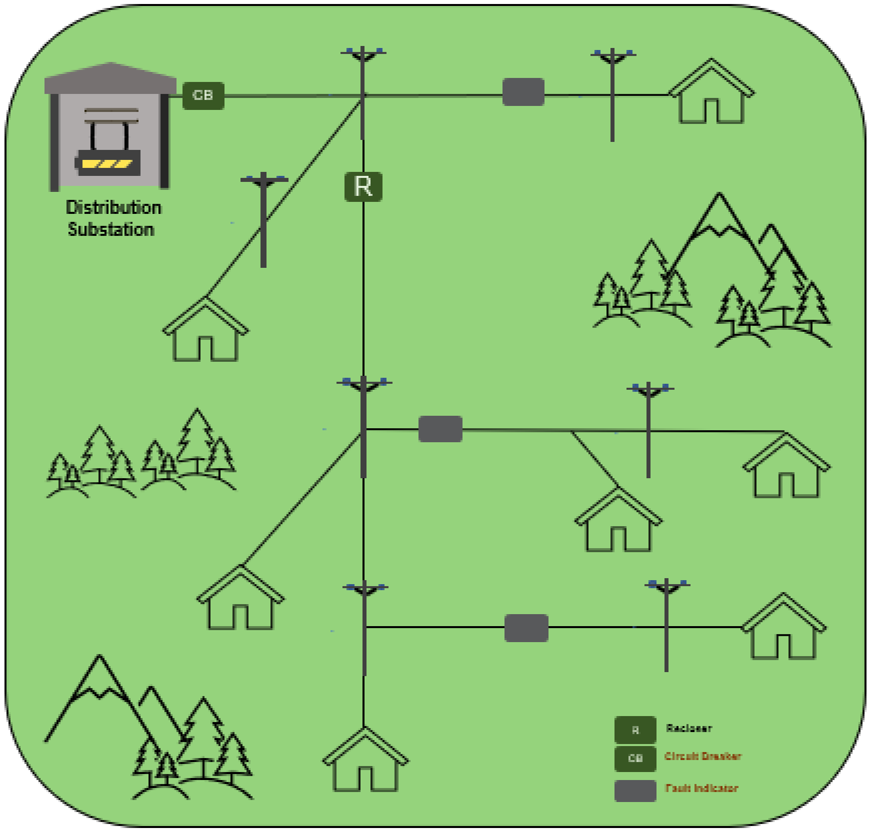


Figure PAC 8-3: General Fault Indicator Location

The time it takes to patrol a line and impact to customers can be substantially reduced when the fault location, or approximate location, can be determined quickly. PacifiCorp installed fault indicators as shown above in Figure PAC 8-3, prioritizing circuits that feed into the HFRA and HFTD areas where ESS are most likely to be implemented. When an outage occurs, these new tools are utilized by regional operators and field personnel to narrow down potential fault locations, optimizing and expediting the deployment of resources, and expedite restoration.

As PacifiCorp continues to understand risk it may install additional fault indicators as needed to continue balancing the impact to customers and wildfire mitigation.

Fire Suppression Notifications

PacifiCorp's emergency management team maintains relationships with federal and state emergency responders and mutual assistance groups. The company's emergency management team has contact information for state, county and tribal emergency managers, the state's Emergency Operations Center Emergency Support Functions (ESF) personnel, and the Geographic Area Coordination Centers (GACC) for fire-related emergency response. District operations managers also maintain relationships with local first responders. If an incident like a wildland fire occurs and emergency operations are established, a district manager or an identified PacifiCorp representative will deploy when needed or requested to the jurisdictional agency's Incident Command Post (ICP) to provide necessary electric utility support and coordination.

8.7.3 Personnel Work Procedures and Training in Conditions of Elevated Wildfire Risk

The electrical corporation must provide a narrative on the following:

• The electrical corporation's procedures that designate what type of work the electrical corporation allows (or does not allow) personnel to perform during operating conditions of different levels of wildfire risk, including:

o What the electrical corporation allows (or does not allow) during each level of risk

o How the electrical corporation defines each level of wildfire risk

o How the electrical corporation trains its personnel on those procedures

o How it notifies personnel when conditions change, warranting implementation of

those procedures

• The electrical corporation's procedures for deployment of firefighting staff and equipment (e.g., fire suppression engines, hoses, water tenders, etc.) to worksites for site-specific fire prevention and ignition mitigation during on-site work

During fire season, PacifiCorp modifies wires operations and work practices to further mitigate wildfire risk. Additionally, the company invests in tools and equipment to mitigate wildfire risk.

Modified Work Practices

As a part of the situational awareness reports and briefings prepared by the meteorology department as described in Section 10, the operations department within PacifiCorp considers the local weather and geographic conditions that may create an elevated risk of wildfire. These practices are targeted to reduce the potential of direct or indirect causes of ignition during planned work activities, fault response and outage restoration.

PacifiCorp follows CPUC 4427 and 4428 rules regarding work practices and required equipment to carry "between April 1 and December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion permitting the spread of fire, without providing and maintaining, for firefighting purposes only, suitable and serviceable tools in the amounts, manner and location prescribed in this section." The company also follows local United States Forest Service (USFS) work practice requirements as outlined in their Industrial Fire Precaution Levels. These are issued as forest orders and change depending on the time of year and the forest.

Table PAC 8-3 shows the equipment carried by field personnel during these times.

Table PAC 8-3: Suppression Equipment

Equipment	Location
Fire Toolbox Containing: One backpack pump-type fire extinguisher filled with water, Two axes Two McLeod fire tools, A sufficient number of shovels: A round point shovel with an overall length of not less than forty-six (46) inches so that each employee at the operation can be equipped to fight fire.	Carried in Vehicle
2- 250-Gallon Water Trailers	Crescent City, CA
2- 250-Gallon Water Trailers	Yreka, CA

Figure PAC 8-4 below shows the location of the water trailers for deployment in the field during times of elevated fire risk.

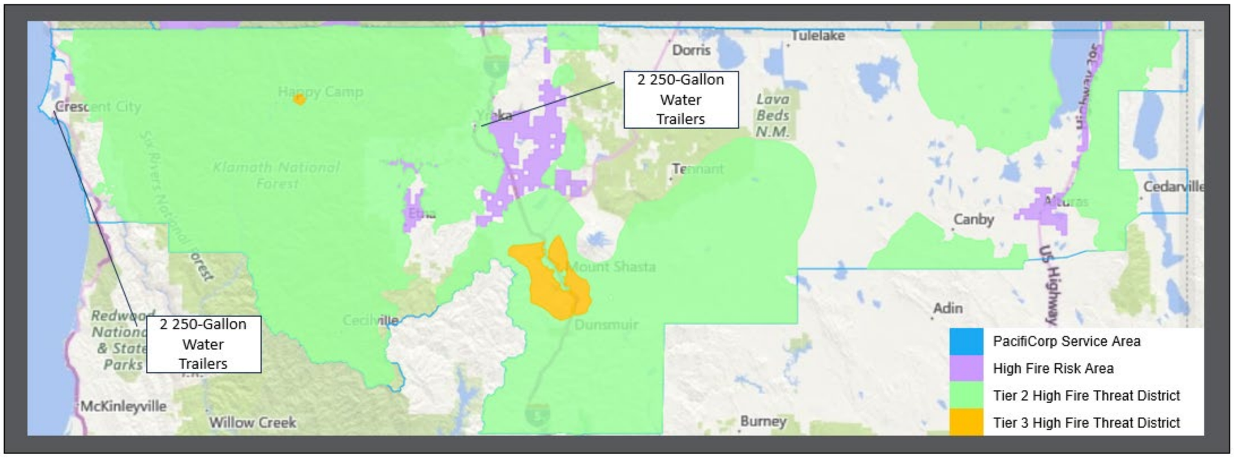


Figure PAC 8-4: Location of Water Trailers

Safety is the first priority for employees, If there is a fire in the immediate area, employees are directed to secure the scene for safety then evacuate and contact emergency personnel by calling 911 . Once emergency personnel are notified, then they contact PacifiCorp's control center.

If a fire is reported near PacifiCorp's equipment, the company will follow the wildfire response procedures described in Section 11.2.1.

PacifiCorp is able to mitigate some wildfire risk by managing the way that field work is scheduled and performed. To effectively manage work during fire season, area managers regularly review local fire conditions and weather forecasts provided to them as part of the company's monitoring program which is discussed in Section 10, these restrictions are evaluated daily. As PacifiCorp is continuously improving and evolving its plan and programs, the process below is subject to change and is managed by internal company policies and procedures as well as jurisdictional regulations as described above. In general, whenever wildfire risk potential is at little or no wildfire risk and no , work may be conducted using normal operating practices. When the meteorology department forecasts wildfire risk conditions that are elevated, significant, or extreme, local operations may modify operating practices. For example, certain personal protective equipment and basic firefighting tools are required for any field work during periods of elevated fire risk. Local area management will also evaluate, after considering multiple factors regarding the local circumstances of a particular circuit, whether any hot work modifications should be made. If wildfire risk is significant or extreme, local area management will also consider whether any additional work might be appropriate.

When a circuit is identified as having elevated wildfire risk or above – meaning YELLOW, ORANGE or RED – local area management will complete an Elevated Fire Risk Work Evaluation (using a standard checklist form for that purpose).

When a circuit is identified as having significant wildfire risk or above – meaning ORANGE or RED – in addition to the actions in No. 1 above, local area management will complete an Additional Work Evaluation (using a standard checklist form for that purpose).

When a circuit is identified as having extreme wildfire risk or above – meaning RED– in addition to the actions in No. 1 and No. 2 above, local area management will cancel planned hot work (instead of considering alternatives as part of a Hot Work Evaluation).

The activities of operations, with respect to a particular category of wildfire risk potential, is summarized in Table PAC 8-4.

Table PAC 8-4: T&D Operations Based on Fire Risk Potential

	Fire Risk Potential		
Practice	Yellow	Orange	Red
PPE Equipment and Tools	✓	✓	✓
Daily Hot Work Evaluation	✓	✓	✓
Additional Work Evaluation		✓	✓
Cancel Hot Work			✓

Additional Resources

To implement some of the wildfire mitigation programs generally described above additional labor resources and field personnel time is often required to (a) support system operations in assessing localized risk and administering ESS and (b) responding to outages during fire season with additional patrols and coordination.

Under normal operating procedures, system operators and field personnel work together on a daily basis to manage the electrical network. In many situations, system operators depend on field personnel to gather information and assess local conditions. There are system operations procedures during wildfire season for implementing ESS and limiting line-testing. Consequently, system operators need field personnel to gather information and assess local conditions during fire season more frequently than would otherwise be required under normal operating procedures. The requests from system operators may be varied, ranging from a simple phone call to confirm that it is raining in a particular area, to a much more time-intensive request, such as a full line patrol on a circuit.

Field personnel may also spend some additional time when responding to an outage during fire season. A heightened risk exists with traditional restoration practices. To mitigate this risk, wires operations may perform some amount of line patrol on certain de-energized sections of the circuit, notably during fire season and particularly in the HFRA and HFTD dependent on current conditions at the work site and the duration of the restoration work. Depending on the circumstances, this extra patrol might be done just before or just after re-energizing the line. Typically, this type of line patrol does not involve a close inspection of any particular facility; instead, it is a quick visual assessment specifically targeted to identify obvious foreign objects that may have fallen into the line during restoration work.

8.8 Workforce Planning

In this section, the electrical corporation must provide an overview of personnel, including qualifications, and training practices, related to workers in roles associated with asset inspections, grid hardening, and risk event inspection.

Please see

Table PAC 8-5 for a summary of personnel qualifications, and training practices, related to workers in roles associated with asset inspections, grid hardening, and risk event inspection.

Table PAC 8-5: Asset Inspections, Grid Hardening Qualifications

Worker Title	Minimum Qualifications for Target Role	Special Certification Requirements	Reference to PacifiCorp Training/Qualification Programs
Journeyman Lineman	Qualified Electrical Worker	Journeyman Lineman card	Company provided annual wildfire training
Highline Patrolman	Qualified Electrical Worker	Journeyman Lineman card with patrolman qualifications met	Company provided annual wildfire training
Relay Technician	Qualified Electrical Worker	Journeyman meter and relay card	Company provided annual wildfire training
Highline Patrolman	Journeyman Lineman card with patrolman qualifications met	Journeyman Lineman card and Wire Strike training	Company provided annual wildfire training
Journeyman Wireman	Qualified Electrical Worker	Journeyman Lineman card	Company provided annual wildfire training

9. Vegetation Management and Inspections

Each electrical corporation's WMP must include plans for vegetation management.

PacifiCorp's vegetation management program is modeled on industry's best practices to maintain conductor to vegetation clearance requirements and address reliability and wildfire ignition risks.

While it is not feasible to eliminate all vegetation contact without drastically altering the landscape near power lines, the primary objective of a vegetation management program is to mitigate grow-in and fall-in risks by maintaining safe clearances between vegetation and power lines. These efforts align with utility goals of enhancing safety, reliability, and wildfire risk mitigation, particularly in high fire-risk areas. and require collaboration among utilities, customers, and government agencies.

Vegetation management on distribution lines typically follows a planned multi-year cycle, such as a three-year schedule, during which vegetation is inspected and maintained to achieve safe clearance distances. Trees growing near power lines are pruned to maintain sufficient distance. Dead, diseased, or otherwise compromised trees that pose a risk of falling into power lines are identified and removed to reduce fall-in risks. Additionally, volunteer saplings, or small unplanned trees that could eventually grow into power lines, are removed as part of long-term vegetation management efforts. PacifiCorp has increased its post-work clearance distances throughout its service territory in California. For instance, minimum side clearances were increased from a range of eight to 12 feet, to 12 to 14 feet side clearances to address wildfire ignition risks. Vegetation management activities adhere to national standards, such as ANSI A300 and the International Society of Arboriculture (ISA) Best Management Practices, to ensure the health and safety of vegetation. Inspections are conducted before and after work to identify hazard trees, determine pruning or removal needs, and evaluate the quality of completed work.

Vegetation management on transmission lines requires even larger clearances due to the higher voltages and greater risks associated with these lines. Utilities maintain clearances that exceed the minimum vegetation clearance distances (MVCD) outlined in reliability standards such as NERC FAC-003. An "action threshold" is applied to determine when vegetation work is needed. For example, a 500 kV line may require a minimum clearance of 8.5 feet; however, PacifiCorp uses an action threshold of 18.5 feet to ensure proactive management. Post-work clearances are designed to provide long-term safety, with a 500 kV line requiring a post-work clearance of 50 feet. Where conditions and property rights allow, integrated vegetation management (IVM) practices may be employed to encourage low growing, compatible vegetation while removing species likely to violate clearance requirements. Transmission lines are inspected regularly, with main grid lines, which generally include lines above 200 kV, inspected annually, and vegetation work is scheduled based on inspection results and local conditions.

To identify and address risks effectively, utilities conduct thorough inspections before vegetation management activities. Initial Level 1 assessments are used to identify vegetation maintenance activities, including hazard trees based on factors such as health, wind patterns, and slope, while Level 2 assessments involve closer examinations of suspect trees to assess their condition and risk potential. After pruning or removal activities, post-work inspections are conducted as part of an audit and quality review process to ensure compliance with clearance standards and identify opportunities for process improvements.

Vegetation management programs aim not only to address immediate risks but also to reduce future work volumes and mitigate wildfire risks over time. By proactively addressing vegetation growth, utilities can eliminate potential vegetation contact with power lines long before it occurs. For example, removing hazard trees and volunteer saplings reduces the likelihood of unplanned vegetation contact, enhancing safety and reliability in the long term. These efforts play a vital role in reducing wildfire risks and maintaining reliable service to customers while adhering to industry's best practices and safety standards.

9.1 Targets

In this section, the electrical corporation must provide qualitative and quantitative targets for vegetation management and inspections for each year of the three-year WMP cycle.

PacifiCorp has established qualitative and quantitative targets to enhance vegetation management and inspection practices within its wildfire mitigation strategy. These targets address key initiatives, including wood and slash management, defensible space, integrated vegetation management, and vegetation management and inspections workforce. PacifiCorp's ability to meet these targets may be influenced by factors including environmental conditions, regulatory framework, and landowner/customer refusals. Vegetation management operations are guided by PacifiCorp's Vegetation Management Operations Procedures, which are provided in Appendix F.

9.1.1 Qualitative Targets

PacifiCorp has identified the following qualitative targets related to implementing and improving its vegetation management and inspections as identified in Table 9-1 below. Estimated risk reduction in Table 9-1 is TBD because PacifiCorp has not quantified risk reduction. As described in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction. The targets unit in Table 9-1 are "N/A" because these are qualitative initiatives and do not have units. Where there is no previous Tracking ID for an activity it is marked "N/A."

Table 9-1: Vegetation Management Targets by Year (Non-Inspection targets)

Initiative	Quantitative or Qualitative	Activity (Tracking ID)	Previous Tracking ID, if applicable	Target Unit	2026 Target/Status	% Risk Reduction for 2026	2027 Target/Status	% Risk Reduction for 2027	2028 Target/Status	% Risk Reduction for 2028	Three-Year Total	Section; Page Number
Wood and Slash Management/Debris Disposal: benchmark debris management data collection with other California utilities to learn how other utilities conduct and track debris management.	Qualitative	VM-12	N/A	N/A	Start	TBD	Continue benchmarking	TBD	Complete Benchmarking	TBD	N/A	9.5.4 p. 284
Defensible Space: Develop hazard tree process for trees outside of Substation property.	Qualitative	VM-13	N/A	N/A	Process Development	TBD	Implement	TBD	N/A	TBD	N/A	9.6.4 p. 295
Integrated Vegetation Management: develop a process for conducting outreach to known nurseries participating in the tree replacement program.	Qualitative	VM-14	N/A	N/A	Start	TBD	Implement	TBD	Ongoing Implementation	TBD	N/A	9.7.4 p. 297-298
Integrated Vegetation Management: Review and identify opportunities to expand use of tree growth regulator.	Qualitative	VM-14	N/A	N/A	Start	TBD	In progress	TBD	Complete	TBD	N/A	9.7.4 p. 298
Vegetation Management and Inspections: Develop and implement formal inspection contractor benchmarking processes.	Qualitative	VM-15	N/A	N/A	Start	TBD	Implement	TBD	Ongoing Implementation	TBD	N/A	9.13.2 p. 321

9.1.2 Quantitative Targets

PacifiCorp has identified the following qualitative targets related to implementing and improving its vegetation management and inspections as identified in Table 9-2 below. Estimated risk reduction in Table 9-2 is TBD because PacifiCorp has not quantified risk reduction. As described in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction Where there is no previous Tracking ID for an activity it is noted as "N/A".

Table 9-2: Vegetation Inspections and Pole Clearing Targets by Year

Activity (Program)	Tracking ID	Previous Tracking ID, if applicable	Target Unit	Cumulative (Cml.) Quarterly Target 2026 Q1	Cumulative (Cml.) Quarterly Target 2026 Q2	Cumulative (Cml.) Quarterly Target 2026 Q3	Cumulative (Cml.) Quarterly Target 2026 Q4	Cumulative (Cml.) Quarterly Target 2027 Q1	Cumulative (Cml.) Quarterly Target 2027 Q2	Cumulative (Cml.) Quarterly Target 2027 Q3	Cumulative (Cml.) Quarterly Target 2027 Q4	Cumulative (Cml.) Quarterly Target 2028 Q1	Cumulative (Cml.) Quarterly Target 2028 Q2	Cumulative (Cml.) Quarterly Target 2028 Q3	Cumulative (Cml.) Quarterly Target 2028} Q4	% HFTD Covered in 2026	% Risk Reduction for 2026	% Risk Reduction for 2027	% Risk Reduction for 2028	Three-Year Total	Activity Timeline Target	Section; Page Number
Routine (Detailed) Inspection – Distribution (DNT)	VM-01	N/A	Circuit Miles	378	464	731	824	301	503	855	875	374	408	826	834	42%	TBD	TBD	TBD	2,533	365 Days	9.2.1 p. 268-273
Routine (Detailed) Inspection – Local Transmission (TNT)	VM-02	VM-02	Circuit Miles	19	114	134	134	161	461	479	479	83	134	142	142	43%	TBD	TBD	TBD	754	365 Days	9.2.4 p. 281-283
Routine (Detailed) Inspection – Main Grid (MGI)	VM-02	VM-02	Circuit Miles	83	130	130	130	45	130	130	130	83	134	142	142	71%	TBD	TBD	TBD	402	365 Days	9.2.3 p. 277-281
Off-Cycle (Patrol) Inspection – Distribution (FIN)	VM-03	N/A	Circuit Miles	681	1,109	1,109	1,109	481	996	1,036	1,036	761	1,124	1,183	1,183	86%	TBD	TBD	TBD	3,328	365 Days	9.2.2 p. 273-276
Off-Cycle (Patrol) Inspection – Transmission (FIT)	VM-04	N/A	Circuit Miles	104	329	329	329	68	116	116	116	83	134	142	142	91%	TBD	TBD	TBD	586	365 Days	9.2.5 p. 284-287
Pole Clearing PRC 4292 (DPL)	VM-05	N/A	Distribution Poles	3,999	7,998	11,999	11,999	3,999	7,998	11,999	11,999	3,999	7,998	11,999	11,999	~33%	TBD	TBD	TBD	35,997	270 Days	9.4 p. 290-292
Pole Clearing (LRA)	VM-05	N/A	Distribution Poles	1,064	2,128	3,192	3,192	1,064	2,128	3,192	3,192	1,064	2,128	3,192	3,192	~35%	TBD	TBD	TBD	9,576	270 Days	9.4 p. 290-292

Activity (Program)	Tracking ID	Previous Tracking ID, if applicable	Target Unit	Cumulative (Cml.) Quarterly Target 2026 Q1	Cumulative (Cml.) Quarterly Target 2026 Q2	Cumulative (Cml.) Quarterly Target 2026 Q3	Cumulative (Cml.) Quarterly Target 2026 Q4	Cumulative (Cml.) Quarterly Target 2027 Q1	Cumulative (Cml.) Quarterly Target 2027 Q2	Cumulative (Cml.) Quarterly Target 2027 Q3	Cumulative (Cml.) Quarterly Target 2027 Q4	Cumulative (Cml.) Quarterly Target 2028 Q1	Cumulative (Cml.) Quarterly Target 2028 Q2	Cumulative (Cml.) Quarterly Target 2028 Q3	Cumulative (Cml.) Quarterly Target 2028} Q4	% HFTD Covered in 2026	% Risk Reduction for 2026	% Risk Reduction for 2027	% Risk Reduction for 2028	Three-Year Total	Activity Timeline Target	Section; Page Number
Substation Defensible Space	VM-13	N/A	Substations	14	28	42	55	14	28	42	55	14	28	42	55	100%	TBD	TBD	TBD	165	365 Days	9.6 p. 294-295

9.2 Vegetation Management Inspections

In this section, the electrical corporation provides an overview of its vegetation management inspection programs for overhead electrical assets. This section does not include pole clearing activities or vegetation management around substations; see Section 9.4 for pole clearing and Section 9.6 for vegetation management around substations.

Table 9-3 below summarizes PacifiCorp's vegetation inspection program for overhead electrical assets.

Table 9-3: Vegetation Management Inspection Frequency, Method, and Criteria

Type	Inspection Activity (Program)	Area impacted	Frequency
Distribution	Routine	Territory wide	Every three years
Distribution	Off-cycle	Lines within or that intersect HFTD Tier 2 or Tier 3, HFRA	Annual
Transmission	Routine Main Grid	Territory wide	Annual
Transmission	Routine Local	Territory wide	Minimum every three years
Transmission	Non-Routine	Lines within or that intersect HFTD Tier 2 or Tier 3, HFRA	Annual

9.2.1 Routine

9.2.1.1 Overhead and Area Inspected

In this section, the electrical corporation provides an overview of the inspection program. This overview describes where the electrical corporation performs the inspection programs (e.g., territory-wide, HFTD only, Areas of Concern, etc.)

Tracking ID: VM-01

PacifiCorp conducts routine inspections or detailed inspections of vegetation near overhead distribution lines to minimize safety, reliability, and wildfire ignition risks. Routine distribution inspections are performed on a planned cycle territory wide. Routine inspections aim to identify vegetation conditions inconsistent with PacifiCorp standards to maintain compliance with applicable regulations and reduce vegetation grow-in and fall-in risks. These inspections include visual assessments of clearance distances against thresholds (where applicable), identification of hazard trees, and discretionary vegetation removals to mitigate future risks.

During routine inspections, the inspector identifies vegetation requiring work based on criteria including, but not limited to:

- Work thresholds, where identified by PacifiCorp.
- Identification of all brush, including volunteer trees
- Identification of vegetation that may encroach upon clearance distances prior to next scheduled routine inspection (or will not hold through a cycle)
- Identification of readily climbable trees and tree houses near conductor
- Identification of hazard trees using ANSI A300 Part 9 Level 1 limited visual assessment strategies, to identify hazard trees. The inspector may conduct a closer inspection or Level 2 assessment of suspect trees, to further assess their condition
- Identify inventory reduction actions, such as discretionary removals, to reduce future work volumes, including high-risk trees or cycle buster trees

9.2.1.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for the inspection program.

Distribution routine inspection program adheres with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024 and is compliant with GO 95 Rule 35, PRC 4292, PRC4293, CCR Title 14 Sections 1250-1258.

9.2.1.3 Clearance

In this section, the electrical corporation describes how clearances are determined and prescribed through this inspection program. As applicable, the electrical corporation describes how it differently prescribes clearances to high-risk species of vegetation.

During routine inspection, vegetation is identified for pruning or removal to achieve minimum post-work clearance distances that maintain proper conductor-to-vegetation clearance for compliance with applicable regulations, including GO 95. Tree growth rates determine the required minimum post-work clearance distances. For example, faster-growing trees, defined as those growing more than three feet per year, require greater post-work clearance relative to slower growing trees to maintain desired clearance throughout the cycle.

PacifiCorp incorporates spatial concepts to account for variations between side clearances, under clearances, and overhang clearances and considers growth rates at the time of inspection. These practices ensure safety and reliability while adhering to clearance guidelines tailored to both high-risk and standard areas. The specific distances for the minimum post-work clearances utilized in PacifiCorp's service territory in California, including within HFTD and HFRA, are presented in Table PAC 9-1.

Table PAC 9-1: Distribution Minimum Post-Work Vegetation Clearance Distances

Clearance	Slow Growing (<1 ft/yr.)	Moderate Growing (1-3 ft/yr.)	Fast Growing (> 3 ft./yr.)
Side Clearance	12 ft.	12 ft.	14 ft.
Under Clearance	12 ft.	14 ft.	16 ft.
Overhang Clearance	12 ft.	14 ft.	14 ft.

When trees are pruned, national standards and best practices are followed to ensure the maintenance of healthy vegetation. PacifiCorp also targets "cycle buster" trees, or trees that grow at a rate where they may not make it through the routine maintenance cycle, which are a category of high-risk trees, as part of the routine distribution inspection to minimize vegetation contact

Routine inspections are conducted on distribution lines in advance of scheduled cycle maintenance to identify trees requiring work, including high-risk trees (cyclebusters) targeted for removal.

9.2.1.4 Fall-in Mitigation

In this section, the electrical corporation describes how it identifies fall-in risks, such as hazard trees (during the inspection (e.g., Level 1, Level 2, etc.). As applicable, the electrical corporation describes how it differently prescribes removal of high-risk species of vegetation.

A **hazard tree** is any tree with structural defects or conditions that make it likely to fail and damage electrical infrastructure, such as power lines, under normal or adverse weather conditions. Examples include dead, dying, diseased, leaning, or decayed trees that pose an immediate threat to public safety and utility operations.

A **high-risk tree** is any tree located in or near a high fire-risk area that increases the likelihood of wildfire ignition or spread due to its species, condition, or proximity to power lines. These trees may include those with flammable characteristics, significant deadwood, or the potential to make contact with electrical equipment.

During routine inspections, PacifiCorp identifies hazard trees through conducting a Level 1 visual assessment, consistent with ANSI A300, and where deemed necessary by the inspector, a Level 2 assessment may be conducted. Trees identified as a hazard by the inspectors are documented for mitigation.

PacifiCorp also identifies trees, such as cycle buster trees (high-risk fast-growing trees) for tree growth regulator application or discretionary removal, which include removal of trees to reduce the total tree inventory and can, therefore, reduce long-term risks, including fall-in risks.

9.2.1.5 Scheduling

In this section, the electrical corporation describes how the inspection program is scheduled. This includes the frequency (e.g., annual, quarterly, three-year cycle) and/or triggers (e.g., severe weather events, risk model outputs) of the inspection program. It also identifies how the frequency and/or trigger might differ by HFTD tier or other risk designation.

If the inspection program is based on a fixed frequency (e.g., annual, three-year cycle), the electrical corporation explains how it uses risk prioritization in the scheduling of the inspection program to target high-risk areas). If the electrical corporation does not use risk prioritization in the scheduling of the inspection program, it explains why.

PacifiCorp's distribution routine inspection program is scheduled for a planned three-year cycle. Scheduling is informed by risk prioritization to target high-risk areas, including circuits within the HFTD or other designated risk zones such as the HFRA. Circuits in these high-risk areas are generally prioritized for inspection over other circuits considering risk factors including tree growth rates, species characteristics, the timing of the last maintenance cycle, and environmental factors (e.g., weather). These risk factors are considered by PacifiCorp's Utility Forestry Arborists coupled with their working knowledge to prioritize circuits for inspection. The sequence in which circuits are inspected and subsequently worked is typically consistent year-over-year.

In some cases, inspections may be triggered outside the fixed schedule due to severe weather events as described in Section 9.9, risk model outputs, or operational requests based on reliability metrics or customer reports. For example, inspections may be conducted after storms or during periods of elevated fire risk to identify and mitigate emerging hazards. This flexible approach ensures that vegetation management addresses both scheduled and unexpected risks, adapting to evolving conditions as needed.

9.2.1.6 Updates

In this section, the electrical corporation discusses changes/updates to the inspection program since its last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

To address PC-23B-16 PacifiCorp will develop work prioritization to incorporate within its MDMS applicable to specific work activities. This initiative is in Table 9-1.

To further identify opportunities for improvement, PacifiCorp will develop formal contractor inspector benchmarking processes to drive consistency among inspection contractors. This initiative is in Table 12-1.

9.2.2 Off-Cycle

9.2.2.1 Overhead and Area Inspected

In this section, the electrical corporation provides an overview of the inspection program. This overview describes where the electrical corporation performs the inspection programs (e.g., territory-wide, HFTD only, Areas of Concern, etc.)

Tracking ID: VM-03

PacifiCorp conducts off-cycle inspections or patrols of vegetation near distribution lines to minimize safety, reliability, and wildfire ignition risks. Distribution off-cycle inspections are performed on circuits that are within or intersect high fire risk areas, HFTD and/or HFRA. Off-cycle inspections aim to identify grow-in and fall-in risks. These inspections include visual assessments of clearance distances against thresholds, where applicable, and mandatory clearance distances, and identification of hazard trees.

During off-cycle inspections, the inspector identifies vegetation requiring work based on criteria including, but not limited to:

- Work thresholds, where identified by PacifiCorp.
- Identification of vegetation that may encroach upon clearance distances prior to next scheduled inspection
- Identification of hazard trees using ANSI A300 Part 9 Level 1 limited visual assessment strategies, to identify hazard trees. The inspector may conduct a closer inspection or Level 2 assessment of suspect trees, to further assess their condition

9.2.2.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for the inspection program.

Distribution off-cycle inspection program adheres with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024 and is compliant with GO 95 Rule 35, PRC 4292, PRC4293, and applicable sections of CCR Title 14 Sections 1250-1258.

9.2.2.3 Clearance

In this section, the electrical corporation describes how clearances are determined and prescribed through this inspection program. As applicable, the electrical corporation describes how it differently prescribes clearances to high-risk species of vegetation.

Refer to Section 9.2.1.3 for post-work clearances. The post-work clearances for distribution off-cycle inspections are the same as those presented in Table PAC 9-1.

9.2.2.4 Fall-in Mitigation

In this section, the electrical corporation describes how it identifies fall-in risks, such as hazard trees (during the inspection (e.g., Level 1, Level 2, etc.). As applicable, the electrical corporation describes how it differently prescribes removal of high-risk species of vegetation.

A **hazard tree** is any tree with structural defects or conditions that make it likely to fail and damage electrical infrastructure, such as power lines, under normal or adverse weather conditions. Examples include dead, dying, diseased, leaning, or decayed trees that pose an immediate threat to public safety and utility operations.

A **high-risk tree** is any tree located in or near a high fire-risk area that increases the likelihood of wildfire ignition or spread due to its species, condition, or proximity to power lines. These trees may include those with flammable characteristics, significant deadwood, or the potential to make contact with electrical equipment.

During off-cycle inspections, PacifiCorp identifies hazard trees through conducting a Level 1 visual assessment, consistent with ANSI A300, and where deemed necessary by the inspector, a Level 2 assessment may be conducted. Trees identified as a hazard by the inspectors are documented for mitigation.

9.2.2.5 Scheduling

In this section, the electrical corporation describes how the inspection program is scheduled. This includes the frequency (e.g., annual, quarterly, three-year cycle) and/or triggers (e.g., severe weather events, risk model outputs) of the inspection program. It also identifies how the frequency and/or trigger might differ by HFTD tier or other risk designation.

If the inspection program is based on a fixed frequency (e.g., annual, three-year cycle), the electrical corporation explains how it uses risk prioritization in the scheduling of the inspection program to target high-risk areas). If the electrical corporation does not use risk prioritization in the scheduling of the inspection program, it explains why.

PacifiCorp's distribution off-cycle inspection program is scheduled during off-cycle years. Scheduled circuits are either wholly within or intersect HFTD and HFRA. Refer to Section 9.2.1.5 for additional scheduling description.

9.2.2.6 Updates

In this section, the electrical corporation discusses changes/updates to the inspection program since its last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

No updates since the last WMP submission.

9.2.3 Routine Main Grid

9.2.3.1 Overhead and Area Inspected

In this section, the electrical corporation provides an overview of the inspection program. This overview describes where the electrical corporation performs the inspection programs (e.g., territory-wide, HFTD only, Areas of Concern, etc.)

Tracking ID: VM-02

PacifiCorp conducts routine inspections or detailed inspections of vegetation near main grid transmission lines to minimize safety, reliability, and wildfire ignition risks. Main grid transmission lines are those lines that PacifiCorp has identified as "Applicable Lines" under NERC Standard FAC-003-5. Routine main grid inspections are performed annually territory wide. Routine main grid inspections aim to identify vegetation conditions inconsistent with PacifiCorp standards to maintain compliance with applicable regulations. These inspections include visual assessments of clearance distances against action thresholds, identification of hazard trees, and discretionary vegetation removals to mitigate future risks.

During routine main grid inspections, the inspector identifies vegetation requiring work based on criteria including, but not limited to:

- Identification of vegetation based on action thresholds identified by PacifiCorp
- Identification of all brush, including volunteer trees
- Identification of readily climbable trees and tree houses near conductor
- Identification of hazard trees using ANSI A300 (Part 9) Level 1 limited visual assessment strategies, to identify hazard trees. The inspector may conduct a closer inspection or Level 2 assessment of suspect trees, to further assess their condition

- Identification of inventory reduction actions, such as discretionary removals, to reduce future work volumes
- Identification of herbicide treatment areas

9.2.3.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for the inspection program.

Transmission routine main grid inspection program adheres with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024, PacifiCorp's Procedure PCC-215, and is compliant with NERC, FAC 003, GO 95 Rule 35, PRC 4292, and PRC4293, as applicable.

9.2.3.3 Clearance

In this section, the electrical corporation describes how clearances are determined and prescribed through this inspection program. As applicable, the electrical corporation describes how it differently prescribes clearances to high-risk species of vegetation.

Clearance work on a main grid transmission line is guided by three concepts: Minimum Vegetation Clearance Distances, Action Thresholds, and Minimum Clearances Following Work. Minimum Vegetation Clearance Distance (MVCD) represents radial distances from the conductors inside of which trees shall not encroach. These distances are established in FAC-003-5 and must be maintained. Action Thresholds are designed to provide a ten foot buffer from the MVCD. Clearance work is performed if vegetation is identified within the Action Threshold distance from a conductor. Minimum Clearances Following Work are designed to always maintain an appreciable buffer with the MVCD. If a tree is within the Action Threshold and pruned, it should be cleared to the Minimum Clearance Following Work.

The MVCD, Action Thresholds, and Minimum Clearances Following Work differ by voltage of the transmission line as shown in Table PAC 9-2.

Table PAC 9-2: Transmission Clearance Requirements

	Line Voltage							
	500 kV	345 kV	230 kV	161 kV	138 kV	115 kV	69 kV	>69 kV
MVCD	8.5 ft	5.3 ft	5.0 ft	3.4 ft	2.9 ft	2.4 ft	1.4 ft	N/A
Action Thresholds	18.5 ft	15.5 ft	15 ft	13.5 ft	13 ft	12.5 ft	10.5 ft	10 ft
Minimum Clearances Following Work	50 ft	40 ft	30 ft	30 ft	30 ft	30 ft	25 ft	20 ft

9.2.3.4 Fall-in Mitigation

In this section, the electrical corporation describes how it identifies fall-in risks, such as hazard trees (during the inspection (e.g., Level 1, Level 2, etc.). As applicable, the electrical corporation describes how it differently prescribes removal of high-risk species of vegetation.

A **hazard tree** is any tree with structural defects or conditions that make it likely to fail and damage electrical infrastructure, such as power lines, under normal or adverse weather conditions. Examples include dead, dying, diseased, leaning, or decayed trees that pose an immediate threat to public safety and utility operations.

A **high-risk tree** is any tree located in or near a high fire-risk area that increases the likelihood of wildfire ignition or spread due to its species, condition, or proximity to power lines. These trees may include those with flammable characteristics, significant deadwood, or the potential to make contact with electrical equipment.

During routine main grid inspections, PacifiCorp identifies hazard trees through conducting a Level 1 visual assessment, consistent with ANSI A300, and where deemed necessary by the inspector, a Level 2 assessment may be conducted. Trees identified as a hazard by the inspectors are documented for mitigation. PacifiCorp typically conducts aerial inspections and follows up these inspections with ground-based inspections.

PacifiCorp also identifies discretionary removals. Within the right-of-way, vegetation is removed consistent with Integrated Vegetation Management principles where feasible.

9.2.3.5 Scheduling

In this section, the electrical corporation describes how the inspection program is scheduled. This includes the frequency (e.g., annual, quarterly, three-year cycle) and/or triggers (e.g., severe weather events, risk model outputs) of the inspection program. It also identifies how the frequency and/or trigger might differ by HFTD tier or other risk designation.

If the inspection program is based on a fixed frequency (e.g., annual, three-year cycle), the electrical corporation explains how it uses risk prioritization in the scheduling of the inspection program to target high-risk areas). If the electrical corporation does not use risk prioritization in the scheduling of the inspection program, it explains why.

PacifiCorp's transmission routine main grid inspection program is implemented annually. Scheduling is informed by risk prioritization to target high-risk areas, including transmission lines within HFTD and HFRA. Transmission lines in these high-risk areas are generally prioritized for inspection over other transmission lines considering risk factors including tree growth rates, species characteristics, the timing of the last maintenance, and environmental factors (e.g., weather). These risk factors are considered by PacifiCorp's Utility Forestry Arborists coupled with their working knowledge to prioritize transmission lines for inspection. The sequence in which transmission lines are inspected and subsequently worked is typically consistent year-over-year.

9.2.3.6 Updates

In this section, the electrical corporation discusses changes/updates to the inspection program since its last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

PacifiCorp previously reported main grid inspections as part of the detailed transmission inspections in the previous Wildfire Mitigation Plan, tracked as VM-02. PacifiCorp has separated main grid (VM-02) transmission and local (VM-02) transmission into distinct initiatives due to the difference in frequency of inspections as shown in Table 9-3.

9.2.4 Routine Local

9.2.4.1 Overhead and Area Inspected

In this section, the electrical corporation provides an overview of the inspection program. This overview describes where the electrical corporation performs the inspection programs (e.g., territory-wide, HFTD only, Areas of Concern, etc.)

Tracking ID: VM-02

PacifiCorp conducts routine inspections or detailed inspections of vegetation near local transmission lines to minimize safety, reliability, and wildfire ignition risks. Routine local inspections are generally performed every other year or at least once every three years territory wide in alignment with inspections of distribution underbuild (routine distribution inspections). Refer to Section 9.2.3.1 for an overview of inspection practices.

9.2.4.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for the inspection program.

Transmission routine local inspection program adheres with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024, PacifiCorp's Procedure PCC-215, and is compliant with NERC, FAC 003, GO 95 Rule 35, PRC 4292, and PRC4293.

9.2.4.3 Clearance

In this section, the electrical corporation describes how clearances are determined and prescribed through this inspection program. As applicable, the electrical corporation describes how it differently prescribes clearances to high-risk species of vegetation.

Refer to Section 9.2.3.3, for description of clearance work associated with transmission lines.

9.2.4.4 Fall-in Mitigation

In this section, the electrical corporation describes how it identifies fall-in risks, such as hazard trees (during the inspection (e.g., Level 1, Level 2, etc.). As applicable, the electrical corporation describes how it differently prescribes removal of high-risk species of vegetation.

A **hazard tree** is any tree with structural defects or conditions that make it likely to fail and damage electrical infrastructure, such as power lines, under normal or adverse weather conditions. Examples include dead, dying, diseased, leaning, or decayed trees that pose an immediate threat to public safety and utility operations.

A **high-risk tree** is any tree located in or near a high fire-risk area that increases the likelihood of wildfire ignition or spread due to its species, condition, or proximity to power lines. These trees may include those with flammable characteristics, significant deadwood, or the potential to make contact with electrical equipment.

Refer to Section 9.2.3.4, for description of fall-in mitigation work associated with transmission lines.

9.2.4.5 Scheduling

In this section, the electrical corporation describes how the inspection program is scheduled. This includes the frequency (e.g., annual, quarterly, three-year cycle) and/or triggers (e.g., severe weather events, risk model outputs) of the inspection program. It also identifies how the frequency and/or trigger might differ by HFTD tier or other risk designation.

If the inspection program is based on a fixed frequency (e.g., annual, three-year cycle), the electrical corporation explains how it uses risk prioritization in the scheduling of the inspection program to target high-risk areas). If the electrical corporation does not use risk prioritization in the scheduling of the inspection program, it explains why.

Scheduling of the routine local inspection program is informed by risk prioritization to target high-risk areas, including transmission lines within HFTD and HFRA Transmission lines in these high-risk areas are generally prioritized for inspection over other transmission lines considering risk factors including tree growth rates, species characteristics, the timing of the last maintenance, and environmental factors (e.g., weather). These risk factors are considered by PacifiCorp's Utility Forestry Arborists coupled with their working knowledge to prioritize transmission lines for inspection. Inspection of local transmission lines may also correspond with inspection of distribution underbuild during distribution routine cycle maintenance. The sequence in which transmission lines are inspected and subsequently worked is typically consistent year-over-year.

9.2.4.6 Updates

In this section, the electrical corporation discusses changes/updates to the inspection program since its last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

PacifiCorp previously reported main grid inspections as part of the detailed transmission inspections in the previous Wildfire Mitigation Plan, tracked as VM-02. PacifiCorp has separated main grid (VM-02) transmission and local (VM-02) transmission into distinct initiatives due to the difference in frequency of inspections as shown in Table 9-3.

9.2.5 Non-Routine Local

9.2.5.1 Overhead and Area Inspected

In this section, the electrical corporation provides an overview of the inspection program. This overview describes where the electrical corporation performs the inspection programs (e.g., territory-wide, HFTD only, Areas of Concern, etc.)

Tracking ID: VM-04

PacifiCorp conducts non-routine inspections or patrol inspections of vegetation near local transmission lines to minimize safety, reliability, and wildfire ignition risks. Non-routine transmission inspections are performed annually on local transmission lines that are wholly within or intersect HFTD and/or HFRA. Non-routine transmission inspections aim to identify vegetation conditions inconsistent with PacifiCorp standards to maintain compliance with applicable regulations and reduce vegetation grow-in and fall-in risks. These inspections include visual assessments of clearance distances against action thresholds and identification of hazard trees.

During non-routine transmission inspections, the inspector identifies vegetation requiring work based on criteria including, but not limited to:

- Identification of vegetation based on action thresholds identified by PacifiCorp
- Identification of hazard trees using ANSI A300 (Part 9) Level 1 limited visual assessment strategies, to identify hazard trees. The inspector may conduct a closer inspection or Level 2 assessment of suspect trees, to further assess their condition

9.2.5.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for the inspection program.

Non-routine transmission inspection program adheres with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024, PacifiCorp's Procedure PCC-215, and is compliant with NERC, FAC 003, GO 95 Rule 35, PRC 4292, and PRC4293.

9.2.5.3 Clearance

In this section, the electrical corporation describes how clearances are determined and prescribed through this inspection program. As applicable, the electrical corporation describes how it differently prescribes clearances to high-risk species of vegetation.

Refer to Section 9.2.3.3, for description of clearance work associated with transmission lines.

9.2.5.4 Fall-in Mitigation

In this section, the electrical corporation describes how it identifies fall-in risks, such as hazard trees (during the inspection (e.g., Level 1, Level 2, etc.). As applicable, the electrical corporation describes how it differently prescribes removal of high-risk species of vegetation.

A **hazard tree** is any tree with structural defects or conditions that make it likely to fail and damage electrical infrastructure, such as power lines, under normal or adverse weather conditions. Examples include dead, dying, diseased, leaning, or decayed trees that pose an immediate threat to public safety and utility operations.

A **high-risk tree** is any tree located in or near a high fire-risk area that increases the likelihood of wildfire ignition or spread due to its species, condition, or proximity to power lines. These trees may include those with flammable characteristics, significant deadwood, or the potential to make contact with electrical equipment.

Refer to Section 9.2.3.4, for description of clearance work associated with transmission lines.

9.2.5.5 Scheduling

In this section, the electrical corporation describes how the inspection program is scheduled. This includes the frequency (e.g., annual, quarterly, three-year cycle) and/or triggers (e.g., severe weather events, risk model outputs) of the inspection program. It also identifies how the frequency and/or trigger might differ by HFTD tier or other risk designation.

If the inspection program is based on a fixed frequency (e.g., annual, three-year cycle), the electrical corporation explains how it uses risk prioritization in the scheduling of the inspection program to target high-risk areas). If the electrical corporation does not use risk prioritization in the scheduling of the inspection program, it explains why.

PacifiCorp's transmission non-routine inspection program is implemented annually on local transmission lines that are not scheduled for inspection under the transmission routine inspection program. Refer to Section 9.2.3.5 for additional scheduling information.

9.2.5.6 Updates

In this section, the electrical corporation discusses changes/updates to the inspection program since its last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

There have been no updates to the inspection program since its last WMP submission.

9.3 Pruning and Removal

9.3.1 Overview

In this section, the electrical corporation provides an overview of the subsequent pruning, removal, and other vegetation management activities that are performed as a result of inspections.

PacifiCorp conducts vegetation maintenance (pruning and removal) based on the inspections identified in Section 9.2. In some cases, inspections may be triggered outside the fixed schedule due to severe weather events, risk model outputs, or operational requests based on reliability metrics or customer reports, which necessitates vegetation maintenance. This flexible approach ensures that vegetation management addresses both scheduled and unexpected risks, adapting to evolving conditions as needed. Vegetation maintenance activities include pruning, removal, herbicide application, etc. to mitigate grow-in and fall-in risks identified during inspections and to maintain compliance. These vegetation maintenance activities are conducted by utility vegetation management contractors. PacifiCorp's contractors systematically prune trees and other vegetation to achieve post-work clearance distances, remove hazard trees, remove brush and other vegetation (e.g., discretionary removals) to reduce future workload or inventory, and apply herbicide where appropriate to inhibit future growth and need for pruning and removal activities. PacifiCorp adheres with industry's best practices, including International Society of Arboriculture (ISA) Best Management Practices and ANSI A300 Part 9.

9.3.2 Procedures

In this section, the electrical corporation provides a list of the procedures, including the version(s) and effective date(s), for subsequent pruning, removal, and other vegetation management activities that are performed as a result of inspections.

PacifiCorp conducts its vegetation management actions, including pruning and removal, in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024 and is compliant with NERC, FAC 003, GO 95 Rule 35, PRC 4292, and PRC4293.

9.3.3 Scheduling

In this section, the electrical corporation describes how subsequent pruning, removal, and other vegetation management activities that are performed as a result of inspections are scheduled. This includes the timeline(s) in which clearance and removal work prescribed by an inspection program will be completed and how the timeline differs by HFTD tier or other risk designation.

Pruning, removal, and other vegetation management activities follow the same schedule as the inspection activities described in Section 9.2; in other words, transmission and distribution lines are generally worked in the order that they are inspected. Transmission and distribution lines in high fire risk areas are generally prioritized for vegetation management maintenance over other powerlines.

Vegetation management activities generally occur anywhere from two weeks to three months after the inspection takes place. In some cases, vegetation management activities may take place following inspections that are triggered outside the fixed schedule due to severe weather events, risk model output, or operational requests based on reliability metrics or customer reports.

To ensure efficiency, PacifiCorp coordinates closely with field inspectors and vegetation management teams, aligning schedules with identified priorities. Coordination with property owners is conducted as necessary to obtain permissions for vegetation removal, with repeated efforts made to address concerns. These tailored timelines and approaches ensure that vegetation management activities are effectively completed while mitigating risks in alignment with HFTD tier designations and applicable regulations.

9.3.4 Updates

In this section, the electrical corporation discusses changes/updates to be pruning and removal activities since the last WMP submission, including known future plans (beyond the current year) and new/novel strategies the electrical corporation may implement in the next five years (e.g., references to and strategies from pilot projects and research). The electrical corporation includes lessons learned as applicable.

In 2022, PacifiCorp implemented a pilot project, "Enhanced Overhang Reduction Pilot", starting in which culminated in 2025. This pilot project targeted high-risk distribution circuits and involved increasing post-pruning conductor-to-vegetation clearances to reduce fall-in risks and ignition potential (increased overhang removal). Post-audit reviews were conducted to ensure work was conducted in accordance with specifications and evaluate tree health. At the end of this year, PacifiCorp will determine to continue or discontinue the pilot.

Workforce stability remains a priority. Since the last WMP, PacifiCorp's contractors increased local crew presence, greatly reducing the need for travel crews (out of area tree crews) that require premium/higher rates.

PacifiCorp is exploring incorporating work prioritization capabilities in conjunction with its mobile data management software and expects implementation in 2026. This initiative is in Table 12-1 and discussed in Section 12.

9.4 Pole Clearing

9.4.1 Overview

In this section, the electrical corporation provides an overview of pole clearing, including:

Pole clearing performed in compliance with Public Resources Code section 4292

Pole clearing outside the requirements of Public Resources Code section 4292 (e.g., pole clearing performed outside of the State Responsibility Area)

Tracking ID: VM-05

Pole clearing is designed to reduce the risk of fire ignition if sparks are emitted from electrical equipment. PacifiCorp's pole clearing program includes pole clearing activities within Local Responsibility Areas (LRA) located in HFTD and HFRA in additional to pole clearing activities in compliance with PRC 4292, which requires clearing of subject poles within State Responsibility Area (SRA).

PacifiCorp conducts pole clearing activities by removing of all vegetation within a ten-foot radius cylinder and up to eight feet vertically of clear space around a subject pole, removing dead vegetation from eight feet to the highest point of the conductor and applying herbicides and/or soil sterilant to prevent any vegetation regrowth, (unless prohibited by law or the property owner). Figure PAC 9-1 below is an illustration of the pole clearing distances.

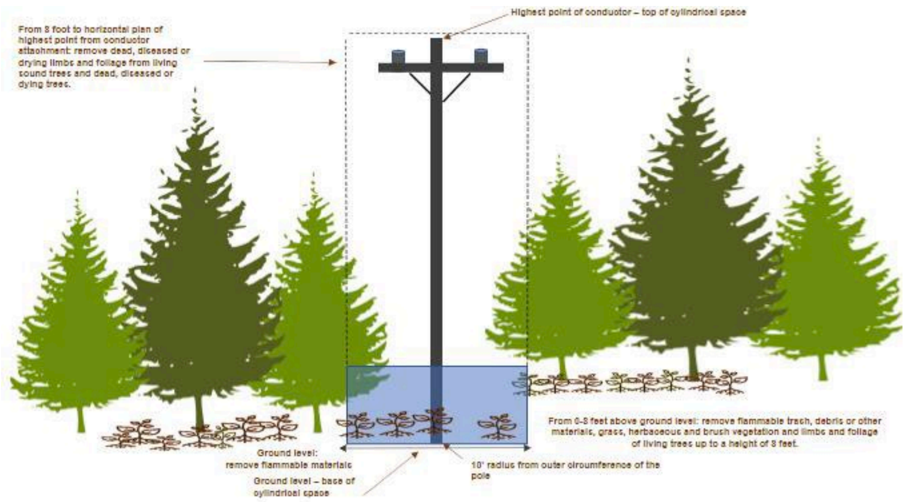


Figure PAC 9-1: Pole Clearing

9.4.2 Procedures

In this section, the electrical corporation lists applicable electrical corporation procedure(s), including the version(s) and effective date(s), used to execute pole clearing.

PacifiCorp conducts its pole clearing program in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024 and is compliant with PRC 4292 and CCR Title 14 Sections 1250-1258, as applicable.

9.4.3 Scheduling

In this section, the electrical corporation describes how pole clearing is scheduled. This includes how the schedule is affected by HFTD tier or other risk designation.

PacifiCorp schedules pole clearing activities in SRA and LRA to be conducted in a manner that aligns with CCR Title 14 Section 1253, which identifies the time when PRC 4292 is applicable. Pole clearing activities in high-risk areas are generally prioritized for implementation over other pole clearing activities considering risk factors, the timing of the last maintenance, and environmental factors (e.g., weather). The sequence in which subject poles are inspected and subsequently worked is typically consistent year-over-year, at the circuit level.

9.4.4 Updates

In this section, the electrical corporation describes changes to pole clearing since the last WMP submission and a brief explanation as to why those changes were made. Discuss any planned improvements or updates to pole clearing and the timeline for implementation.

PacifiCorp has updated its process to document/track pole clearing activities, including tracking of poles that are deemed exempt at the time of inspection. This will allow for more accurate reporting of number of poles inspected and worked. To further reduce regrowth, PacifiCorp is exploring formal implementation of additional inspection and clearing activities at locations where herbicide use is not permitted.

9.5 Wood and Slash Management/Debris Disposal

9.5.1 Overview

In this section, the electrical corporation provides an overview of how it manages all downed wood and slash/debris generated from vegetation management activities.

Tracking ID: VM-12

PacifiCorp's wood and slash/debris management practices are part of the base vegetation management program. PacifiCorp manages or disposes of debris typically less than six inches in diameter, through the following typical methods, chipping and hauling offsite, chipping and broadcast onsite, and lop and scatter in accordance with industry best management practices. The appropriate method of debris management considers the location where the vegetation maintenance is being performed.

In developed areas, debris is typically chipped and hauled offsite; in undeveloped areas, debris may be chipped and broadcast onsite; and in inaccessible areas, debris may be disposed of onsite through, typically, lop and scatter techniques. These debris management activities are conducted as appropriate in conjunction with implementing pruning and removal activities described in Section 9.3. Deviations from these typical debris management practices are identified during inspection through landowner coordination where applicable (e.g., landowner requests chips be left onsite).

An integral component of PacifiCorp's vegetation program that influences fuel management and reduction of slash/debris are the appropriate use of herbicide and tree-growth regulators (as described in Section 9.7. By preventing and/or inhibiting undesirable vegetation growth, the volume of slash/debris can be further reduced. PacifiCorp uses herbicides and tree-growth regulators, where approved by the property owner or land management agency in targeted areas.

9.5.2 Procedures

In this section, the electrical corporation lists applicable electrical corporation procedure(s), including the version(s) and effective date(s), used to manage wood and slash/debris.

PacifiCorp conducts its debris management actions in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024.

9.5.3 Scheduling

In this section, the electrical corporation describes how wood and slash management is scheduled. This includes how the schedule is affected by HFTD tier or other risk designation.

Debris management is conducted as part of vegetation management activities that are described in Section 9.3. Debris management takes place at the time of pruning or removal activities and is typically conducted by the crew who conduct the vegetation maintenance activity. In some cases, a separate debris management crew may conduct prescribed debris management activities.

9.5.4 Updates

In this section, the electrical corporation describes changes to wood and slash management since the last WMP submission and a brief explanation as to why those changes were made. Discuss any planned improvements or updates to pole clearing and the timeline for implementation.

PacifiCorp will benchmark debris management data collection with other California utilities to learn how other utilities conduct and track debris management. The information gathered will be used to inform potential changes in PacifiCorp's process and additions to PacifiCorp's new work management software, GeoDigital, expected to be released for full rollout in the first quarter of 2026. PacifiCorp also has directed its vegetation management contractors to conduct debris management actions associated with scheduled maintenance within HFTD and HFRA, even in situations where the landowner has indicated that no cleanup is needed; all debris, typically less than six inches in diameter, will be managed through chipping or lop and scatter. These initiatives are in Table 9-1.

9.6 Defensible Space

9.6.1 Overview

In this section, the electrical corporation provides an overview of its action taken to reduce wildfire risk to substations, generation facilities, and other electrical facilities.

PacifiCorp performs substation defensible space management to reduce wildfire risk in substations in accordance with PRC 4291.

9.6.2 Procedures

Vegetation removal is performed annually by licensed contractors who spray herbicide inside the substation, the perimeter, and through the fence line at the substation

Additionally, substation inspections as described in Section 8.3.4 determine where vegetation may pose a current or future risk to substation equipment. As part of the substation inspections, PacifiCorp identifies if there is vegetation overhang limbs or climbable vegetation and verify there are no weeds inside the substation. Substations are inspected at least eight times a year.

There are no specific operating procedures provided for contractors. Substation inspections follow substation inspection procedures.

9.6.3 Scheduling

Defensible space management at substations is prioritized based on accessibility of the substations due to weather and road conditions.

Substation equipment inspections are scheduled based on the procedures described in Substation Inspections 8.3.4.

9.6.4 Updates

As described in Table 9-1, PacifiCorp is developing a process to address hazard trees that are outside of the substation property. These trees may pose a risk of falling onto the substation property and a process to address them with the owners of the property the tree is on will reduce the risk of a tree falling into the substation, creating a potential safety or reliability issue.

9.7 Integrated Vegetation Management

9.7.1 Overview

In this section, the electrical corporation must provide an overview of its actions taken for activities not covered in previous sections and are performed in accordance with Integrated Vegetation Management principles. This may include, but is not limited to, the following activities: the strategic use of herbicides, growth regulators, or other chemical controls; tree-replacement programs; promotion of native shrubs; prescribed fire; or other fuel treatment activities.

PacifiCorp utilizes integrated vegetation management (IVM) best practices, where possible, to manage vegetation. IVM is a system of managing vegetation in a manner designed to establish desired vegetation characteristics, such as sustainable plant communities that are compatible with the electric facility over the long-term, through implementing selected control(s), consistent with the American National Standards Institute guidance. Desirable plant communities are stable, low-growing, compatible with conductors, diverse, and establish a sustainable supply of forage, escape and nesting cover, movement corridors for wildlife, reduced energy release risk, and more open access to the line. PacifiCorp generally utilizes chemical, mechanical, and manual controls, coupled with a tree replacement program and community engagement. PacifiCorp's use of chemical control includes use of herbicides to inhibit regrowth and promote cover type conversion and tree growth regulators targeting fast growing species, where landowner approval has been obtained. Appropriate application of herbicide is an integral part of PacifiCorp's vegetation management strategy.

In addition, PacifiCorp promotes the right tree in the right place or small trees for small places, concepts, with customers coupled with the company's tree replacement voucher program. Tree replacement vouchers may be provided to customers on a case-by-case basis to offset discretionary removals within or adjacent to the right-of-way. PacifiCorp provides information to customers regarding vegetation that is compatible with utility rights-of-way and coordinates with communities through Arbor Day functions or other educational outreach opportunities.

9.7.2 Procedures

In this section, the electrical corporation lists applicable electrical corporation procedure(s), including the version(s) and effective date(s), used for integrated vegetation management.

PacifiCorp conducts vegetation management actions as described in Section 9.7, in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024.

9.7.3 Scheduling

In this section, the electrical corporation describes how integrated vegetation management activities are scheduled. This includes how the schedule is affected by HFTD tier or other risk designation.

PacifiCorp integrates IVM concepts into all aspects of its vegetation management program where possible, ensuring a systematic approach to mitigating wildfire risk and maintaining grid reliability. IVM strategies are scheduled based on vegetation maintenance activity PacifiCorp prioritizes work in the HFTD and HFRA, but scheduling may be influenced by other factors including weather conditions land management agency coordination requirements. PacifiCorp inspects transmission rights-of-way to identify and prescribe vegetation maintenance or where feasible, IVM strategies to be employed generally consistent with the wire zone border zone concepts. Herbicide projects and application of tree growth regulator are generally scheduled based on timing of last maintenance and timing of a candidate tree being pruned, respectively.

9.7.4 Updates

In this section, the electrical corporation describes changes to its integrated vegetation management activities since the last WMP submission and a brief explanation as to why those changes were made. Discuss any planned improvements or updates to pole clearing and the timeline for implementation.

There are no changes to IVM activities. Regarding use of tree growth regulator, PacifiCorp will review opportunities to expand use of tree growth regulator in California and identify such opportunities for potential implementation in 2027. The expanded use of tree growth regulator, specifically, along distribution rights-of-way, is a tool to minimize potential for grow-in risks. This initiative is in Table 9-1.

In 2026, PacifiCorp will also develop a process for conducting outreach to known nurseries participating in the tree replacement program (tree voucher) for implementation in 2027. Outreach to participating nurseries will bolster the ongoing implementation of PacifiCorp's tree replacement program through maintaining nursery participation. This initiative is in Table 9-1.

9.8 Partnerships

9.8.1 Vegetation Management Partnership

PacifiCorp recognizes the benefit of partnerships with other entities in vegetation management. PacifiCorp has and will continue to partner with entities, including communities, as opportunities arise, however PacifiCorp vegetation management department does not maintain formal partnerships at this time to accomplish agreed upon objectives. "N/A" in Table 9-4 below reflects that PacifiCorp does not have formal partnerships.

Table 9-4: Partnerships in Vegetation Management

Partnering Agency/ Organization	Activities	Objectives	Electrical Corporation Role	Anticipated Accomplishments
N/A	N/A	N/A	N/A	N/A

9.8.1.1 Overview

N/A

9.8.1.2 Partnership History

N/A

9.8.1.3 Future Projects

N/A

9.9 Activities Based on Weather Conditions

9.9.1 Overview

In this section, the electrical corporation provides an overview of planning and execution of operational changes to address wildfire risk associated with weather conditions such as pruning or removal, executed based on and in advance of a Red Flag Warning or other forecasted weather conditions that indicates an elevated fire threat in terms of ignition likelihood and wildfire potential.

PacifiCorp plans and executes operational changes to address wildfire risk during elevated fire weather conditions indicating increased ignition likelihood and wildfire potential, including PSPS events. In these instances, vegetation management supports T&D Operations by addressing conditions identified during patrols conducted by T&D Operations. The vegetation management department may also conduct additional patrols.

In addition, vegetation management contractors develop wildfire plans and train their personnel. Vegetation management contractors also adhere to jurisdictional work restrictions and requirements to equip personnel with minimum wildfire tools to safely perform pruning, removal, and other mitigation activities. These proactive measures are implemented in advance of adverse weather conditions to reduce ignition risks and enhance system resilience during periods of heightened wildfire potential.

9.9.2 Procedures

In this section, the electrical corporation lists applicable electrical corporation procedure(s), including the version(s) and effective date(s), used for activities based on weather conditions.

PacifiCorp conducts vegetation management actions in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024. Section 2.1.5 Fire Protection, of the SOP, identifies minimum requirements of the vegetation management contractors regarding adherence with applicable fire restrictions.

9.9.3 Scheduling

In this section, the electrical corporation describes how activities based on weather conditions are scheduled (or triggered). This includes how the schedule is affected by HFTD tier or other risk designation.

PacifiCorp considers environmental factors, such as weather, when scheduling vegetation management activities. For example, where possible, work in an area that typically is impacted by fire restrictions may be scheduled for earlier in the year to minimize conducting work in such areas when jurisdictional fire restrictions are in effect. Generally, PacifiCorp responds dynamically when such weather conditions arise such as forecasted weather events of elevated fire risk, which signal an increased likelihood of ignition and wildfire potential. Response to such events generally coincides with direction from PacifiCorp's Emergency Coordination Center, and Operations.

9.9.4 Updates

In this section, the electrical corporation describes changes to its activities based on weather conditions since the last WMP submission and a brief explanation as to why those changes were made. Discuss any planned improvements or updates to pole clearing and the timeline for implementation.

There are no updates to PacifiCorp's activities based on weather conditions since the 2023-2025 WMP submission.

9.10 Post-Fire Service Restoration

9.10.1 Overview

In this section, the electrical corporation provides an overview of vegetation management activities during post-fire service restoration.

Response to wildfire impacts vary depending upon size of the fire, resulting impacts to trees within strike distance of electrical infrastructure, and impacts to assets. Typical response actions include:

- Support of T&D Operations' patrols and restoration of impacted facilities through mitigating imminent vegetation conditions and fallen trees blocking access roads and mitigating impacted trees in the immediate area for worker safety.
- Vegetation management staff and contractors patrol wildfire-impacted areas near electrical infrastructure to assess fire-damaged trees within strike distance, evaluate risks, and determine appropriate mitigation strategies.

- Trees posing an imminent risk are promptly topped or felled to eliminate the hazard as quickly as possible.

Additional mitigation efforts for remaining fire-damaged trees are carried out based on the level of risk, land ownership considerations, and environmental concerns.

In all cases, safety is the highest priority, and post-fire vegetation management work is conducted to minimize risks to the public and to crews or contractors performing infrastructure repairs in areas affected by wildfire. Response is also coordinated through collaboration with Incident Command or entity with jurisdiction over firefighting activities.

9.10.2 Procedures

In this section, the electrical corporation lists applicable electrical corporation procedure(s), including the version(s) and effective date(s), used for post-fire service restoration vegetation management.

PacifiCorp utilizes available guidelines (e.g., Marking Guidelines for Fire-Injured Trees in California) when identifying fire-impacted trees as reference material when conducting wildfire response actions to assess vegetation conditions. At the time of the development of this plan, PacifiCorp has not established specific procedures for post-fire service restoration vegetation management. As such, there are no formalized versions or effective dates to reference.

9.10.3 Scheduling

In this section, the electrical corporation describes how post-fire service restoration vegetation management are scheduled (or triggered).

Response is generally scheduled based on the level of risk, while considering land ownership, and environmental concerns. As indicated in Section 9.10.1, the response may include immediate action by vegetation management to support T&D Operations and address imminent vegetation conditions. In addition, needed vegetation work that is not addressed in the immediate response is scheduled as appropriate and implemented; for example, to support rebuild projects of longer duration and mitigate impacted vegetation that does not pose an immediate risk.

9.10.4 Updates

In this section, the electrical corporation describes changes to post-fire service restoration vegetation management since the last WMP submission and a brief explanation as to why those changes were made. Discuss any planned improvements or updates to pole clearing and the timeline for implementation.

There are no updates to the post-fire service restoration vegetation management since the last WMP submission.

9.11 Quality Assurance and Quality Control

9.11.1 Overview, Objectives and Targets

In this section, the electrical corporation provides an overview of each of its quality assurance (QA) and quality control (QC) programs for vegetation management. This overview includes the following for each program:

- Initiative/activity being audited (each initiative/activity name corresponds to an initiative/activity described in Sections 9.2 through 9.9)
- Tracking ID from Table 9-1 or 9-2.
- Quality program type (QA or QC).
- Objective of the quality program. Table 9-4 provides an example of the appropriate level of detail and the required format.

The electrical corporation also provides the following tabular information for each QA and QC program:

- Initiative/activity being audited (each initiative/activity name corresponds to an initiative/activity described in Sections 9.2 through 9.9)
- Population/sample unit
- Population size for each audited initiative/activity for each year of the three-year WMP cycle
- Sample size for each audited initiative/activity for each year of the three-year WMP cycle
- Percent of sample in the HFTD for each audited initiative/activity for each year of the three-year WMP cycle
- Confidence level and MOE
- Target pass rate for each audited initiative/activity for each year of the three-year WMP cycle

Tracking ID: VM-11

Quality control actions are critical to ensure vegetation requiring work (pruning and/or removal) is properly identified and the work is subsequently conducted in accordance with vegetation program standards/specifications. PacifiCorp's QC activities include quality reviews and post-audits.

Quality Reviews

- Quality reviews are detailed reviews of a portion of completed work against PacifiCorp's Vegetation SOP and requirements. These reviews may focus on individuals or crews conducting pre-inspection, pole clearing, chemical maintenance, and tree maintenance and may include a review of documentation, work performed, adherence with work practices and workflows, and safety practices.
- Minimum qualifications of individuals conducting a quality review include ISA arborist certification.

- Quality reviews are generally completed by PacifiCorp personnel and are completed annually on all or a subset of contracted personnel or crews to identify opportunities for continuous improvement.

Post-audits

Post-audits are conducted to review the quality of work completed to ensure it conforms with the required scope and standards of quality.

- Post-auditor minimum qualifications include ISA arborist certification.
- Post-audits are completed by PacifiCorp personnel or third-party contractors annually.

Post audits include:

- Review of routine maintenance (work identified during detailed inspections), and
- Review of off-cycle maintenance in HFTD and HFRA (work identified during patrol inspections).

Post-audits are generally conducted soon after the vegetation management work is completed at a location, to identify any issues before vegetation management crews leave the area for their next work assignment.

Tracking ID: VM-13

Defensible space QA/QC is performed as part of the substation inspection management audits and procedures.

Table 9-5 summarizes the Vegetation management QA/QC program objectives.

Table 9-5: Vegetation Management QA and QC Program Objectives

Initiative/Activity Being Audited	Activity (Tracking ID #)	Quality Program Type	Objective of the Quality Program
Routine Distribution (Detailed)	VM-11	QC	To ensure contractor pre-inspectors follow company procedures, to identify trees that were missed, and to identify work that was not conducted in accordance with requirements.
Off-cycle Distribution (Patrol)	VM-11	QC	To ensure contractor pre-inspectors follow company procedures, to identify trees that were missed, and to identify work that was not conducted in accordance with requirements.
Non-Routine Transmission (Patrol)	VM-11	QC	To ensure contractor pre-inspectors follow company procedures, to identify trees that were missed, and to identify work that was not conducted in accordance with requirements.
Pole Clearing	VM-11	QC	To ensure work is conducted in accordance with requirements.
Substation Defensible Space	VM-13	QC	To ensure contractors achieve defensible space around assigned structures according to procedure.

Table 9-6 below outlines PacifiCorp 's QC targets by vegetation management activities, including the population size, sample size, pass rate targets, and where applicable, confidence level and margin of error (MOE) for each year of the three-year WMP cycle. PacifiCorp audits 100% of Routine

Distribution (Detailed), Off-cycle Distribution (Patrol), and Off-cycle Transmission (Patrol), the Confidence Level /MOE is N/A in Table 9-6 because the company is auditing 100% of the population. Defensible Space has not calculated the percent of sample size in the HFTD and does not have a confidence level/MOE at this time.

Table 9-6: Vegetation Management QA and QC Activity Targets

Initiative/Activity Being Audited	Population/Sample Unit	2026: Population Size	2026: Sample Size	2026 Percent of Sample in the HFTD	2027: Population Size	2027: Sample Size	2027 Percent of Sample in the HFTD	2028: Population Size	2028: Sample Size	2028 Percent of Sample in the HFTD	Confidence level/MOE	2026 Pass Rate target	2027 Pass Rate target	2028 Pass Rate target
Routine Distribution (Detailed)	Circuit Miles	825	825[11]	42% of Sample miles in HFRA/HFTD	875	875	56% of Sample miles in HFRA/HFTD	834	834	55% of Sample miles in HFRA/HFTD	N/A	95%	95%	95%
Off-cycle Distribution (Patrol)	Circuit Miles	1,109	1,109	86% of Sample miles in HFRA/HFTD	1,036	1,036	78% of Sample miles in HFRA/HFTD	1183	1183	71% of Sample miles in HFRA/HFTD	N/A	95%	95%	95%
Off-cycle Transmission (Patrol)	Circuit Miles	329	329	91% of Sample miles in HFRA/HFTD	116	116	56% of Sample miles in HFRA/HFTD	417	417	73% of Sample miles in HFRA/HFTD	N/A	95%	95%	95%

11 A portion of the corrective maintenance associated Routine Distribution (Detailed) inspections are generally completed late in the calendar year, which results in completion of post audit activities to be completed during the beginning of the following calendar year. Other external factors may also impact completion of post-audits within the same calendar year the maintenance action was completed.

Initiative/Activity Being Audited	Population/Sample Unit	2026: Population Size	2026: Sample Size	2026 Percent of Sample in the HFTD	2027: Population Size	2027: Sample Size	2027 Percent of Sample in the HFTD	2028: Population Size	2028: Sample Size	2028 Percent of Sample in the HFTD	Confidence level/MOE	2026 Pass Rate target	2027 Pass Rate target	2028 Pass Rate target
Pole Clearing (DPL and LRA)	Distribution Poles	15,191	1,519	50%	15,191	1,519	50%	15,191	15,191	50%	99%/>1%	95%	95%	95%
Defensible Space	Substations	55	28	TBD	55	28	TBD	55	28	TBD	N/A	95%[12]	95%	95%

12 Pass rate calculation consistent with pass rate calculation for Asset Inspections in Table 8-4.

9.11.2 QA/QC Procedures

In this section, the electrical corporation lists the applicable procedure(s), including the version(s) and effective date(s), used for each vegetation management QA and QC program listed in Table 9-5.

PacifiCorp conducts its quality management actions in accordance with PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024. Additional information is found in PacifiCorp's Vegetation Management Quality Management Program Guidelines document dated 3/04/2025.

Defensible space QA/QC is performed as part of the substation inspection management audits.

9.11.3 Sample Sizes

In this section, the electrical corporation describes how it calculates pass rates. This description includes:

The sample unit that generates the pass rate for each QA and QC program (e.g., for pole clearing, the sample unit that generates the pass rate may be a single pole that passes or fails a QC audit).

The pass and failure criteria for each program listed in table 9-4. List each criterion and discuss any weighted contributions to the pass rate.

The sample size for QA/QC initiatives VM-11 have a targeted sample size of 100%. PacifiCorp has implemented this robust quality control system to minimize to the maximum extent practicable, vegetation conditions requiring mitigation that persist post-work.

Pole clearing targeted sample size was calculated to achieve a greater than 99% confidence interval.

Defensible space QA/QC is performed as part of the substation inspection management audits, with approximately 50% of the substations inspected annually.

9.11.4 Pass Rate Calculation

PacifiCorp calculates the pass rate associated with tree maintenance as follows.

$$\text{Pass Rate}_{\text{veg}} = \frac{\textit{Work Locations} - \textit{Work Locations with an Audit Finding}}{\textit{Work Locations}}\ x\ 100$$

The audit findings used in the calculation are "non-billable" and attributable to the contractor conducting the tree maintenance work.

PacifiCorp calculates the pass rate associated with pole clearing as follows.

$$\text{Pass Rate}_{\text{poles}} = \frac{\textit{Poles Audited} - \textit{Poles Failed}}{\textit{Poles Audited}}\ x\ 100$$

There is currently no pass rate calculation for defensible space. The substation inspection audits that are performed by management to identify is substation inspectors do not meet the inspection criteria and identify trends to train inspectors on common deficiencies and best practices.

9.11.5 Other Metrics

In this section, the electrical corporation lists and describe the metrics used by the electrical corporation, other than pass rate, to evaluate the effectiveness of its QA and QC programs and procedures (e.g., find rate, rework rate, outage rate within 6 months of inspection attributed to vegetation contact, etc.)

Results of quality reviews are used to further gauge quality of vegetation maintenance work conducted by contractors. These results, coupled with post-audit results, help PacifiCorp identify opportunities for improvement and targeted discussions to have with its contracted workforce, including requiring development of corrective action plans to address recurring issues.

9.11.6 Documentation of Findings

In this section, the electrical corporation describes how it documents its QA and QC findings and incorporates lessons learned from those findings into corrective actions, trainings, and procedures.

Post-audits are intended to identify recurring quality-related issues early on, so that PacifiCorp staff can review with the contractors conducting the work and implement any needed corrective measures.

Personnel conducting quality reviews and post-audits record findings, including work exceptions (inconsistencies with PacifiCorp specifications or work missed) and observations using the MDMS. PacifiCorp foresters provide feedback and review audit findings, where applicable, during recurring meetings with the vegetation management contractor and discuss opportunities for improvement and expectations. The findings are also available to the vegetation management contractor within the MDMS and assigned to that contractor, who remains responsible for the work, including any corrective action. PacifiCorp also reviews audit finding trends (e.g., recurring type of audit finding) with the applicable contractor during quarterly meetings as a key performance indicator.

9.11.7 Changes to QA/QC Since Last WMP and Planned Improvements

In this section, the electrical corporation must describe:

A list of changes the electrical corporation made to its QA and QC procedure(s) since its last WMP submission.

Justification for each of the changes including references to lessons learned as applicable.

A list of planned future improvements and/or updates to QA and QC procedure(s) including a timeline for implementation.

Since the last WMP submission, PacifiCorp has further categorized initiative VM-11 as follows; VM-11RD Routine Distribution, VM-11OD Off-cycle Distribution, VM-11NT Non-Routine Transmission, and VM-11P Pole Clearing. PacifiCorp may modify pass rate and QA/QC procedures based on rollout of updated work management software, which is expected to be implemented in 2026.

9.12 Open Work Orders

In this section, the electrical corporation provides an overview of how it manages its work orders resulting from vegetation management inspections that prescribe vegetation management activities. This overview includes the following under these headers:

PacifiCorp issues a work release to the vegetation management contractor to correct vegetation conditions identified. Specific work orders are not issued for each work location, but rather one work release is issued for the entire power line being worked.

As corrections are made, the vegetation management contractor marks work as complete in the MDMS. Work locations are identified in the MDMS by a unique identifier, a MapObject ID. PacifiCorp reviews work locations to ensure all locations are marked as complete and a work complete form is attached to the work location. PacifiCorp does not have a formal system for tracking “open” work locations through time; however, “open” work locations may be identified through a comparison of inventories to work complete records. This may change through implementation of PacifiCorp’s updated MDMS.

PacifiCorp utilizes a report that links forms (e.g., inventory and work complete) at a work location. This report is used by PacifiCorp staff and contractors to drive continuous improvement, data integrity, and to help drive completion of any open work locations prior to end of each calendar year.

9.12.1 Priority Assignment

In this section, the electrical corporation describes how work orders are assigned priority, including the initiative timeline for each priority level/group.

At present, work locations are not formally assigned priorities. This may change with the implementation of PacifiCorp's updated MDMS. Please see the initiative "Develop work prioritization to incorporate within MDMS" in Table 12-1, which addresses PC-23B-16.

9.12.2 Backlog Elimination

In this section, the electrical corporation describes the plan for eliminating work order backlogs (i.e., open work orders that have passed initiative timelines), if applicable.

In general, vegetation work identified within a calendar year associated with initiatives described in this WMP, are completed within the same calendar year. If any work was not completed, it would be rolled over into the following calendar year and scheduled for completion. Future plans may include the implementation of advanced work management tools to monitor and manage backlogs more effectively, enabling the development of targeted strategies to eliminate delays and ensure timely completion of work.

9.12.3 Trends

In this section, the electrical corporation describes of trends with respect to open work orders and:

An aging report for work orders past due (i.e., work orders that were not completed within the electrical corporation's assigned initiative timelines per priority level/group described in Section 9.11.1)

At this time, PacifiCorp does not have data available to provide trends related to open work orders/work locations or an aging report for work orders past due, as this information is not currently tracked in the existing systems, at this time the number of work orders is "TBD" because the PacifiCorp does not have the information in the current system. Future enhancements to the company's work management processes and systems may include improved tracking and reporting capabilities to facilitate the development of an aging report and identify trends in open work orders across priority levels and risk areas. Table 9-7 and Table 9-8 are below.

Table 9-7: Number of Past Due Vegetation Management Work Orders Categorized by Age and HFTD Tier

HFTD Area	0-30 Days	31-90 Days	91-180 Days	181+ Days
Non-HFTD	TBD	TBD	TBD	TBD
HFTD Tier 2	TBD	TBD	TBD	TBD
HFTD Tier 3	TBD	TBD	TBD	TBD

Table 9-8: Number of Past Due Vegetation Management Work Orders Categorized by Age and Priority Levels

Priority Level	0-30 Days	31-90 Days	91-180 Days	181+ Days
Priority 1	TBD	TBD	TBD	TBD
Priority 2	TBD	TBD	TBD	TBD
Priority 3	TBD	TBD	TBD	TBD

9.13 Workforce Planning

In this section, the electrical corporation provides an overview of vegetation management and inspections personnel. The electrical corporation:

List all worker titles relevant to vegetation management and inspections including, but not limited to, titles related to inspecting, auditing, and tree crews.

List and describe minimum qualifications for each worker title with an emphasis on qualifications relevant to vegetation management.

The electrical corporation notes if workers with title hold any certifications, such as being an International Society of Arboriculture Certified Arborist or a California-licensed Registered Professional Forester.

Table 9-9 presents PacifiCorp worker titles and associated minimum qualifications identified by PacifiCorp for internal utility forestry arborists and contracted target roles who conduct work vegetation inspections and oversee project work. “N/A” in the table indicates that the column is not applicate for the row, for example, “Utility Forestry Arborist I (PacifiCorp Forester)” is a PacifiCorp employee, therefore “# of Contracted Employees with Min Quals” it not applicable. “TBD” indicates that PacifiCorp does not have the information.

Table 9-9: Vegetation Management Qualifications and Training

Worker Title	Minimum Qualifications for Target Role	Applicable Certifications	# of PacifiCorp Employees with Min Quals	# of PacifiCorp Employees with Special Certifications	# of Contracted Employees with Min Quals	# of Contractor Employees with Applicable Certifications	Total # of Employees	Reference to PacifiCorp Training /Qualification Programs
Utility Forestry Arborist I (PacifiCorp Forester)	Degree in vegetation management, forestry or related field or the equivalent combination of education and experience	ISA Arborist ISA Utility Specialist	6	5	N/A	N/A	6	Vegetation SOP
Utility Forestry Arborist II (PacifiCorp Forester)	Degree in vegetation management, forestry or related field or the equivalent combination of education and experience (minimum three years related experience)	ISA Arborist ISA Utility Specialist	0	N/A	N/A	N/A	0	Vegetation SOP
Utility Forestry Arborist III (PacifiCorp Forester)	Degree in vegetation management, forestry or related field or the equivalent combination of education and experience (minimum three-five years related experience)	ISA Arborist ISA Utility Specialist	2	2	N/A	N/A	2	Vegetation SOP
Sr, Utility Forestry Arborist (PacifiCorp Forester)	Degree in vegetation management, forestry or related field or the equivalent combination of education and experience (minimum ten years related experience)	ISA Arborist ISA Utility Specialist	5	4	N/A	N/A	5	Vegetation SOP
Vegetation Manager (PacifiCorp Forester)	Degree in vegetation management, forestry or related field or the equivalent combination of education and experience (minimum seven years related experience and three years of supervisory role)	ISA Arborist ISA Utility Specialist	2	2	N/A	N/A	2	Vegetation SOP
Forest Technician I	Required to obtain ISA Arborist certification within six months	N/A	N/A	N/A	N/A	TBD	TBD	Vegetation SOP

Worker Title	Minimum Qualifications for Target Role	Applicable Certifications	# of PacifiCorp Employees with Min Quals	# of PacifiCorp Employees with Special Certifications	# of Contracted Employees with Min Quals	# of Contractor Employees with Applicable Certifications	Total # of Employees	Reference to PacifiCorp Training /Qualification Programs
Forest Technician II	Minimum two years of arboricultural-related experience or combination of education and practical experience	ISA Arborist	N/A	N/A	N/A	TBD	TBD	Vegetation SOP
Forest Technician III	Minimum three years arboricultural-related experience or combination of education and practical experience	ISA Arborist ISA Utility Specialist	N/A	N/A	N/A	TBD	TBD	Vegetation SOP
Forest Technician IV	Minimum three years arboricultural-related experience or combination of education and practical experience	ISA Arborist ISA Utility Specialist ISA Tree Risk Assessment Qualification Herbicide applicator license or similar	N/A	N/A	TBD	TBD	TBD	Vegetation SOP
Supervisors (e.g., General Foreperson)	Determined by Contractor	ISA Arborist ISA Utility Specialist Herbicide applicator license or similar	N/A	N/A	TBD	TBD	TBD	Vegetation SOP
Crew Leaders and Tree Trimmers	Determined by Contractor/Union	Qualified Line Clearance or Qualified Line Clearance Trainee	N/A	N/A	TBD	TBD	TBD	Vegetation SOP

9.13.1 Recruitment

In this section, the electrical corporation describes how it recruits vegetation management and inspections personnel, including any relevant partnerships with colleges or universities.

PacifiCorp recruits for internal vegetation management positions utilizing internal and external job boards including the Utility Arborist Association career page, to broaden reach and interest from prospective candidates. PacifiCorp currently does not implement any formal practice to recruit external vegetation management and inspections personnel and relies on the applicable contractors to employ recruitment tactics. PacifiCorp currently does not maintain partnerships with colleges or universities specific to vegetation management or inspections personnel.

9.13.2 Training and Retention

In this section, the electrical corporation describes how it trains its vegetation management and inspection personnel, including any requirements for continued/refresher education and programs to improve worker qualifications.

Tracking ID: VM-15

Regarding implementation of the vegetation management program activities, such as inspection and correction work, PacifiCorp relies on a contracted workforce. As such PacifiCorp relies on the applicable contractors to employ and maintain a trained workforce. PacifiCorp is not directly responsible for the training of the vegetation management workforce, who are employees of an independent contractor, however, does provide annual environmental awareness training and conducts audits, which may lead to discussions and opportunities for improvement. Contracted resources complete any training and meet qualifications set forth by the independent contractor and applicable union.

PacifiCorp requires that its internal utility forestry arborists be certified arborists and certified utility specialists by the International Society of Arboriculture (ISA). Internal utility foresters maintain certifications and credentials through completing continuing education units, training, and assessments as applicable. Continuing education units are provided by or reviewed and approved by the ISA.

To further identify opportunities for improvement, PacifiCorp will develop formal contractor inspector benchmarking processes to drive consistency among inspection contractors. This initiative is in Table 9-1.

10. Situational Awareness and Forecasting

Each electrical corporation's WMP must include plans for situational awareness

10.1 Targets

In this section, the electrical corporation must provide qualitative and quantitative targets for each year of the three-year WMP cycle. The electrical corporation must provide at least one qualitative and quantitative target for the following initiatives:

• Environmental Monitoring Systems (Section 10.2)

• Grid Monitoring Systems (Section 10.3)

• Ignition Detection Systems (Section 10.4)

• Weather Forecasting (Section 10.5)

• Weather Station Maintenance and Calibration (Section 10.5.5)

PacifiCorp uses a combination of tools, analysis, and maps layered with a risk driver analysis to inform strategic asset inspections, vegetation maintenance practices, and long-term system hardening solutions. However, as climate and weather patterns change, extreme weather events are predicted to become more frequent, and the potential exists for seasonal, dynamic, and/or isolated risk events to occur that compound or deviate from this baseline risk. Therefore, having an additional sophisticated, dynamic risk model grounded in situational awareness is pertinent to ensure electric utilities know when, where, how, and why to take enhanced action to mitigate the risk of wildfire.

PacifiCorp's approach to situational awareness, which includes the acquisition of data to forecast and assess the risk of potential or active events to inform operational strategies, response to local conditions, and decision making. These key components, which are outlined in the graphic below, are leveraged to inform risk-based system operations and work practices as discussed in the sections below in Figure PAC 10-1.

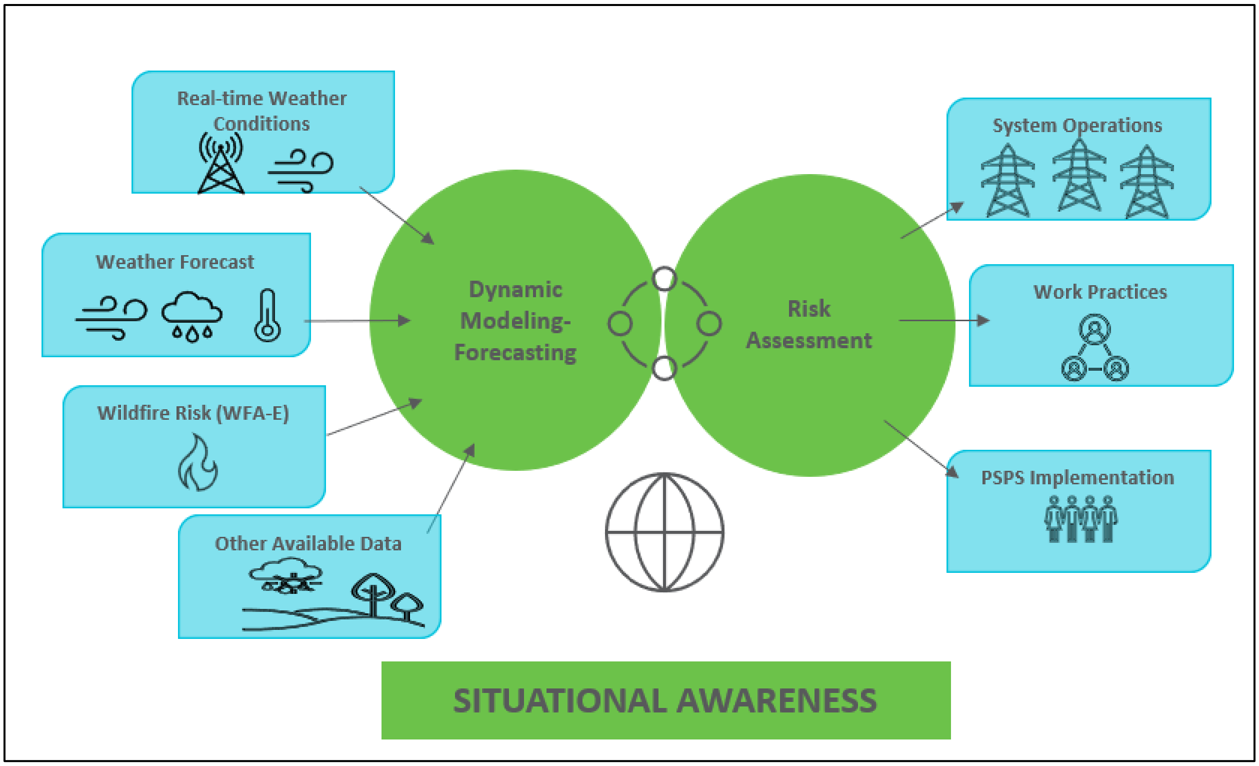


Figure PAC 10-1: Components of Situational Awareness

10.1.1 Qualitative Targets

The electrical corporation must provide qualitative targets for its three-year plan for implementing and improving its situational awareness and forecasting.

10.1.2 Quantitative Targets

The electrical corporation must list all quantitative targets it will use to track progress on its situational awareness and forecasting in its three-year plan, broken out by each year of the WMP cycle. Electrical corporations must show progress toward completing quantitative targets in subsequent reports, including data submissions and WMP Updates. For each target, the electrical corporation must provide the following:

• Identification of which initiative(s) and activity/activities in the WMP the electrical

corporation is implementing to achieve the stated target, including Tracking IDs and the Tracking ID(s) used in past WMPs ("Previous Tracking ID"), if applicable

• Projected targets and totals for each of the three years of the WMP cycle three-year total and the associated units for the targets

• The expected % risk reduction for each of the three years of the WMP cycle.

Table 10-1 below presents PacifiCorp's qualitative and quantitative situational awareness initiatives and targets for the 2026-2028 WMP cycle. Estimated risk reduction in Table 10-1 is TBD because PacifiCorp has not quantified risk reduction. As described in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction. Target Unit for qualitative initiatives are "N/A" as these initiatives do not have units. Initiatives SA-05: Implement WRF Ensemble Forecasting, SA-05: Climate Vulnerability Assessment, and SA-05: Machine Learning techniques of Normalized Differential Vegetation Index (NDVI) and Self Organizing Maps (SOMs) have "N/A" in 2027 and/or 2028 Total/Status as PacifiCorp expects the initiative to be completed. SA-02: Distribution Protective Settings Review has "TBD" targets for 2026-2028 as the project is assessing if and how many settings will be remaining to review at the end of 2025.

Table 10-1: Situational Awareness Targets by Year

Initiative	Quantitative or Qualitative Target	Activity (Tracking ID #)	Previous Tracking ID, if applicable	Target Unit	2026 End of Year Total/Completion Date	% Risk Reduction for 2026	2027 Total/Status	% Risk Reduction for 2027	2028 Total/Status	% Risk Reduction for 2028	Three-year Total	Section; Page number
Situational Awareness Tools and Models	Qualitative	SA-05	SA-05	N/A	-Extension of WRF Reanalysis -Annual updates to fuels models -Annual review of wildfire criteria	TBD	-Extension of WRF Reanalysis -Annual updates to fuels models -Annual review of wildfire criteria	TBD	-Extension of WRF Reanalysis -Annual updates to fuels models -Annual review of wildfire criteria	TBD	N/A	10.5.3 p. 367
Implement WRF Ensemble Forecasting	Qualitative	SA-05	SA-05	N/A	Implemented	TBD	N/A	TBD	N/A	TBD	N/A	10.5.3 p. 367
Climate Vulnerability Assessment	Qualitative	SA-05	N/A	N/A	Study Underway	TBD	Study Delivered	TBD	N/A	TBD	N/A	10.5.3 p. 368
Machine Learning techniques of Normalized Differential Vegetation Index (NDVI) and Self Organizing Maps (SOMs)	Qualitative	SA-05	N/A	N/A	NDVI Complete	TBD	SOMs Complete	TBD	N/A	TBD	N/A	10.5.3 p. 368
Fire Potential Index (FPI) Improvements	Qualitative	SA-06	SA-06	N/A	Annual evaluation of FPI performance and updates as needed	TBD	Annual evaluation of FPI performance and updates as needed	TBD	Annual evaluation of FPI performance and updates as needed	TBD	N/A	10.6.3 p. 377
Weather Station Maintenance and Calibration	Quantitative	MA-01	MA-01	Weather Station Fleet	100%	TBD	100%	TBD	100%	TBD	100%	10.5.5 p. 370-371
Expansion of Weather Station Network	Quantitative	SA-01	SA-01	Weather Stations	5	TBD	4	TBD	0	TBD	9	10.2.3 p. 329-331
Installation of cFCI	Quantitative	SA-02	N/A	Devices	30	TBD	30	TBD	30	TBD	90	10.3.3 p. 342
Installation of SCAN	Quantitative	SA-02	N/A	Locations	20	TBD	20	TBD	0	TBD	40	10.3.3 p. 342
Distribution Protective Settings Review	Quantitative	SA-02	N/A	N/A	TBD	TBD	TBD	TBD	TBD	TBD	N/A	10.3.3 p. 343
Installation of Advanced AMI Meters	Quantitative	SA-02	N/A	Meters	5,000	TBD	1,000	TBD	1,000	TBD	7,000	10.3.3 p. 343

10.2 Environmental Monitoring Systems

The electrical corporation must describe its systems and procedures for monitoring environmental conditions within its service territory. These observations should inform the electrical corporation's near-real-time risk assessment and weather forecast validation. The electrical corporation must document the following:

- Existing systems, technologies, and procedures
- How the need for additional systems is evaluated
- Implementation schedule for any planned additional systems
- How the efficacy of systems for reducing risk are monitored

The electrical corporation must reference the Tracking ID where appropriate.

10.2.1 Existing Systems, Technologies, and Procedures

The electrical corporation must report on the environmental monitoring systems and related technologies and procedures currently in use, highlighting any improvements made since the last WMP submission.

In Table 10-2 below are the environmental monitoring systems PacifiCorp uses.

Table 10-2: Environmental Monitoring Systems

System	Measurement/ Observation	Frequency	Purpose and Integration
Microstation	Temperature, Humidity, Wind Speed & Gust, Wind Direction, Rainfall	10 min	Improve weather modeling and forecasts, improve real time weather data, and inform operational decisions.

RAWS Weather Station	Temperature, Humidity, Wind Speed & Gust, Wind Direction, Rainfall, and 10-hour Dead Fuel Moisture	10 min	Improve understanding of fuel moisture near infrastructure, weather forecasts and real time situational awareness in remote locations
Portable Stations	Temperature, Humidity, Wind Speed & Gust, Wind Direction, Rainfall	5 min	Deployed as needed in areas where additional weather data is necessary to temporarily increase weather data granularity for situational awareness.

Tracking ID: SA-01

PacifiCorp owns and operates a network of weather stations, most of which provide ten-minute observations of temperature, humidity, wind speed, wind direction, wind gusts and accumulated rainfall. All weather stations are calibrated and receive maintenance, if necessary, annually to ensure the accuracy and reliability of the data. There are three different types of weather stations used throughout the territory: MicroStations, remote automated weather station (RAWS), and portable stations. The MicroStation's are weather are stations installed directly on the utility infrastructure, distribution, or transmission poles, and are the most common type of weather station used in the weather station network. In addition to raw weather variable observations, Microstations calculate other variables such as dew point and vapor pressure deficit, which are both functions of temperature and relative humidity. The RAWS are able to be installed in remote locations on a tri-pod structure and collect fuel moisture data, in addition to the same weather parameters as the Microstations. The portable weather stations are readily available for deployment in the event of extreme weather conditions or may be deployed as temporary data points at high-priority locations where future Microstations are scheduled to be installed to provide better granularity to the weather data collected. Portable weather stations collect data at five minute intervals and are also sent to the vendor annually for calibrations and maintenance.

The weather stations are installed in locations prioritized by inherent wildfire risk. The areas are mainly but not limited to the HFRA and HFTD. Each circuit is analyzed for wildfire risk and the climatology differences in the region generally dictates how many weather stations are needed. The stations are placed in areas of the line where an adequate site is available for installation at a location where the most extreme weather conditions would generally be expected and/or near locations that can be sectionalized in the event the information is needed to inform operational decisions.

Figure PAC 10-2 below shows the location of the fixed location weather stations.

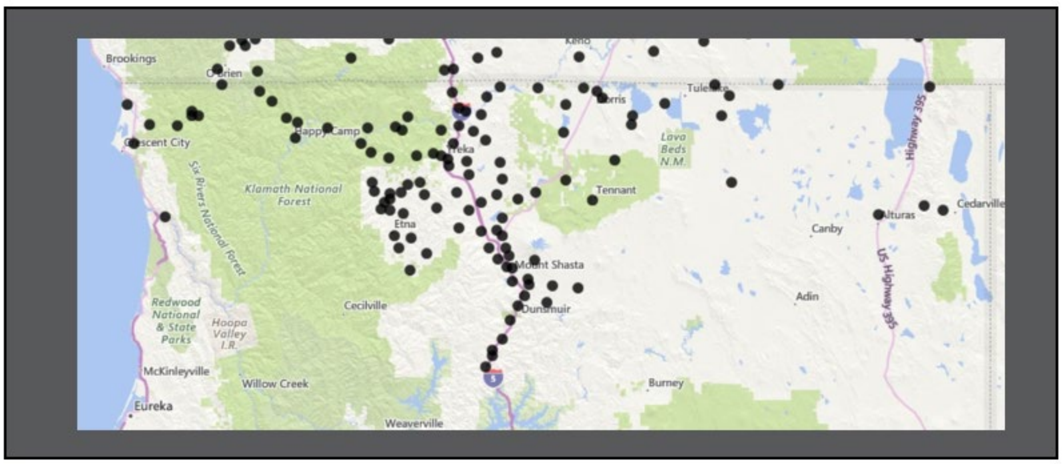


Figure PAC 10-2: Location of Fixed Location Weather Stations

10.2.2 Evaluation and Selection of New Systems

The electrical corporation must describe how it evaluates the need for additional environmental monitoring systems. This description must include:

• How the electrical corporation evaluates the impact of new systems on reducing risk (e.g., expected quantitative improvement in weather forecasting)

• How the electrical corporation evaluates the efficacy of new technologies

PacifiCorp currently operates both MicroStation's and RAWS weather stations as described above. While the company is open to new technologies, at this time, no other environmental monitoring systems are being considered at this time. Generally, when deciding on new technologies, the collected data and limits of the sensors are evaluated along with installation and maintenance criteria. The data collected must also integrate with existing systems and offer something unique that is not accomplished with the existing weather station equipment.

10.2.3 Planned Improvements

The electrical corporation must describe its planned improvements for its environmental monitoring systems.

The weather station network has been built following a methodology to assess risk, climatology data, and the best location for placement. The intent of weather station placement is to provide reliable and accurate data to support better forecasting and to inform real time situational awareness and decision-making during adverse fire weather conditions. Figure PAC 10-3 below shows considerations in placing weather stations.

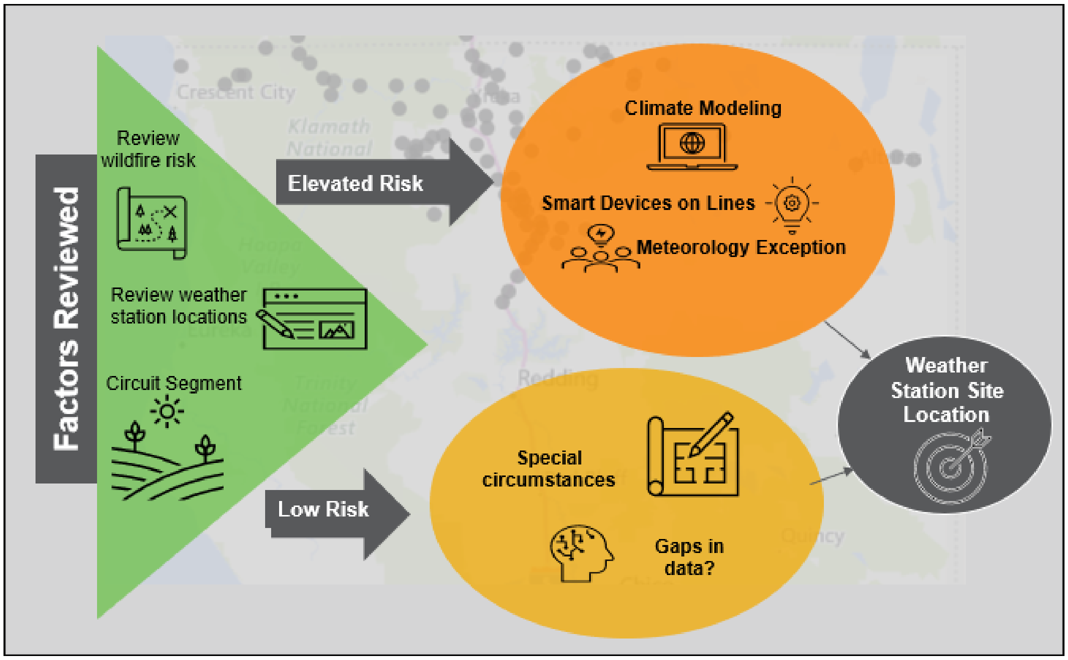


Figure PAC 10-3: Considerations in Weather Station Placement

When analyzing the weather station data collected during critical fire weather events, it has been shown necessary to have a utility-owned weather station network to support real-time decision making versus relying solely on publicly available data. PacifiCorp weather stations are installed directly on company equipment to fill critical gaps in existing observation networks and to ensure that the data reported is representative of the weather impacting company facilities. This is in contrast to other publicly available weather stations that may report conditions that are not representative of our facilities due to their distance from our facilities or other factors. Additionally, PacifiCorp weather stations report every ten minutes, and up to every 30 seconds during emergency operations, whereas other public weather stations may only report once per hour. Lastly, PacifiCorp has complete control and knowledge of the network calibration and maintenance to ensure that the weather data used to support operational decision making is of the highest quality.

The example in Figure PAC 10-4 below from the September 10, 2022 PSPS event in Oregon highlights how PacifiCorp's weather stations will cover critical gaps and capture localized strong wind conditions that would otherwise go undetected using the existing non-utility weather station networks.

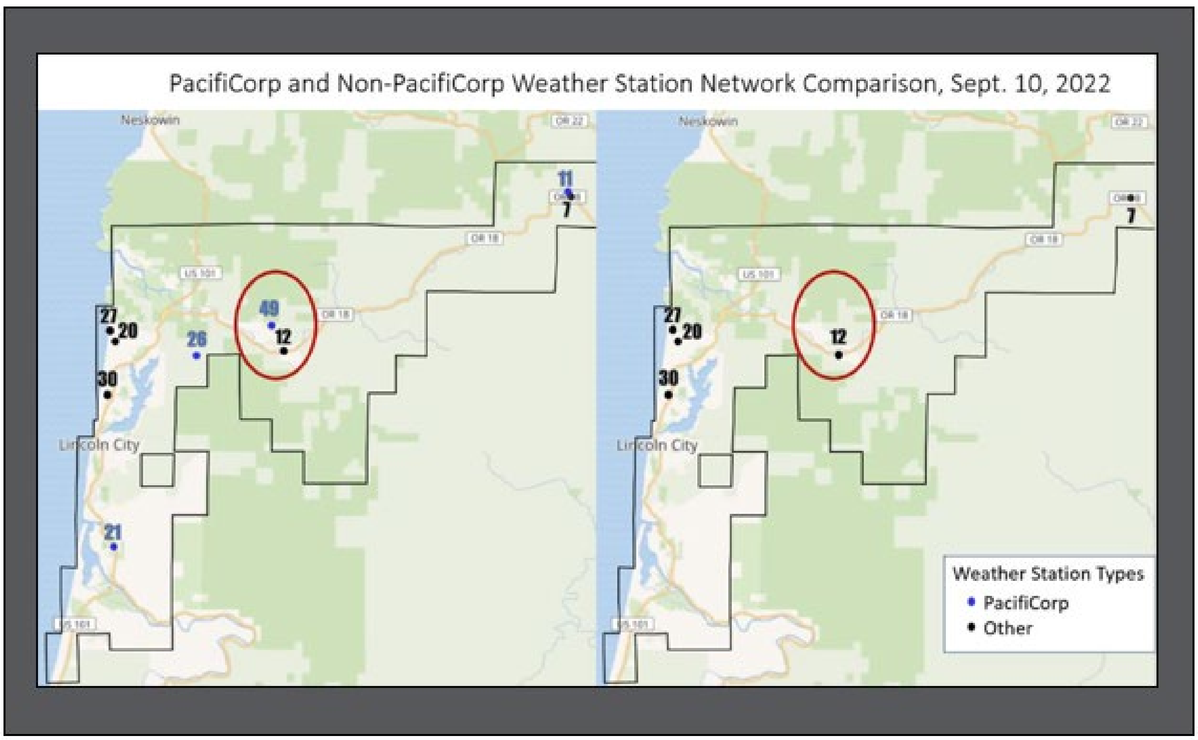


Figure PAC 10-4 Weather Station Report from September 10, 2022 PSPS Event in Oregon

10.2.4 Evaluating Activities

The electrical corporation must describe its procedures for the ongoing evaluation of the efficacy of its environmental monitoring activity (program).

PacifiCorp evaluates weather station coverage of both its own weather stations as well as publicly available weather data from other organizations and the type of data it provides particularly the frequency of data. PacifiCorp maps the location of its weather stations to the proximity of its zones of protection (ZOP)s to ensure that the ZOPs are within 1-5 radial miles of a weather station. PacifiCorp's planned weather installations are to fill in the gaps where there are no weather stations within 1-5 radial miles of a ZOP. Figure PAC 10-5 illustrates this approach. The circuit colors indicate the proximity of ZOPs to a PacifiCorp weather station. The black dots are the installed weather stations, and the red dots are the planned weather stations. The locations of the planned weather stations are where the ZOPs are not within 1-5 radial miles of a currently installed weather station.

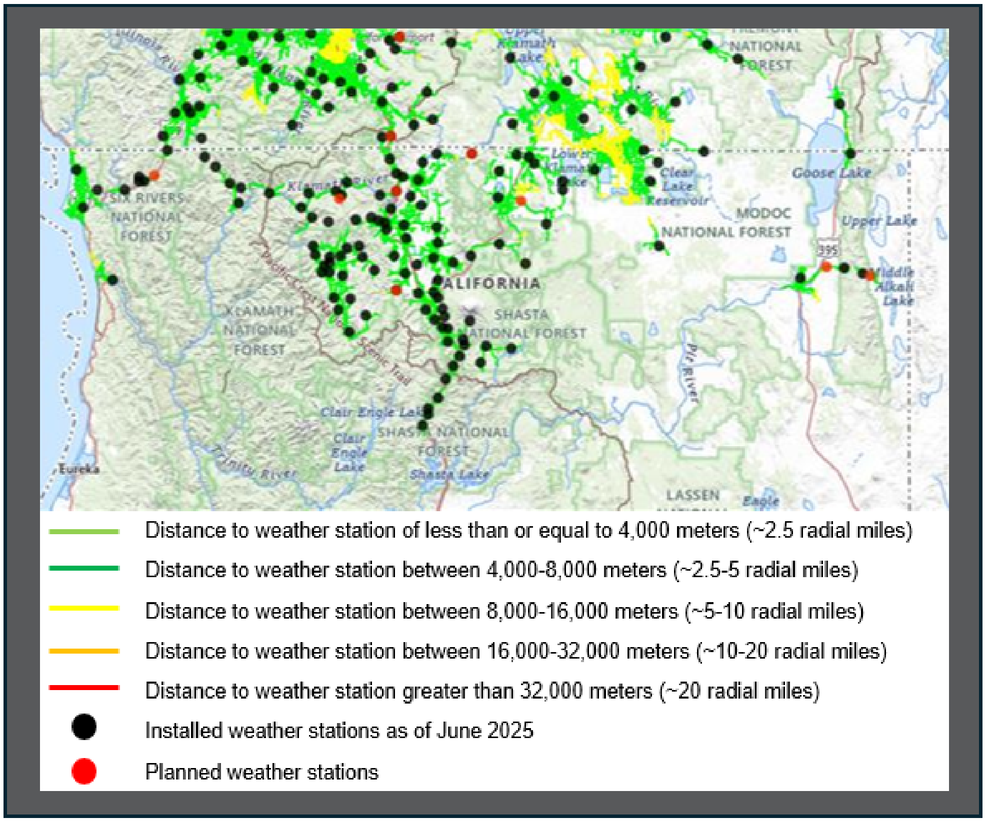


Figure PAC 10-5: Proximity of PacifiCorp Circuits to Weather Stations

10.3 Grid Monitoring Systems

The electrical corporation must describe its systems and procedures used to monitor the operational conditions of its equipment. These observations should inform the electrical corporation's near-real-time risk assessment.

10.3.1 Existing Systems, Technologies, and Procedures

The electrical corporation must report on the grid system monitoring systems and related technologies and procedures currently in use, highlighting any improvements made since the last

WMP submission. At a minimum, the electrical corporation must discuss systems, technologies, and procedures related to the detection of:

- Faults (e.g., fault anticipators, rapid earth fault current limiters, etc.)
- Failures
- Recloser operations

Table 10-3 below shows PacifiCorp's grid operation monitoring systems.

Table 10-3: Grid Operation Monitoring Systems

System	Measurement/ Observation	Frequency	Purpose and Integration
Line Sensors: cFCI Distribution (≤35kV)	Current, eField, Conductor Temperature / Fault current magnitude, Oscillography	Fault current magnitudes captured and oscillography by condition based thresholds. 5-min to hourly interval logging current, eField and conductor temperature parameters.	Fault locating/restoration and precursors support zone based patrol and predictive location modeling with short circuit analysis. Interval data: supports load flow engineering studies. Integrations: EMS/SCADA, Pi Historians, Web dashboard
Line Sensor: Early Fault Detection	Partial discharge, time-synchronized high frequency RF emissions (nano-joules), coupled to transmission lines / RF source location/distance from measurement point and intensity	Once per-second	Detection of localized defects in overhead insulators and conductors, baselining line characteristics and change detection. Integrations: Web dashboard and email alerts.

System	Measurement/ Observation	Frequency	Purpose and Integration
Line Sensor: Gridware	Vibration, eField, acoustics, optical camera / Structure failure, tree impact, voltage presence, visual field conditions	Event occurrence: impact to line, structure failure, loss of voltage	Integrations: Web dashboard, email alerts, phone-calls to control center.
Circuit Breaker/Recloser Monitoring: SCAN	Current, Voltage / Relay fault current magnitudes, breaker operation, event based COMTRADE files, and sequence of event records	Fault current magnitudes and event reported upon occurrence. Continuous retrieval of sequence of event records.	Fault locating/restoration and precursors: predictive location modeling with short circuit analysis. Analysis of protective device coordination and event pre-cursers Integrations: EMS/SCADA, Pi Historians Web dashboard
Circuit Breaker/Recloser Monitoring: DFA	Current, Voltage / Oscillography, fault current magnitudes, breaker operation, series/shunt arcing events	Fault current magnitudes and event reported upon occurrence	Fault locating/restoration and precursors: predictive location modeling with short circuit analysis. Analysis of protective device coordination and event pre-cursers Integrations: Web dashboard and email alerts.

Tracking ID: GO-01

Line Sensors: cFCI Distribution (≤35kV)

The company operates a fleet of 480 distribution communicating faulted circuit indicators (cFCI) at 195 sites in the State of California. The cFCIs are conductor mounted sensors with embedded communications modules that monitor conductor current, electric field intensity and alarm on the detection of fault currents and loss of electric field associated system outages.

Integrations with the broader company's system are depicted in Figure PAC 10-6, the sensor management platform facilitates device configuration, status monitoring, archival of interval time-series data, and fault event classification and reporting corporate and control center users. Corporate access enables engineers and operations personnel to retrieve fault targets, oscillography, sequence-of-event data and subscribe to email alerts based on districts and circuits of interest. Control center integrations include device status and alarming of fault events, root mean square (RMS) current fault targets in energy management system (EMS) and distribution management system (DMS) applications.

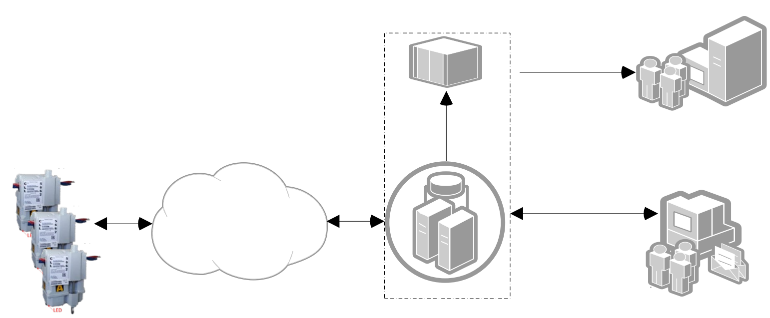


Figure PAC 10-6: Distribution cFCI Systems Integration

cFCI sensor fault event triggers are used in zone based fault locating, RMS current fault targets and oscillography records are used in fault locating with short-circuit analysis and assessment of protective device coordination.

Tracking ID: SA-02

Line Sensor: Early Fault Detection (EFD):

In the fall of 2024, the company completed the installation of 19 of 20 planned Early Fault Detection (EFD) sensors, monitoring approximately 60-circuit miles of 69kV sub-transmission between the Cave Junction Substation in Oregon and the Happy Camp, Seiad, Hamburg and Scott Bar Substations in California. One additional sensor (Site #15) is planned to be installed near Scott Bar substation during a scheduled outage in 2025. EFD sensor locations, transmission line route and fire threat districts are shown in Figure PAC 10-7 below.

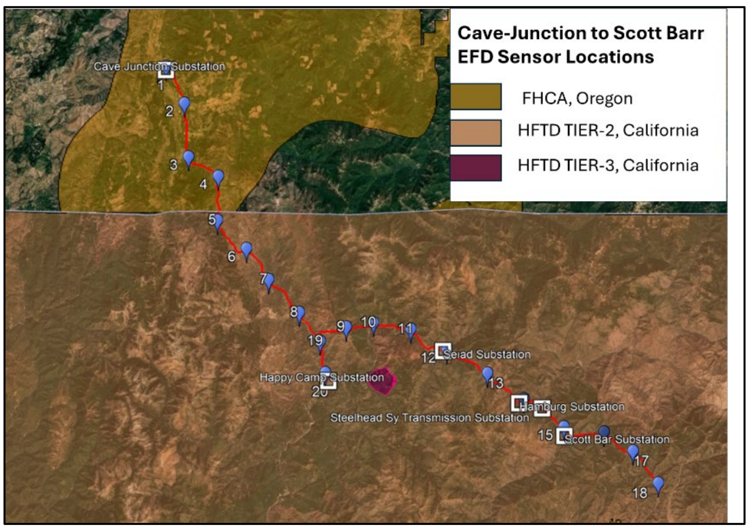


Figure PAC 10-7: EFD Sensor Locations and Line Route

The EFD sensor fleet detects high frequency radio frequency (RF) emissions coupled to transmission lines, RF source locations are calculated as a distance from measurement points using precise global positioning system (GPS) timing and potential correlations with company assets are assessed by analysis of RF pulse intensity and patterns of occurrence. In the frequency spectrum monitored RF sources correlated to electrical equipment may be indicative of partial discharge activity related to localized breakdown of insulators or other electrical equipment. Early detection, inspection, and corrective measures taken at these locations have the potential to prevent faults and associated ignition risks. PacifiCorp is in the process of baselining information from the EFD system and developing systems and procedures for data analysis and field inspections. Data and alerts from the platform are monitored by engineers with high-detection sites flagged for off-cycle inspection.

Example data from the EFD platform is shown in Figure PAC 10-8, the cluster chart depicts cumulative PD pulse-count and relative energy vs. the distance detected between two EFD sites #13 and #14, with a predicted electrical defect near transmission pole #10/16.

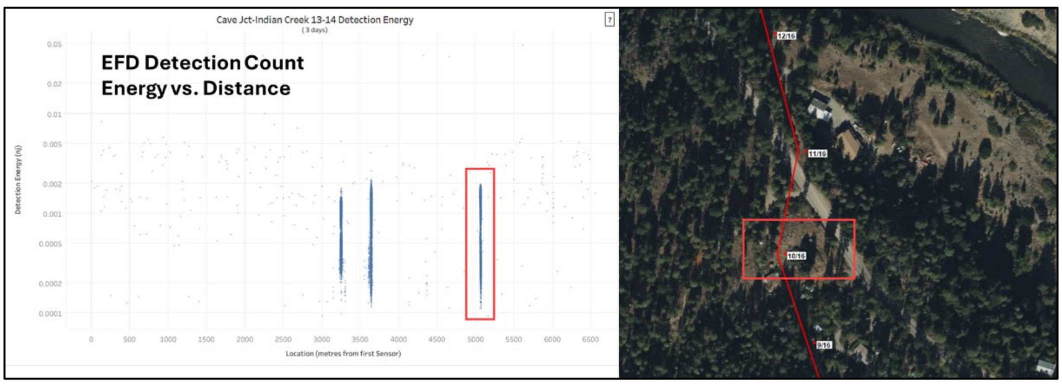


Figure PAC 10-8: EFD Web Portal Example Data

Tracking ID: SA-02

Circuit Breaker/Recloser Monitoring: SCAN

PacifiCorp's substation control advanced network (SCAN) automatically retrieves and archives enriched event data from protective relays. The data collected includes sequence of event (SOE) logs and COMTRADE event files associated with breaker operations, overcurrent faults and high-impedance faults. Files and logs collected by the system are generally available to control center engineers within a few minutes of an event occurring enabling in-depth analysis including classification of fault types, fault magnitudes, probable locations determined through analysis with impedance models. The data can also be used to assess performance of protective settings and provide early indication of high-impedance fault.

The company currently has nine protective relays connected to the SCAN system in California.

Tracking ID: GO-01

Distribution Protective Settings Review

In 2025, PacifiCorp began a Distribution Protective Settings Review to update protection devices where implementation of settings did not occur at the time of installation.

Part of improving the grid involves replacing old electromechanical protection devices, like reclosers and relays, with new microprocessor-based ones. Protection device installation programs follow the high level process in Figure PAC 10-9 below.

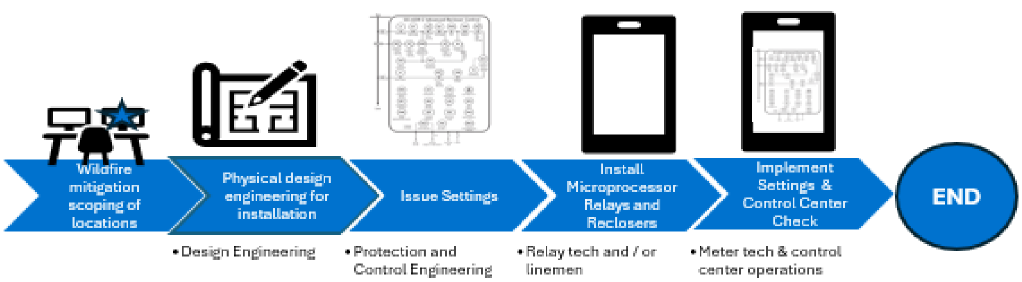


Figure PAC 10-9: Protection Device Installation Process

While every effort is made to take advantage of new technology and implement a variety of wildfire mitigation protection settings that reduced arc-energy release compared to traditional protective settings. There will be circumstances where "tagged mode" or "non-reclose mode" capability will be the only mode available on certain protection devices, as the network priority for installation of devices and mode is prioritized.

Tagged mode provides fast tripping capability without "reclosing." Implementing Elevated Fire Risk (EFR), ESS mode, compared to Tagged mode has the potential to reduce the likelihood of temporary faults becoming a sustained outage and reducing outage duration as indicated by the following data. The current sampling of outage data supports and indicates circuit breakers and reclosers placed in Tagged position has a frequency of 0.12 outages per day whereas EFR, for its ESS mode, has a frequency of 0.06 outages per day during ESS activation. This is a 50% reduction in sustained outage frequency when using EFR versus Tagged. The initiative reviewed the settings previously issued for the devices that are in scope and after the settings are reviewed, ensured they are re-issued and installed to the current standard.

Tracking ID: SA-02

Discontinued Pilot: Circuit Breaker/Recloser Monitoring: DFA

The company has distribution fault anticipators (DFA) monitors installed on two circuits feeding out of the Weed Substation in California. The DFA devices continuously monitor, classify and alert when high or low current fault conditions are measured. The alerts preemptively identify equipment along distribution circuits that could cause an outage. Data from the DFA platform is monitored through a vendor managed web interface with event based alerts available by email to subscribed engineers.

Discussion of this discontinued initiative is in Section 13.3.

10.3.2 Evaluation and Selection of New Systems

The electrical corporation must describe how it evaluates the need for additional grid operation monitoring systems

As part of wildfire mitigation efforts, grid monitoring technologies are systematically assessed to enhance situational awareness, detect faults, and reduce ignition risks. Various grid monitoring technologies, including advanced sensors, distributed fault detection systems, and remote sensing tools, are reviewed to determine their effectiveness. Factors such as accuracy, reliability, feasibility of deployment, integration capabilities, and cost-efficiency are considered during the selection process.

Before full-scale implementation, selected technologies are tested in piloted to evaluate their performance under different environmental conditions. Data gathered from these pilot programs inform decisions regarding broader deployment strategies. Efforts are made to ensure that new monitoring systems are compatible with existing grid infrastructure, including Supervisory Control and Data Acquisition (SCADA) systems and wildfire risk modeling tools.

10.3.3 Planned Improvements

The electrical corporation must describe its planned improvements in its grid operation monitoring systems

Table PAC 10-1 below summarizes the planned grid monitoring improvements during the 2026-2028 WMP Cycle. These initiatives are also in Table 10-1 above. The estimated risk reduction in Table PAC 10-1 is TBD because PacifiCorp has not quantified risk reduction. As described in Section 6.2 PacifiCorp is developing a framework to quantify the estimated and observed or measured effectiveness of wildfire risk mitigation activities to incorporate into an analysis of achieved and forecasted risk reduction. The company expects to complete this work in 2025 for use beginning in 2026.

Table PAC 10-1: Planned Grid Monitoring System Improvements

System	Description	Impact	%Risk Impact Implementation Schedule	Implementation Schedule
Line Sensors: cFCI Distribution (≤35kV)	Installation of line sensors capable of detecting and reporting overcurrent events and faults in HFTD.	Early detection and localization of overcurrent events enables proactive corrective actions to be taken; if a fault occurs localization improve response time	TBD	Install an average of nine to 15 line sensors on HFTD circuits.
Circuit Breaker/Recloser Monitoring/Control: SCAN	Installation of communications network infrastructure and operational technology enabling retrieval of relay event files and control of operation state	Control of operational state enables activation of fast-acting overcurrent protection and high-impedance fault detection algorithms. Event files enable root cause analysis, evaluation of protection system effectiveness, and identifying opportunities for improvement.	TBD	Installation to communications infrastructure at up to 30 field recloser locations in 2026 and 2027
AMI: Advanced Bellwether Meters	Installation of advanced AMI meters at bellwether location to facilitate detection of broken energized downed conductors and localization of high-impedance faults	Early detection and localization of voltage abnormalities on distribution networks. Algorithmic processing of alarms with physics-based models enables event detection; correlations with high-impedance alarms from protective relays enhances localization.	TBD	Installation of up to 5,000 bellweather meters in 2026

System	Description	Impact	%Risk Impact Implementation Schedule	Implementation Schedule
Distribution Protective Settings Review	Update protection devices where implementation of settings did not occur at the time of installation	Reduction in sustained outage frequency when using EFR versus Tagged. The initiative reviewed the settings previously issued for the devices that are in scope and after the settings are reviewed, ensured they are re-issued and installed to the current standard.	TBD	Updates completed by end of 2026
Distributed Sensor Operation Insights and Analytics	Development of a platform integrating event records from protective relays, distribution cFCI sensors, and other grid-edge devices.;	Enables improved situational awareness, detection and localization of energized downed conductors, impending faults, high-impedance fault precursors and quantitative assessment protection settings performance.	TBD	2026: Anticipated Production Release 2027: Ongoing Implementation 2028: Maintenance

10.3.4 Evaluating Activities

The electrical corporation must describe its procedures for the ongoing evaluation of the efficacy of its grid operation monitoring activity (program).

The evaluation of initiative activities related to grid monitoring technologies is conducted to assess their effectiveness in enhancing wildfire mitigation efforts. A structured approach is followed to ensure that deployed technologies are meeting performance expectations and contributing to grid resiliency.

Data collected from monitoring technologies is analyzed to determine their accuracy in detecting faults, identifying anomalies, and supporting proactive grid management. Insights gained from performance reviews and stakeholder feedback are used to refine implementation strategies and enhance system capabilities. Advanced analytics and predictive modeling tools are being developed to optimize the deployment and effectiveness of monitoring technologies.

10.4 Ignition Detection Systems

The electrical corporation must describe its systems, technologies, and procedures used to detect ignitions within its service territory and gauge ignition size and growth rates

10.4.1 Existing Ignition Detection Sensors and Systems

The electrical corporation must report on the sensors and systems, technologies, and procedures for ignition detection that are currently in use, highlighting any improvements made since the last WMP submission.

Table 10-4 below summarizes PacifiCorp's current fire detection systems, which are described in detail below the table.

Table 10-4: Fire Detection Systems Currently Deployed

Detection System	Capabilities	Companion Technologies	Contribution to Fire Detection and Confirmation
High-Definition Cameras	AI software 24/7 to support early detection of ignitions	Satellite Imagery Weather Station Data Fire Modeling Software	Supports wildfire-reactive responses to ignition
Fire Modeling Software	1-126 hour forecast of the wildfire potential and consequence if there is a wildfire	Weather Research and Forecasting (WRF)	Provides identification of areas that may require additional monitoring due to conditions

Tracking ID: SA-04

High-Definition Cameras

With the implementation of advanced wildfire detection technologies, PacifiCorp recognizes that it can respond quickly to support wildfire- reactive responses to ignition. Minutes can mean everything in terms of whether a fire becomes catastrophic. The placement of wildfire cameras to enhance situational awareness, as well as implementation of fire modeling software solutions, particularly those that have AI/ machine learning capabilities, have the potential to:

- Speed up fire detection time, resulting in a reduction of destruction (environment, property)
- Provide PacifiCorp emergency management and first responders with another set of tools to monitor fire progression and coordinate response efforts that may include field response, evacuations, PSPS, and property protection

PacifiCorp has experience with high-definition cameras in the company's Utah service territory. Additionally, PacifiCorp partnered with forest agencies in Oregon to mount cameras on utility infrastructure. In 2023, PacifiCorp installed two high-definition (HD) camera systems in the company's California service territory and in 2024 installed an additional six HD camera systems in the company's California service territory.

The camera systems include two HD, pan-tilt-zoom (PTZ) cameras, one of which will operate in "sentry" mode and continuously rotate 360 degrees. PacifiCorp placed the camera systems in areas that offer a 360 degree viewshed, except where it is impossible due to viewshed limitations. It is also expected that all cameras will run artificial intelligence (AI) software 24/7 to support early detection of ignitions. All camera systems and the AI software are capable of near-infrared and nighttime detection.

PacifiCorp installed eight high-definition (HD) cameras in the locations shown below in Figure PAC 10-10:

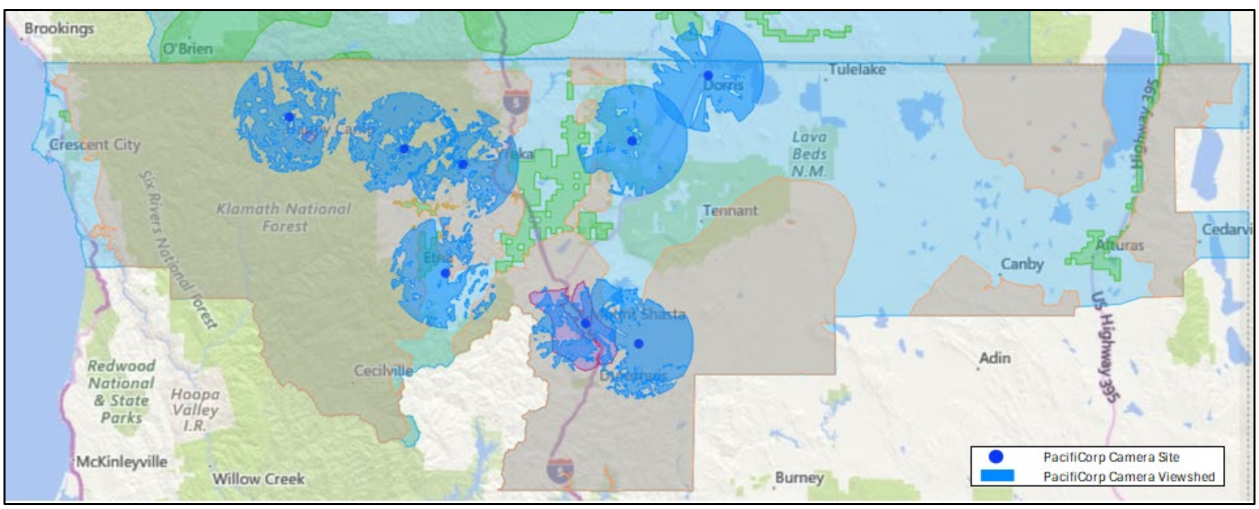


Figure PAC 10-10: High-Definition Camera Installation Locations

Camera feeds are transferred to the cloud via a secure, redundant network architecture intended to ensure maximum network availability for camera data transfer. Camera data is also constantly fed to the AI model for training purposes. For instance, when the AI model detects smoke, it is sent to a human monitor for validation. If the monitor determines that the detection is a true positive, the image is sent to a web dashboard, and an alert is issued via email and short message service (SMS). If the human monitor determines that the detection is a false positive, then the image is sent to the AI model for training. A high-level diagram of the flow of data into the AI model is shown in Figure PAC 10-11 below:

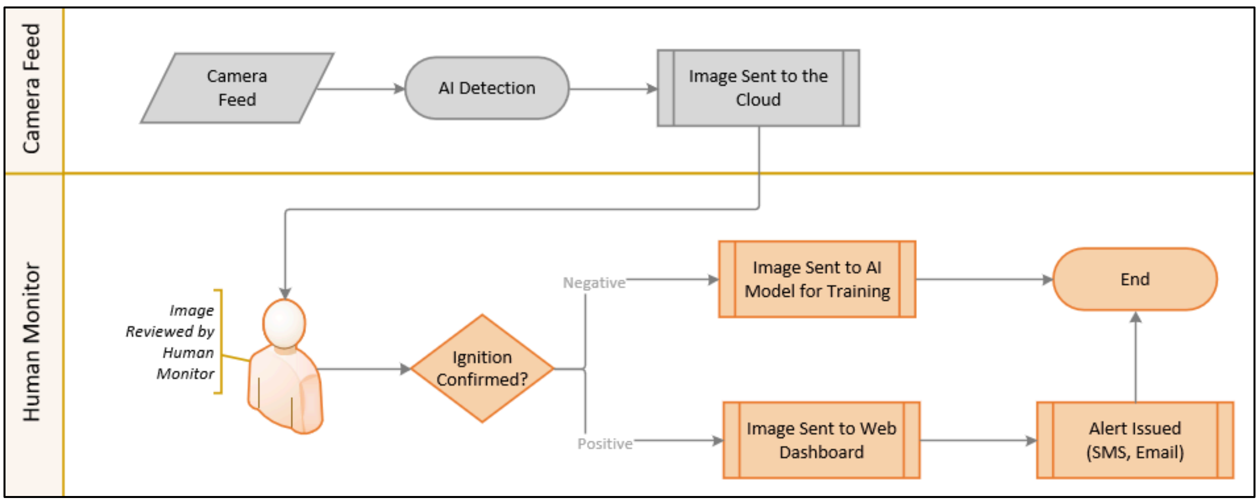


Figure PAC 10-11: Camera Data Flow Diagram

Tracking ID: SA-05

Wildfire Analyst Enterprise

Wildfire Analyst Enterprise (WFA-E) includes two fire models, FireRisk and FireSim. These models are used to inform current and near-term weather forecasts and to better understand the impacts of potential ignition(s). FireRisk performs millions of wildfire simulations daily across the company's six-state service territory to assess the energy release risk in any given area. This output is joined with a subset of distribution and transmission asset data to provide asset-specific wildfire risk and consequence forecasts. FireRisk provides a 126-hour look ahead to discern if there is a risk of wildfire within that period, where the risk is and where the greatest consequence is if there is a wildfire. FireRisk also allows for comparison of forecast conditions to historical conditions in the operational area.

FireSim, also part of the WFA-E solution, is a simulation that can be run to forecast the potential fire behavior and spread from as little as one hour to up to a 126-hour period to assess the potential impact on populations, buildings, utility assets and other resources in the field. FireSim's model assumes no suppression efforts to slow the fire's spread and considers the following elements.

- **Initial Attack Assessment**. Assessment of how difficult initial attack will be for first responders and the probability of stopping the fire within the first operating period.
- **Population at Risk.** Number of people in the path of the fire and the estimated timing of when the fire is likely to arrive at populations.
- **Assets at Risk.** Physical assets such as utility equipment, residential and commercial structures, barns, outbuildings etc. and the timing of when the fire is likely to arrive at assets.
- **Places at Risk.** These are locations identified on the maps that may not be physical assets but have other significance. These could include parks, reservoirs, cultural sites, campgrounds, etc. These locations are default locations from Google Earth Studio.
- **Weather and fuels conditions.** Wind speed, direction, fuel moisture content.

Figure PAC 10-12 below is an example of an output from FireSim of Mount Shasta, from September 10, 2022.

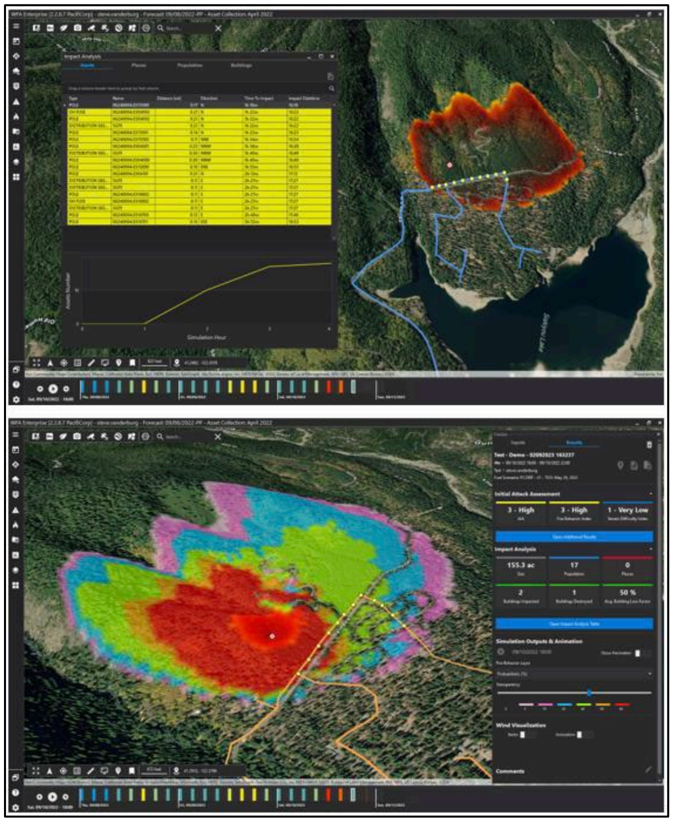


Figure PAC 10-12: Example of a FireSim Output, Mt. Shasta, California

FireRisk can be used to provide a 126-hour forecast at intervals of energy release risk at a macro level (service territory and operating area) or a micro level (lines, circuits) to provide the following:

- The potential for a fire given fuel, weather, and other conditions
- Fire characteristics or, rather, a simulation of how a fire would behave if there was an ignition.
- This would include, for instance, forecasted rate of spread, size, and flame length, population threatened and impact to assets (e.g., identification of buildings that would be threatened if a fire were to start).

These outputs are assigned a score as a raw value and then ranked in percentiles for risk. The percentiles can be compared to the scores of the historical fire weather days. Figure PAC 10-13 below is an example of a FireRisk output of Mount Shasta, also dated September 10, 2022.

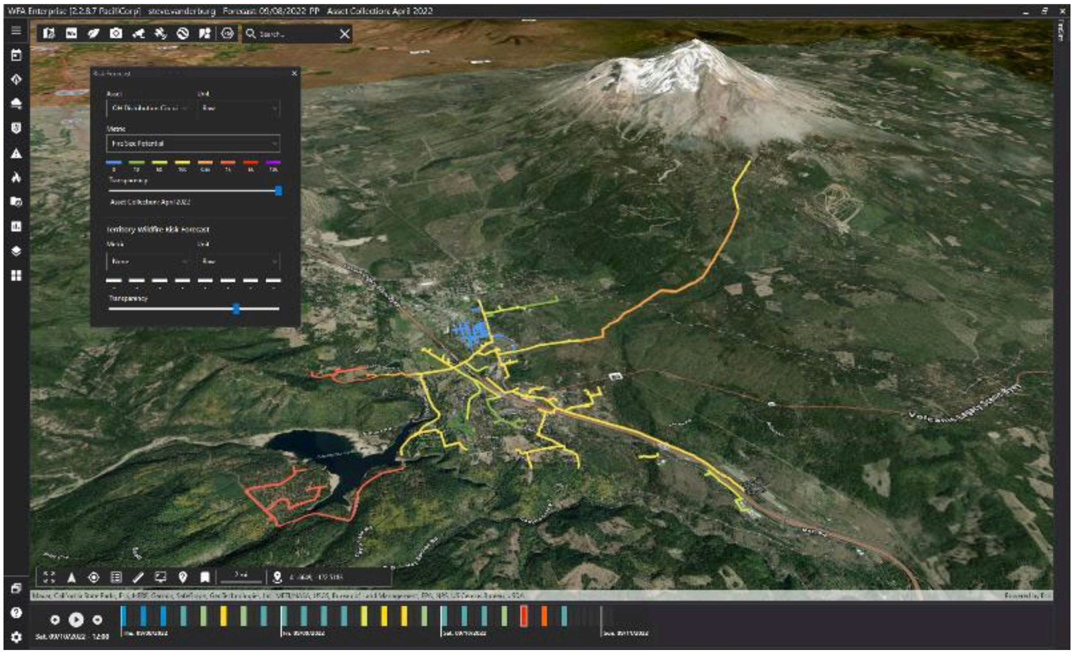
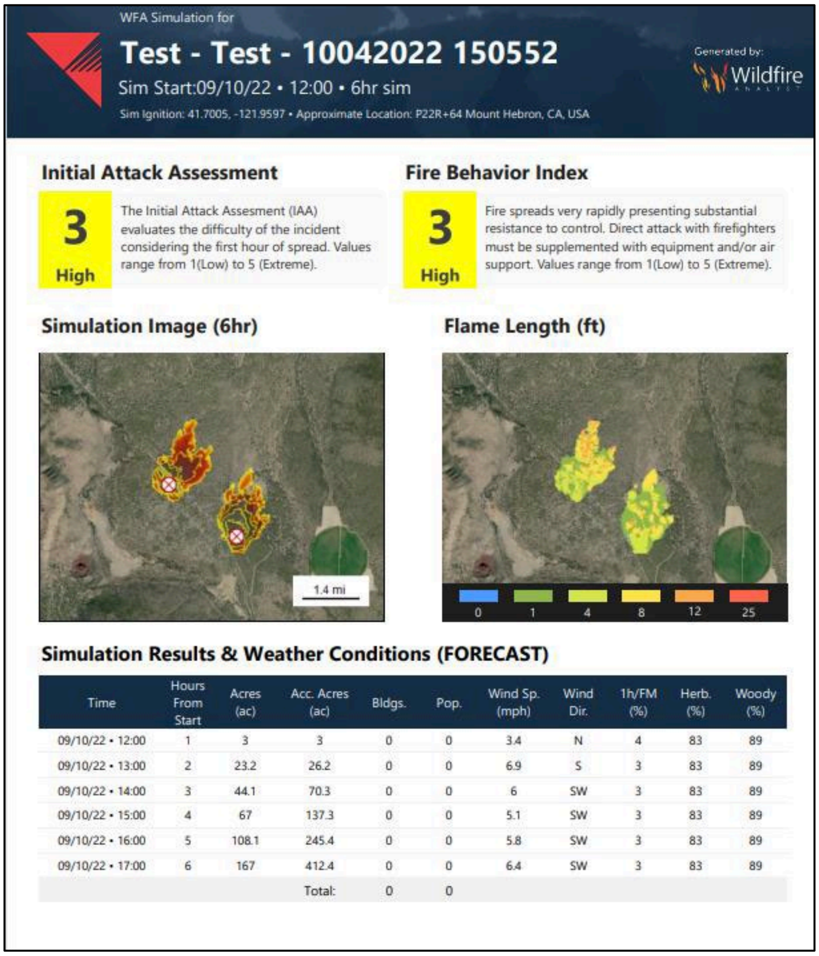


Figure PAC 10-13: Example of FireRisk Output, Mt. Shasta, California

FireSim models the following elements across time to provide risk scores and forecast of the fire growth and timing of arrival at buildings or populations, the results are presented in a Wildfire Spread Prediction Report. Figure PAC 10-14 below shows a summary page example.



WFA Simulation for

Test - Test - 10042022 150552

Sim Start:09/10/22 • 12:00 • 6hr sim

Sim Ignition: 41.7005, -121.9597 • Approximate Location: P22R+64 Mount Hebron, CA, USA

Generated by: Wildfire Analyst

Initial Attack Assessment

3 High

The Initial Attack Assesment (IAA) evaluates the difficulty of the incident considering the first hour of spread. Values range from 1(Low) to 5 (Extreme).

Fire Behavior Index

3 High

Fire spreads very rapidly presenting substantial resistance to control. Direct attack with firefighters must be supplemented with equipment and/or air support. Values range from 1(Low) to 5 (Extreme).

Simulation Image (6hr)

Flame Length (ft)

Simulation Results & Weather Conditions (FORECAST)

Time	Hours From Start	Acres (ac)	Acc. Acres (ac)	Bldgs.	Pop.	Wind Sp. (mph)	Wind Dir.	1h/FM (%)	Herb. (%)	Woody (%)
09/10/22 • 12:00	1	3	3	0	0	3.4	N	4	83	89
09/10/22 • 13:00	2	23.2	26.2	0	0	6.9	S	3	83	89
09/10/22 • 14:00	3	44.1	70.3	0	0	6	SW	3	83	89
09/10/22 • 15:00	4	67	137.3	0	0	5.1	SW	3	83	89
09/10/22 • 16:00	5	108.1	245.4	0	0	5.8	SW	3	83	89
09/10/22 • 17:00	6	167	412.4	0	0	6.4	SW	3	83	89
			Total:	0	0					

Figure PAC 10-14: Example of FireSim Summary Report

10.4.2 Evaluation and Selection of New Detection Systems

The electrical corporation must describe how it evaluates the need for additional ignition detection technologies.

To evaluate the impact of new detection technologies such as cameras PacifiCorp is tracking

- Number of detections that the camera stations provided actionable alerts for.

- Number of de-energizations supported that were viewed in real time by the cameras. This indicates a fire was detected near the company's equipment and was used to support and inform operations of a potential de-energization.

PacifiCorp installed eight HD cameras to fill in the gaps of the existing, extensive camera network within its service territory. When a gap in the existing camera network is identified, PacifiCorp evaluates whether the area may benefit from placement of camera(s). Areas deemed suitable include, for example, rural areas that may be susceptible to fire. If an area is deemed suitable for placement of a camera, then specific location(s) for camera placement are identified (e.g., on fire lookout towers, existing communication structures, etc.) and a full viewshed analysis is completed to determine whether the location provides adequate coverage of the area. Next, a site survey is completed, and an installation estimate is developed by the camera supplier. The general process is shown in Figure PAC 10-15 below:

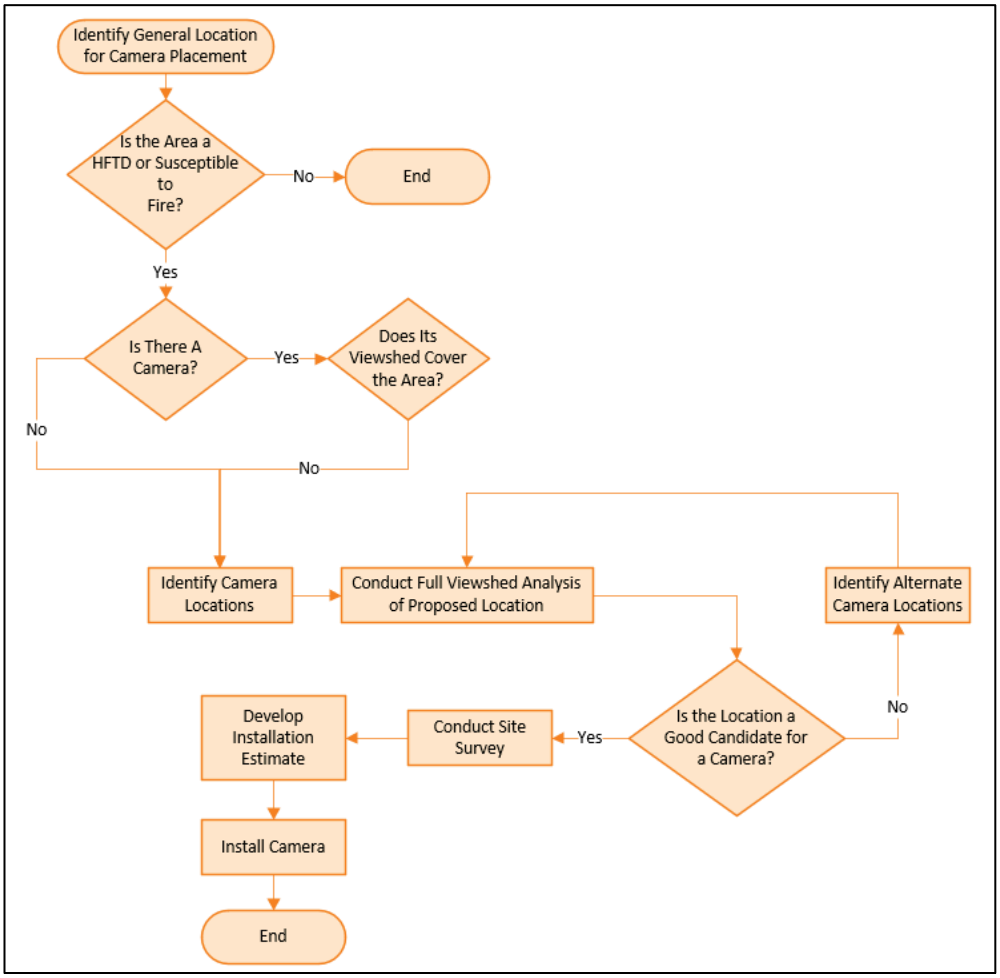


Figure PAC 10-15: Camera Placement Methodology

10.4.3 Planned Integration of New Ignition Detection Technologies

The electrical corporation must provide an implementation schedule for new ignition detection and alarm system technologies.

Currently PacifiCorp has no plans for installation of new ignition detection and alarm system technologies. If potential new technologies are identified they will follow the process described in Section 6.

10.4.4 Evaluating Activities

The electrical corporation must describe its procedures for the ongoing evaluation of the efficacy of its fire detection systems.

PacifiCorp anticipates that data to evaluate the success of camera placement may be collected and analyzed as described below.

- Number of detections that the camera stations provided actionable alerts for.
- Number of fires that are confirmed fires with the Integrated Reporting of Wildland-Fire Information (IRWIN) system including the total number of acres burned by these fires.
- The number of positive detections occurred pre-911 call and the time difference between the two. Data to make the comparison will be collected from two sources, the IRWIN system and from the AI software supplier's platform. First, data will be pulled from the two systems. Next, the time of first report provided by IRWIN will be subtracted from the AI detection time in a spreadsheet.
- The number of de-energizations supported that were viewed in real time by the cameras. This indicates a fire was detected near the PacifiCorp's assets and was used to support and inform operations of potential de-energization.
- User feedback on the functionality of the software. This data may be collected via feedback obtained in project meetings, interviews with administrative users (e.g., emergency management), and solicited from first responders electronically. PacifiCorp anticipates that this feedback will be obtained on an ongoing basis. As of April 2025, there are 48 user accounts and 21 different agencies accessing the California camera stations.

Because the primary beneficiaries of the cameras are first responders, PacifiCorp may use this data to assess the value of the camera systems. For instance, if the AI detection data does not show the level of accuracy reported by the AI software supplier prior to implementation of the software, the company may determine that it is not worth continued investment in the AI software.

10.5 Weather Forecasting

The electrical corporation must describe its systems and procedures used to forecast weather within its service territory. These forecasts must inform the electrical corporation's near real-time-risk assessment and PSPS decision-making processes.

Tracking ID: SA-05

Weather forecasts play a critical role in mitigating the risk of electric utility-caused wildfires. By accurately predicting weather conditions and its impact on the grid, electric utilities can proactively take steps to reduce the risk of fire ignition and spread, ensuring public safety. The ability to gather, interpret, and translate data into an assessment of utility specific risk and inform decision making is key component of PacifiCorp's situational awareness capability. To support this effort, PacifiCorp has developed an experienced meteorology department. This team consists of full-time meteorologists, a data scientist, and a manager. The team's experience includes decades of fire weather forecasting for various government agencies such as the National Weather Service (NWS) and Geographic Area Coordination Center (GACC).

The objectives of this department are to supplement PacifiCorp's longer term risk analysis capabilities, also referred to in this document as baseline risk modeling and described in Section 5 with a real time risk assessment and forecasting tool, identify and close any forecasting data gaps, manage day to day threats and risks, and provide information to operations to inform recommend changes to operational protocols during periods of elevated risk as depicted in Figure PAC 10-16 below.

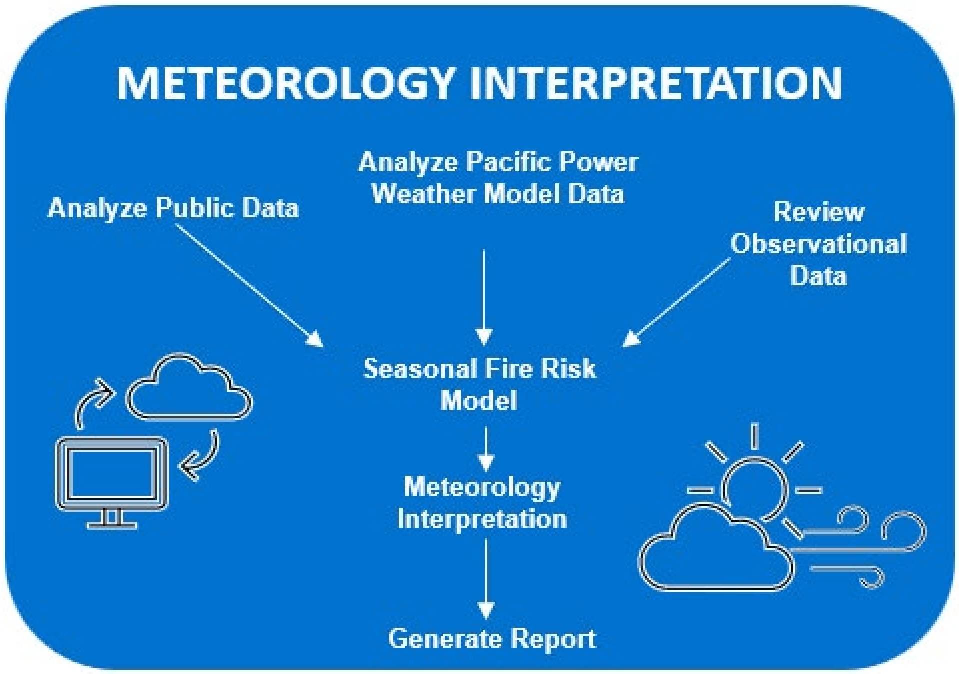


Figure PAC 10-16: Meteorology Daily Process

10.5.1 Existing Modeling Approach

At a minimum, the electrical corporation must discuss the following components of weather forecasting:

• Data assimilation from environmental monitoring systems within the electrical corporation service territory

• Ensemble forecasting with control forecast and perturbations

• Model inputs, including, for example:

o Land cover / land use type

o Local topography

• Model outputs, including, for example:

o Air temperature

o Barometric pressure

o Relative humidity

o Wind velocity (speed and direction)

o Solar radiation

o Rainfall duration and amount

• Separate modules (e.g., local weather analysis and local vegetation analysis)

• Subject matter expert (SME) assessment of forecasts

• Spatial granularity of forecasts, including:

o Horizontal resolution

o Vertical resolution

• Time horizon of the weather forecast throughout the service territory

PacifiCorp's existing weather and seasonal wildfire modeling approach is focused on data-driven, impacts-based forecasting system which consists of an operational Weather Research and Forecasting (WRF) model, a complimentary 30-year WRF reanalysis, and the use of WFA-E. More specifically,

- PacifiCorp's WRF model provides twice-daily operational weather forecasts across its entire service territory. PacifiCorp's WRF model output includes National Fire Danger Rating System (NFDRS) variables relevant to forecasting fuels conditions and wildfire danger.
- PacifiCorp built a 30-year WRF reanalysis to establish a climatology for weather, fuels, and fire danger conditions across the service territory.
- The company is using the WRF reanalysis and other relevant training data such as past power outage records, wildfire statistics, and historical weather observations. These models use the output from the operational WRF to predict weather-related outages, wildfire risk, and other relevant impacts.
- PacifiCorp uses WFA-E's suite of products including FireRisk, and FPI dashboards to produce a daily forecast of wildfire potential, risks, and consequences for distribution and transmission assets across the California service area.

Figure PAC 10-17 below depicts PacifiCorp's operational weather modeling approach.

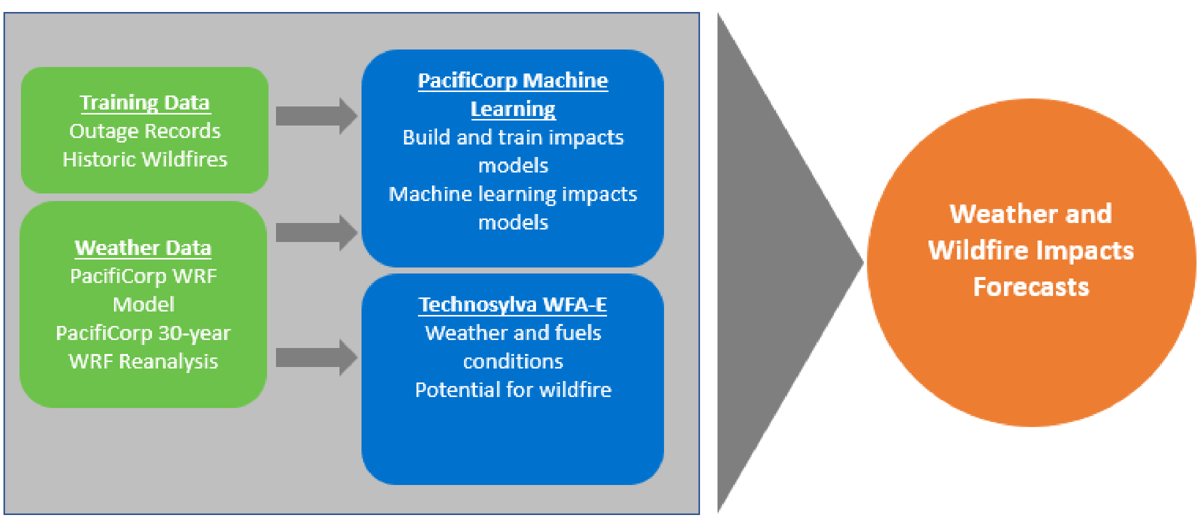


Figure PAC 10-17: Existing Operational Weather and Seasonal Wildfire Modeling Approach

Operational WRF Model: PacifiCorp's Meteorology department currently runs a twice daily Global Forecast System (GFS)-initialized, 2km-resolution, hourly WRF model, which now produces a comprehensive 126-hour forecast of atmospheric, fire weather, and National Fire Danger Rating System (NFDRS) variables. The model's high resolution gives a much more complete picture of finer scale atmospheric features than is available with most public five-day ahead timescale models. The WRF output is made available internally through the company's GREATER application, WFA-E, and a web-based visualization portal. Some WRF forecast is publicly available through the company's situational awareness website [https://pacificpowerweather.com/,](https://pacificpowerweather.com/) An example of this information is depicted below in Figure PAC 10-18:

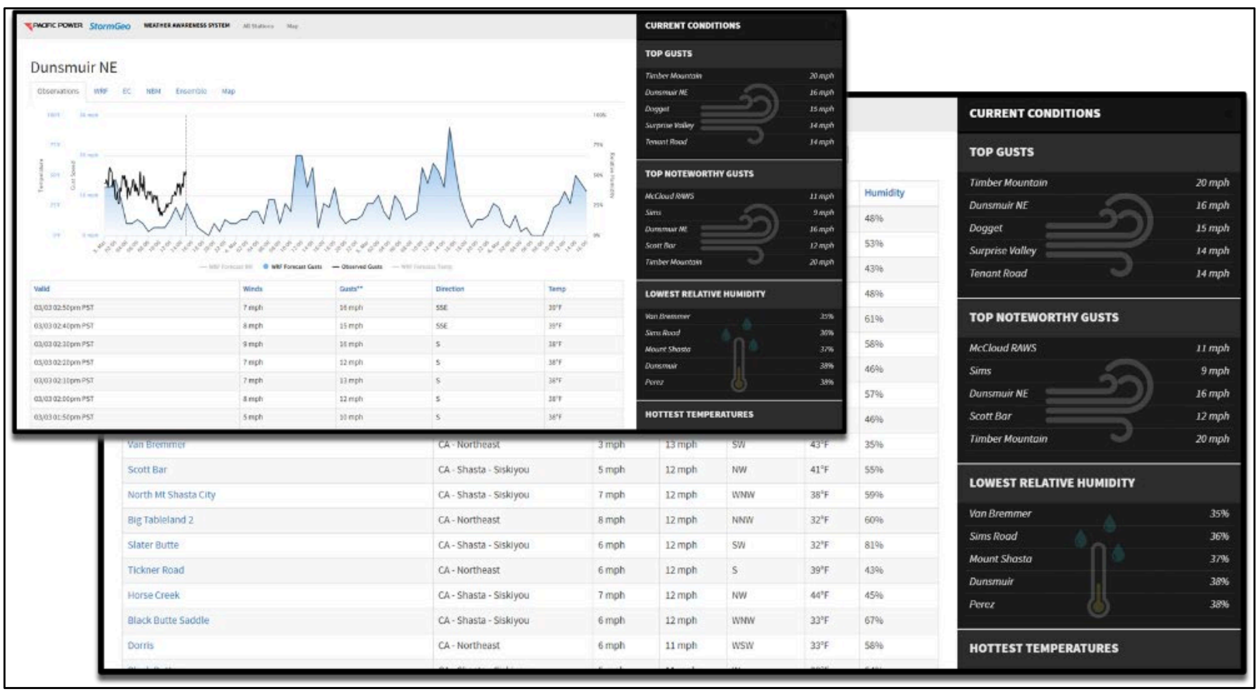


Figure PAC 10-18: Example of Data Available on PacificPowerWeather.com

PacifiCorp WRF Configuration

- Inner Domain = 1.3 million square miles
- Spatial Horizontal Resolution = 2km
- Spatial Vertical Resolution = 52 vertical levels
- Temporal Resolution = 1 hour
- Forecast horizon = 126-hour
- Atmospheric inputs for WRF initialization = GFS
- New Thompson microphysics scheme
- Mellor-Yamada-Nakanishi-Niino (MYNN) surface layer scheme
- MYNN3 planetary boundary layer (PBL) scheme
- New Goddard shortwave radiation scheme
- New Goddard longwave radiation scheme
- NoahMP land surface scheme
- Land use data = Moderate Resolution Imaging Spectroradiometer (MODIS) 30s
- Terrain height = Global Multi-resolution Terrain Elevation Data (GMTED) 2010 30s
- Sea surface temperature = NASA SpoRT and RTG blended temperatures at 1km horizontal resolution.
- Albedo, green vegetation fraction and Leaf Area Index = MODIS climatological inputs
- WRF soil moisture is cycled in between forecasts
- WRF snow cover is cycled in between forecasts

PacifiCorp's WRF domain is depicted in the image below in Figure PAC 10-19, the dark gray shaded region represents the 6km outer domain. The orange box represents the outer edge of the inner 2km domain.

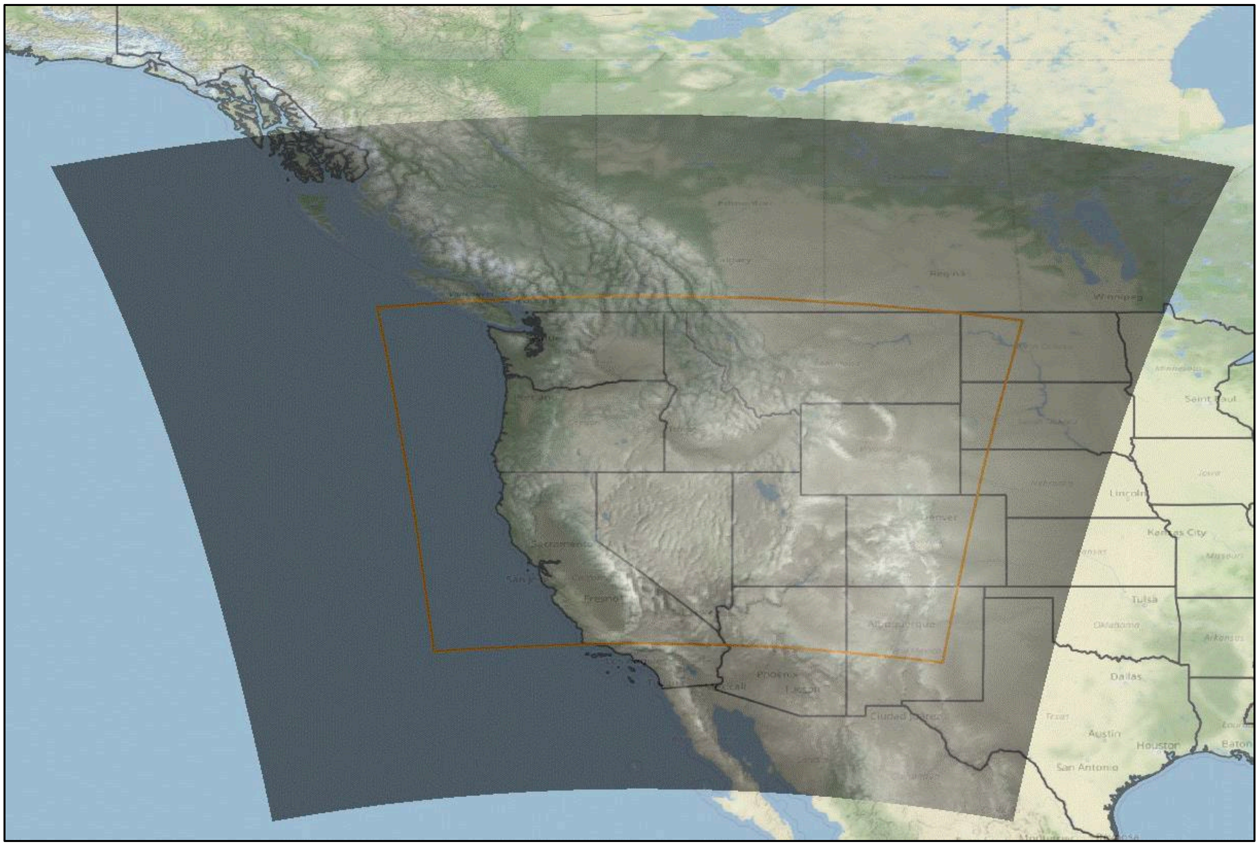


Figure PAC 10-19: PacifiCorp's WRF Domain

30-Year WRF Reanalysis: PacifiCorp has completed a 30-year, 2km resolution, hourly WRF reanalysis, which serves as both a detailed climatological record of weather and fire weather across its service territory and as a training dataset for statistical and machine learning models. This dataset is continuously updated, with an additional year added annually to ensure the reanalysis remains as current as possible. The WRF reanalysis dataset is used to train predictive models leveraging the company's operational WRF output to forecast weather-related outages, wildfire risk, and other relevant impacts.

PacifiCorp has already utilized the completed reanalysis dataset, along with archived power outage records and historical wildfire data, to improve weather-related outage thresholds and wildfire risk assessments. The reanalysis is initialized with Climate Forecast System Reanalysis (CFSR) rather than GFS, while maintaining identical configurations to the operational WRF. It provides the same weather, fire weather, and NFDRS outputs as the operational WRF, supporting PacifiCorp's efforts to enhance its predictive capabilities and operational efficiency.

WFA-E: WFA-E includes FireRisk and FireSim, two seasonal fire models, and is currently used by the Meteorology Department to forecast the risk of wildfire and the potential behavior if a wildfire should occur. Technosylva, vendor that developed and provides implementation and ongoing operational support for WFA-E, sources most of the data inputs for the Seasonal Wildfire Model.

FireRisk performs millions of wildfire simulations daily across the PacifiCorp's six-state service territory to assess the energy release risk in any given area. This output is also joined with a subset of distribution and transmission asset data to provide asset-specific wildfire risk and consequence forecasts. FireRisk provides a 126-hour look ahead to discern if there is a risk of wildfire within that period, where the risk is and where the greatest consequence is if there is a wildfire. FireRisk also allows for comparison of forecast conditions to historical conditions in the operational area.

FireSim, part of the WFA-E solution, is a simulation that can be run to forecast the potential fire behavior and spread from as little as one hour to up to a 126-hour period to assess the potential impact on populations, buildings, utility assets and other resources in the field. FireSim's model assumes no suppression efforts to slow the fire's spread and considers the following elements.

- Initial Attack Assessment: Assessment of how difficult initial attack will be for first responders and the probability of stopping the fire within the first operating period.
- Population at Risk: Number of people in the path of the fire and the timing of when the fire is likely to arrive at populations.
- Assets at Risk: Physical assets such as utility equipment, residential and commercial structures, barns, outbuildings etc. and the timing of when the fire is likely to arrive at assets.
- Places at Risk: These are locations identified on the maps that may not be physical assets but have other significance. These could include parks, reservoirs, cultural sites, campgrounds, etc. These locations are default locations from Google Earth Studio.
- Weather and fuels conditions: Wind speed, direction, fuel moisture content.

The WFA-E suite also integrates Probability of Fault (PoF) metrics to enhance its risk assessment capabilities. By combining wildfire behavior modeling with PoF data, PacifiCorp gains a more comprehensive understanding of the likelihood of asset failure contributing to wildfire risk. This integration allows the utility to evaluate not only the environmental conditions that could lead to wildfires but also the vulnerability of specific assets within the service territory. PoF is particularly valuable in assessing the operational risks associated with aging or high-risk infrastructure, enabling the prioritization of mitigation efforts and resource allocation.

To support the weather forecasting performed by FireRisk and FireSim in WFA-E, Table PAC 10-2 shows the inputs identified by Technosylva.

Table PAC 10-2: FireRisk and FireSim Weather Inputs

Feature Group	Description	Spatial Granularity (meters)	Temporal Granularity	Data Vintage	Source
Landscape	Terrain	10	Yearly		United States Geological Survey (USGS)
Landscape	Surface Fuels	30/10	Pre Fire Season, Monthly Update In Fire Season, End Of Fire Season	2020	Technosylva
Landscape	WUI and Non Forest Fuels Land Use	30/10	Twice A Year	2020	Technosylva
Landscape	Canopy Fuels (Cbd,Ch,Cc,Cbh)	30/10	Pre Fire Season, Monthly Update In Fire Season, End Of Fire Season	2020	Technosylva
Landscape	Roads Network	30	Yearly		USGS
Landscape	Hydrography	30	Yearly		USGS
Landscape	Croplands	30	Yearly	1997	United States Department of Agriculture
Weather and Atmosphere	Wind Speed	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Wind Direction	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Wind Gust	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Air Temperature	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Surface Pressure	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Relative Humidity	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Precipitation	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Radiation	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Water Vapor Mixing Ratio 2m	2000	Hourly / 126 Hour Forecast		Technosylva
Weather and Atmosphere	Snow Accumulated - Observed	1000	Daily		NOAA

Feature Group	Description	Spatial Granularity (meters)	Temporal Granularity	Data Vintage	Source
Weather and Atmosphere	Precipitation Accumulated - Observed	4000	Daily		NOAA
Weather and Atmosphere	Burn Scars	10	5 Days	2000	NASA/ESA
Weather and Atmosphere	Weather Observations Data	Points	10 Min		Synoptic
Fuels	Herbaceous Live Fuel Moisture	250	Daily / 5-Day Forecast	2000	Technosylva
Fuels	Woody Live Fuel Moisture	250	Daily / 5-Day Forecast	2000	Technosylva
Fuels	1 Hr. Dead Fuel Moisture	2000	Hourly / 126 Hour Forecast		Technosylva
Fuels	10 Hr. Dead Fuel Moisture	2000	Hourly / 126 Hour Forecast		Technosylva
Fuels	100 Hr. Dead Fuel Moisture	2000	Hourly / 126 Hour Forecast		Technosylva
Fuels	1000 Hr. Dead Fuel Moisture	2001	Hourly / 126 Hour Forecast		Technosylva

10.5.2 Known Limitations of Existing Approach

The electrical corporation must describe any known limitations of its existing modeling approach resulting from assumptions, data availability, and computational resources. It must discuss the impact of these limitations on the modeling outputs.

There are several limitations to PacifiCorp's current modeling approach including:

- Computational Requirements: PacifiCorp's WRF's domain covers the entirety of the company's six-state service territory. Significant computational resources are needed to efficiently run a WRF of this size. Even with two sizeable high performance computing clusters (HPCC) and recent WRF optimizations, the operational WRF forecasts are not available until over ten hours after initialization. In addition to the operational WRF, it will take one of the PacifiCorp's HPCCs running continuously for nearly 16 months to produce the companion 30-year WRF reanalysis. Looking ahead over the next one-three years, computational resource requirements will increase significantly as PacifiCorp looks to extend its WRF forecast from four days to five days and move from a single deterministic WRF (current approach) to a WRF ensemble approach.

- Data Management: PacifiCorp's WRF generates nearly one terabyte (TB) of weather forecast data every single day. Further, the 30-year WRF Reanalysis contains approximately five petabytes (PB) of data. Managing the large amount of output produced by these two models is extremely challenging for both the company and its vendors.
- Data Availability: GFS model output is a critical input into the company's WRF. Unexpected problems related to the servers at the National Center for Environmental Prediction (NCEP) can result in delayed or even missing WRF runs. This would be serious if such a problem occurred immediately prior to and during a significant fire weather event. Further, the NFDRS WRF outputs (specifically 1, 10, 100, & 1000-hour Dead Fuel Moisture) require a continuous record to run properly. Therefore, missed WRF runs will need to be completed before future runs can occur if they are to contain accurate NFDRS outputs.
- Forecast Uncertainty: Another limitation to the current modeling approach is that PacifiCorp relies on a single, deterministic WRF model to support much of its forecast operations. This approach provides a single forecast solution and does not account for any forecast uncertainty that may exist. The proposed solution is to establish a multi-member WRF ensemble, though as mentioned above, there are significant computational resource constraints that must first be addressed before a WRF ensemble could be implemented at this scale. If there are missing asset attributes (ex: age, materials), WFA-E will look at information for similar assets in the

same location or close by and correlate missing asset attributes to the attributes of those assets. Fuels data in WFA-E does not consider specific fuels that may have been identified during inspections. Technosylva uses LANDFIRE, National Incident Feature Services (NIFS), and other ancillary data to prepare the wildfire urban interface (WUI) custom fuels analysis.

10.5.3 Planned Improvements

The electrical corporation must describe its planned improvements in its weather forecasting systems.

Tracking ID: SA-05

The internal PacifiCorp WRF will be validated on a regular basis to ensure that it is performing optimally. This will involve both validating the WRF internally and externally with vendors. The model will continue to be enhanced by adding additional forecasting variables that will increase the amount of data that PacifiCorp can utilize for daily risk forecasting. Data will continue to be delivered twice on a daily basis, but exploration has begun on what would be needed to increase the frequency of data.

As described in Table 10-1, PacifiCorp has four initiatives to improve weather forecasting.

Implement WRF Ensemble Forecasting: Implementing an advanced approach to predicting weather by combining multiple forecasts generated using slightly different initial conditions. Instead of relying on a single forecast, the ensemble system leverages the power of many simulations to provide a more comprehensive picture of possible future weather scenarios. This gives PacifiCorp the ability to focus on low probability, high impact events. This approach will be used to improve accuracy and help plan for uncertainty during weather events.

Climate Vulnerability Assessment: PacifiCorp is actively participating in the EPRI Climate READi study and with Argonne National Labs to assess climate change impacts within its service territory. This third party vendor will generate climate impact information metrics based on a mid-century timeframe (2045-2054) and RCP8.5 emission. The outcomes will be based on 12km by 12km dynamically downscaled climate model projections.

Machine Learning Techniques of Normalized Differential Vegetation Index (NDVI) and Self Organizing Maps (SOMs): This work will continue to be improved upon the existing machine learning work within the Meteorology program to help assist in making predictions and recognize patterns with weather phenomena across the service territory.

Tracking ID: ES-01

Data Integration (Foundry): Foundry is a tool that allows PacifiCorp to visualize the internal WRF models and overlay it with real-time weather station data and the location of PacifiCorp's T&D equipment. This information is used to support the daily risk assessment used to information operational practices as described in Section 8.7 and PSPS as described in Section 11.2. PacifiCorp will continue to evolve and iterate improvements in the use of Foundry during the 2026-2028 WMP cycle.

10.5.4 Evaluating Activities

The electrical corporation must describe its procedures for the ongoing evaluation of the efficacy of its weather forecasting activity (program).

Evaluation of the efficacy of PacifiCorp's model performance is primarily qualitative at this early stage in the program's development. The meteorologists use WRF to perform their normal daily forecast duties. It is in that capacity that the WRF model is continually evaluated against real-time observations and other publicly available model data. Any trends or biases that are observed are communicated to the vendor for investigation.

There are currently no other publicly available weather models that can provide a five-day (126-hour) 2km resolution weather and NFDRS forecast across the company's entire six-state service territory. High-resolution NFDRS outputs are especially critical as they provide insight into fuel moisture and fire weather conditions for all PacifiCorp's distribution and transmission at the zone of protection (ZOP) level. PacifiCorp's meteorologists have observed that WRF tends to perform better in the utility's complex terrain than other, coarser-resolution models. Further, WRF has been instrumental to providing advanced warnings of significant and extreme fire weather threats since its implementation.

The combination of the operational WRF data with completed WRF reanalysis data allows for a historical comparison between the current and past forecasts. This enables the meteorologists to "size up" the forecasted fire weather threats in the context of past threats. Further, the WRF reanalysis data is actively being trained on past system impacts.

WRF, in combination with WFA-E, has already demonstrated success in recent events such as the September 2022 PSPS event in Oregon. In that example, PacifiCorp was able to use the data from its WRF and from WFA-E to identify the circuits of risk several days in advance of the threat based on circuit-level wind-related outage probabilities, ZOP-level fuels and fire weather forecasts, and wildfire spread and consequence modeling.

Evaluation of the model's performance and efficacy is expected to become increasingly sophisticated and automated over time. However, even before that happens, there is no doubt among PacifiCorp's SMEs that the current modeling approach has dramatically increased the ability to prepare for and mitigate against extreme fire weather threats.

10.5.5 Weather Station Maintenance and Calibration

In this section, the electrical corporation must provide a narrative describing maintenance and calibration and risk impacts due to weather station inoperability.

Tracking ID: MA-01

PacifiCorp performs annual maintenance and calibration of its weather station fleet. Accurate weather station data is a critical component of weather modeling and decision-making processes. The weather station maintenance program is an annual program to ensure each weather station is operational and reporting correct and accurate data. The three weather station types described in Section 10.2.1 each require different methodologies to complete the maintenance.

PacifiCorp has not quantified an acceptable percentage of weather station outage. Annual calibration begins in spring and is typically complete by the end of July. Every attempt is made to complete the calibration by then, but timing may be impacted by weather conditions that may make roads impassable until late spring-early summer.

If a weather station is not working and conditions are forecast for a potential PSPS event, PacifiCorp will look for alternatives to ensure there is adequate weather station coverage, including requesting the weather station vendor expedite maintenance, deploying portable weather stations, or using publicly available weather stations data from other organizations. Where PacifiCorp's weather station data is unavailable and potential PSPS conditions are forecast, the company will proceed with an abundance of caution and prioritize public safety.

PacifiCorp evaluates weather station coverage of both its own weather stations as well as publicly available weather data from other organizations and the type of data it provides particularly the frequency of data. PacifiCorp maps the location of its weather stations to the proximity of its ZOPs to ensure that the ZOPs are within 1-5 radial miles of a weather station. PacifiCorp's planned weather installations are to fill in the gaps where there are no weather stations are within 1-5 miles of a ZOP.

10.6 Fire Potential Index

The electrical corporation must describe its process for calculating its fire potential index (FPI) or a similar landscape-scale index used as a proxy for assessing real-time risk of a wildfire under current and forecasted weather conditions.

Tracking ID: SA-06

PacifiCorp's Fire Potential (FPI) was developed by Technosylva. Technosylva takes a variety of different inputs to provide a comprehensive analysis of the fire potential across its service territory. The variables include inputs including fuels, terrain, wind, and aridity. The fuels metric includes the fuel complexity value, which is available within WFA-E. This data input included quantifying fuel type, fuel load and fuel age. The Terrain Difficulty Index provides information to quantify terrain and its potential impacts on suppression activity including accessibility, fuel penetrability and ease of opening fire line. Wind speed, both sustained and wind gust and dead fuel moisture content. Aridity is another function of the FPI which quantifies the contribution of atmospheric conditions, including relative humidity and vapor pressure deficit. The resultant value from the previously discussed inputs yields a range from categories from very low to extreme. Figure PAC 10-20 below represents a graphical depiction of PacifiCorp's FPI approach.

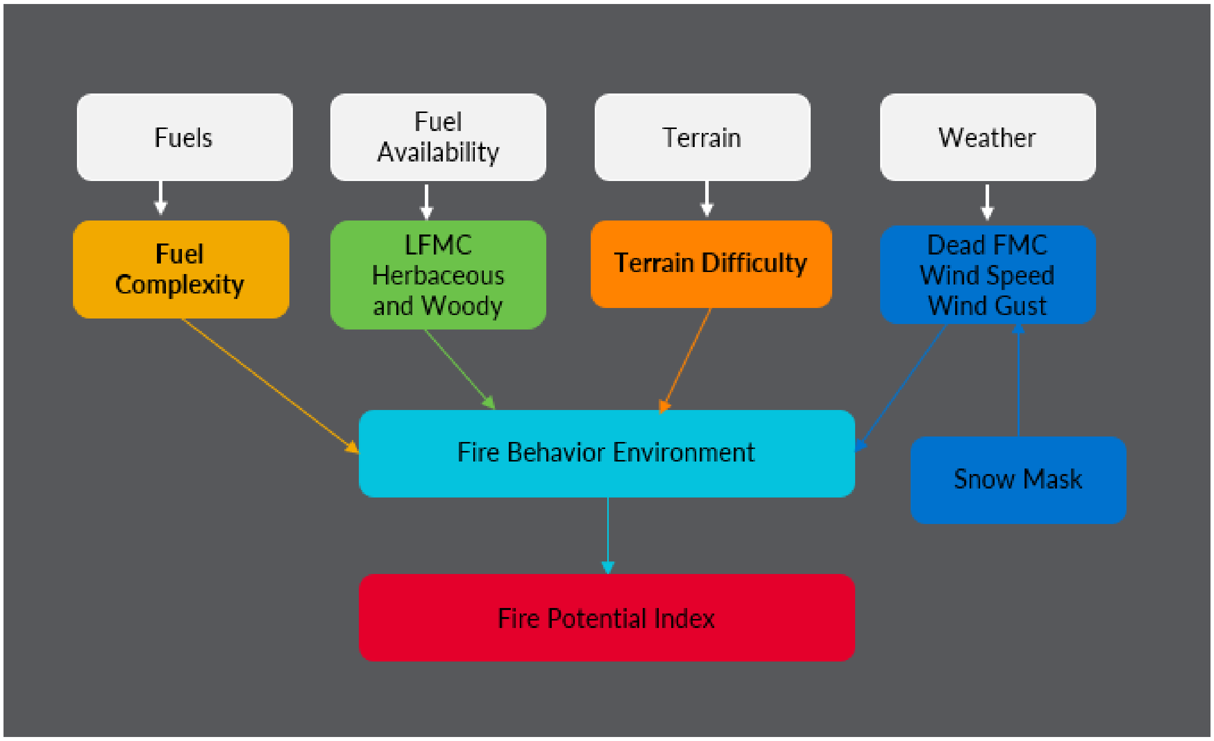


Figure PAC 10-20: PacifiCorp's FPI Approach

10.6.1 Existing Calculation Approach and Use

The electrical corporation must describe:

• How it calculates its own FPI or if uses an external source, such as the United States Geological Survey

• Assumptions in calculations and justification for each assumption

• How it uses its or an FPI in its operations

Additionally, if the electrical corporation calculates its own FPI, it must provide tabular information regarding the features of its FPI.

PacifiCorp uses the Technosylva FPI in use in combination with other information to assign a district-level wildfire risk. Additional fire potential metrics are utilized including publicly available fuels information, terrain and fuels metric, and weather forecast data. Wildfire risk is expressed using a four color-code scheme as shown in Figure PAC 10-21 below with general inputs to indicate the level of fire potential existing at a district level.

PacifiCorp Wildfire Risk	GACC 7-Day Significant Fire Potential	Fuels Considerations	Wind Gust Considerations
Little to No Wildfire Risk	Low or Little to No Risk		
Elevated Wildfire Risk	Low or Moderate	Dry	
Significant Wildfire Risk	Moderate	Very Dry	
	High Risk*	Dry or Very Dry	Max Gusts < 95th Percentile
Extreme Wildfire Risk	High Risk*	Dry or Very Dry	Max Gusts ≥ 95th Percentile

* Excludes Lightning or Recreation High Risk triggers

PacifiCorp Fuels	100-hr Dead Fuel Moisture	1000-hr Dead Fuel Moisture	Energy Release Component
Dry	Near or Below Average*		Near or Above Average*
Very Dry	≤ 10th Percentile	≤ 10th Percentile	≥ 90th Percentile

*Relative to the average fire season values for a given location

Figure PAC 10-21: District Level Fire Risk

Table 10-5 presents the FPI features. The "N/A" denotes where the altitude, spatial, or temporal granularity is not pertinent to the feature group.

Table 10-5: Fire Potential Index Features

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Weather	Wind, sustained and gusts	10m	Wind speed and gust measured	Internal PacifiCorp WRF	Twice daily	2km	Hourly
Fuel Complexity	Fuel type, fuel load and fuel age	Surface	Quantifies the fuel type, fuel load and fuel age	Technosylva	Annually	30m	N/A

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Weather	Relative humidity, vapor pressure deficit	Surface	Moisture variable from the atmosphere	Internal PacifiCorp WRF	Twice daily	2km	Hourly
Terrain	Terrain Difficulty Index	N/A	Quantifies the terrain and its potential impacts on suppression activity including accessibility, fuel penetrability, and ease of opening fire line.	Technosylva	Annually	30m	N/A
Fuel Moisture	1 and 10 hour dead fuel moisture	10m	Moisture of dead fuels	Internal PacifiCorp WRF	Twice daily	2km	Hourly
Fuel Moisture	Woody and Herbaceous Live Fuel moisture	10m	Moisture of live fuels	Remote Sensing data	Daily		Hourly

When moving into an elevated, significant, or extreme wildfire risk, Meteorology performs an additional review of fuels and fire weather forecasts and observations, including by using some or all of the additional metrics and methods listed below.

- Fire Weather Conditions: This includes National Weather Service Fire Weather Watches and Red Flag Warnings, publicly available weather model data, and fire weather and NFDRS outputs from PacifiCorp's WRF model.
- Fire Weather and Drought Indices: This includes the Hot-Dry-Windy Index and the Evaporative Demand Drought Index (EDDI).

- Wildfire Risk: This includes an assessment from FireRisk of the potential for extreme fire behavior and consequence should an ignition occur. Live and dead fuels moisture conditions inform the risk.
- Fuels Conditions: This includes a more detailed assessment of live fuel moisture (herbaceous and woody), dead fuel moisture, grassland curing, and tree mortality.
- Fuels and Fire Behavior Advisory: These advisories are issued by the GACC when abnormal fuels conditions and/or fire behavior poses a threat to firefighters and public safety. The combination of exceptionally dry fuels and excessive tree mortality is an example of conditions that could prompt the issuance of a Fuels and Fire Behavior Advisory.
- Current Wildfire Activity: Current wildfire activity in or near a district can indicate that the weather and fuels conditions are contributing to fire occurrence and spread. This information provides insight into how a new fire may behave. Additionally, initial attack on a new fire may be impacted by resource availability due to ongoing wildfires in the region.
- Normalized Differential Vegetation Index (NDVI): A numerical indicator used to measure and monitor vegetation health and density. It is derived from remote sensing data, typically captured by satellites or drones. This data is both publicly available and observed within PacifiCorp's NDVI machine learning model.

The district-level wildfire risk is made available to the company via the System Impacts Forecast Matrix, a five-day forecast product issued daily by the Meteorology team. The final district-level wildfire risk forecast is shown in the "F" columns of the Systems Impacts Forecast Matrix shown in Figure PAC 10-22. The "Wx"system columns represent the weather-related power outage potential.

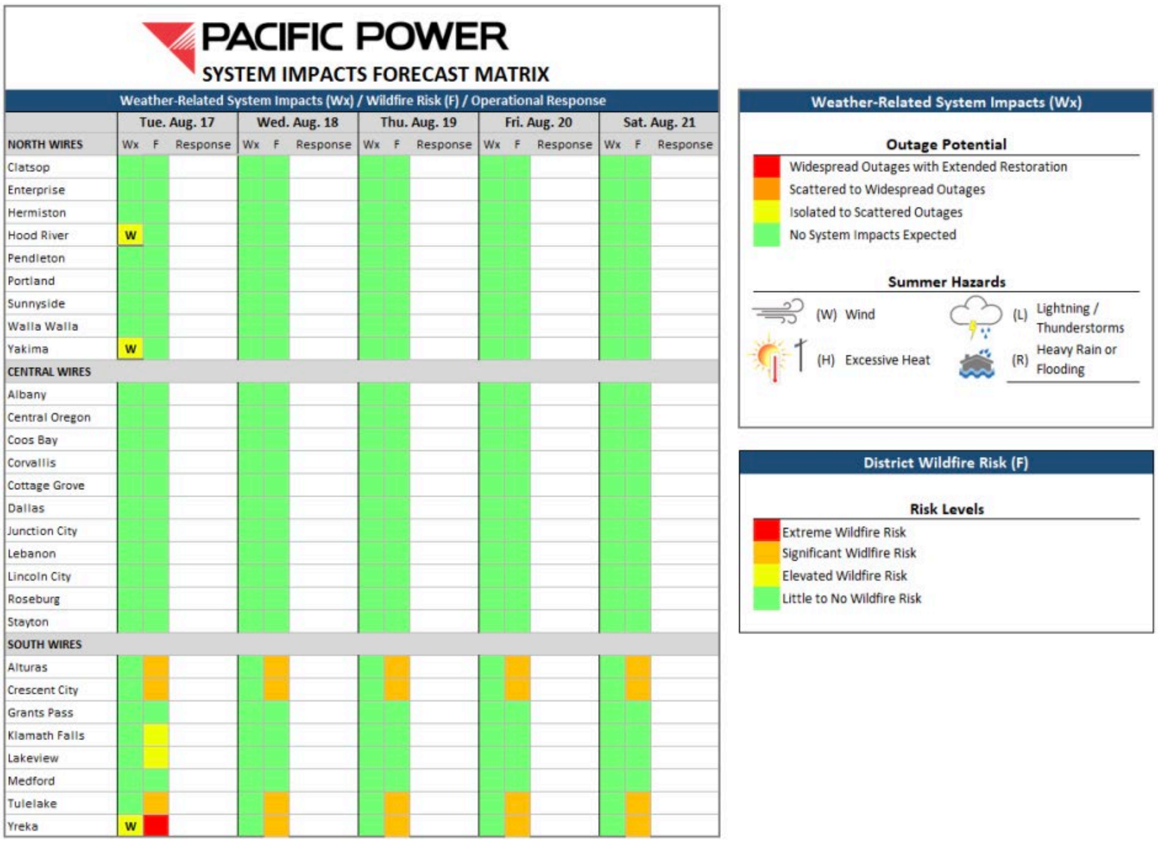


Figure PAC 10-22: Example Systems Impacts Forecast Matrix

This system's impact forecast metric is generally used to inform operational strategies, response to local conditions, and decision making, including the potential for PSPS implementation. For a discussion of how PacifiCorp uses its District-Level Wildfire Risk Matrix to modify operational practices, as described in Section 8.7.3, to understand how this matrix is used to inform modifications to system operations, such as the implementation of ESS settings, see Section 8.7 For more details regarding the impact of this matrix on assessing the potential for PSPS see Section 7.

10.6.2 Known Limitations of Existing Approach

The electrical corporation must describe any known limitations of current FPI calculation. Specifically, list of any changes implemented since its last WMP submission, including justification of for changes and lessons learned, where applicable.

The FPI discussed in Section 10.6.3 below, in combination with detailed analysis of the 30-year WRF reanalysis and wildfire history, will enable PacifiCorp to quantify daily fire potential. Known limitations include the inability to corelate how the FPI values relate to a specific location's historically dry fuels and weather variables.

10.6.3 Planned Improvements

The electrical corporation must describe its planned improvements for its FPI, including a description of the improvement, reason for the change, and the planned schedule for implementation.

Tracking ID: SA-06

PacifiCorp plans to work closely with Technosylva to continuously improve FPI outputs to supplement other wildfire risk products. The FPI model currently quantifies the potential for large or consequential wildfires out several days based on weather, fuels, and terrain inputs. To accomplish this, Technosylva performed a detailed analysis of past weather from PacifiCorp's WRF reanalysis, satellite-derived hotspot (wildfire) data from the Visible Infrared Imaging Radiometer Suite (VIIRS), and other environmental data. PacifiCorp's future plans include developing a percentile based FPI for each of the districts across PacifiCorp's service territory. This will enable the utility to assess what an extreme FPI will mean from a locality and historical aspect.

11. Emergency Preparedness, Collaboration, and Community Outreach

Each electrical corporation must develop and adopt an emergency preparedness plan in compliance with the standards established by the CPUC pursuant to Public Utilities Code section 768.6(a).

11.1 Targets

In this section, each electrical corporation must provide qualitative targets for emergency preparedness, collaboration, and community outreach.

11.1.1 Qualitative Targets

The electrical corporation must provide qualitative targets for its three-year plan for implementing and improving its emergency preparedness, collaboration, and community outreach.

Table 11-1 below presents PacifiCorp's 2026-2028 emergency preparedness and community outreach targets. Where there was no previous Tracking ID for an activity it is marked "N/A". The 2026 and 2027 targets for Initiative CO-01: Create a way for non-account holders to register for outage/emergency alerts, has "N/A" for 2027 and 2028 status as PacifiCorp expects the change to be implemented and operational in 2026.

Table 11-1: Emergency Preparedness and Community Outreach Targets by Year

Initiative	Activity (Tracking ID #)	Previous Tracking ID, if applicable	2026 End of Year Total/Completion Date	2027 Status	2028 Status	Section; Page number
Conduct pre-season and post-season customer surveys to assess understanding of messaging and information shared by PacifiCorp and inform adjustments in messaging.	CO-01	CO-01	-Conduct pre-season survey -Conduct post-season survey	-Conduct pre-season survey -Conduct post-season survey	-Conduct pre-season survey -Conduct post-season survey	11.4.6 p.428
Create a way for non-account holders to register for outage/emergency alerts	CO-01	N/A	Create alerts system for non-account holders and socialize new alerts system to customers.	N/A	N/A	11.4.6 p.428
Continue to identify customers who are Electricity Dependent	CO-02	CO-02	- Enhance existing marketing and outreach campaigns based on data and feedback received through surveys and interviews - Continue to work with CBOs, regional centers and healthcare organizations to ensure their clients are informed about available PSPS resources - Partner with Wildfire Advisory Board members and other AFN service providers to better understand the needs of AFN customers and gaps in PacifiCorp's current offerings	- Enhance existing marketing and outreach campaigns based on data and feedback received through surveys and interviews - Continue to work with CBOs, regional centers and healthcare organizations to ensure their clients are informed about available PSPS resources - Partner with Wildfire Advisory Board members and other AFN service providers to better understand the needs of AFN customers and gaps in PacifiCorp's current offerings	- Enhance existing marketing and outreach campaigns based on data and feedback received through surveys and interviews - Continue to work with CBOs, regional centers and healthcare organizations to ensure their clients are informed about available PSPS resources - Partner with Wildfire Advisory Board members and other AFN service providers to better understand the needs of AFN customers and gaps in PacifiCorp's current offerings	11.4.6 p. 245-427, 429
Coordinate and integrate resources with state, community and utility to minimize duplication of AFN programs	CO-02	N/A	- Identify opportunities and efficiencies to ease Medical Baseline (MBL) program enrollment in accordance with CPUC and legislative framework	- Identify opportunities and efficiencies to ease Medical Baseline (MBL) program enrollment in accordance with CPUC and legislative framework	- Identify opportunities and efficiencies to ease Medical Baseline (MBL) program enrollment in accordance with CPUC and legislative framework	11.4.6 p. 245-427, 429
Identify enhancements to programs and resources needed to mitigate the impacts of PSPS on AFN customers	CO-02	CO-02	- Continue to review customer feedback from PSPS survey results, including CRC survey results, to benchmark and evaluate if programmatic changes are needed to enhance existing resources and support	- Continue to review customer feedback from PSPS survey results, including CRC survey results, to benchmark and evaluate if programmatic changes are needed to enhance existing resources and support	- Continue to review customer feedback from PSPS survey results, including CRC survey results, to benchmark and evaluate if programmatic changes are needed to enhance existing resources and support	11.4.6 p. 245-427, 429

Initiative	Activity (Tracking ID #)	Previous Tracking ID, if applicable	2026 End of Year Total/Completion Date	2027 Status	2028 Status	Section; Page number
Increase awareness of PacifiCorp's programs and services available for AFN customers before, during and after a PSPS	CO-02	CO-02	- Increase awareness among PacifiCorp's Wildfire Advisory Board (Board) members via presentations/materials - Engage with the Board, CBOs, health care coalitions and other local AFN service providers to identify opportunities to amplify AFN program messaging - Explore making appropriate updates to PSPS materials to reflect the needs of individuals with AFN	- Increase awareness among PacifiCorp's Wildfire Advisory Board (Board) members via presentations/materials - Engage with the Board, CBOs, health care coalitions and other local AFN service providers to identify opportunities to amplify AFN program messaging - Explore making appropriate updates to PSPS materials to reflect the needs of individuals with AFN	- Increase awareness among PacifiCorp's Wildfire Advisory Board (Board) members via presentations/materials - Engage with the Board, CBOs, health care coalitions and other local AFN service providers to identify opportunities to amplify AFN program messaging - Explore making appropriate updates to PSPS materials to reflect the needs of individuals with AFN	11.4.6 p.429
Develop and update wildfire de-energization materials for customers to communicate PacifiCorp Emergency De-Energization for Wildfire.	CO-03	N/A	-Update emergency de-energization materials for 2026 wildfire season and paid advertising campaigns. -Present on emergency de-energization in California WMP Webinar. Include emergency de-energization information in pre-season customer emails.	-Update emergency de-energization materials for 2026 wildfire season and paid advertising campaigns. -Present on emergency de-energization in California WMP Webinar. Include emergency de-energization information in pre-season customer emails.	-Update emergency de-energization materials for 2026 wildfire season and paid advertising campaigns. -Present on emergency de-energization in California WMP Webinar. Include emergency de-energization information in pre-season customer emails.	11.4 p. 429
Western Wildfire Communications Workshop	CO-04	N/A	Complete two workshops	Complete two workshops	Complete two workshops	13.2 p. 447
Review and update outage procedures in ERP plan-Restoration Annex	EP-01	N/A	Plan reviewed and updated as identified.	Plan reviewed and updated as identified.	Plan reviewed and updated as identified.	11.2 p. 381
Continue the use of tabletop exercises to prepare for emergencies and PSPS events.	EP-02	EP-02	1 Functional Exercise (FE), 1 Tabletop Exercise (TTX), 1 Workshop Dates for 2026 TBD	1 (FE), 1 (TTX), 1 workshop Date for 2027 TBD	1 (FE), 1 (TTX), 1 workshop Dates for 2028 TBD	11.3.2 p. 405-407
Implement improvement to Public Safety Partner Portal (PSP Portal)	EP-03	EP-03	N/A	Security Improvements	Reporting Improvements	11.3.1 p. 402

11.2 Emergency Preparedness and Recovery Plan

In this section, the electrical corporation must provide an overview of how it has evaluated, developed, and integrated wildfire- and PSPS-specific emergency preparedness strategies, practices, policies, and procedures into its overall emergency plan based on the minimum standards described in GO 166. The electrical corporation must provide the title of and link to its latest emergency preparedness report, the date of the report, and an indication of whether the plan complies with CPUC R. 15-06-009, D. 21-05-019, and GO 166. The overview must be no more than two paragraphs.

In addition, the electrical corporation must provide a list of any other relevant electrical corporation documents that govern its wildfire and PSPS emergency preparedness planning for response and recovery efforts.

Tracking ID: EP-01

- PacifiCorp's 2025 Emergency Response Plan (ERP), Sixth edition, dated April 23, 2025, complies with CPUC Code Section 768.6(a).

PacifiCorp's 2024 Emergency Response Plan (ERP) plan consists of a base plan and one functional annex and describes PacifiCorp's all-hazards framework for response to emergencies. The sixth edition of the plan was submitted to the CPUC on April 30, 2025, to comply with GO 166 and is intended to be the primary reference material for any emergency or contingency response affecting the company's employees, assets, or business continuity. The plan defines tactics and procedures which are used in response to any emergency incident or planned event that could affect company assets. PacifiCorp's ERP applies the principles of the National Incident Management System (NIMS), to provide guidance and support to emergency responses of any size or scope.

11.2.1 Overview of Wildfire and PSPS Emergency Preparedness and Service Restoration

In this section, the electrical corporation must provide an overview of its wildfire- and PSPS specific emergency preparedness and service restoration plan. The overview must describe the following:

• Overview of protocols, policies, and procedures for responding to and recovering from a wildfire or PSPS event (e.g., means and methods for assessing conditions, decision-making framework, prioritizations). This must include:

o An operational flow diagram illustrating key components of its wildfire- and PSPS-specific emergency response procedures from the moment of activation to response, recovery, and restoration of service

o Separate overviews and operational flow diagrams for wildfires and PSPS events

• Key personnel, qualifications, and training that show the electrical corporation has trained the workforce to promptly restore service after wildfire or PSPS event, accounting for workers pursuant to mutual aid agreement or contracts. This must include:

o The key roles and responsibilities, personnel resource planning (internal and external staffing needs), personnel qualifications, and required training programs

o A brief narrative describing its process for planning to meet its internal and external staffing needs for emergency preparedness planning, preparedness, response, and recovery related to wildfire and PSPS

o The name of each training program, a brief narrative of the purpose and scope of each training program, the frequency of each training program, and how the electrical corporation tracks who has completed the training program

• Each Memorandum of Agreement (MOA) the electrical corporation has with state, city, county, and tribal agencies within its service territory on wildfire and/or PSPS emergency preparedness, response, and recovery activities. The electrical corporation must provide a brief summary of the MOA, including the agreed role(s) and

responsibilities of the external agency before, during, and after a wildfire or PSPS emergency

o Coordination and collaboration with public safety partners (e.g., emergency planning, interoperable communications)

o Notification of and communication to customers before, during and after a wildfire or PSPS event

o Improvements/updates made since the last Base WMP submission

In Section 11.2.1, PacifiCorp provides an overview of its wildfire and PSPS specific emergency preparedness and service restoration plan. Figure 11-1 depicts the operational flow diagram for key components of wildfire and PSPS response.

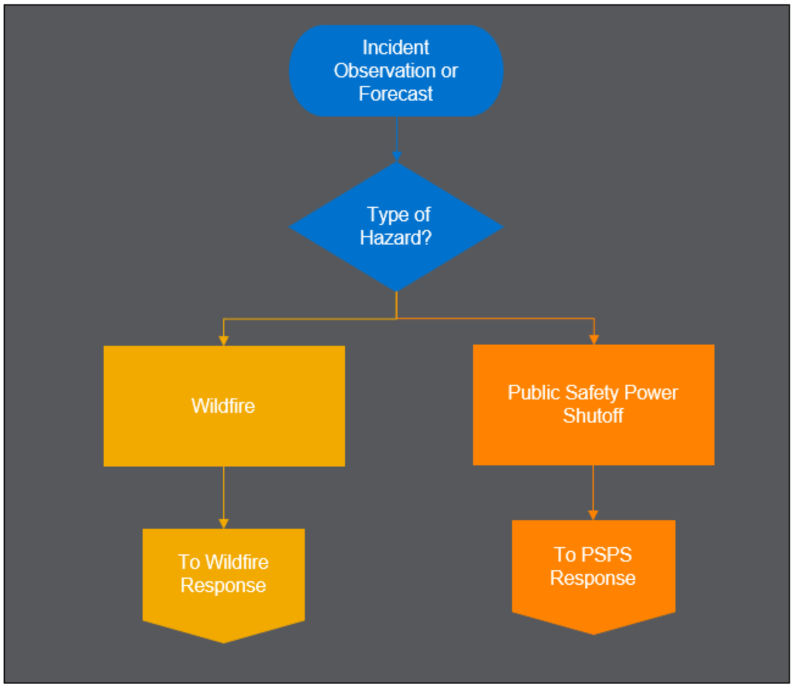


Figure 11-1: Operational Flow Diagram for Key Components for Wildfire & PSPS Emergency Response Procedures

Table 11-2 describe the key gaps and limitations evaluating, developing, and integrating wildfire and PSPS-specific preparedness and planning features into its overall emergency preparedness and recovery plan.

Table 11-2: Key Gaps and Limitations in Integrating Wildfire- and PSPS-Specific Strategies into Emergency Plan

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
Limited feedback from partners on PSPS playbook during workshop review.	Limited feedback from partners on PSPS playbook during workshop review.	Continue outreach, training, and exercise with partners to ensure alignment of plans, roles and expectations during system events. Target Timeline: Annually by June 30

Wildfire Response

Purpose and Scope of the Wildfire Plan

PacifiCorp's ERP describes the company's all-hazards framework for response to emergencies, including wildfires. This plan is intended to be the primary reference material for any emergency or contingency response affecting the company's employees, assets, or business continuity and provides tactics and procedures which are used in response to any emergency incident or planned event which could affect company assets. PacifiCorp's ERP applies to the principles of NIMS, to provide guidance and support to emergency responses of any size or scope.

Overview of Protocols, Policies and Procedures

PacifiCorp monitors and supports the response to active wildfires occurring near its assets and within its service territory. While employees may carry small fire suppression tools as part of their preparedness, they are not professionally trained firefighters. If a fire of significant magnitude is encountered, employees are instructed to prioritize safety and contact emergency services by dialing 911.

Operational Flow for Wildfires

For active wildfires, PacifiCorp follows a structured operational process, as illustrated in the accompanying Figure 11-2. Upon identification of a fire, monitoring and response protocols are initiated. The Wildfire Intelligence Center confirms the fire status with first responders and, if necessary, produces a fire simulation or predictive analysis. Internal coordination begins by contacting the Wildfire Intelligence Center to ensure accurate situational awareness.

If the fire presents a significant threat to infrastructure or public safety, the Wildfire Intelligence Center consults the Wildfire Encroachment System Operations Procedure, SOP-203 to evaluate the need for de-energization. If immediate action is required, the process ensures that de-energization occurs swiftly to mitigate wildfire risks.

Notifications are sent to internal operations management using the AlertMedia, and stakeholders, including management, are informed of ongoing actions and decisions. Throughout the event, continuous monitoring of the fire ensures a coordinated and effective response to minimize risks, protect public safety, and support restoration efforts as needed.

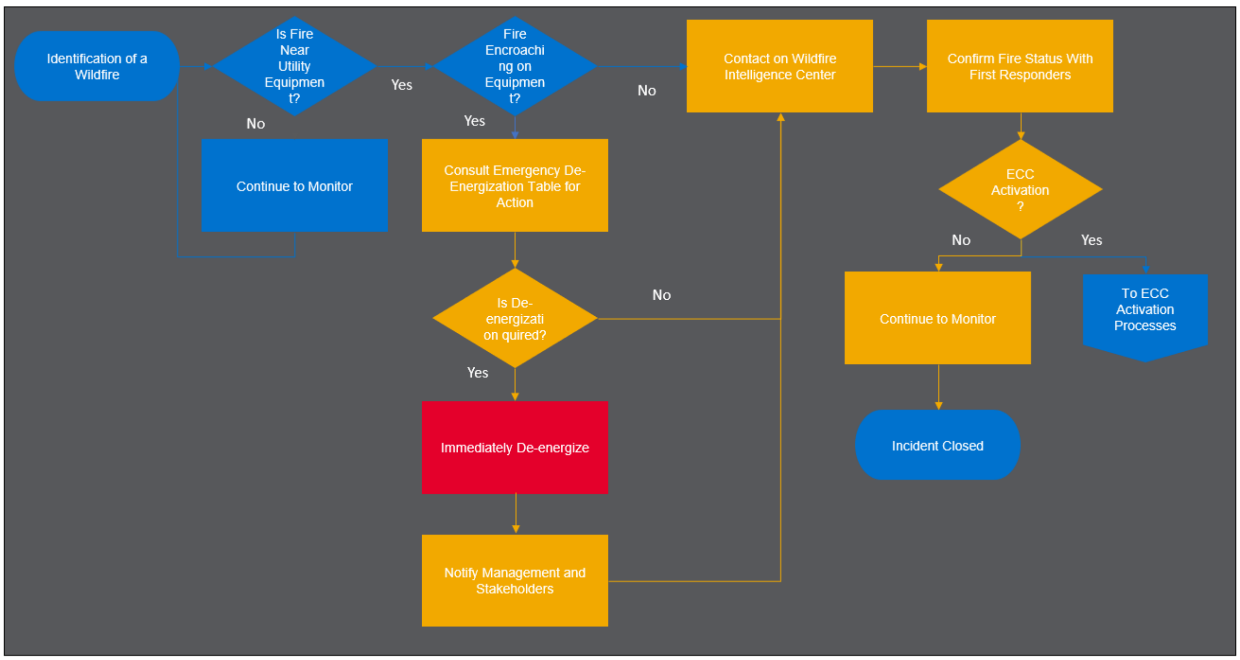


Figure 11-2: Example Wildfire Operational Flow Diagram Overview

PSPS Events

Purpose and Scope of the Plan

PacifiCorp's primary PSPS specific emergency preparedness plan is called the Public Safety Power Shutoff Execution Playbook (PSPS Playbook). The PSPS Playbook is a standalone document and not part of the PacifiCorp's all hazards ERP. The PSPS Playbook is intended to provide the minimum guidelines for a planned de-energization of energized facilities when extreme weather or other conditions pose an imminent safety threat to persons and/or property.

Overview of Protocols, Policies and Procedures

PacifiCorp utilizes weather forecasts and other situational awareness information to identify when a potential PSPS event may be warranted. Based on the best available weather forecast and other relevant situational awareness information, senior management can initiate a PSPS event.

Operational flow PSPS events

PacifiCorp may de-energize power lines as a preventative measure during periods of the greatest wildfire risk. The decision to implement a PSPS is based on extreme weather and area conditions, including high wind speeds, low humidity, and critically dry fuels. A PSPS event is implemented as a temporary measure and is intended to supplement, not replace, existing wildfire mitigation strategies. The general process is depicted below in Figure 11-3.

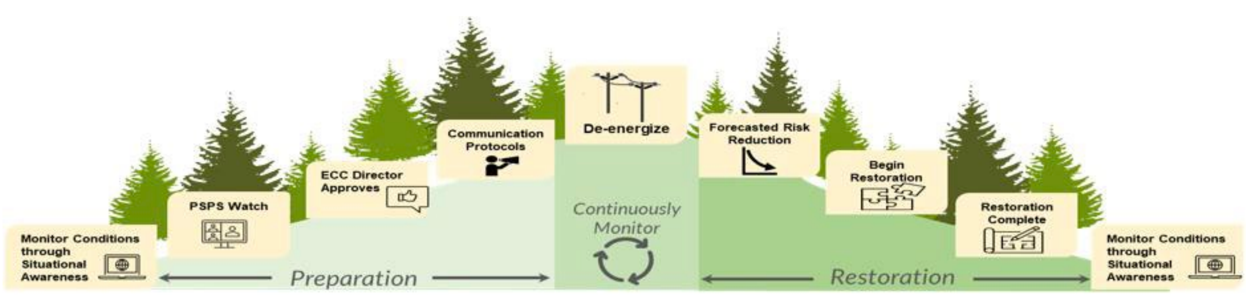


Figure 11-3: PSPS Process Flow Diagram Overview

Upon agreement by executive management to initiate PSPS actions, the Emergency Coordination Center (ECC) will be activated, if it has not already been activated. The ECC Staff will then prepare a public safety power shutoff plan, which at a minimum shall include:

- Forecasted date and time that the de-energization event will start.
- Estimated duration of the event.
- Date and time that affected customers will be notified under a proposed customer notification plan including additional notifications to AFN customers.
- Critical customers and facilities on the circuit such as hospitals, emergency centers, and water/water treatment plants that will be impacted.
- With respect to each circuit or portion of a circuit planned for de-energization, a description of the circumstances that give rise to the need to de-energize with specific focus on how it creates an “imminent and significant risk to persons and/or property”
- A description of measures considered as an alternative to de-energization and why such measures alone are insufficient.
- A description of the public safety benefits the company hopes to achieve by de- energizing the applicable electrical facilities.
- A description of proposed efforts to mitigate the adverse impacts on customers and communities impacted by de-energization; and
- The proposed date and time for notifying the appropriate commission staff.
- Additional information may be required as part of a specific state event mitigation plan.

PacifiCorp actively monitors real-time weather conditions and tries to provide customers with additional notifications if de-energization is likely. When real-time observations and weather forecasts indicate that the three triggers for "de-energization watch" have been evaluated, and the Wildfire Risk Index is elevated, a de-energization watch protocol is initiated. The protocol includes activation of an ECC, communication with local public safety partners, and implementation of additional monitoring activities.

The ECC is staffed by specialized staff who assemble during de-energization warning and implementation to provide critical operations support through the collection and analysis of data. The ECC makes decisions to maintain the safety and reliability of the transmission and distribution system and helps facilitate cross-organization incident coordination. The ECC is led by an ECC Executive and has the support of a safety officer, a joint information team (JIT), emergency management, meteorology and operational stakeholders representing wires operations, system operations, vegetation management, engineering, and other specialties.

When the ECC is activated, PacifiCorp's emergency management gathers input from public safety partners to properly characterize and consider impacts on local communities and send notifications to the operators of pre-identified critical facilities, partner utilities, and adjacent local public safety partners. The company's customer service team then coordinates through the ECC to confirm customer lists for the area to develop a communication plan for potentially impacted customers.

Local patrol and inspection of lines during a PSPS watch can include a variety of methods depending on the accessibility of locations, the reliability of the line, area conditions and other factors. The ECC reviews these factors to determine necessary tasks such as the deployment of crews or remote monitoring by system operations.

Because of the public desire for reliable electric service, together with public safety concerns associated with de-energization, a PSPS is a measure of last resort. Consistent with existing regulations and the general mandate to operate the electrical system safely, the ECC has discretion to determine when a PSPS is appropriate.

The ECC Executive considers all available information, including real-time feedback and input from other ECC participants, wires operations and Public Safety Partners to determine whether PSPS should be executed. Additionally, ECC Executive has the discretion to determine when or if a PSPS is appropriate or refine the PSPS areas identified.

Notification and Communication

Notification of and communication to customers during and after a wildfire or PSPS event are detailed in Section 11.4.

Improvements/updates made since the last WMP submission

Since the last WMP submission, PacifiCorp emergency management has extended communications to partners to learn more about how to best reach communities and plans to improve outreach as updated partner information becomes available.

To address the growth in wildfire and wildfire risk, the company has established a Wildfire Intelligence Center that will eventually provide 24/7 monitoring of all hazards that threaten company equipment with a focus on wildfire. The establishment of the Wildfire Intelligence Center addresses the growing risk of wildfire in the states PacifiCorp serves. Figure PAC 11-1 below shows the wildfire acres burned over the past 40 years in the six states PacifiCorp and the trend line showing the increasing acres burned:

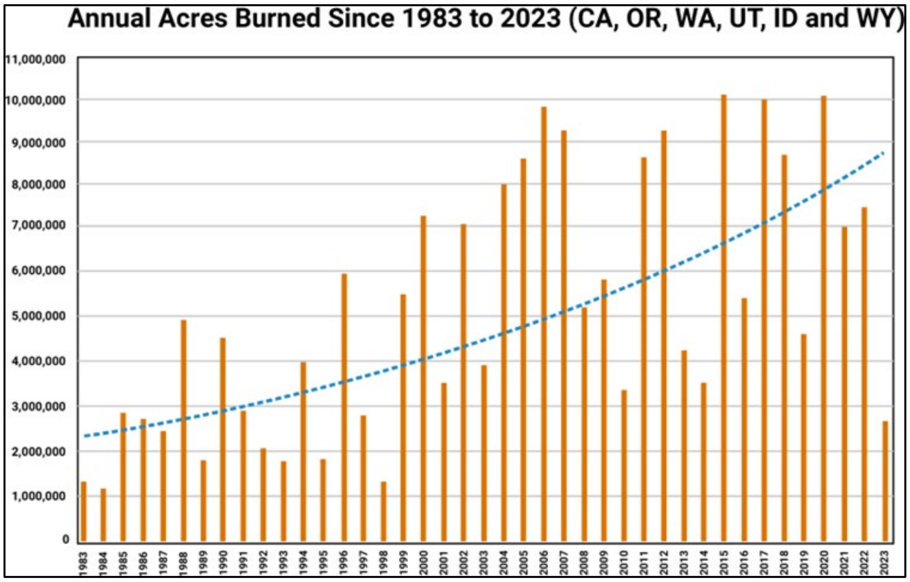


Figure PAC 11-1: Wildfire Acres Wildfires in States Served by PacifiCorp 1983-2024

Historically the company has responded to an active wildfire after receiving notification from 911 or other agencies of an outside threat. In cases where the first notification is from 911, PacifiCorp would dispatch personnel to the site and provide information on the situation.

There are technologies available that allow for earlier detection and methods to receive updates as an incident evolves. Having dedicated staff with the skillset and background to monitor and receive alerts from camera networks, fire agency dispatch, and social media alerts at the earliest warning better positions the company to determine the need for action while balancing the safety of the public, protection of equipment and maintaining electric service.

PacifiCorp's Wildfire Intelligence Center was modeled after the best practices and insights of PG&E, Southern California Edison, and SoCal Gas who have integrated similar advanced notification technology and intelligence gathering to inform decision making and coordination with fire authorities. The Wildfire Intelligence Center is comprised of individuals who monitor live events and provide situational awareness and support. The team conducts analysis of information against a threat of incident complexity matrix to determine if the situation meets a threshold of action. The team is responsible for monitoring situational awareness with the goals of early detection, rapid resource deployment and improved customer notification.

The Wildfire and Emergency Response Team is staffed by fire emergency response managers who will provide resource support during wildland fires and other events; the response managers fulfill the role of agency representative and will service as the primary point of contact with incident management. Response managers will work with the Wildfire intelligence Center to validate threats, issues, and concerns and are strategically located in the company's operational areas.

Key personnel, qualifications, and training

Below are the qualifications, and training for key personnel in emergency management to support wildfire and PSPS events:

Emergency Management Director

Incident Types: Wildfire, PSPS

Responsibilities:

- Lead, oversee, and coordinate emergency preparedness program
- Oversee all functions related to preventing, mitigating, responding to, and recovering from emergencies due to all relevant hazards for the company
- Develop, maintain, and update the PacifiCorp emergency preparedness plan with associated policies, practices, and procedures
- Direct and manage emergency program managers and specialists

- Evaluate emergency management staff available to respond to emergencies
- Monitor program performance; recommend and implement modifications to systems and procedures
- Develop and oversee the company's emergency coordination center; evaluate regular and emergency communication systems; make recommendations as appropriate

Qualifications: Incident Command Certifications: ICS 100, 200, 300, 700, 800, Master's in Disaster Risk Management, Minimum 15 years' experience in disaster risk management and/or emergency preparedness and planning

Emergency Duty Officer

Incident Types: Wildfire, PSPS

Responsibilities:

- Monitor situation across PacifiCorp service area
- Serve as point of contact for all wildfire-related emergencies/disasters in conjunction with the Emergency Management Director

Qualifications: Bachelor's degree in emergency management or related field, Incident Command Certifications: ICS 100, 200, 300, 700, 800, Minimum five years' experience in disaster risk management and/or emergency preparedness and planning

Wildfire Intelligence Center

- Incident Types: Wildfire

Responsibilities:

- Analyze wildfire risk in real time
- Provide analysis and recommend actions
- Develop situational awareness products

Qualifications: Bachelor's degree in emergency management or related field, Incident Command Certifications: ICS 100, 200, 300, 700, 800, Minimum five years' experience in disaster risk management and/or emergency preparedness and planning, 9-1-1 dispatching, intelligence analysis.

Wildfire and Emergency Response Team

Incident Types: Wildfire

Responsibilities:

- Serve as liaison for with local fire agencies at the field response level

Qualifications: Experience in Complex incident Management Teams (CIMT) or Fire Chief, experience in service area.

ECC Executive

Incident Types: Wildfire, PSPS

Responsibilities:

- Coordinates response to incidents
- Participates in ECC coordination meetings

Qualifications: Experience in building effective teams with bargaining, non-bargaining, and degreed personnel to meet the challenges of increasing customer demands in both blue-sky and disaster recovery scenarios, expertise in disaster response and recovery.

Region Systems Operations Director or Manager

Incident Types: Wildfire, PSPS

Responsibilities:

- Participate in the ECC
- Coordinate switching between field and engineering organizations. Directs execution of the same via Operators
- Respond to and mitigate outage duration and risk.

Qualifications: Minimum 15 years' experience in system operations or System Operations Control Center Leadership. Experience in building effective teams with bargaining, non-bargaining, and degreed personnel to meet the challenges of increasing customer demands in both blue-sky and disaster recovery scenarios. Expertise in meeting common performance indices such as CAIDI (Customer Average Interruption Duration Index) and SAIDI (System Average Interruption Duration Index) with practical application and maturation staged approach to attaining the same. Application of the same led to a five-minute drop in CAIDI in the span of a year. Expertise in black starts, as well as disaster recovery and load, shed models. Expertise in the development of Incident Response Plans and Wildfire Response Plans.

Public Information Officer (PIO)

Incident Types: Wildfire, PSPS

Responsibilities:

- Plan and host press conferences to announce major news or address crises

- Prepare press releases, speeches, articles, social media posts, and other materials for public consumption
- Develop strategies and procedures for working effectively with the media
- Maintain good working relationships with media organizations
- Collaborate with executive management and marketing team to ensure a cohesive public image
- Work with various teams to organize and host public events and promotions
- Speak directly to the public or media to address questions and represent the organization

Qualifications: Bachelor's degree in communications, public relations, journalism, or related field. Prior experience in a public relations role. Exceptional written and verbal communication skills. Strong understanding of the media, including social media. Ability to travel on short notice. Great public speaking and interpersonal skills.

Mutual Aid

Timely restoration requires significant logistical expertise, skilled line workers and assessors, and specialized equipment on a large scale. Mutual assistance is an essential part of the energy industry's contingency planning and restoration process. Utility companies impacted by a major outage event are able, under mutual assistance, to increase the size of their workforce by requesting mutual assistance from other companies. When called upon, PacifiCorp will send skilled restoration workers along with specialized equipment, oversight management, and support personnel to assist the restoration efforts of a fellow electric/gas service company. Crew members who deploy mutual assistance are provided just-in-time training at the pre-deployment briefing.

The primary goal of the mutual assistance program is to restore service in a safe, effective, and efficient manner. The program also serves additional objectives that benefit the entire energy industry. These include:

- Promote the safety of employees and customers
- Strengthen relationships among utility companies
- Provide a means for utility companies to receive competent, trained employees and contractors from other experienced companies
- Provide a predefined mechanism to share industry resources expeditiously
- Mitigate the risks and costs of member companies related to major incidents
- Proactively improve resource-sharing during emergency conditions
- Share best practices and technologies that help the utility industry improve its ability to prepare for, and respond to, emergencies
- Promote and strengthen communication among Regional Mutual Assistance Groups (RMAGs) and other Mutual Assistance Agreements
- Enable a consistent, unified response to emergency events

Mutual assistance is both incoming and outgoing. PacifiCorp is a member of multiple emergency associations to facilitate mutual assistance and maintains active mutual assistance agreements with the following organizations:

- Regulated subsidiaries of BHE
- California Utility Emergency Association (CUEA)

- Western Energy Institute Western Region Mutual Aid Assistance (WRMAA)

Drills, Simulations, and Tabletop Exercises

Tracking ID: EP-02

PacifiCorp takes a multi-step approach to coordination with its public safety partners on wildfire mitigation and PSPS preparedness, as shown in Figure PAC 11-2 below.

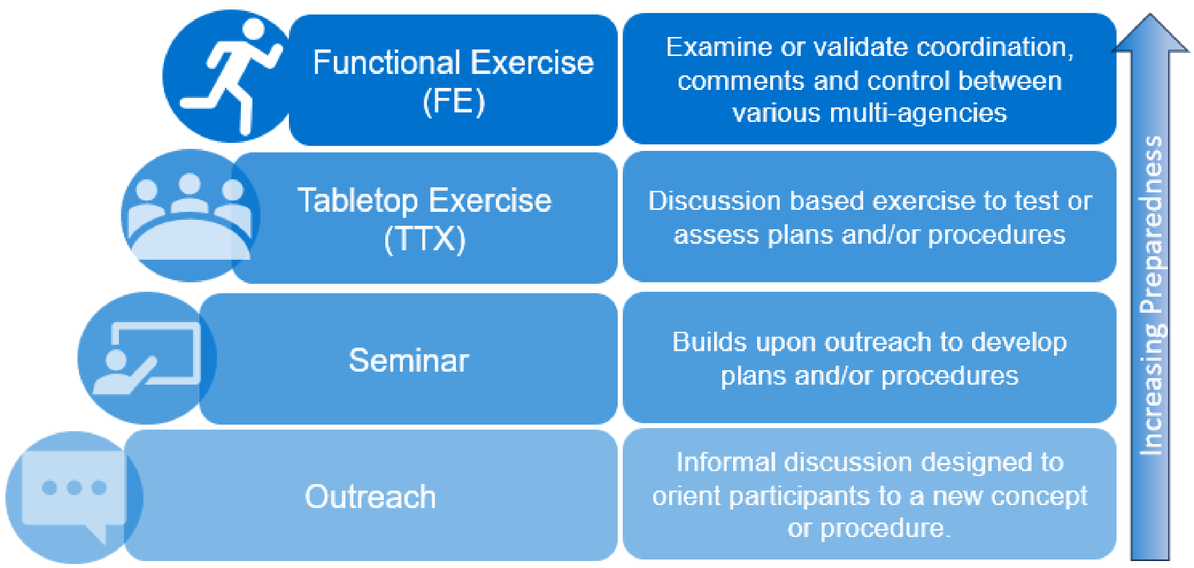


Figure PAC 11-2: Wildfire Response and PSPS Training Preparedness Strategy

As a part of this strategy, each element builds upon the previous step to increase overall preparedness. They include seminars, workshops, Tabletop Exercises (TTXs), and functional exercises (FEs) as described in more detail in the following subsections.

Seminars

PacifiCorp participates in multiple public safety partner meetings and workshops throughout the calendar year across its service territory. Meetings include monthly, quarterly, and annual County and State Emergency Management partner meetings, in addition to pre- and post-fire season collaboration meetings with local, state, and federal fire suppression agencies. These informal discussions are designed to orient participants to a new concept or procedure and continue fostering key working relationships. Additionally, the company provides an annual customer webinar, which provides additional information about PSPS practices that is displayed prominently on the wildfire safety and preparedness webpage.

Workshops

Workshops are local, targeted discussions that build upon outreach to further compare and refine plans, streamline processes, and confirm capabilities (such as customer outreach, critical facilities, and CRC locations and operations) with local public safety partners.

Tabletop Exercises

PacifiCorp facilitates annual discussion-based and functional tabletop exercises to develop awareness of PSPS planning and procedures. These exercises aim to facilitate public and private sector coordination, validate communications protocols, and verify capability to support communities during extreme risk events through mitigation actions such as the deployment of community resource centers. Additionally, the exercises include the collective identification of critical infrastructure at the county level to better inform restoration planning and notifications. The company collects after-action reports from exercises and real-world events involving wildfire safety and PSPS. The after-action reports request feedback on areas for improvement, potential corrective actions and suggestions for plan or procedure development. PacifiCorp considers suggestions for inclusion in a comprehensive plan that is subsequently shared with the appropriate public safety partners.

Functional Exercises

Functional Exercises (FE) are the last step in PSPS preparedness. PacifiCorp coordinates these exercises to examine or validate coordination, command, and control between various agencies. Unlike TTXs or workshops, which are discussion based, these exercises are larger scale and require significantly more planning and coordination and include deployment of resources to practice protocols and processes. A functional exercise tests a part of the plan be executed. Examples relevant to a PSPS FE might include performing customer calls or updating websites. To be successful, functional exercises require that foundational planning like workshops and TTXs be complete, and formal plans to be in place.

11.2.2 Planning and Allocation of Resources

The electrical corporation must briefly describe its methods for planning appropriate resources (e.g., equipment, specialized workers), and allocating those resources to assure the safety of the public during service restoration.

In addition, the electrical corporation must provide an overview of its plans for contingency measures regarding the resources required to respond to an increased number of reports concerning unsafe conditions and expedite a response to a wildfire- or PSPS-related power outage.

Prior to the start of a potential PSPS event, a company meteorologist provides analysis of weather a fuel variables in relation to PacifiCorp assets that could result in a PSPS. All identified circuits, or portions of circuits, are geographically shared with operations. Field resources are assigned to pre-inspect assets and vegetation and staged in advance of the potential event to observe strategic locations within each of the impact areas. The role of the observer is to look for unsafe conditions that may trigger the need to de-energize lines for safety. Some of these conditions may include wind conditions causing debris or vegetation to potentially fly into lines, and/or extreme conductor movement that may lead to wires contacting each other.

Each circuit, or portion of circuit, which may be impacted by a PSPS event has a pre-defined resource allocation for pre-inspection, observation and restoration activities for overhead line sections. Resources will be assigned during an event, and a plan will be developed. During an event, PacifiCorp will develop a plan and assign resources accordingly. The plan also identifies if the line could be patrolled on the ground, identifies known areas that may not be safe for patrol in the dark, and considers areas where helicopter patrol is feasible. Based on the total resources needed to patrol all line segments impacted by a PSPS event, estimated restoration times based on switching evolution is calculated. If there is a large enough event that there is a shortage of patrol resources, then restorations are prioritized by critical infrastructure affected and the number of customers impacted to prioritize restoration circuits.

The ECC Executive approves restoration priorities and resource plans. Additionally, each individual authorization to patrol and authorization to re-energize is issued by ECC Executive after consulting with a company meteorologist and field observers to confirm conditions have subsided.

11.3 External Collaboration and Coordination

11.3.1 Communication Strategy with Public Safety Partners

The electrical corporation must describe at a high level its communication strategy to inform external public safety partners and other interconnected electrical corporation partners of wildfire, PSPS, and re-energization events as required by GO 166 and Public Utilities Code section 768.6. 108 This must include a brief description of the policies, practices, and procedures the electrical corporation adopts to establish appropriate communication protocols with public safety partners for both wildfire- and PSPS-specific incidents to ensure timely, accurate, and complete communications. The electrical corporation must refer to its emergency preparedness plan as needed to provide more detail.

Public Safety Partner Portal

Tracking ID: EP-03

During a PSPS event, the PacifiCorp recognizes the importance of providing additional geographical details of area(s) that may be affected by an outage. In 2024, the company implemented a Public Safety Partner Portal. The Public Safety Partner (PSP) Portal is a secure web-based application that hosts key information about customers that has been identified as critical facilities or infrastructure. This information includes, for example, the location, primary/secondary contact information, and backup generation capabilities of critical customers. The PSP Portal is accessible to only public safety partners during PSPS events to support notification and provision of support to critical facilities that may be impacted by an outage. In addition to enhancing coordination with local public safety partners during emergencies, the PSP Portal also enhances PacifiCorp's ability to prioritize power restoration, backup power evaluation, additional communications, and allocation of other resources before and during PSPS events to critical facility customers.

Table 11-3 below summarizes PacifiCorp's communications with Public Safety Partners.

Table 11-3: High-Level Communication Protocols, Procedures, and Systems with Public Safety Partners

Public Safety Partner Group	Name of Entity	Key Protocols	Frequency of Prearranged Communication Review and Update
Emergency Management	California State OES	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Del Norte County OES	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Modoc County OES	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Shasta County OES	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Siskiyou OES	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Hoopa Tribe	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly

Public Safety Partner Group	Name of Entity	Key Protocols	Frequency of Prearranged Communication Review and Update
Emergency Management	Karuk Tribe	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Tolowa Dee-ni' Tribe	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Emergency Management	Yurok Tribe	Public Safety Partner Portal, Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Quarterly
Telecommunications	Siskiyou Telephone	Public Safety Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Biannual PSPS exercises: TTX and FE
Telecommunications	AT&T	Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Biannual PSPS exercises: TTX and FE
Telecommunications	Frontier Communications	Email, Phone, Voice, Meetings, Exercises ERP Annex 01 External Emergency Coordination and Communications.	Biannual PSPS exercises: TTX and FE

Table 11-4 below summarizes the key gaps and limitations in coordinating with Public Safety Partners.

Table 11-4: Key Gaps and Limitations in Communication Coordination with Public Safety Partners

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
Feedback on PSPS Playbook	No feedback on the 2025 PSPS Playbook updates during the CA Wildfire Advisory board meeting on 03/21/2025	Walk through the PSPS playbook in greater detail during the pre-wildfire season meeting with the California Wildfire Advisory Board (WAB) in March to further engage the Board in preparation for the TTX and FE in April and May. Target Timeline: March 2025 WAB Meeting and 2025 TTX and FE

11.3.2 Collaboration on Local and Regional Wildfire Mitigation Planning

In this section, the electrical corporation must provide a high-level overview of its plans, activities (programs), and/or policies for collaborating with communities on local and regional wildfire mitigation planning (e.g., wildfire safety elements in general plans, community wildfire protection plans, local multi-hazard mitigation plans) within its service territory.

Tracking ID: CO-03

PacifiCorp enhanced its emergency preparedness plan in collaboration with key internal business units and external public safety partners. The company meets at least annually with county and local emergency management agencies, public health authorities, local law enforcement and fire jurisdictions and other interested parties. Through these meetings, PacifiCorp gathers inputs from the community and adjusts plans as needed.

PacifiCorp participates in workshops, work groups, meetings, and exercises with other electrical corporations for the purpose of sharing best practices and procedures.

Table 11-5 below summarizes PacifiCorp's collaboration in wildfire mitigation planning.

Table 11-5: Collaboration in Local and Regional Wildfire Mitigation Planning

Name of County, City, or Tribal Agency or Civil Society Organization (e.g., nongovernmental organization, fire safe council)	Program, Plan, or Document	Last Version of Collaboration	Level of Collaboration
California State OES	Wildfire Mitigation Plan, PSPS, ECC Activations	Spring 2025	Quarterly
Del Norte County OES	Wildfire Mitigation Plan, PSPS, and Community Wildfire Protection	Spring 2025	Quarterly
Modoc County OES	Wildfire Mitigation Plan, PSPS, and Community Wildfire Protection	Spring 2025	Quarterly
Shasta County OES	Mitigation Plan, PSPS, and Community Wildfire Protection	Spring 2025	Quarterly
Siskiyou County OES	Wildfire Mitigation Plan, PSPS, and Community Wildfire Protection	Spring 2025	Quarterly
Hoopa Tribe	Wildfire Mitigation Plan, PSPS	Spring 2025	Quarterly
Karuk Tribe	Wildfire Mitigation Plan, PSPS	Spring 2025	Quarterly
Tolowa Dee-ni' Tribe	Mitigation Plan, PSPS	Spring 2025	Quarterly
Yurok Tribe	Wildfire Mitigation Plan, PSPS	Spring 2025	Quarterly
Siskiyou Telephone	Wildfire Mitigation Plan, PSPS	Spring 2025	Biannual PSPS exercises: TTX and FE
AT&T	Wildfire Mitigation Plan, PSPS	Spring 2025	Biannual PSPS exercises: TTX and FE
Frontier Communications	Wildfire Mitigation Plan, PSPS	Spring 2025	Biannual PSPS exercises: TTX and FE

Table 11-6 below summarized the key gaps in collaborating on local and regional wildfire mitigation planning.

Table 11-6: Key Gaps and Limitations in Collaborating on Local and Regional Wildfire Mitigation Planning

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
Minimal feedback received from exercise participants.	During the 2024 exercise series limited engagement occurred and little to no feedback was provided by attendees	Encourage participation during exercise and feedback following exercise by way of survey. Encourage conversation and questions during Wildfire Safety Advisory Board (WSAB) meetings. WSAB meetings are held bi-annually and are scheduled for pre- and post-wildfire season (usually March and November). Meetings include a workshop to review the PSPS playbook along with discussion regarding program and process improvement. Tabletop and functional exercises are held pre-season and include participation from public safety partners, representation from Tribal Nations, and shareholders.

11.3.3 Collaboration with Tribal Governments

In this section, the electrical corporation must provide a high-level overview of its plans, activities (programs), and/or policies for collaborating on local wildfire mitigation planning with tribal governments served by the electrical corporation and on whose lands its infrastructure is located.

PacifiCorp serves a number of Tribal Nations in its California service area, including the Karuk Tribe, Tolowa Dee-ni' Nation, and the Yurok Tribe.11 Some Tribal lands and areas of historical and cultural significance are within areas of heightened wildfire risk. In 2025 PacifiCorp signed a Cultural Monitoring agreement with the Karuk Tribe.

Additionally, Tribal members who live in remote communities or areas with limited infrastructure may not have full access to information on wildfires, emergency de-energizations, or PSPS events.

Table 11-7 below summarizes PacifiCorp's collaboration with Tribal Nations.

Table 11-7: Collaboration with Tribal Agencies

Name of County, City, or Tribal Agency or Civil Society Organization (e.g., nongovernmental organization, fire safe council)	Program, Plan, or Document	Last Version of Collaboration	Level of Collaboration
Karuk Tribe	Wildfire Mitigation Plan, PSPS Cultural Monitoring Plan	Spring 2025	Quarterly
Yurok Tribe	Wildfire Mitigation Plan, PSPS	Spring 2025	Quarterly
Tolowa Dee-ni' Nation	Wildfire Mitigation Plan, PSPS	Spring 2025	Quarterly
Shasta Tribe	Wildfire Mitigation Plan, PSPS, Cultural Monitoring Plan	Spring 2025	Quarterly

Table 11-8 outlines key gaps and limitations in collaborating with Tribal Agencies.

Table 11-8: Key Gaps and Limitations in Collaborating with Tribal Agencies

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
Communication/Outreach	Assembling correct contact info for individual Tribes	Centralized location for contact workbook/spreadsheet and staff assigned to keep it current.
Cultural competency	Having an understanding of Tribal governments and their assets, what is of cultural and historical importance, etc.	Internal trainings through the Tribal Liaison Representative
Relationship-building	Cultivating partnerships with Tribes	Identify issues of mutual interest and commonalities; ways to support, etc.
Creating a formal MOU or official document about mutual support during emergencies -	Have a reciprocal agreement with Tribes for emergency needs such as a lease agreement for emergency use of Tribal lands; access to facilities, vehicles, etc.	Support from leadership in PacifiCorp and Tribal leadership.

11.4 Public Communication, Outreach, and Education Awareness

The electrical corporation must describe at a high level its comprehensive communication strategy to inform essential customers and other stakeholder groups of wildfires, outages due to wildfires, and PSPS and service restoration, as required by Public Utilities Code section 768.6. This should include a discussion of the policies, practices, and procedures the electrical corporation adopts to establish appropriate communication protocols to ensure timely, accurate, and complete communications.

Tracking ID: CO-01

Strong partnerships and regular collaboration between the utility with local public safety, health organizations, other utilities, and emergency management agencies are essential for effective coordination in any event that impacts the community. PacifiCorp will serve as the initiating agency in the event of a PSPS and will coordinate with all local agencies as appropriate, employing the expertise and recommendations offered by state and local emergency management agencies. Any non-outage related issues or incidents that arise during a PSPS will be handled by local emergency management and public safety.

PacifiCorp's emergency management staff maintains regular contact with local jurisdictions, voice and email notifications and communication occur at least once daily during a PSPS event.

If requested, a company employee may be dispatched to the affected state or county emergency operations centers in the role of agency representative to provide a constant and direct conduit for information.

To help PacifiCorp understand local sensitivities and concerns during a PSPS, the company will typically discuss the critical infrastructure affected with local emergency management agencies. This information adds to the situational awareness for PacifiCorp's incident command personnel before the events initiation.

PacifiCorp will conduct outreach to adjacent utilities as appropriate based on the events circumstances. Other utility contact information can be found within mutual assistance directories or the use of the "In Case of Crisis" application which is an electronic directory of all Western Region Mutual Assistance Agreement (WRMAA) member utility points of contact, internal directory as created for smaller neighboring utilities, utility commission and through ESF-12 (Energy) requests for coordination.

Effective communication is essential in any incident that impacts the public. PacifiCorp will coordinate local communication from the JIT under the ECC. Event update meetings will be held as needed with an option to join remotely. In addition, should a Community Resource Center (CRC), as outlined in the Community Resource Center Playbook, be established, company representatives will be present to communicate with and assist community members. The communication plan can be found in Appendix D of the PSPS Execution Playbook.

If feasible, the decision to activate a CRC should be made at the 48-hour point. If 48-hour notice is not feasible, a CRC decision should be made at least within the 24-hour point, because a minimum of a 24-hour notice is typically needed to successfully mobilize a CRC. Please see the CRC Playbook for specifics.

Date of last discussion-based or operations-based exercise(s) on public safety partner communication.

Corporate Communications hosts an internal tabletop exercise for wildfire before the season starts each year. The last exercise was March 17, 2025. An external tabletop exercise was held May 27, 2025 and a functional exercise June 5, 2025.

11.4.1 Protocols for Emergency Communications

The electrical corporation must identify the relevant stakeholder groups and target communities in its service territory and describe the protocols, practices, and procedures used to provide notification of wildfires, outages due to wildfires and PSPS, and service restoration before, during, and after each incident type.

Tracking ID: CO-01

PacifiCorp uses a variety of outreach methods for customers and communities for notification of wildfires, outages due to wildfires and PSPS. Table 11-9 outlines PacifiCorp's protocols for stakeholder communications during wildfires, wildfire-related outages, and PSPS events with further explanation below the table.

Table 11-9: Protocols for Emergency Communication to Stakeholder Groups

Stakeholder Group/Target Community	Event Type	Method(s) for Communicating	Means to Verify Message Receipt	Interests or Concerns Before, During, and After Wildfire and PSPS events
General Public	Wildfire	Media release, interviews, social media, website, standard customer notification via all available channels.	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long will the event last, where to learn more information, steps to take to be prepared during an outage
General Public	Wildfire-related outage	Media release, interviews, social media, website, direct customer calls, standard customer notification via all available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long will the event last, where to learn more information, steps to take to be prepared during an outage
General Public	PSPS-related outage	Media release, interviews, social media, website, standard PSPS customer notifications via all available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long the event will last, where to learn more information, steps to take to be prepared during an outage, resources available at CRCs
General Public	Restoration of service	Media release, interviews, social media, website, standard customer notification via all available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long the event will last, where to learn more information, how to contact PacifiCorp for restoration issues
Priority Essential Services	Wildfire	Emergency management personnel, Public Safety Partners, ESF12, RBMs	Customer notifications (call, email, phone) verified/tracked through customer notification too and direct outreach from Emergency Management or RBM	How long will the outage last, will generator support be provided for facilities if they do not have generators.

Priority essential services	Wildfire-related outage	Emergency management personnel, Public Safety Partners, ESF12, RBMs	Customer notifications (call, email, phone) verified/tracked through customer notification too and direct outreach from Emergency Management or RBM	How long will the outage last, will generator support be provided for facilities if they do not have generators.
Priority essential services	PSPS-related outage	Emergency management personnel, Public Safety Partners, ESF12, RBMs	Customer notifications (call, email, phone) verified/tracked through customer notification too and direct outreach from Emergency Management or RBM	How long will the outage last, will generator support be provided for facilities if they do not have generators.
Priority essential services	Restoration of service	Emergency management personnel, Public Safety Partners, ESF12, RBMs,	Customer notifications (call, email, phone) verified/tracked through customer notification too and direct outreach from Emergency Management or RBM	How long will the outage last, will generator support be provided for facilities if they do not have generators.
AFN populations	Wildfire	Media release, interviews, social media, website, standard customer notification via available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long will outage last, programs to support medical/AFN customers, update contact information, steps to take to be prepared for an outage
AFN populations	Wildfire-related outage	Media release, interviews, social media, website, standard customer notification via available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	How long will outage last, programs to support medical/AFN customers, update contact information, steps to take to be prepared for an outage .
AFN populations	PSPS-related outage	Standard PSPS notification via all available channels; plus, additional PSPS notifications via personal phone calls; and possible in person welfare check if unable to reach via phone	Confirm via personal phone call or welfare check	How long will outage last, programs to support medical/AFN customers, how PacifiCorp communicate with customers with medical certificate and others who have been self-identified as having an AFN, resources available at CRCs

AFN populations	Restoration of service	Standard customer notification via all available channels	Confirm via personal phone call or welfare check	Limited awareness of PacifiCorp's de-energization process, including restoration and how the company communicates with customers that have self-identified as having an AFN (including customers in the medical certificate and medical baseline programs) during each phase. How to contact PacifiCorp for restoration issues
Populations with limited English proficiency	Wildfire, wildfire related outage, PSPS-related de-energization, restoration of service	Media release, interviews, social media, website translated content in key languages: English, Spanish, standard customer notification via all available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	Limited awareness of PacifiCorp's de-energization process, including restoration and how the company communicates with Customers and communities during each phase. Resources available to support customers such as CRCs during a PSPS. How to contact PacifiCorp for restoration issues
Tribes	Wildfire, wildfire related outage, PSPS-related de-energization, restoration of service	Emergency management personnel, Public Safety Partners, ESF12, RBMs, Media release, interviews, social media, website; standard customer notification via all available channels	Customer notifications (call, email, phone) verified/tracked through customer notification too and direct outreach from Emergency Management or RBM	Limited awareness of PacifiCorp's de-energization process, including restoration and how the company communicates with Customers and communities during each phase. Resources available to support customers such as CRCs during a PSPS. How to contact PacifiCorp for restoration issues

People in remote areas	Wildfire, wildfire related outage, PSPS-related de-energization, restoration of service	Media release, interviews, social media, website, standard customer notification via all available channels	Social media/media releases verified on Pacific Power website and social media channels; Customer notifications (call, email, phone) verified/tracked through customer notification tool	Limited access to information and resources based upon geographical location and available essential services. Resources available to support customers such as CRCs during a PSPS. How to contact PacifiCorp for restoration issues. High fire risk areas in need of information on defensible space.

Outages Due to Wildfires

The communication protocols for wildfires will vary. As shown in Figure 11-2 above, PacifiCorp will respond to wildfires based on proximity to the equipment. Figure 11-4 below shows the high level communications process for wildfires near company that may result in an emergency de-energization that is described further below.

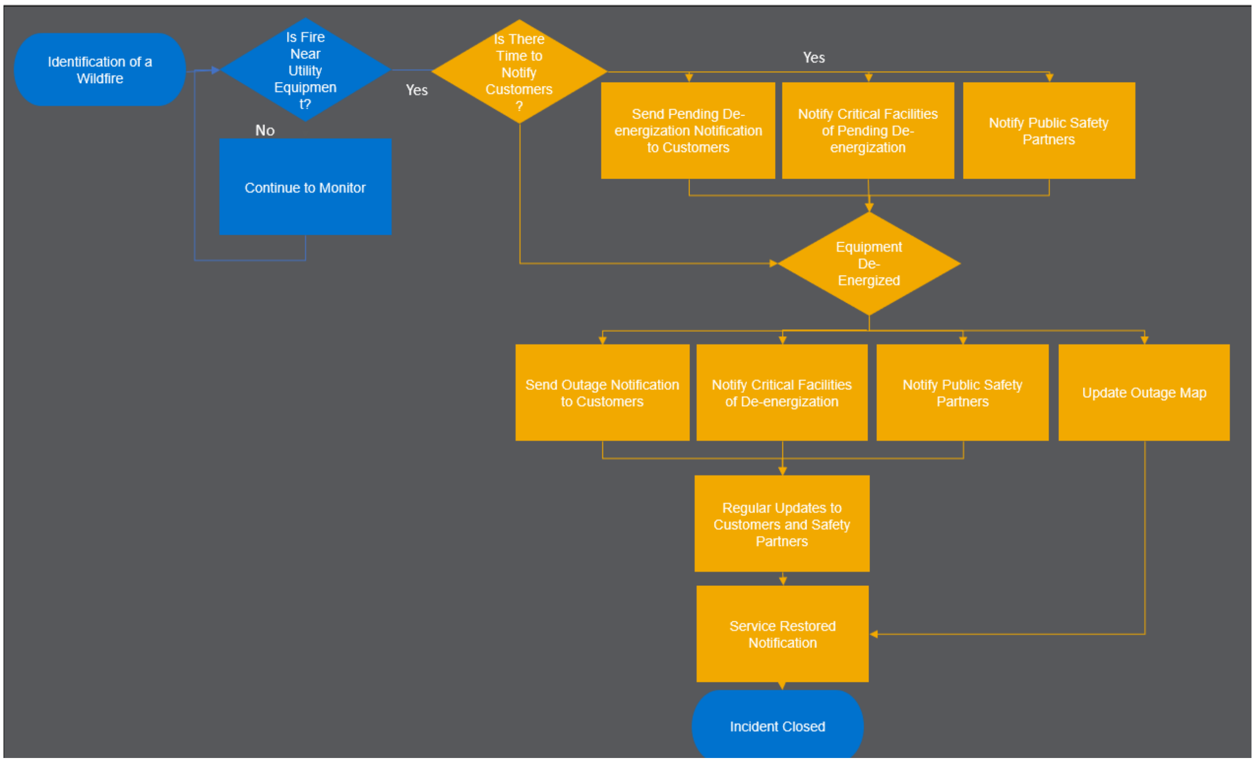


Figure 11-4: Example High Level Communications Processes for Wildfire Incidents

If there is time before an emergency de-energization:

- The company will notify customers that emergency de-energization is pending. This notification is sent by text, email, or phone based on the customer's outage notification preferences they have established in PacifiCorp's customer care system.

- Critical facility customers will receive specific notifications
- Public Safety Partners will be notified by company emergency management of the pending de-energization
- If the equipment is de-energized, PacifiCorp will notify customers about the outage. This notification is sent by text, email, or phone based on the customer's outage notification preferences they have established in PacifiCorp's customer care system.
- After the de-energization, Customers will continue to receive regular notifications regarding the outage based on the expected duration of the outage and receive notification when service is restored.

If there is no time before the equipment de-energization:

- The company will notify customers about the outage once it occurs. This notification is sent by text, email, or phone based on the customer's outage notification preferences they have established in PacifiCorp's customer care system.
- Critical facility customers will receive notification from their Regional Business Manager (RBM)
- Company emergency management will notify Public Safety Partners of the de-energization will notify Public Safety Partners

After the de-energization, Customers will continue to receive regular notifications regarding the outage based on the expected duration of the outage and receive notification when service is restored.

Figure PAC 11-3 below is an example of PacifiCorp's outage map and the icons that show if an outage is due to an emergency de-energization for wildfire.

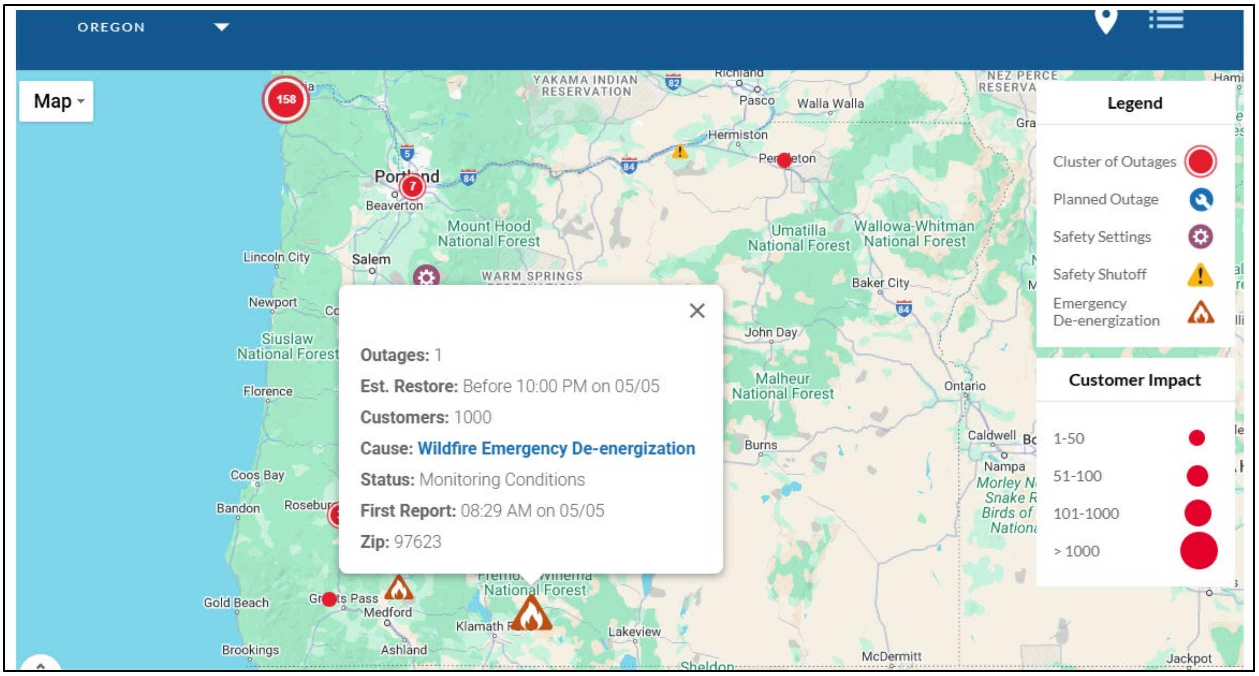


Figure PAC 11-3: Example of Emergency De-energization Information on PacifiCorp Outage Map

PSPS Events

For PSPS events, Figure 11-5 below shows the high level communications process and timing.

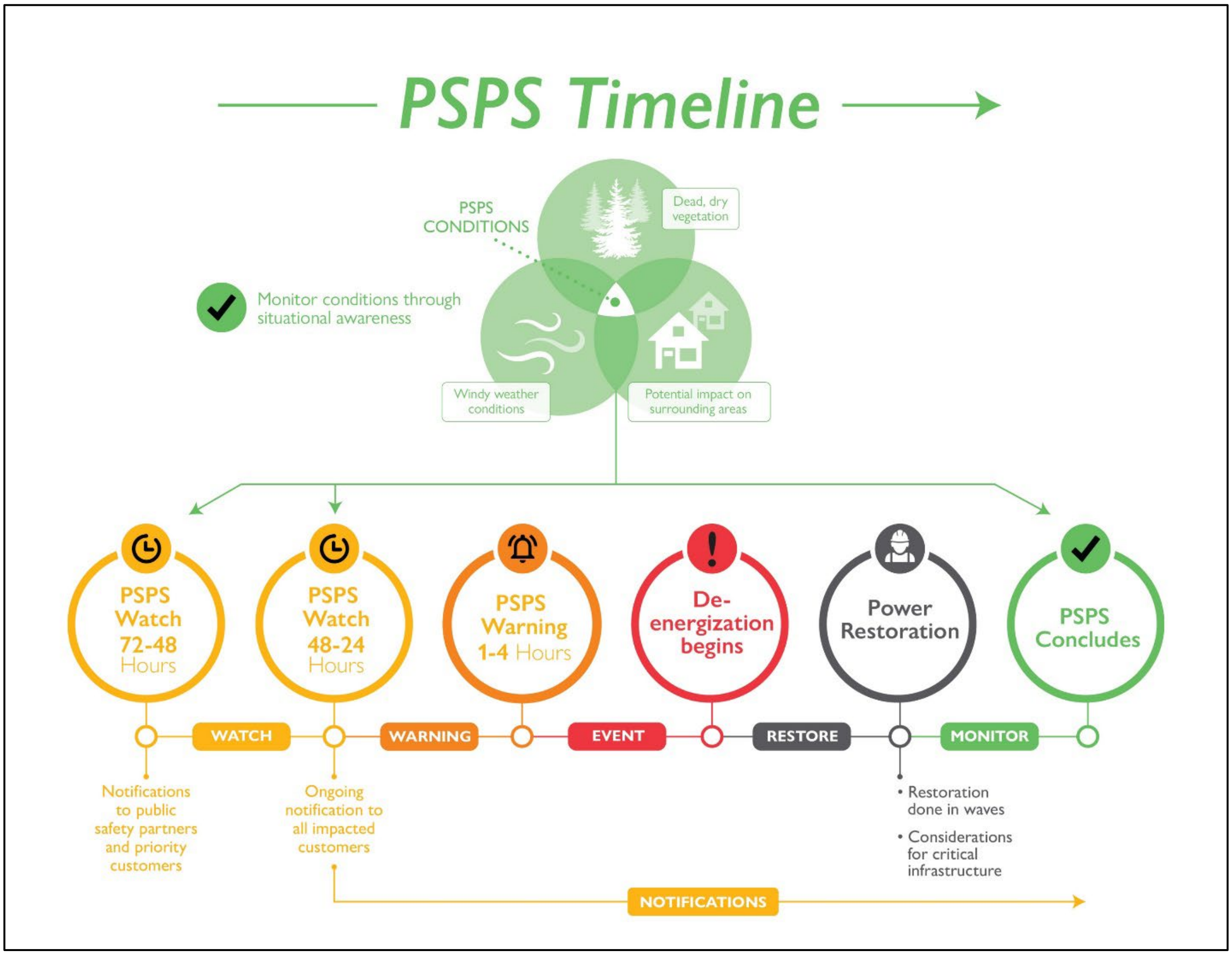


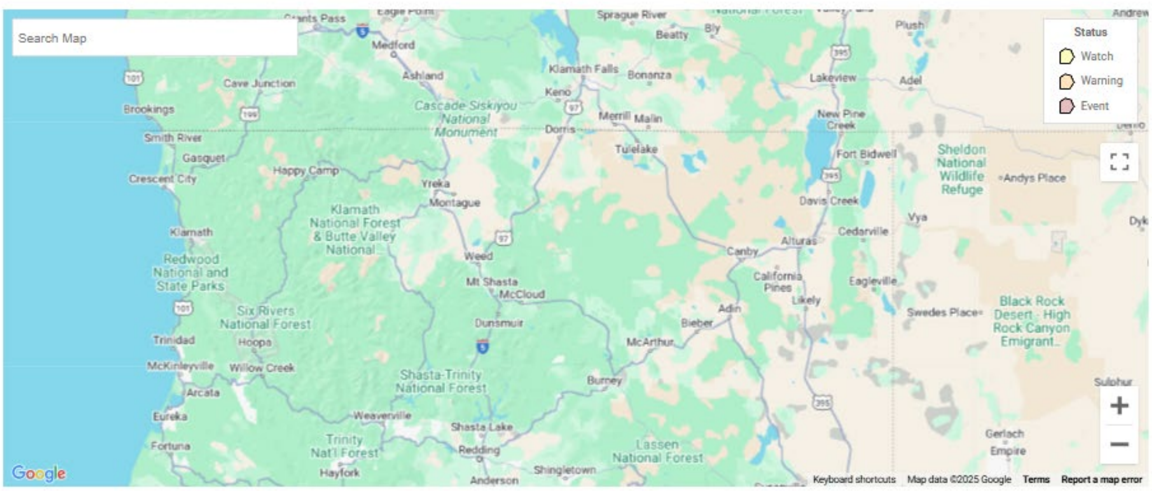
Figure 11-5: PSPS Communications Processes

When a PSPS Watch is set, approximately 72-48 hours before the PSPS event, public safety partners and managed/industrial or large customers are notified. Customer outreach begins 48-24 hours before the PSPS event with customers receiving notification on all available methods. Customers receive regular communications based on the duration of the event through notification of restoration.

PacifiCorp customer service attempts to make personal phone calls to customers who are identified as AFN, including medical baseline customers. Contact occurs, when possible, prior to an event, at the beginning of re-energization, and after energization is completed. Customer service tracks if a positive confirmation of contact was made with medical and other AFN customers. The results of the contacts are reported to the ECC Executive if a medical/ AFN customer needs additional assistance, the AFN Coordinator coordinates with customer service, the ECC Joint Information Team and the ECC Liaison to quickly relay the information to local public safety partners. Such coordination may lead to a wellness check.

Customers can also see on PacifiCorp's outage map or PSPS map that the outage is due to PSPS. An example of the map is presented in Figure PAC 11-4 below.

Public Safety Power Shutoff map



**Some customers outside of Public Safety Power Shutoff areas could be impacted by a Public Safety Power Shutoff due to the interconnected nature of the electrical grid.*

DEFINITIONS

Watch: This area is being monitored for elevated weather conditions that could **possibly** lead to a Public Safety Power Shutoff.

Warning: This area is being monitored for elevated weather conditions that will **likely** lead to a Public Safety Power Shutoff.

Event: This area is currently experiencing a Public Safety Power Shutoff during elevated weather conditions.

Figure PAC 11-4: Example of PSPS Map

11.4.2 Messaging

In this section, the electrical corporation must describe its procedures for developing effective messaging to reach the largest percentage of stakeholders in its service territory before, during, and after a wildfire, an outage due to wildfire, or a PSPS event.

Tracking ID: CO-01

PacifiCorp follows a comprehensive communications process internally for coordination before, during, and after an incident, with communication redundancies in place. This process leverages the JIT model, ensuring streamlined messaging across key roles and functions, including the PIO, Regional Business Managers (RBMs), Customer Service, Regulatory Coordinator, AFN outreach, Tribal and Government Affairs Coordinator. Processes and procedures for notifying stakeholders, including but not limited to the general public, priority essential services, public safety partners, AFN populations, populations with limited English proficiency, and Tribes, are outlined in Table 11-10 below.

Company personnel are notified of an incident or potential event as early as feasible prior to the activation of an incident or event. The information provided includes current or forecasted weather conditions, additional key variables triggering an event, the affected area, customer count, and the date and time of the event. The goal is for the Emergency Manager to notify local authorities, emergency management services, and stakeholders as early as possible in advance of an incident or potential event that could result in a power outage due to wildfire or PSPS. Several key roles coordinate these emergency communications under the JIT structure.

Emergency Management staff will activate the ECC and initiate the emergency communications process. The Emergency Management team will manage the ECC, establish cadence, and coordinate with public safety partners at the state and local levels. The Public Safety Partner Portal as referenced in 11.3.1 is used to provide critical updates to public safety partners but is separate from customer communication processes during a wildfire or PSPS.

The JIT Lead, led by the company PIO, develops accurate, accessible, and timely information for press and media briefings related to power supply and customer safety. The JIT Lead also prepares and attends media briefings, providing summaries and messaging templates as part of the JIT structure.

The RBM coordinates with community leaders, non-governmental organizations (NGOs), business leaders (managed accounts), and political leaders at the city and county levels.

Customer Service (Mission Control) uses an automated integrated voice response system to communicate with impacted customers through their preferred method of communication, including phone calls, texts, or emails. It also manages social media and website content during the event. Mission Control plays a critical role in contacting AFN customers before, during, and after PSPS events to ensure their needs are met.

Regulatory staff handle all regulatory communications, ensuring alignment with Commission Staff and coordinating updates between Emergency Management and ESF12.

AFN outreach coordinates AFN customer needs.

Tribal and Government Affairs Coordinator is PacifiCorp's official representative to Tribal Nations and government officials.

Messaging for all stakeholders is developed collaboratively within the JIT, ensuring consistency and alignment across all channels, roles, and tools, including those specific to AFN populations and public safety partners.

Effective Messaging

PacifiCorp outlines its procedures for developing effective messaging to reach the largest percentage of stakeholders in its service territory before, during, and after a wildfire, an outage caused by wildfire, or a PSPS event. The company's communication strategy prioritizes accessibility, clarity, and inclusivity to ensure critical information reaches all audiences. The messaging strategy incorporates the following elements:

- Alert and Notification Schedules: Notifications are issued in a timely manner and follow a structured schedule, ensuring stakeholders are informed well in advance of potential events and updated regularly throughout the duration of the incident.
- Translation of Notifications: Recognizing the diverse linguistic needs within the service territory, all notifications are translated into Spanish. PacifiCorp ensures translated materials maintain accuracy and cultural sensitivity, targeting populations with limited English proficiency effectively.
- Messaging Tone and Language: Messaging is crafted to be clear, concise, and appropriate to the situation, using plain language to avoid confusion. Tone is empathetic and informative, balancing urgency with reassurance.

Key Components and Order of Messaging Content: Communication is structured to prioritize the most critical information first. Messages follow best practices for emergency communications. By addressing these aspects, PacifiCorp ensures that its communication strategy effectively informs and engages stakeholders before, during, and after wildfire events, power outages, or PSPS incidents.

11.4.3 Outreach and Education Awareness Activities

In tabulated format, the electrical corporation must provide a list the various outreach and education awareness activities (programs) (i.e., campaigns, informal education, grant programs, participatory learning) that the electrical corporation implements before, during, and after wildfire, vegetation management, and PSPS events to target communities, including efforts to engage with partners in developing and exercising these activities(programs).

Table 11-10 describes the target communities and concerns regarding wildfire and PSPS events.

Table 11-10: List of Target Communities

Target Community	Interests or Concerns Before, During, and After Wildfire and PSPS events
AFN populations including Medical Baseline customers	Limited access to information and resources to prepare for wildfire. Limited awareness of PacifiCorp's PSPS process, including restoration and how the company communicates with customers that have self-identified as having an AFN (including customers in the medical certificate and medical baseline programs) during each phase.
Community Based Organizations	These organizations are established in the communities as entities that provide essential and consistent services to the residents and are a place that residents rely on for information. In working with these organizations, PacifiCorp can provide wildfire and PSSP information before, during and after an event which provides an additional reach to customers that may not seek out information on PacifiCorp's website, App, and customer service.
Rural Residential Customers	Limited access to information and resources based upon geographical location and available essential services. Information on defensible space, understanding the steps taken to initiate a PSPS event and how the restoration process is conducted and how PacifiCorp communicates with customers during each phase
Commercial Customers that have a high impact of essential services to a small community with limited resources	Working with essential service businesses and those that provide considerable employment or resources to a community. To provide timely information when PacifiCorp is preparing for a PSPS event to mitigate adverse effects to available services and resources within the community by the businesses having time to implement continuity plans.

11.4.4 Engagement with Access and Functional Needs Populations

The electrical corporation must provide an overview of its process for understanding, evaluating, designing, and implementing wildfire and outage program risk initiative strategies, policies, and procedures specific to AFN customers across its territory.

Tracking ID: CO-02

From January 1, 2024, to December 31, 2024, PacifiCorp saw a net increase of 527 customers identifying as AFN, representing approximately a 42% increase in AFN customer identification over the year. As of December 31, 2025, the total AFN population within PacifiCorp's service territory was 1,770 customers, comprising approximately 5% of the overall customer base. This growth reflects the company's commitment to identifying and supporting AFN customers through expanded outreach, robust communication strategies, and customer-focused programs.

PacifiCorp utilizes multiple pathways to identify AFN customers. In 2021, the company added a checkbox on the California Alternate Rates for energy (CARE) application for customers to self-identify as AFN. Since the modification of the CARE application PacifiCorp has experienced an overall increase of 127% in customers who identify as AFN. This straightforward and accessible method has proven effective, and the company plans to retain it. Customers may self-identify during interactions with customer service representatives.

Additionally, customers with serious health conditions that could be aggravated by a loss of power in their home or who require electricity powered medical equipment in the home, can enroll in the PacifiCorp's medical certificate program. Customers in the medical certificate program who meet medical baseline criteria are automatically enrolled in the medical baseline allowance program. The company classifies all customers with medical certificates, including those enrolled in the medical baseline program, who are all classified as AFN.

To strengthen its AFN identification and outreach, PacifiCorp partners with a third-party vendor, MDC Research, to conduct annual surveys of customers, including customers with medical certificates and others that have self-identified as having an AFN. These surveys evaluate the effectiveness of current communication efforts and provide insight on the needs and preferences of AFN customers. The company also collaborates with Community-Based Organizations (CBOs), Tribal Authorities, local governments, and other partners to amplify the reach of its wildfire preparedness, customer programs, and PSPS communications.

Pre-fire season, PacifiCorp enhances its outreach through multiple communication channels and partners with public safety partners, CBOs, and other AFN service providers to amplify messaging. These include targeted emails, social media posts, wildfire safety webinars, and the distribution of digital brochures and handouts in multiple languages, including English and Spanish. These materials cover a range of topics, including wildfire preparation, the CARE Program, the medical baseline allowance program, and backup power programs. The company's customer care agents are trained to provide PSPS-related information and facilitate conversations with translation services to ensure language barriers do not hinder critical communication.

PacifiCorp's Access and Functional Needs Plan describes the company's approach to mitigate impact of PSPS on individuals with AFN through improved customer outreach, education, assistance programs and services. The company participates in the Joint Investor Owned Utility (IOU) Statewide AFN Council, Joint IOU AFN Collaborative Council and convenes a California Wildfire Advisory Board to seek guidance and address the "Why," "Who," "What" and "How" to better mitigate risk and support individuals with AFN, as described in the AFN Plan. Filed annually with the California Public Utility Commission (CPUC), the AFN Plan defines key objectives identified during the prior year's planning meetings. Progress is reported in quarterly reports to the CPUC.

PacifiCorp's AFN key objectives are also listed as AFN targets in Table 11-1 and include the following.

- Increase awareness of our programs and services available for AFN customers before, during and after a PSPS
- Continue to identify individuals who are Electricity Dependent
- Identify new enhancements to programs and resources needed to mitigate the impacts of PSPS on AFN customers
- Coordinate and integrate resources with state, community, utility to minimize duplication of AFN programs

11.4.5 Engagement with Tribal Nations

The electrical corporation must provide an overview of its process for understanding, evaluating, designing, and implementing wildfire and outage program risk initiative strategies, policies, and procedures specific for collaboration with Tribal Nations served by the electrical corporation and on whose lands its infrastructure is located.

PacifiCorp serves a number of Tribal Nations in its California service area, including the Karuk Tribe, Tolowa Dee-ni' Nation, and the Yurok Tribe. Some Tribal lands and areas of historical and cultural significance are within areas of heightened wildfire risk and should be carefully monitored. Additionally, Tribal members who live in remote communities or areas with limited infrastructure may not have full access to information on wildfires, emergency de-energizations, or PSPS events.

Beginning in 2024, PacificCorp established a Tribal Liaison position to facilitate consultation with the Tribal Nations on topics that are of interest to them, including wildfire and PSPS preparedness. PacifiCorp also consults with Tribal Nations through the WSAB.

11.4.6 Current Gaps and Limitations

In tabulated format, the electrical corporation must provide a list of current gaps and limitations in its public communication strategy, including any notification failures identified in the most recent PSPS post-season report. Where gaps or limitations exist, the electrical corporation must indicate the remedial action plan and the timeline for resolving the gaps or limitations.

Table 11-11 below summarizes key gaps and limitations in PacifiCorp's public emergency communication strategy and remediation plan.

Table 11-11: Key Gaps and Limitations in Public Emergency Communication Strategy

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
PSPS Awareness	Customer recall of PSPS fluctuates based on most recent PSPS occurrence; Customer recall of PSPS fluctuates pre-season (lower) to post-season (higher)	Strategy: Focus communications on preparedness for outage, whether due to PSPS or other factors. Promote PacifiCorp website as a resource for information (e.g., via bill insert, social media) Target Timeline: Year round
Generator Rebate Program	Customer awareness of generator rebate program remains low (8%)	Strategy: Add/ emphasize information about the generator rebate program to preparedness communications Target Timeline: Year-round in alignment with outage awareness communications

Gap or Limitation Subject	Brief Description of Gap or Limitation	Remedial Action Plan
Wildfire Safety Communications Awareness	Wildfire safety awareness among customers fluctuates pre-season (lower) vs. Post-season (higher)	Strategy: Reevaluate off season messaging and cadence in pre-fire season survey. Target Timeline: Year Round, following customer survey findings
Master meter PSPS tenant notifications	Tenants do not receive PSPS notifications. Only the master meter/account holder (i.e. landlord, property manager) will receive these notifications.	Add master meter/account holder tenant reminder in all PSPS notifications: Create a master meter toolkit to notify tenants about PSPS via email/mail Target Timeline: 2026
AFN Customer Program Awareness	Customers lack awareness of programs to support AFN preparedness and resilience, resulting in low AFN self-identification and program participation	Develop AFN self-identification webform Enhance Accessibility Program Toolkit for Partners Target Timeline: 2026
Emergency de-energizations	Customers are unaware of PacifiCorp's process for emergency de-energizations and why they occur.	Communicate emergency de-energization in annual WMP webinar. Target Timeline: Annually by end of Q2
Communications and Outreach to Smaller Agencies	Smaller agencies such as rural/volunteer fire departments or community centers need information on PacifiCorp's wildfire and PSPS processes and communications during an incident but can feel overwhelmed by information coming from multiple company sources.	Working internally on streamlining processes to have the right communications at the right time and the right channels. Target Timeline: 2027
Engagement With Tribal Nations on PSPS and wildfire processes and communications.	Need for pre-wildfire season outreach and education for Tribal Nations of PacifiCorp's PSPS and wildfire response processes. Share PacifiCorp's new EM & Fire Response resources/contact information.	Meet with Tribal Nations to discuss PacifiCorp's processes for Wildfire, PSPS and other emergencies. Maintain current database of who their point of contact is at PacifiCorp, Target Timeline: 2026

11.5 Customer Support in Wildfire and PSPS Emergencies

In this section, the electrical corporation must provide an overview of its activities (programs), systems, and protocols to support residential and non-residential customers during and after wildfire emergencies and PSPS events.

PacifiCorp has implemented policies and procedures to ensure a timely response to emergency outages and to coordinate the necessary personnel and resources to ensure timely restoration.

Overview

Critical customers are those who rely on PacifiCorp to provide electrical power for the vital sustainment of life, essential service to a community or large revenue customers who are important financially to both the company and the community. There are three categories of critical customers that the PacifiCorp serves:

- **Access and Functional Needs:** Individuals who are at an increased risk of harm to their health, safety, and independence during a Public Safety Power Shutoff. This includes, but is not limited to, customers who depend on electrical power to maintain machinery or equipment vital to sustainment of life. These may include dialysis machines, breathing apparatus or other critical medical equipment needed. PacifiCorp will make every attempt to restore these customers as soon as possible.
- **Critical Infrastructure Customers:** These are customers who use electrical power to provide an essential service to a community. These customers could include police, fire, hospitals, airports, television, and radio stations. The locations and specific requirements of these customers shall be determined and tracked locally, and these customers shall be given priority,

as practical, during restoration efforts. These customers usually have some type of backup generation that automatically engages when there is a loss of power.

- Strategic Customers: Strategic customers are typically large revenue customers who are important financially to both the community and the company. Typically, these customers are manufacturing plants, but they also may be government installations, municipalities, or other entities. These customers may have backup or self-generation that allows them to continue all or part of their activities upon loss of utility power. These power systems, if they feed into the utility's local system, are already coordinated with the utility prior to the disaster. Strategic customers are assigned to RBMs who should be involved with all contact with these customers before, during, and after an emergency.

Below are described the support resources for customers.

Outage Reporting: In reporting outages, PacifiCorp will continue its customer outage management protocols and real-time outage maps as shown above in Figure PAC 11-3 and Figure PAC 11-4 to inform customers about the presence and location of outages as well as the estimated restoration plans. Details regarding the company's PSPS-specific notifications, tools, messaging, and support services have been included in the PSPS Execution Playbook. Additionally, PacifiCorp has the following wildfire emergency-related customer support programs.

Support for Low-Income Customers: PacifiCorp's support for low-income customers program includes the ability to:

- Freeze all standard and high-usage reviews for the CARE program eligibility until the 12-month period has lapsed, or potentially longer.

- Contact all community outreach contractors and community-based organizations who assist in enrolling hard-to-reach low-income customers, to better inform customers of these eligibility changes.
- Partner with program administrators of the customer-funded emergency assistance program for low-income customers and increase the assistance limit amount for affected customers during the following 12-month period.

Billing Adjustments: PacifiCorp can adjust billing, including prorating monthly bill to the date of the emergency or subsequent damage to customer premises and recalibrating energy usage estimates when premises are unoccupied because of a disaster.

Deposit Waivers: The company can waive deposit and late fee requirements for one year from the declared emergency.

Extended Payment Plans: Affected customers with existing service or those seeking to establish service at a new residence, who have an old bill, are offered a payment plan with 20% due, with equal installments for the remainder for at least 12 billing cycles with no interest.

Suspension of Disconnection and Nonpayment Fees: PacifiCorp may suspend disconnecting for nonpayment and associated fees and eliminate reporting to credit reporting agencies or any collection services for unpaid bills.

Repair Processing and Timing: Immediately after the emergency, PacifiCorp assesses the premises of affected customers whose utility service had been disrupted or degraded and, if applicable, the meter is removed. Every attempt is made to have service available to the customer immediately after the PSPS event or emergency is over. Additionally, time from when the service is requested is tracked.

Community Resource Centers

Tracking ID: PS-01

The company has logistical support for deployment of Community Resource Centers, if necessary, during a PSPS event. Customers can access PacifiCorp representatives in person at the Community Resource Centers, on the phone via the Customer Service phone number and online via social media platforms.

Medical Baseline Allowance Program

Tracking ID: EP-05

PacifiCorp provides qualifying residential customers with a lower rate baseline allowance on their monthly energy bill. Customers in the Medical Baseline Allowance program are designated as AFN customers and receive additional PSPS notifications, when possible, as described in the PSPS Execution Playbook Section 6.; and may be eligible for additional backup power program offerings.

Access to Utility Representatives: PacifiCorp will directly contact customers with damaged facilities after the meter is removed from the damaged property and will expedite any work required to reinstate electrical service. Additionally, PacifiCorp will closely coordinate with local agencies to facilitate any permitting requirements and ensure work is completed as quickly as practical. Furthermore, when activated, CRCs described in Section 11.4.3 are staffed with company employees to support customers locally during events.

12. Enterprise Systems

In this section, the electrical corporation must provide an overview of inputs to, operation of, and support for various enterprise systems it uses for vegetation management, asset management and inspection, grid monitoring, ignition detection, weather forecasting, and risk assessment initiatives. Enterprise systems encompass structures and methods that allow the electrical corporation and its employees and/or contractors to accept, store, retrieve, and update data for the production, management, and scheduling of related work.

12.1 Targets

In this section, the electrical corporation must provide qualitative targets for each year of the three-year WMP cycle. The electrical corporation must provide at least one qualitative target for each initiative as related to implementation and improvement of its enterprise systems.

12.1.1 Qualitative Targets

The electrical corporation must provide at least one qualitative target for each relevant initiative (vegetation management, asset management and inspection, grid monitoring, ignition detection, weather forecasting, and risk assessment) in its three-year plan for implementing and improving its enterprise systems, including the following:

• Identification of which initiative(s) and activity/activities in the WMP the electrical

corporation is implementing to achieve the stated target, including Tracking IDs and the previous tracking ID used in past WMPs, if applicable

• A target completion date

• Reference(s) to the WMP section(s) or appendix, including page numbers, where the details of the target(s) are documented and substantiated

In Table 12-1 below are PacifiCorp's enterprise system targets. Where there was no previous Tracking ID for an activity it is marked "N/A". Initiative ES-01: Implement new vegetation management work management software has "N/A" in 2027 and 2028 as it is expected to be implemented in 2026. Initiative ES-01: Quality Assurance/Quality Control: Create QA/QC process and procedure for reviewing data in the Vegetation Management database (Quality Reviews) has a "N/A" in 2026 as no work on the initiative is planned for that year. RA-04: Data Integration (Foundry) has N/A for 2027 and 2028 as no work on the initiative is planned for those years.

Table 12-1: Enterprise Systems Targets

Initiative	Activity (Tracking ID #)	Previous Tracking ID, if applicable	2026 End of Year Total/Completion Date	2027 Status	2028 Status	Section; Page number
Business Transformation Wave 4: Maximo*	ES-01	N/A	Design complete by EOY. Development in flight.	Anticipated production release 2027	Maintenance	12.2 p. 439
Data Integration (Foundry)	ES-01	RA-04	Implement	N/A	N/A	10.5.3 p. 368
Distributed Sensor Operation Insights and Analytics	ES-01	N/A	Anticipated Production Release	Ongoing Implementation	Maintenance	10.3.3 p. 343
Implement new vegetation management work management software	ES-01	N/A	Implement	N/A	N/A	12.2 p. 440
Quality Assurance/Quality Control: Create QA/QC process and procedure for reviewing data in the Vegetation Management database (Quality Reviews)	ES-01	N/A	N/A	Define Scope	Implement	12.2 p. 440
Vegetation Management and Inspections: Develop work prioritization to incorporate within MDMS	ES-01	N/A	Start	Implement	Ongoing Implementation	9.2.1.6 p. 273
Model Validation and Verification	RA-01	N/A	Implement	Ongoing Maintenance	Ongoing Maintenance	5.7 p 111, 116-117
Ignition Detection Systems: Wildfire Camera Coverage of HFTD/HFRA	SA-04	N/A	50%	65%	80%	10.4.1 p. 345-347

12.2 Summary of Enterprise Systems

Electrical corporations must provide a summary narrative of no more than three pages that discusses how its enterprise systems contain, account, or allow for the following:

• Any database(s) the electrical corporation used for data storage

• Internal procedures for updating the enterprise system, including database(s), any planned updates, and the ability to migrate data across systems and ensure accuracy if necessary

• The electrical corporation's asset identification process

• The electrical corporation's process for integrating 100 percent asset identification or its justification if not currently in place

• Processes to ensure data integrity (accuracy, completeness, and quality of data), accessibility (ability of the electrical corporation to access data across formats and locations), and retention (any policies the electrical corporation for how long it stores data and how it disposes of data after any retention period)

• Any QA/QC or auditing of its system

• Overview of any data governance plan that the electrical corporation has in place. Highlighting any data stewardship practices

• How current WMP initiatives and activities are being tracked and monitored in enterprise systems

• Employee and/or contractor ability to access and interact with the data and systems for tracking work order status and scheduling

• How the electrical corporation's work order and asset management systems feed into risk analysis and alternative or interim activity selection

• Any changes to the electrical corporation's enterprise systems since the last Base WMP submission and a brief explanation as to why those changes were made. Include any planned improvements or updates to the enterprise systems and the timeline for implementation

In Section 12, PacifiCorp provides an overview of the practices for database management and security of its enterprise systems to manage assets and vegetation management. Section 12.2 will encompass discussion of these systems. The company's ignition detection and weather forecasting are hosted solutions managed by third parties. Currently PacifiCorp does not have an enterprise system to track its risk assessment initiatives.

Asset Management and Defensible Space

Enterprise systems used for asset management and defensible space for the processes described in Sections 8.3 and 8.4 and 9.6 are SAP, Maximo and GIS

Currently Wires assets are stored in PacifiCorp's GIS as the system of record. SAP has wires asset information and is used for planning of asset inspections as described in Sections 8.3.1-8.3.3, 8.3.5-8.3.8. Maximo is the system of record for substation equipment and used for planning of substation inspections and defensible space as described in Sections 8.3.4 and 9.6. This information is also stored in GIS. Currently Maximo and SAP are not integrated with GIS, however, there is light integration between Maximo and SAP.

The validation of asset information between GIS and SAP and GIS and Maximo is through manual input. Periodic analysis is performed to ensure that the asset information in the three systems is materially aligned. Please see the initiative in Table 12-1for the integration of wires and substation assets.

Asset Management performs periodic audits on the most crucial wires and substation data. This is the data applicable to North American Electric Reliability Corporation (NERC) or Western Electricity Coordinating Council (WECC) standards or state requirements.

Initiatives for asset maintenance programs are tracked within SAP and Maximo. Work orders record when activity is performed and document the results of the inspection and correction.

As part of Berkshire Hathway Energy (BHE), PacifiCorp is part of a business transformation effort to align and modernize IT systems to streamline and simplify processes. Included in the business transformation effort is moving wires equipment from SAP to Maximo. As a result of the initiative, as described in Table 12-1 above, GIS will become the system of record for wires equipment and will be integrated with Maximo. Asset information will be passed from GIS to Maximo with minimal manual intervention.

PacifiCorp retained a systems integrator to assist PacifiCorp with its systems implementations, including the migration from the legacy mainframe to the new enterprise asset management software suite. This systems integrator assisted PacifiCorp's previous systems implementation in 2022 for substation asset management systems.

In addition to retaining the systems integrator, PacifiCorp utilizes industry best practices to maintain data integrity in preparation for systems implementations, including iterative practice data loads, iterative functionality testing and other industry standard practices to ensure quality results. PacifiCorp uses a robust, standardized process after implementation to ensure data quality and integrity, including a support function to correct any potential issues that may arise.

As described in Section 5.2.1, wires equipment history is an input to the wildfire risk. This includes type and age of equipment as well as any outage and ignition history.

Vegetation Management

PacifiCorp does not own an enterprise system to track its vegetation management initiatives. PacifiCorp maintains a database used to track production metrics associated with vegetation management activities. This system is separate from the third-party work management system used in the field during inspection and correction of vegetation conditions identified during implementation of activities identified in Sections 9.2 include PacifiCorp Vegetation Management (PVM) and GIS.

Vegetation management uses PVM to store production data associated with vegetation management work. Location of distribution and transmission lines is provided annually in a GIS file that is provided to the vendor to load into MapIt Fast/VM Optix. MapItFast/VM Optix is a hosted solution managed by a third party.

Vegetation Management work for initiatives is tracked in PVM by work code with specific work codes that tie to WMP initiatives, this includes tracking of cost and/or production metrics associates with work planned, completed, and who performed the work. Information in PVM is at the circuit level. Vegetation Management performs a validation in PVM when invoices are received and reviewed against data contained in PVM.

Vegetation Management is also replacing its work management system for managing vegetation. This initiative is in Table 12-1. GIS will continue to be a manual export to SFTP and the annual refresh to the vendor will for MapIt Fast/VM Optix will continue.

Vegetation Management will also create QA/QC process and procedure for reviewing data in the Vegetation Management database (Quality Reviews). This initiative is in Table 12-1.

Enterprise Access and Database Management

Access to PacifiCorp's systems is role based. This applies to employees, contractors, and third-party vendors.

Berkshire Hathaway Energy's (BHE) Data Services ensures the security, currency, and maintenance of PacifiCorp's databases through a comprehensive approach. This includes daily backups and incremental logs for point-in-time recovery for both Oracle and SQL Server databases.

The Data Services team addresses vulnerabilities through a structured patch management process. For Oracle databases, quarterly patching is conducted using vendor-supplied patches, while SQL Server databases are patched monthly, following the vendor's schedule.

The team employs Nexpose, a tool that scans the data center enterprise to identify and prioritize vulnerabilities based on their severity. For Oracle databases, a gold copy is created, and Oracle Compliance Manager is used to harden the patched copy before it is deployed across the enterprise. This rigorous process is also applied to any new builds introduced into the environment. These measures ensure that vulnerabilities are systematically identified, prioritized, and mitigated, maintaining the integrity and security of PacifiCorp's data infrastructure.

To enhance cybersecurity at a higher level, PacifiCorp employs multiple replication strategies to safeguard data offsite:

- Symmetrix Remote Data Facility (SRDF): Maintains real-time (or near real-time) copies of data on a production storage array at one or more remote storage arrays in either Portland or Salt Lake City.
- Oracle Data Guard: Replicates data to offsite data centers located in either Portland or Salt Lake City.

- Site Recovery Manager: Utilizes VMware software for replication in either Portland or Salt Lake City.
- SQL Server Availability Groups: Replicates data to offsite data centers in either Portland or Salt Lake City.

These measures collectively ensure robust data security and availability.

13. Lessons Learned

An electrical corporation must use lessons learned to drive continual improvement in its WMP. Electrical corporations must include lessons learned due to ongoing monitoring and evaluation initiatives, collaboration with other electrical corporations and industry experts, PSPS or outage events, and feedback from Energy Safety and other regulators.

13.1 Description and Summary of Lessons Learned

In this section, the electric corporation must provide a brief narrative describing the key lessons learned tied to feedback from government agencies and stakeholders, collaboration efforts with other electrical corporations, areas for continued improvement, PSPS or outage events, and outcomes from previous WMP cycles.

The narrative must also include lessons learned from prior catastrophic wildfires ignited by the electrical corporation's facilities or equipment and findings from Energy Safety compliance audits and reports.

Table 13-1 below presents lessons learned.

Table 13-1: Lessons Learned

ID #	Year of Lesson Learned	Subject	Category and Source of Lesson Learned	Description of Lesson Learned	Proposed WMP Improvement	Timeline for Implementation	Reference
1	2024	Emergency Preparedness: Wildfire Response	2024 Wildfire Season Experience	Utilizing existing roles/functions for situational awareness for wildfires was a challenge. Often this activity occurred during the work day/weekends and late hours and personnel had to balance their existing roles with their situational awareness responsibilities.	Establish a Wildfire Intelligence Center to eventually provide 24/7 monitoring of all hazards that threaten company equipment with a focus on wildfire.	2025	Section 11.2.1 Improvements made since the last WMP submission. Discussions with PG&E and Southern California Edison
2	2024	Emergency Preparedness: External Collaboration and Communication	2024 Wildfire Season Experience	While emergency management has many relationships, PacifiCorp serves over 90 counties in its six-states through a variety of networks between local, regional and state fire agencies and coordination centers. These relationships need to be bolstered to improve real time ability to coordinate.	Establish a Wildfire and Emergency Response Team who are strategically located in the company's operational areas to support local response to active wildfire and liaison with fire agency jurisdictions.	2025	Section 11.2.1 Improvements made since the last WMP submission.
3	2024	PSPS Decision Making	Internal Exercise	During PSPS, uniform conditions must be assumed on circuits with only one weather station downstream of the WUI border or protective devices meaning all upstream customers are de-energized if conditions are unknown.	Increase the number of weather stations near the WUI border and near upstream protective devices allowing PSPS decision making to be more surgical in reducing the number of affected customers and the time spent patrolling.	2026-2028	Table 10-1
4	2024	Public Communications and Outreach	Community forums and feedback from Public Safety Partners.	When there are outages on due to ESS (Section 8.7.1) or Emergency De-energization from wildfire (Figure 11-4) they want information on why the outage is happening.	Updated the outage map to show if an outage is due to an Emergency De-energization or on a circuit with ESS.	2025	Figure PAC 11-3

ID #	Year of Lesson Learned	Subject	Category and Source of Lesson Learned	Description of Lesson Learned	Proposed WMP Improvement	Timeline for Implementation	Reference
5	2024	WSS Re-Energization Decision Making	Internal Discussion	More weather information is necessary near substations and WUI border for System Operations to confirm whether or not conditions are favorable to testing the line for reenergization without patrol.	Increase the number of weather stations between weather stations and substations deep in wildland.	2026-2028	Table 10-1
6	2025	Public Communications and Outreach	Customer WMP Webinars	Non-account holders (ex: customers on master meter, landlords with rentals) do not receive notifications of PSPS, ESS or Emergency De-energization Outages, which go to the customer of record	Create a way for non-account holders to register for outage/emergency alerts	2026	2025 California Wildfire Webinar
7	2025	Public Communications and Outreach	AFN Planning	PacifiCorp files an annual AFN Plan with the CPUC, but previously there has not been clear links between the AFN plan and WMP initiatives.	AFN Initiatives in the 2026-2028 WMP align with the objectives of the 2025 AFN Plan	2026-2028	Table 11-1 PacifiCorp's AFN Plan included in Appendix F

13.2 Working Group Meetings

The electrical corporation must identify any Energy Safety-required working group meetings attended or planning to attend in the WMP submission year and provide any lessons learned that applied to its WMPs. The electrical corporation must include interactions and collaborations related to the electrical corporation's WMP submission such as identifying new technology, industry best practices, and shared lessons learned from the WMP process.

Industry collaboration is a component of PacifiCorp's Wildfire Mitigation Plan. Through active participation in workshops, international and national forums, consortiums, and advisory boards, the company maintains an understanding of existing best practices and collaborates with industry experts regarding new technologies and research. Through the lessons learned PacifiCorp has been able to develop processes and procedures that are being adopted in other states and countries. At the time of this filing, the company does not have specific policies applied to sharing best practices and collaborating with other companies on technical and programmatic aspects of its WMP program.

PacifiCorp collaborates with other California IOUs at the direction of Energy Safety. The Company participates in the Risk Modeling Working Group and will participate in Energy Safety-organized activities related to best practices for inclusion of climate change forecasts in consequence modeling, inclusion of community vulnerability in consequence modeling and utility vegetation management for wildfire safety consistent with PC-25U-05 .

The company participates in joint California IOU meetings to discuss related to wildfire mitigation work, including topics such as WMP development, undergrounding, and potential use of AMI to detect faults. In addition, Pacific Gas and Electric hosts meetings on system protection related to wildfire that PacifiCorp participates in.

As described in Table 11-1, PacifiCorp has an initiative CO-04, Western Wildfire Communications Workshop to meet with communications teams from western utilities in the United States and Canada to discuss wildfire communications. The first event was hosted by PacifiCorp in November 2024 and included discussions on internal communications, digital media, paid media, media relations, community engagement, lessons learned from the 2024 wildfire season and a look ahead to 2025 challenges. California IOUs were invited to the 2024 event which was attended by nine utilities and additional workshops are planned to continue among the utilities.

PacifiCorp also participates in the AFN Collaborative Council in response to the CPUC's Decision 21-06-034. The 2025 AFN Plan's operational priorities are the AFN initiatives and activities reflected in Table 11-1 of the 2026-2028 WMP. PacifiCorp's 2025 AFN Plan is in Appendix F.

In addition to collaboration with California IOUs, the company is also an active member of the International Wildfire Risk Mitigation Consortium (IWRMC), an industry-sponsored collaborative designed to facilitate the sharing of wildfire risk mitigation insights and discovery of innovative and unique utility wildfire practices from across the globe. This consortium, with working groups focused on areas of asset management, operations and protocols, risk management, and vegetation management, facilitates a system of working and networking channels between members of the global utility community to support the ongoing sharing of data, information, technology, and practices.

Additionally, the PacifiCorp plays leadership and support roles through other organizations such as the Edison Electric Institute (EEI), and the Institute of Electrical and Electronics Engineers (IEEE). Within the western United States, PacifiCorp also engages with the Western Energy Institute (WEI) and also collaborates with Oregon IOUs on topics such as risk modeling. Collaboration also occurs regarding research and applications of technologies through the PacifiCorp's parent company, BHE, and its affiliated companies.

Where applicable, lessons learned from collaboration with other utilities that are related to the 2026-2028 WMP are described in Table 13-1..

13.3 Discontinued Activities

The electrical corporation must provide all activities from previous WMP submissions that it is no longer implementing ("Discontinued Activities"), the rationale for discontinuation, the applicable lessons learned, and a list of the new or existing activities that mitigate risk in place of the discontinued activity ("Replacement Activities"), including cross-references to the page numbers within the WMP where each replacement activity is discussed.

Table 13-2 lists PacifiCorp's discontinued activities which is discussed in detail below.

Table 13-2: Lessons Learned from Discontinued Activities

Distribution Fault Anticipator (DFA)	PacifiCorp installed Distribution Fault Anticipators (DFA) devices as a pilot to evaluate new technological capabilities on the system.	-Provides a structured database that categorizes events and identifies reoccurring events with similar waveforms and characteristics. This feature is extremely valuable and should be implemented as part of an automated outage analysis system. -Capable of performing waveform analytics that identify a variety of fault types -DFA does not provide location information for the types of events that are of interest for preventing wildfires. It	Table PAC 10 1: Planned Grid Monitoring System Improvements: -Line Sensors: cFCI Distribution (≤35kV) -AMI: Advanced Bellwether Meters

	needs to be combined with other technologies to be useful. However, many of the new technologies can provide actionable information without DFA. -Installation of dedicated DFA sensors in the substation adds significant costs and time delays for deployment.	

PacifiCorp installed Distribution Fault Anticipators (DFA) devices as a pilot to evaluate new technological capabilities on the system. DFA devices are high resolution power quality recorders with a sampling rate of 250,000 samples per second (4,166 samples per cycle) and a voltage resolution of around 0.1 % (it can detect variations as small as seven volts on a 7,200 V line). This extremely high resolution allows the devices to detect events that are well below the detection threshold of other systems.

When an event is detected, the waveform data is sent to a cloud server for further processing. Waveform analytics are used to determine what caused the event and can classify many types of events such as vegetation contacts, motor starts, regulator and capacitor bank operations, transformer winding trouble, burning switches etc. The software also tracks events over time and can associate identical events that occurred months or years apart.

The company installed DFA devices on circuits in Oregon, California, and Washington and evaluated the results of the devices installed. Table PAC 13-1 below shows the use cases for the DFA pilot and results.

Table PAC 13-1: DFA Use Cases and Results

Use Case	Proposed	Confirmed	Comments
Series arcing and detection of degraded switches and connectors	✓	✖	Correlation between some of the series arcing events and AMI meter alarms has been established. Robust data analytics platform required to detect, localize and develop narrow patrol zones.
Cap bank problems, transformer problems	✓	✓	Cap bank issues have been identified and fixed.
Fault Location	✖	✖	DFA has demonstrated it can provide useful fault information; however, it duplicates results from other tools (relay data, CFCI's, etc.).
Fault Induced Conductor Slap, recurring faults, troubleshooting "unknown cause" outages, etc.	✓	✖	The system is capable of doing analytics that can help identify issues PacifiCorp does not otherwise know about, but so far there haven't been any documented successes.
Other – vegetation contacts, transformers failing etc.	✓	✖	Insufficient data was available from alerts to confirm the issue or localize the source.

Observations from the installed DFA devices are:

- Provides a structured database that categorizes events and identifies reoccurring events with similar waveforms and characteristics. This feature is extremely valuable and should be implemented as part of an automated outage analysis system.
- Capable of performing waveform analytics that identify a variety of fault types
- DFA does not provide location information for the types of events that are of interest for preventing wildfires. It needs to be combined with other technologies to be useful. However, many of the new technologies can provide actionable information without DFA.

- Installation of dedicated DFA sensors in the substation adds significant costs and time delays for deployment.

Based on the pilot results, PacifiCorp is not moving forward with further application of DFA. Lessons learned through the implementation have been incorporated into successor event collection and analytic platforms integrating data from AMI meters, CFCI sensors and protective relays.

Appendix A Definitions

Unless otherwise expressly stated, the following words and terms, for the purposes of these Guidelines, have the meanings shown in this chapter.

Terms Defined in Other Codes

Where terms are not defined in these Guidelines and are defined in the Government Code, Public Utilities Code, or Public Resources Code, such terms have the meanings ascribed to them in those codes.

Terms Not Defined

Where terms are not defined through the methods authorized by this section, such terms have ordinarily accepted meanings such as the context implies.

Term	Definition
Access and functional needs (AFN) populations	Individuals, including, but not limited to, those who have developmental or intellectual disabilities, physical disabilities, chronic conditions, or injuries; who have limited English proficiency or are non-English speaking; who are older adults, children, or people living in institutionalized settings; or who are low income, homeless, or transportation disadvantaged, including, but not limited to, those who are dependent on public transit or are pregnant. (Gov. Code, § 8593.3(f)(1).)
Asset (utility)	Electric lines, equipment, or supporting hardware.
Benchmarking	A comparison between one Company's protocols, technologies used, or mitigations implemented, and other companies' similar endeavors.
Burn likelihood	The likelihood that a wildfire with an ignition point will burn at a specific location within the service territory based on a probabilistic set of weather profiles, vegetation, and topography.

Term	Definition
Catastrophic wildfire	The likelihood that a wildfire with an ignition point will burn at a specific location within the service territory based on a probabilistic set of weather profiles, vegetation, and topography.
Circuit miles	The total length in miles of separate circuits regardless of the number of conductors used per circuit (i.e., different phases)
Circuit segment	A specific portion of an electrical circuit that can be separated or disconnected from the rest of the system without affecting the operation of other parts of the network. This isolation is typically achieved using switches, circuit breakers, or other control mechanisms.
Consequence	The adverse effects from an event, considering the hazard intensity, community exposure, and local vulnerability.
Contact from object ignition likelihood	The likelihood that a non-vegetative object (such as a balloon or vehicle) will contact utility-owned equipment and result in an ignition.
Contact from vegetation likelihood of ignition	The likelihood that vegetation will contact utility-owned equipment and result in an ignition.
Contractor	Any individual in the temporary and/or indirect employ of the electrical corporation whose limited hours and/or time-bound term of employment are not considered "full-time" for tax and/or any other purposes.
Critical facilities and infrastructure	Facilities and infrastructure that are essential to public safety and that require additional assistance and advance planning to ensure resiliency during PSPS events. These include the following: Emergency Services Sector: Police Stations Fire Station Emergency Operations Centers Public safety answering points (e.g., 9-1-1 emergency services) Government Facilities Sector: Schools

Term	Definition
	Jails and prisons Healthcare and Public Health Sector Public Health Departments Medical facilities, including hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers and hospice facilities (excluding doctor offices and other non- essential medical facilities) Energy Sector Public and private utility facilities are vital to maintaining or restoring normal service, including, but not limited to, interconnected publicly owned utilities and electric cooperatives Water and Wastewater Systems Sector Facilities associated with the provision of drinking water or processing of wastewater including facilities used to pump, divert, transport, store, treat and deliver water or wastewater Communications Sector Communication carrier infrastructure including selective routers, central offices, head ends, cellular switches, remote terminals, cellular switches, remote terminals and cellular sites Chemical Sector Facilities associated with the provision of manufacturing, maintaining, or distributing hazardous materials and chemicals (including Category N-Customers as defined in D.01-06-085) Transportation Sector Facilities associated with transportation for civilian and military purposes: automotive, rail, aviation, maritime, or major public transportation (D.19-05-042 and D.20-05-051)
Customer hours	Total number of customers, multiplied by the average number of hours (e.g., of power outage).

Term	Definition
Dead fuel moisture content	The moisture content of dead organic fuels, expressed as a percentage of the oven dry weight of the sample, which is controlled entirely by exposure to environmental conditions.
Detailed inspection	In accordance with GO 165, an inspection where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be gathered) opened, and the condition of each rated and recorded.
Disaster	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts. The effect of the disaster can be immediate and localized but is often widespread and could last a long time. The effect may test or exceed the capacity of a community or society to cope using its own resources. Therefore, it may require assistance from external sources, which could include neighboring jurisdictions or those at the national or international levels. (United Nations Office for Disaster Risk Reduction [UNDRR].)
Discussion-based exercise	Exercise is used to familiarize participants with current plans, policies, agreements, and procedures or to develop new plans, policies, agreements, and procedures. Often includes seminars, workshops, tabletop exercises, and games.
Electrical corporation	Every corporation or person owning, controlling, operating, or managing any electric plant for compensation within California, except where the producer generates electricity on or distributes it through private property solely for its own use or the use of its tenants and not for sale or transmission to others.
Emergency	Any incident, whether natural, technological, or human caused, that requires responsive action to protect life or property but does not result in serious disruption of the functioning of a community or society. (FEMA/UNDRR.)
Enhanced inspection	Inspection whose frequency and thoroughness exceeds the requirements of the detailed inspection, particularly if driven by risk calculations.
Enhanced inspection	Inspection whose frequency and thoroughness exceed the requirements of a detailed inspection, particularly if driven by risk calculations.

Term	Definition
Equipment caused ignition likelihood	The likelihood that utility-owned equipment will cause an ignition through either normal operation (such as arcing) or failure.
Exercise	n instrument to train for, assess, practice, and improve performance in prevention, protection, response, and recovery capabilities in a risk-free environment. (FEMA.)
Exposure	The presence of people, infrastructure, livelihoods, environmental services and resources, and other high-value assets in places that could be adversely affected by a hazard.
Fire hazard index	A numerical rating for specific fuel types, indicating the relative probability of fires starting and spreading, and the probable degree of resistance to control; similar to burning index, but without effects of wind speed.[13]
Fire potential index (FPI)	Landscape scale index is used as a proxy for assessing real-time risk of a wildfire under current and forecasted weather conditions.
Fire Season	The time of year when wildfires are most likely for a given geographic region due to historical weather conditions, vegetative characteristics, and impacts of climate change. Each electrical corporation defines the fire season(s) across its service territory based on a recognized fire agency definition for the specific region(s) in California.
Fireline intensity	The rate of heat release per unit time per unit length of fire front. Numerically, it is the product of the heat yield, the quantity of fuel consumed in the fire front, and the rate of spread.[14]
Frequency	The anticipated number of occurrences of an event or hazard over time.
Frequent PSPS events	Three or more PSPS events per calendar year per line circuit.
Fuel continuity	The degree or extent of continuous or uninterrupted distribution of fuel particles in a fuel bed thus affecting a fire's ability to sustain combustion and spread. This applies to aerial fuels as well as surface fuels.[15]

13 National Wildfire Coordinating Group: https://www.nwcg.gov/node/393188 (accessed May 9, 2024).

14 National Wildfire Coordinating Group: https://www.nwcg.gov/node/447140 (accessed May 9, 2024).

15 National Wildfire Coordinating Group: https://www.nwcg.gov/node/444281 (accessed May 9, 2024).

Term	Definition
Fuel density	Mass of fuel (vegetation) per area which could combust in a wildfire.
Fuel management	Act or practice of controlling flammability and reducing resistance to control of wildland fuels through mechanical, chemical, biological, or manual means, or by fire, in support of land management objectives.[16]
Fuel moisture content	Amount of moisture in each mass of fuel (vegetation), measured as a percentage of its dry weight.
Full-time employee (FTE)	Any individual in the ongoing and/or direct employ of the utility whose hours and/or term of employment are considered as “full-time” for tax and/or any other purposes.
GO 95 nonconformance	Condition of a utility asset that does not meet standards established by GO 95.
Grid hardening	Actions (such as equipment upgrades, maintenance, and planning for more resilient infrastructure) taken in response to the risk of undesirable events (such as outages) or undesirable conditions of the electrical system to reduce or mitigate those events and conditions, informed by an assessment of the relevant risk drivers or factors.
Grid topology	General design of an electric grid, whether looped or radial, with consequences for reliability and ability to support PSPS (e.g., ability to deliver electricity from an additional source).
Hazard	A condition, situation, or behavior that presents the potential for harm or damage to people, property, the environment, or other valued resources.
Hazard tree	A tree that is, or has portions that are, dead, dying, rotten, diseased, or otherwise has a structural defect that may fail in whole or in part and damage utility facilities should it fail
High Fire Threat District (HFTD)	Areas of the state designated by the CPUC as having elevated wildfire risk, where each utility must take additional action (per GO 95, GO 165, and GO 166) to mitigate wildfire risk. (D.17-01-009.)

16 National Wildfire Coordinating Group: https://www.nwcg.gov/node/386549 (accessed May 9, 2024).

Term	Definition
High Fire Risk Area (HFRA)	Areas that the Company has deemed at high risk from wildfire, independent of HFTD designation.
Highly rural region	Area with a population of less than seven persons per square mile, as determined by the United States Bureau of the Census. For purposes of the WMP, "area" must be defined as a census tract.
High-risk species	Species of vegetation that (1) have a higher risk of either coming into contact with powerlines or causing an outage or ignition, or (2) are easily ignitable and within close proximity to potential arcing, sparks, and/or other utility equipment thermal failures. The status of species as "high-risk" must be a function of species specific characteristics, including growth rate; failure rates of limbs, trunk, and/or roots (as compared to other species); height at maturity; flammability; and vulnerability to disease or insects.
High Wind Warning (HWW)	Level of wind risk from weather conditions, as declared by the National Weather Service (NWS). For historical NWS data, refer to the Iowa State University Iowa archive of NWS watch / warnings.[17]
HWW overhead (OH) Circuit Mile Day	Sum of overhead circuit miles of utility grid subject to High Wind Warnings (HWW, as defined by the NWS) each day within a given time, calculated as the number of overhead circuit miles that are under an HWW multiplied by the number of days those miles are under said HWW. For example, if 100 overhead circuit miles are under an HWW for 1 day, and 10 of those miles are under HWW for an additional day, then the total HWW OH circuit mile days would be 110.
Ignition likelihood	The total anticipated annualized number of ignitions resulting from Company owned assets at each location in the Company's service territory. This considers probabilistic weather conditions, type and age of equipment, and potential contact of vegetation and other objects with Company assets. This should include the use of any method used to reduce the likelihood of ignition. For example, the use of protective equipment and device settings (PEDS) to reduce the likelihood of an ignition upon an initiating event.
Incident command system ICS)	A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the

17 IEM :: NWS Watches Warnings Advisories Download

Term	Definition
	complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.
Initiative activity	See mitigation activity
Initiative construction standards	The standard specifications, special provisions, standards of practice, standard material and construction specifications, construction protocols, and construction methods that an electrical corporation applies to activities undertaken by the Company pursuant to a WMP initiative in a given compliance period.
Level 1 finding	In accordance with GO 95, an immediate safety and/or reliability risk with high probability for significant impact.
Level 2 finding	In accordance with GO 95, a variable (non-immediate high to low) safety and/or reliability risk.
Level 3 finding	In accordance with GO 95, an acceptable safety and/or reliability risk.
Limited English proficiency (LEP)	Population with limited English working proficiency based on the International Language Roundtable scale.
Line miles	The number of miles of transmission and/or distribution conductors, including the length of each phase and parallel conductor segment.
Live fuel moisture content	Moisture content within living vegetation, which can retain water longer than dead fuel.
Locally relevant	In disaster risk management, generally understood as the cope at which disaster risk strategies and initiatives are considered the most effective at achieving desired outcomes. This tends to be the level closest to impacting residents and communities, reducing existing risks, and building capacity, knowledge, and normative support. Locally relevant scales, conditions, and perspectives depend on the context of application
Match-drop simulation	Wildfire simulation method that takes an arbitrary ignition and forecasts propagation and consequence/impact.
Mitigation	Undertakings to reduce the loss of life and property from natural and/or human-caused disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating Undertakings to reduce the loss of life and

Term	Definition
	property from natural and/or human-caused disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating
Mitigation activity	A measure that contributes to or accomplishes a mitigation initiative designed to reduce the consequences and/or probability of wildfire or outage event. For example, covered conductor installation is a mitigation activity under the mitigation initiative of Grid Design and System Hardening.
Mitigation category	The highest subset in the WMP mitigation hierarchy. There are five Mitigation Categories in total: Grid Design, Operations, and Maintenance; Vegetation Management and Inspections; Situational Awareness and Forecasting; Emergency Preparedness; and Enterprise Systems. Contains mitigation initiatives and any subsequent mitigation activities.
Mitigation initiative	Efforts within a mitigation category either proposed or in process, designed to reduce the consequences and/or probability of wildfire or outage event. For example, Asset Inspection is a mitigation initiative under the mitigation category of Grid Design, Operations, and Maintenance.
Model uncertainty	The amount by which a calculated value might differ from the true value when the input parameters are known (i.e., limitation of the model itself based on assumptions).[18]
Mutual aid	Voluntary aid and assistance by the provision of services and facilities, including but not limited to electrical corporations, communication, and transportation. Mutual aid is intended to provide adequate resources, facilities, and other support to an electrical corporation whenever its own resources prove inadequate to cope with a given situation.
National Incident Management System (NIMS)	A systematic, proactive approach to guide all levels of government, nongovernment organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from the effects of incidents. NIMS provides stakeholders across the whole community with the shared vocabulary, systems, and processes to successfully deliver the capabilities described in the National Preparedness System. NIMS provides a

18 Adapted from SFPE, 2010, "Substantiating a Fire Model for a Given Application," Society of Fire Protection Engineers Engineering Guides..

Term	Definition
	consistent foundation for dealing with all incidents, ranging from daily occurrences to incidents requiring a coordinated federal response.
Operations-based exercise	Type of exercise that validates plans, policies, agreements, and procedures; clarifies roles and responsibilities; and identifies resource gaps in an operational environment. Often includes drills, functional exercises (FEs), and full-scale exercises (FSEs).
Outage program risk	The measure of reliability impacts from wildfire mitigation related outages at a given location.
Overall utility risk	The comprehensive risk is due to both wildfire and PSPS incidents across a utility's territory; the aggregate potential of adverse impacts to people, property, critical infrastructure, or other valued assets in society.
Overall utility risk, PSPS risk	See Outage program risk.
Parameter uncertainty	The amount by which a calculated value might differ from the true value based on unknown input parameters. (Adapted from Society of Fire Protection Engineers [SFPE] guidance.)
Patrol inspection	In accordance with GO 165, a simple visual inspection of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards. Patrol inspections may be carried out in the course of other company business.
Performance metric	A quantifiable measurement that is used by an electrical corporation to indicate the extent to which its WMP is driving performance outcomes.
Population density	Population density is calculated using the American Community Survey (ACS) one-year estimate for the corresponding year or, for years with no such ACS estimate available, the estimate for the immediately preceding year.
Preparedness	A continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. Within the NIMS, preparedness focuses on planning, procedures and protocols, training and exercises, personnel qualification and certification, and equipment certification.

Term	Definition
Priority essential services	Critical first responders, public safety partners, critical facilities and infrastructure, operators of telecommunications infrastructure, and water utilities/agencies.
Property	Private and public property, buildings and structures, infrastructure, and other items of value that are destroyed by wildfire, including both third-party property and utility assets.
Protective equipment and device settings (PEDS)	The electrical corporation's procedures for adjusting the sensitivity of grid elements to reduce wildfire risk, other than automatic reclosers (such as circuit breakers, switches, etc.). For example, PG&E's "Enhanced Powerline Safety Settings" (EPSS).
PEDS outage consequence	The total anticipated adverse effects from an outage occurring while increased sensitivity settings on a protective device are enabled at a specific location, including reliability and associated safety impacts.
PEDS outage exposure potential	The potential physical, social, or economic impact of an outage occurring when PEDS are enabled on people, property, critical infrastructure, livelihoods, health, local economies, and other high-value assets.
PEDS outage likelihood	The likelihood of an outage occurring while increased sensitivity settings on a protective device are enabled at a specific location given a probabilistic set of environmental conditions.
PEDS outage risk	The total expected annualized impacts from PEDS enablement at a specific location.
PEDS outage vulnerability	The susceptibility of people or a community to adverse effects of an outage occurring when PEDS are enabled, including all characteristics that influence their capacity to anticipate, cope with, resist, and recover from the related adverse effects (e.g., high AFN population, poor energy resiliency, low socioeconomics).
PSPS consequence	The total anticipated adverse effects of a PSPS for a community. This considers the PSPS exposure potential and inherent PSPS vulnerabilities of communities at risk.
PSPS event	The period from notification of the first public safety partner of a planned public safety PSPS to re-energization of the final customer.

Term	Definition
PSPS exposure potential	The potential physical, social, or economic impact of a PSPS event on people, property, critical infrastructure, livelihoods, health, local economies, and other high-value assets.
PSPS likelihood	The likelihood of an electrical corporation requiring a PSPS given a probabilistic set of environmental conditions.
PSPS risk	The total expected annualized impacts from PSPS at a specific location. This considers two factors: (1) the likelihood a PSPS will be required due to environmental conditions exceeding design conditions, and (2) the potential consequences of the PSPS for each affected community, considering exposure potential and vulnerability.
PSPS vulnerability	The susceptibility of people or a community to adverse effects of a PSPS event, including all characteristics that influence their capacity to anticipate, cope with, resist, and recover from the adverse effects of a PSPS event (e.g., high AFN population, poor energy resiliency, low socioeconomics).
Public safety partners	First/emergency responders at the local, state, and federal levels; water, wastewater, and communication service providers; community choice aggregators (CCAs); affected publicly owned electrical corporations/electrical cooperatives; tribal governments; Energy Safety; the Commission; the California Office of Emergency Services; and CAL FIRE.
Qualitative target	Specific, measurable, achievable, realistic, and timely outcomes for the overall WMP strategy, or mitigation initiatives and activities that a utility can implement to satisfy the primary goals and subgoals of the WMP program.
Quantitative target	A forward-looking, quantifiable measurement of work to which an electrical corporation commits to in its WMP. Electrical corporations will show progress toward completing targets in subsequent reports, including data submissions and WMP Updates.
RFW OH Circuit Mile Day	Sum of OH circuit miles of utility grid subject to Red Flag Warning (RFW) each day within a given time, calculated as the number of overhead circuit miles that are under an RFW multiplied by the number of days those miles are under said RFW. For example, if 100 overhead circuit miles are under an RFW for 1 day, and 10 of those miles are under RFW for an additional day, then the total RFW OH circuit mile days would be 110.

Term	Definition
Risk	A measure of the anticipated adverse effects from a hazard considering the consequences and frequency of the hazard occurring.[19]
Risk component	A part of an electric corporation's risk analysis framework is used to determine overall utility risk.
Risk evaluation	The process of comparing the results of a risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable. (ISO 31000:2009.)
Risk event	An event with probability of ignition, such as wire down, contact with objects, line slap, event with evidence of heat generation, or other event that causes sparking or has the potential to cause ignition. The following all qualify as risk events: Ignitions Outages not caused by vegetation Outages caused by vegetation Wire-down events Faults Other events with potential to cause ignition
Risk management	Systematic application of management policies, procedures, and practices to the tasks of communication, consultation, establishment of context, and identification, analysis, evaluation, treatment, monitoring, and review of risk. (ISO 31000.)
Rule	Section of Public Utility Code requiring a particular activity or establishing a particular threshold.
Rural region	In accordance with GO 165, area with a population of less than 1,000 persons per square mile as determined by the United States Bureau of the Census. For the purposes of the WMP, "area" must be defined as census tracts.

19 Adapted from D. Coppola, 2020, "Risk and Vulnerability," Introduction to International Disaster Management, 4th ed.

Term	Definition
Seminar	An informal discussion, designed to orient participants to new or updated plans, policies, or procedures (e.g., to review a new external communications standard operating procedure).
Sensitivity analysis	Process used to determine the relationships between the uncertainty in the independent variables ("input") used in an analysis and the uncertainty in the resultant dependent variables ("output"). (SFPE guidance.)
Situational awareness	An on-going process of gathering information by observation and by communication with others. This information is integrated to create an individual's perception of a given situation.[20]
Slash	Branches or limbs less than four inches in diameter, and bark and split products debris left on the ground because of utility vegetation management.[21]
Span	The space between adjacent supporting poles or structures on a circuit consisting of electric lines and equipment. "Span level" refers to asset-scale granularity.
Tabletop exercise (TTX)	A discussion-based exercise intended to stimulate discussion of various issues regarding a hypothetical situation. Tabletop exercises can be used to assess plans, policies, and procedures or to assess types of systems needed to guide the prevention of response to, or recovery from a defined incident.
Tree with strike potential	Trees that could either, in whole or in part, "fall in" to a power line or have portions detach and "fly in" to contact a power line in high-wind conditions.
Uncertainty	The amount by which an observed or calculated value might differ from the true value. For an observed value, the difference is "experimental uncertainty"; for a calculated value, it is "model" or "parameter uncertainty." (Adapted from SFPE guidance.)
Urban region	In accordance with GO 165, area with a population of more than 1,000 persons per square mile as determined by the United States Bureau of the Census. For purposes of the WMP, "area" must be defined as a census tract.

20 https://www.nwcg.gov/node/439827 (assessed May 13, 2024).

21 California Public Resources Code section 4525.7.

Term	Definition
Utility-related ignition	An event that meets the criteria for a reportable event subject to fire-related reporting requirements.[22]
Validation	Process of determining the degree to which a calculation method accurately represents the real world from the perspective of the intended uses of the calculation method without modifying input parameters based on observations in a specific scenario. (Adapted from ASTM E 1355.)
Vegetation management (VM)	The assessment, intervention, and management of vegetation, including pruning and removal of trees and other vegetation around electrical infrastructure for safety, reliability, and risk reduction.
Verification	Process to ensure that a model is working as designed, that is, that the equations are being properly solved. Verification is essentially a check of the mathematics. (SFPE guidance.
Vulnerability	The propensity or predisposition of a community to be adversely affected by a hazard, including the characteristics of a person, group, or service and their situation that influences their capacity to anticipate, cope with, resist, and recover from the adverse effects of a hazard.
Wildfire consequence	The total anticipated adverse effects from a wildfire on a community that is reached. This considers the wildfire hazard intensity, the wildfire exposure potential, and the inherent wildfire vulnerabilities of communities at risk.
Wildfire exposure potential	The potential physical, social, or economic impact of wildfire on people, property, critical infrastructure, livelihoods, health, environmental services, local economies, cultural/historical resources, and other high-value assets. This may include direct or indirect impacts, as well as short- and long-term impacts.
Wildfire hazard intensity	The potential intensity of a wildfire at a specific location within the service territory given a probabilistic set of weather profiles, vegetation, and topography.
Wildfire likelihood	The total anticipated annualized number of fires reaching each spatial location resulting from utility-related ignitions at each location in the electrical corporation service territory. This considers the ignition likelihood and the likelihood that an

22 CPUC Decision 14-02-015, Appendix C, page C-3: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M087/K892/87892306.PDF.

Term	Definition
	ignition will transition into a wildfire based on the probabilistic weather conditions in the area.
Wildfire mitigation strategy	Overview of the key mitigation initiatives at enterprise level and component level across the electrical corporation's service territory, including interim strategies where long-term mitigation initiatives have long implementation timelines. This includes a description of the enterprise-level monitoring and evaluation strategy for assessing overall effectiveness of the WMP.
Wildfire risk	The total expected annualized impacts from ignitions at a specific location. This considers the likelihood that an ignition will occur, the likelihood the ignition will transition into a wildfire, and the potential consequences—considering hazard intensity, exposure potential, and vulnerability—the wildfire will have for each community it reaches.
Wildfire spread likelihood	The total expected annualized impacts from ignitions at a specific location. This considers the likelihood that an ignition will occur, the likelihood the ignition will transition into a wildfire, and the potential consequences—considering hazard intensity, exposure potential, and vulnerability—the wildfire will have for each community it reaches.
Wildfire vulnerability	The susceptibility of people or a community to adverse effects of a wildfire, including all characteristics that influence their capacity to anticipate, cope with, resist, and recover from the adverse effects of a wildfire (e.g., AFN customers, Social Vulnerability Index, age of structures, firefighting capacities).
Wildland-urban interface (WUI)	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels (National Wildfire Coordinating Group).
Wire down	Instance where an electric transmission or distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object.
Work order	A prescription for asset or vegetation management activities resulting from asset or vegetation management inspection findings.
Workshop	Discussion that resembles a seminar but is employed to build specific products, such as a draft plan or policy (e.g., a multi-year training and exercise plan).

Appendix B Supporting Documentation for Risk Methodology and Assessment

Model Inventory

The electrical corporation must provide a model inventory listing all models and associated inputs and outputs used in the development of the WMP.

Below in Table B-1 are summarized the models PacifiCorp uses for risk modeling.

Table B-1: Risk Model Inventory

Model Name	Model Description
FireSight	Used for modeling of long-term wildfire risk for planning as described in Section 5.2
WFA-E: FireCast/FireSim	Used for Situational Awareness as described in Section 10.5.1
Fire Potential Index	Used for Situational Awareness as described in Section 10.6

Below in Table PAC B-1 are the model inputs for FireSight and WFA-E

Table PAC B-1: FireSight and WFA-E Model Inputs

Dataset	Spatial Resolution (Meters)	Start of Dataset	Dataset Update Frequency	Source
Landscape Characteristics				
Terrain	10		Yearly	United States Geological Survey (USGS)
Surface Fuels	30/10	2020	Pre-Fire Season, Monthly Update in Fire Season, End of Fire Season	Technosylva
Wildland Urban Interface (WUI) and Non-Forest Fuels Land Use	30/10	2020	Twice A Year	Technosylva

Dataset	Spatial Resolution (Meters)	Start of Dataset	Dataset Update Frequency	Source
Canopy Fuels (CBD, CH, CC, CBH)	30/10	2020	Pre-Fire Season, Monthly Update in Fire Season, End of Fire Season	Technosylva
Roads Network	30		Yearly	USGS
Hydrography	30		Yearly	USGS
Croplands	30	1997	Yearly	USDA
Weather And Atmospheric Data				
Wind Speed	2000	1990	Hourly / 96 Hour Forecast	Technosylva)
Wind Direction	2000	1990	Hourly /96 Hour Forecast	Technosylva
Wind Gust	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Air Temperature	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Surface Pressure	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Relative Humidity	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Precipitation	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Radiation	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Water Vapor Mixing Ratio 2 meter	2000	1990	Hourly / 96 Hour Forecast	Technosylva
Snow Accumulated – Observed	1000	2008	Daily	National Oceanic and Atmospheric Administration (NOAA)
Precipitation Accumulated - Observed	4000	2008	Daily	NOAA
Burn Scars	10	2000	5 Days	National Aeronautics and Space Administration (NASA)/ European Space Agency (ESA)
Weather Observations Data	Points	1990	10 Min	Synoptic

Dataset	Spatial Resolution (Meters)	Start of Dataset	Dataset Update Frequency	Source
Fuel Moisture				
Herbaceous Live Fuel Moisture	250	2000	Daily / 5-Day Forecast	Technosylva
Woody Live Fuel Moisture	250	2000	Daily / 5-Day Forecast	Technosylva
1-Hour Dead Fuel Moisture	2000	1990	Hourly / 124 Hour Forecast	Technosylva
10-Hour Dead Fuel Moisture	2000	1990	Hourly / 124 Hour Forecast	Technosylva
100-Hour Dead Fuel Moisture	2000	1990	Hourly / 124 Hour Forecast	Technosylva
Values at Risk				
Buildings	Polygon Footprints	2020-21	Yearly	Microsoft/Technosylva
Damage Inspection (DINS)	Points	2014-21	Yearly	Cal Fire
Population	90	2019	Yearly	LANDSCAN, Oak Ridge National Laboratory (ONRL)
Roads	Vector Lines	2021	Yearly	Caltrans
Social Vulnerability	Plexels	2021	Yearly	ESRI Geoenrichment Service
Fire Stations	Points	2021	Yearly	ESRI, USGS
Building Loss Factor	Building Footprints	2022	Yearly	Technosylva
Critical Facilities	Points	2021	Yearly	Fire Resource Assessment Program (FRAP), Cal Fire
Potential Ignition Locations				
Distribution & Transmission Lines	Linear Segments	2022	Updated Quarterly	PacifiCorp
Poles & Equipment	Points	2022	Updated Quarterly	PacifiCorp
Outage History	Points	1989	Annual	PacifiCorp
Ignition History	Points	2020	Annual	PacifiCorp
Fire Activity				
Hotspots MODIS	1000	2000	Twice A Day	NASA

Dataset	Spatial Resolution (Meters)	Start of Dataset	Dataset Update Frequency	Source
Hotspots VIIRS	375	2014	Twice A Day	NASA
Hotspots GOES 16/17	3000	2019	10 Minute	NASA
Fireguard	Polygons	2020	15 Minute	National Guard
Fire Season Perimeters	Polygons	2021	Daily	National Incident Feature Service (NIFS)
Historic Fire Perimeters	Polygons	1900	Yearly	Cal Fire
Alert Wildfire Cameras	Live Feeds	Real Time	1 Minute	Alert Wildfire Consortium
Lighting Strikes	1000	Real Time	1 Minute	Earth Networks / Others

Below in Table PAC B-2 are the FireSight Outputs. Where attributes have no percentiles, it is noted as "N/A."

Table PAC B-2: FireSight Outputs

Attribute	Description:	Percentiles
Acres Burned	Number of Acres Burned	0, 20, 40, 60, 80, 90, 95, 98, and 100
Building Density	Building Density per Plexel	N/A
Buildings Destroyed	Number of Buildings Destroyed	0, 20, 40, 60, 80, 90, 95, 98, and 100
Building Loss Factor	Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100
Building Loss Factor (Average-Mean)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100
Building Loss Factor (Median)	Average Estimated Building Loss Factor Within the Plexel.	0, 20, 40, 60, 80, 90, 95, 98, and 100

Attribute	Description:	Percentiles
Buildings Threatened	Number of Buildings Threatened	0, 20, 40, 60, 80, 90, 95, 98, and 100
Burn Frequency	Burn Frequency is the number of times a plexel is touched from all assets ignited simulations run for the selected weather days. It is similar to traditional burn probability although this only represents a frequency, not a probability.	N/A
Disability Population	Disability Population Ratio	N/A
Fire Behavior Index	Fire Behavior Index	N/A
Fire Station Density	Density of Fire Stations in a location	N/A
Flame Length	Feet	N/A
Fuel Model Majority	Majority Fuel in Each Plexel	N/A
Number of Buildings	Number of Building per Plexel	N/A
Population Count	Population Count per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100
Population Density	Population Density per Plexel	0, 20, 40, 60, 80, 90, 95, 98, and 100
Population Impacted	Population Count	0, 20, 40, 60, 80, 90, 95, 98, and 100
Poverty Population	Poverty Population Ratio	N/A
Rate of Spread	66 Feet/Hour	0, 20, 40, 60, 80, 90, 95, 98, and 100
Road Availability-With Social Vulnerability Population	Availability of Roads in a Location with Consideration of Social Vulnerability Population	N/A
Road Availability-With No Population	Availability of Roads in a Location with No Consideration of Social Vulnerability Population	N/A

Attribute	Description:	Percentiles
Road Miles	Total Miles (Major + Minor)	N/A
Senior Population	Senior Population Ratio	N/A
Terrain Difficulty Index	Terrain Difficulty per Plexel	N/A
Years Since Last Fire	Years Since Last Fire per Plexel	N/A

Table PAC B-3 presents the FPI model inputs. The "N/A" denotes where the altitude, spatial, or temporal granularity is not pertinent to the feature group.

Table PAC B-3: Fire Potential Index Inputs

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Weather	Wind, sustained and gusts	10m	Wind speed and gust measured	Internal PacifiCorp WRF	Twice daily	2km	Hourly
Fuel Complexity	Fuel type, fuel load and fuel age	Surface	Quantifies the fuel type, fuel load and fuel age	Technosylva	Annually	30m	N/A
Weather	Relative humidity, vapor pressure deficit	Surface	Moisture variable from the atmosphere	Internal PacifiCorp WRF	Twice daily	2km	Hourly
Terrain	Terrain Difficulty Index	N/A	Quantifies the terrain and its potential impacts on suppression activity including accessibility, fuel penetrability, and ease of opening fire line.	Technosylva	Annually	30m	N/A
Fuel Moisture	1 and 10 hour dead fuel moisture	1m	Moisture of dead fuels	Internal PacifiCorp WRF	Twice daily	2km	Hourly

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Fuel Moisture	Woody and Herbaceous Live Fuel moisture	10m	Moisture of live fuels	Remote Sensing data	Daily		Hourly

Summary Documentation

The electrical corporation must provide high-level information on the calculation of each risk and risk component used in its risk analysis.

Below, PacifiCorp describes the five bowtie models within FireSight. ID in the outputs refers to the ID in

Table 5-2 and F: <Name> refers to the name used in FireSight.

The bow tie models presented below in Figures B-1 through B-6 represent the following:

- Figure B-1: Risk Associated with Ignition Location (RAIL): Wildfire risk associated to ignitions from utility assets, including ignition potential, fire spread potential, and locational vulnerability to a wildfire. The outputs are created in the FireSight model.
- Figure B-2: Risk Associated with Value Exposure (RAVE): Locational risk calculated from all surrounding assets, environmental characteristics, and demographics. This includes the fire intensity and the vulnerability of the community to a wildfire including social vulnerability, egress, terrain, and possible building damage. The outputs are created in the FireSight model.
- Figure B-3: Fuel/Terrain Driven Composite Risk: Attributes selected by PacifiCorp from the FireSight Outputs and used by PacifiCorp to calculate the Fuel/Terrain Composite Risk Score. A discussion of the rationale and weightings is provided in Section 5.2.
- Figure B-4: Wind-Driven Composite Risk: Attributes selected by PacifiCorp from the FireSight Outputs and used by PacifiCorp to calculate the Wind-Driven Composite Risk Score. A discussion of the rationale and weightings is provided in Section 5.2

- Figure B-5: Combined Composite Risk: The combined composite risk consisting of the Fuel/Terrain-Driven and Wind-Driven Composite Risk Scores. A discussion of the rationale is provided in Section 5.2 above. The combined composite risk score is calculated by PacifiCorp.

Figure B-6 is the calculation schematic for FireSight. The ID in the outputs refers to the ID in

Table 5-2 and F: <Name> refers to the name used in the FireSight model.

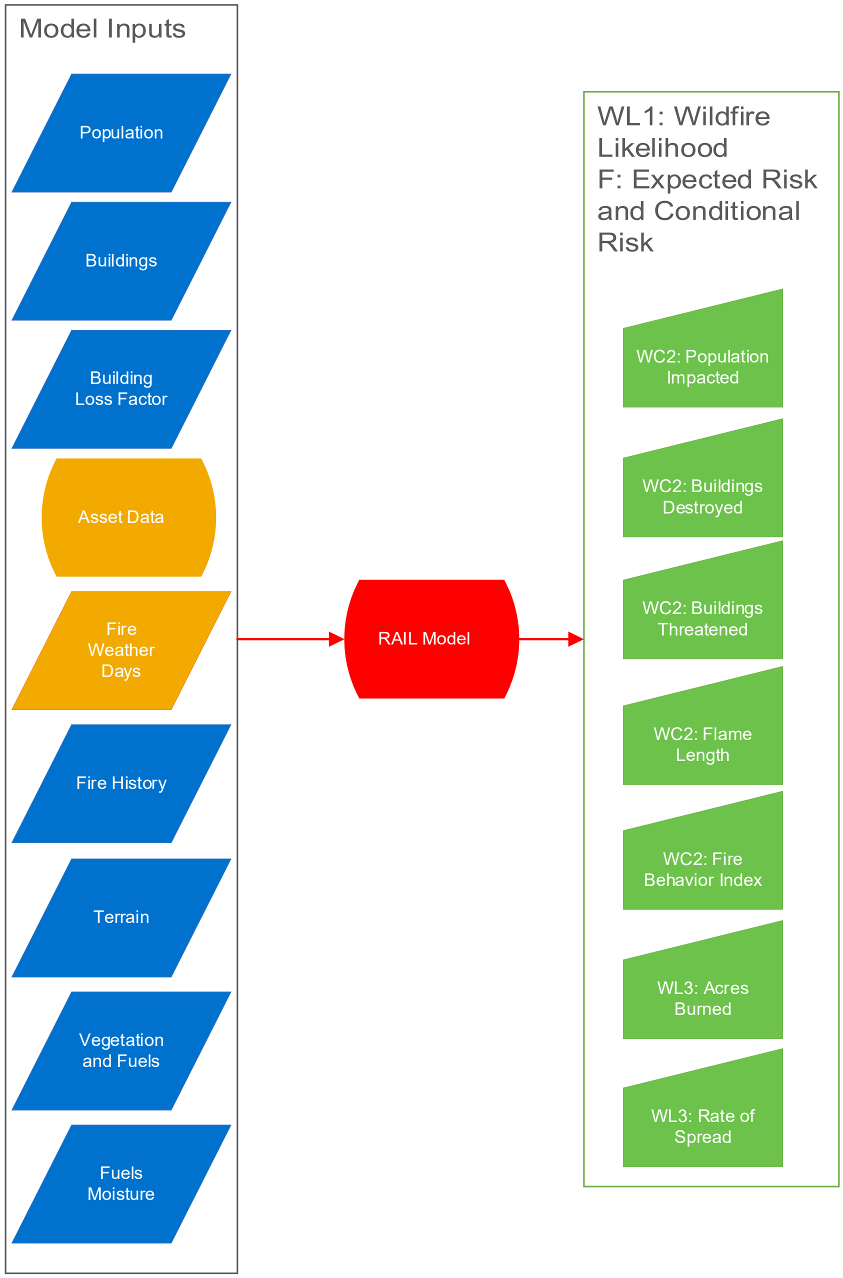


Figure B-1: Risk Associated with Ignition Locations (RAIL) Bowtie Model

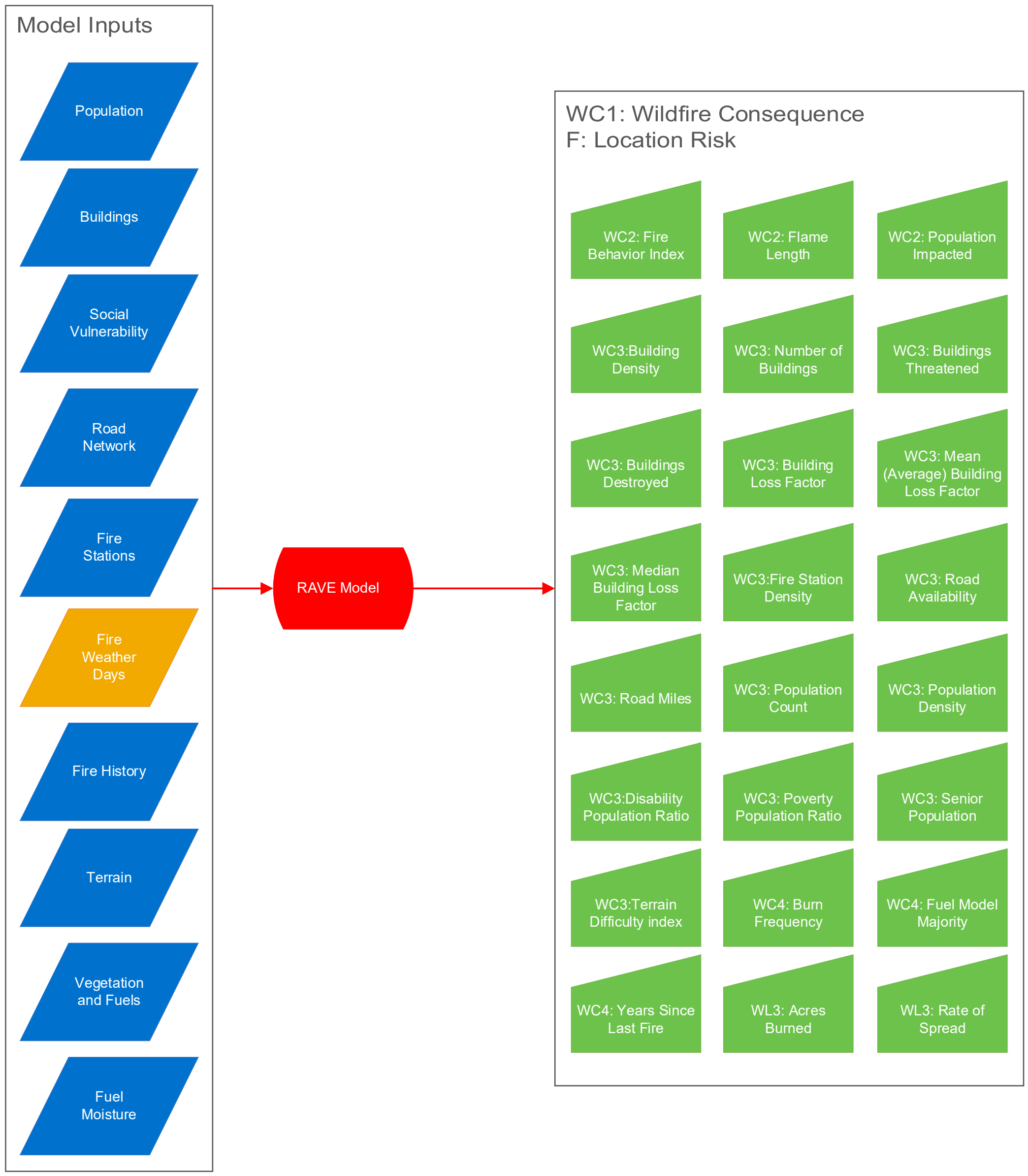


Figure B-2: Risk Associated with Value Exposure (RAVE) Bowtie Model

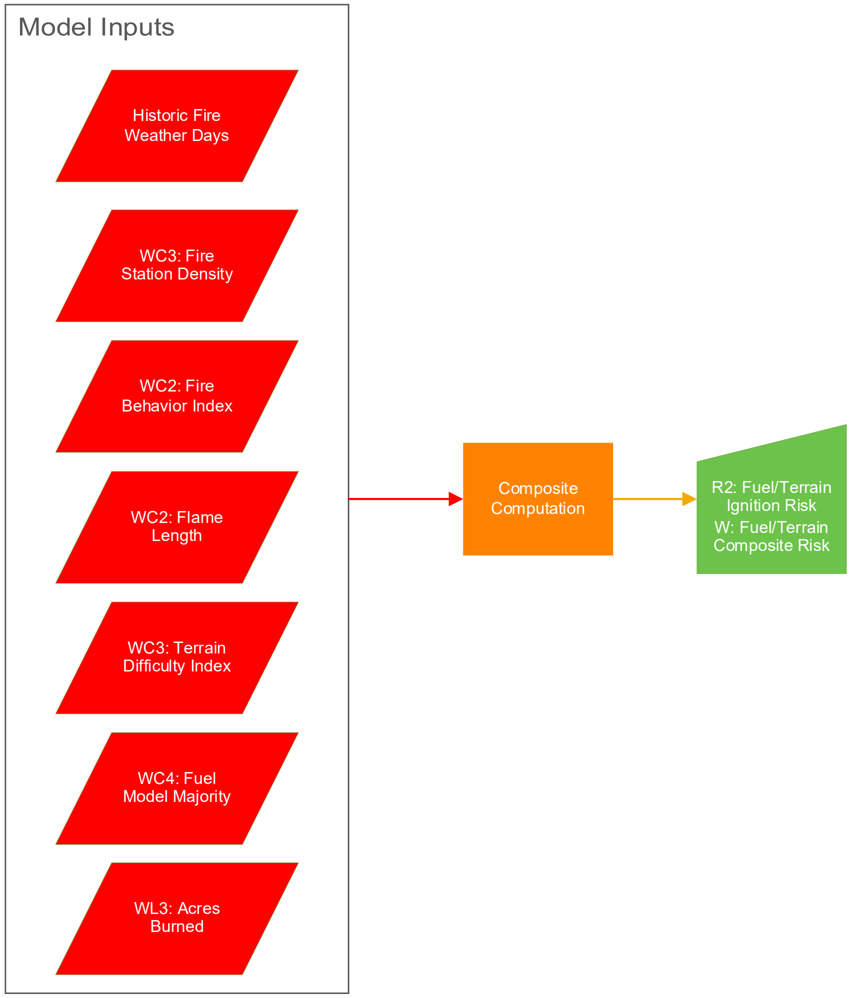


Figure B-3: Fuel/Terrain Driven Composite Risk Bowtie Model

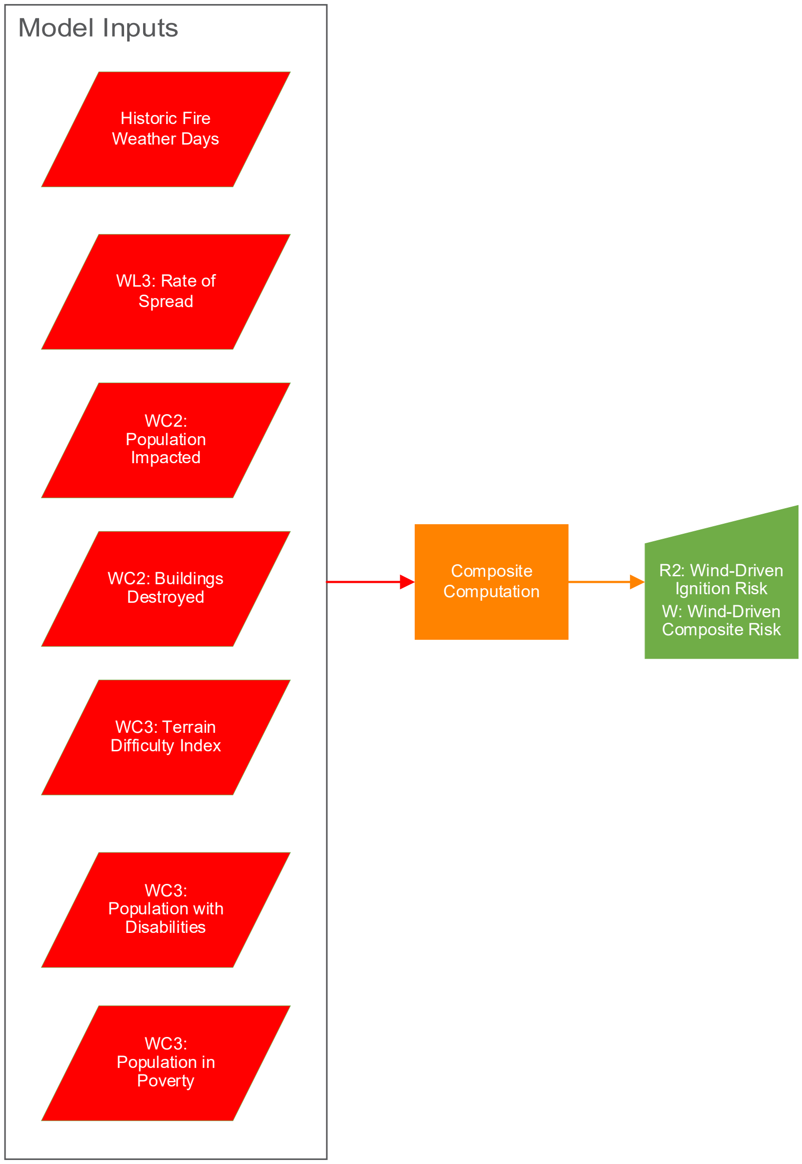


Figure B-4: Wind Driven Composite Risk Bowtie Model

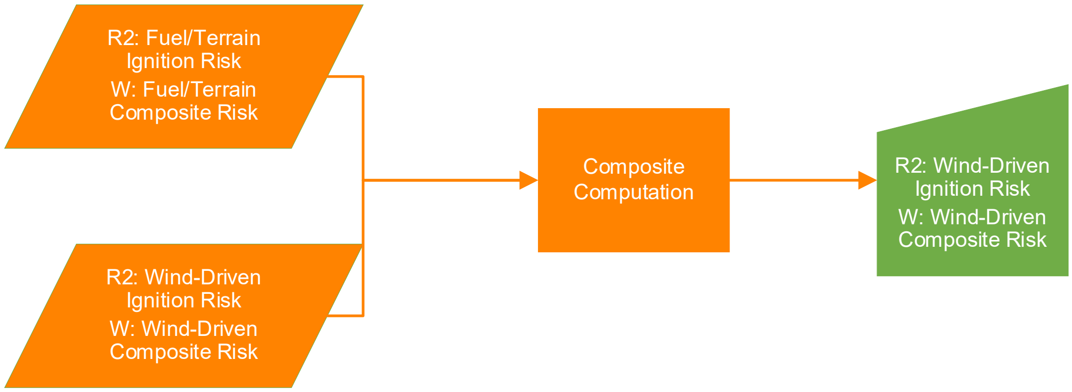


Figure B-5: Combined Composite Risk

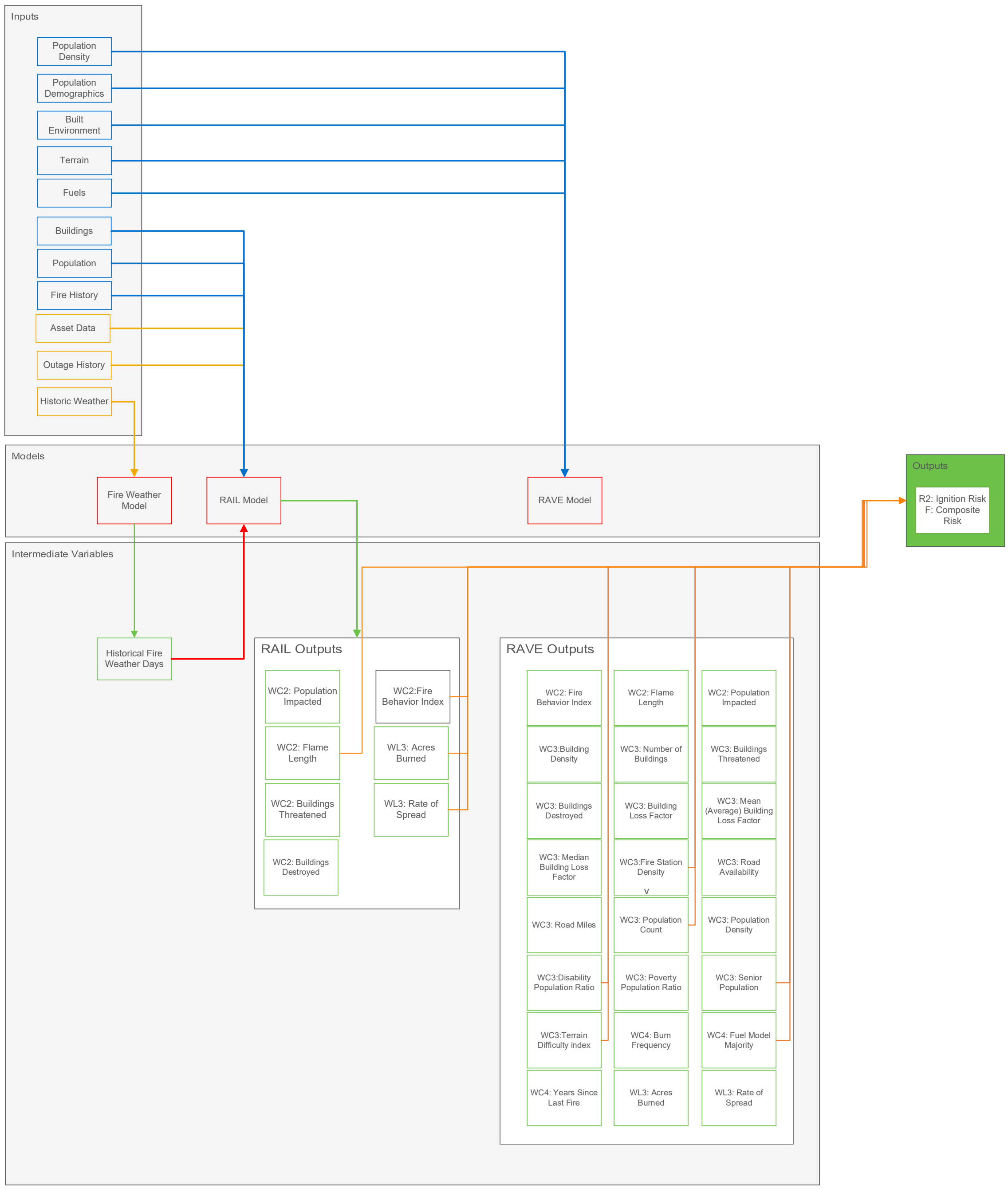


Figure B-6: Composite Risk Calculation Schematic

Purpose of FireSight

FireSight is part of the Wildfire Risk Analysis Enterprise (WFA-E) software from Technosylva. It is a modeling tool to measure the current level of risk of overhead utility equipment ignition under specific weather conditions and the consequence if there was an ignition. FireSight modeling is the start of the planning process as it identifies the areas of highest risk and consequence that should be looked at to consider mitigation strategies.

There are three components in FireSight as shown in the bowties above that support planning processes:

Risk Associated with Ignition Locations (RAIL)

In FireSight, RAIL represents the wildfire risk associated to ignitions from utility asset risk based on the characteristics of the asset, including age and materials. RAIL assesses the asset risk by associating the ignition impact over an eight-hour period to an ignition location. RAIL does not consider the characteristics of an asset location that may impact the resiliency of the location to a wildfire. Factors considered in RAIL calculations include:

- Surface and canopy fuel
- Topography
- Wind speed and direction.
- Fuel Moisture
- Historical fire occurrence identifying time of data, typical weather conditions, and duration.

Fire encroachment into urban areas.

RAIL Outputs:

- Ignition likelihood: This is the result of potential asset equipment fault, drivers causing that fault and/or ignition, and the damage that may lead to an ignition.
- Fire spread potential: The spread potential of fires originating at an ignition location is a function of the fire environment such as fuel, topography, and weather in the area surrounding the ignition location. The fire spread model defines where possible ignitions will spread across the landscape. This definition of spread is critical for defining vulnerability, i.e., potential impacts due to a utility-asset caused fire. The risk associated with each possible ignition provides the basis for evaluating the best opportunities for reducing risk by implementing mitigation projects.
- Vulnerability: Vulnerability refers to the exposure and susceptibility of values-at-risk (VAR), such as population, buildings, and critical facilities. Exposure is the location of VAR with respect to wildfire hazard; while susceptibility refers to the level of impact caused by wildfires of different intensities. For FireSight, the vulnerability is captured as a baseline risk for population impacted, number of buildings impacted, estimated number of buildings destroyed, and acres burned. Flame length, Rate of Spread (ROS), and Fire Behavior Index metrics are also included.

Risk Associated with Value Exposure (RAVE)

In FireSight, RAVE represents the locational risk calculated from all the surrounding assets, environmental characteristics, and demographics. Community demographics, topography, and the built environment influence how at risk or resilient a community is to wildfire or an eight-hour period from the initial ignition. RAVE is calculated independently of the asset risk calculated in RAIL and considers the following:

- Population density
- Socially vulnerable populations: Elderly, people with disabilities, or people in poverty

- Infrastructure: Major and minor roads, location of fire stations, and building density
- Suppression difficulty: Terrain and fuels
- Fire History: Burn history at the location.
- Historic Weather
- Crown fire: The amount the fire can spread through crowning in continuous spread through the tree crown.

RAVE Outputs:

- Community resiliency: How vulnerable a community is to a wildfire and their ability to respond quickly to fight the fire and/or evacuate.
- Fire intensity: How a fire is expected to behave and what area may be impacted from the point of ignition

Composite Risk

This is the combination of RAIL and RAVE to provide an ignition risk, the likelihood of an ignition from a utility asset given certain conditions and the consequence if a wildfire were to occur. The FireSight intermediate attributes are shown in

Table 5-2, RAIL attributes are at the circuit level and the RAVE attributes are at the plexel (area) level. Not all attributes, for example, population and fire stations, have a percentile as these attributes are not likely to be influenced by the conditions that may cause as fault or ignition. PacifiCorp selected ten of the attributes as inputs into the composite risk score.

Assumptions and Limitations

- The physical framework development is based on the measurement of the spread of hundreds of fires. Although the model may not fit some extreme behavior of fires in certain connective conditions, the model was validated with 1,853 fires.
- Fuels are assumed to be continuous and uniform for the scale of the input (typically between 10-to-30-meter (m) resolution). The models may wrongly characterize the fuel types in specific vegetation patches, however, under adverse weather conditions, this issue should not have significant impacts on the FireSight outcomes.
- Fire characteristics at a point only depends on the conditions at that point (point-functional model). This means that there are certain non-local phenomena like:
- Increase of Rate of Spread (ROS) due to a concave front.
- Fire interaction between different parts of the same fire or a different one.
- Fire spread is assumed to be elliptical although there are several variations such as double ellipse, oval, egg-shape, etc.
- Weather is given hourly and is assumed to remain constant during that time. There is no interpolation in time to compute evolution of weather between hours.
- Reliability of weather inputs in the mid-range forecast (2 to 5 days)
- Fire is not coupled with the atmosphere in any way. This may seem like a major limitation in the model as wind is a main contribution to fire spread and at present many models (especially physical ones) try to couple wind and fire. The main reasons for us not to consider the coupling is:
    - It would make it unfeasible to run millions of simulations considering the coupling effect.

    - Empirical and semi-empirical models have been developed using an average wind speed as an input, so it is not clear that considering more granular wind at the front is advisable.

- Fire is always assumed to be fully developed. Fire acceleration, flashover, or decay is not considered.
- Atmospheric instability which may have a deep impact on ROS (beer 1991) is not considered in the model.
- Gusts are not considered in the model.
- No interaction between slope and wind other than creating an effective or equivalent wind. This means that fire is assumed to have an elliptical shape no matter the alignment of wind and slope.
- Models have been developed with scares empirical data. The abundance of today's fire data sources, however, is allowing us to better adjust models to observed fire patterns.
- Fuel array description of the vegetation may not perfectly describe fuel characteristics.
- Spotting is only considered in surface fires.

Description of the calculation procedure shown in the bow tie model

Risk Associated with Location (RAIL)

Risk must be characterized with specific ignition locations, such as the electrical utility network assets. Instead of characterizing wildfire risk where the expected risks occur, a RAIL analysis assigns those potential impacts to the ignition location. This identifies the risk associated with individual assets, and identifies which assets have the greatest risk (potential impacts) if causing a wildfire. The three main components of a RAIL analysis are:

1) probability of ignition for the asset
2) fire spread potential of wildfires starting at the asset ignition location, and
3) consequence of the values-at-risk (population, buildings, etc.) impacted by the fire spread.

By combining these three components we can identify risk scores for specific assets. These components must be assessed for each potential ignition location being considered, i.e., OH lines:

Probability of ignition: In the FireSight model, electrical distribution equipment is the key ignition source under consideration. Probability of ignition is a result of potential asset equipment fault, drivers causing that fault and/or ignition, and damage that may lead to an ignition. A description of how probability of ignition data for assets is integrated into the risk scores.

Fire Spread Potential: The spread potential of fires originating at an ignition location is a function of the fire environment—fuel, topography, and weather—in the area surrounding the ignition location. The fire spread model defines where possible ignitions will spread across the landscape. This definition of spread is critical for defining consequence, i.e. potential impacts due to an asset caused wildfire. The risk associated with each possible ignition provides the basis for evaluating the best opportunities for reducing risk by implementing mitigation projects. This section describes the elements of the fire spread model component of FireSight based on Technosylva's Wildfire Analyst Enterprise product.

Factors to be considered in this component of the FireSight include:

- Surface and canopy fuel (spatial)
- Topography (spatial)
- Wind speed and direction (spatial and temporal)

- Fuel moisture (spatial and temporal)
- Historical fire occurrence identifying time of data, typical weather conditions and duration (spatial and temporal)
- Fire encroachment into urban areas (spatial)

The fire spread potential component of the FireSight relies on a fire spread modeling system, which consumes spatial and temporal information about the fire environment to simulate fire spread from a given ignition location for a specified period of time. Fuels and landscape characteristics data are used in combination with weather and fuel moisture data as key inputs to derive the fire spread simulation. An 8-hour fire duration is used representing a typical first burning period, but there is growing interest in 24-hour modeling risk to better understand how that changes the risk profile[23]. Therefore, PacifiCorp is modeling both to better understand if there are significant differences in the results that may impact mitigation efforts. This may be adjusted if desired. Accordingly, the simulation represents a fire spread potential for a specific set of input conditions (i.e., wind speed, wind direction, fuel moisture, temperature, humidity, etc.) that change spatially by the hour. Weather data has a 2 km spatial resolution. Other landscape input metrics have a 30-meter spatial resolution.

Consequence refers to the impacts to values-at-risk, such as population, buildings, and critical facilities. For the FireSight, consequence is captured as baseline risk outputs for population impacted, number of buildings threatened, estimated number of buildings destroyed, and acres burned. Flame Length, Rate of Spread, and Fire Behavior Index metrics are also included.

23 California Office of Energy Infrastructure Safety. "Standardized Wildfire Risk Type Classifications and in Situ Wildfire Risk Assessment." Risk Modeling Working Group. October 11, 2023.

FireSight Risk Metrics

The calculation of risk metrics applies to both the primary asset risk outputs and the supplemental territory wide risk outputs. Asset risk metrics include more detailed calculations as they integrate individual asset probability of ignition data to extend conditional risk to expected risk. Conditional risk is calculated from the spread predictions (simulations) assuming a probability of ignition of 1.0 for each asset, i.e., all assets are assumed to have the same probability of ignition. These impacts reflect if a fire were to occur. Expected risk integrates the probability of ignition for the specific asset. Expected risk can only be calculated for asset risk as it is dependent on having a probability of ignition for the individual asset. Accordingly, asset risk includes both conditional and expected metrics while territory risk only includes conditional metrics. Type of Risk Metrics Based on the impacts calculated from the fire spread prediction for each ignition source, a consistent set of risk metrics are calculated and assigned back to the asset ignition locations. In this manner risk is quantified for each asset segment (distribution). Risk metrics are categorized as follows:

Baseline Risk – primary outputs are calculated based on the number of buildings threatened, number of buildings destroyed, population impacted, and acres burned from a fire spread prediction. Baseline risk is calculated for both Asset Risk and Territory Risk.

Baseline Risk Model

The baseline risk model implemented within FireSight calculates the following impacts:

- Number of Buildings Threatened – risk metric based on total number of buildings impacted assigned to every ignition point.
- Number of Buildings Destroyed – an estimate of the number of buildings destroyed for each fire spread simulation is derived using the Building Loss Factor (BLF) data assigned to each building.

- Total Population - risk metric based on population impacted assigned to every ignition point.
- Fire Size Potential - risk metric based on number of acres burned assigned to every ignition point. Baseline risk metrics are calculated based on the spread of a fire predicted for each ignition point. Fire spread predictions are run for each weather scenario day extracted from the utility climatology. This results in hundreds of different risk values for each ignition point and asset, i.e., one for each weather scenario run

To achieve this for Asset Risk, fire ignition points are defined along assets, and impacts from fire spread predictions are associated back to the source ignition points and assets, i.e. segments for linear features. For FireSight, multiple simulations are run for each asset ignition point – one for each of the weather scenarios (days). Impacts are calculated for each simulation resulting in hundreds of sets of impacts for each asset.

Since the weather scenarios are not weighted, i.e. they are all considered equal, a set of summary outputs are calculated from the sets of baseline risk outputs. These include:

- Standard Deviation values for all simulations
- Average impact value for all simulations
- Percentiles impact value for all simulations (0, 20, 40, 50, 60, 80, 90, 95, 98, 100)

These summary values are calculated for each baseline risk output, i.e., number of buildings threatened, estimated buildings destroyed, population impacted, and acres burned. Providing these summary outputs allows a utility to utilize the aggregate score that is preferred. For Territory Risk, baseline risk metrics are calculated for each point consistent with Asset Risk.

Incorporating Probability of Ignition for Assets

The impact values calculated by the FireSight analysis fire spread simulations represent the conditional risk, that is, the impacts should a fire occur. It is assumed all probability of ignition is the same for all assets. This is referred to as "Conditional Risk" – conditional on a fire occurring. It provides the basis for integrating asset probability of ignition to calculate an "Expected Risk" – impacts that are expected to occur based on probability of different assets causing an ignition.

Expected Risk (ER) is the product of equipment-related Probability of Ignition (POI) for the asset, equipment-related Probability of Fault (POF), and the Conditional Risk (CR) of a wildfire should one ignite at that location.

$$ER = POI * POF * CR$$

CR is a function of both fire spread potential and consequence in the area surrounding the asset. CR is modeled by combining a custom implementation of deterministic fire spread models (Component 2 of the RAIL analysis) with geospatial data pertaining to the consequence and potential damage of structures across the territory (Component 3).

Risk Associated with Value Exposure (RAVE)

The need to develop a comprehensive asset risk analysis necessitates the combination of asset risk values with risk factors describing the characteristics of the landscapes potentially impacted from asset ignited fires. Technosylva has conducted analysis of these landscape factors and created a set of data analysis outputs that quantify and describe the potentially affected landscapes. The landscape related risk factors data is referred to as Risk Associated with Value Exposure (RAVE).

The RAVE risk metrics are intended to be combined with the Risk Associated with Ignition Locations (RAIL) metrics already calculated in daily risk forecasts (FireRisk) and FireSight to facilitate a composite asset risk metric. This metric provides a comprehensive measure of risk that can be incorporated into Multi-Attribute Risk Score (MARS) and Multi-Attribute Value Function (MAVF) frameworks to support short term operational decision making, and long-term mitigation planning.

The three main components of a RAVE analysis are:

- Local characteristics of impacted areas
- Fire spread exposure of wildfires potentially ignited by utility assets, and
- Vulnerability of the local area (population, buildings, etc.)

By combining these three components we can identify risk scores across the landscape and tie these specifically to electric utility assets as possible fire ignition sources.

Integrating RAVE with existing RAIL risk metrics allows for calculation of a composite risk metric for electric utility assets that incorporates local risk factors that can substantially increase risk for possible fires caused by an asset, i.e., increase the asset risk.

For example, if an area potentially impacted from an asset ignited fire has certain risk factors, such as:

- Significant terrain difficulty for suppression or egress issues (local characteristics),
- High crown fire potential and majority of volatile fuels (fire spread exposure), and/or
- High senior age and poverty ratio (vulnerability),

then the possibility of damage or loss is amplified by these risk factors. Accordingly, the risk score for an asset that impacts an area with these characteristics should be increased as it is worse than risk for another asset source that may impact areas without these factors present.

Local Characteristics and Vulnerability tend to be more static factors as they relate to landscape characteristics, population, buildings, and manmade infrastructure. Fire Spread Exposure factors tend to be more dynamic as they relate to fire behavior conditions caused by varying weather conditions and hence can vary significantly based on specific weather scenarios.

Plexels as RAVE Analysis Units

To properly characterize risk factors across the landscape an analysis unit is required. In the GIS world, geo-administrative polygons are typically used to define socio-economic and demographic characteristics, and raster grids are used for terrain related characteristics. However, the use of geo-administrative boundaries does not provide the granularity necessary to characterize risk factors for fire spread simulations; a smaller unit is necessary. Hexagons are used as the analysis unit for RAVE analysis.

The hexagon was selected as having many benefits over using the conventional raster grid approach. In particular, hexagons are preferred when the analysis includes aspects of connectivity or movement paths, as is required for wildfire spread prediction across the terrain. Hexagons reflect distortion over large areas, as is the requirement for this analysis.

For RAVE, hexagons are referred to as plexels – comprised of the main components of hexagons, pixels and population – the primary attribute of the landscape we are concerned with.

Prior to the 2022 analysis, hexagons were created across the service territory at a 1000-meter centroid spacing. Each plexel was approximately 214 acres.

In 2022, Technosylva switched to Uber's Hexagonal Hierarchical Spatial Index (H3) system. Level 8 or Level 9 hexagons are used, depending on the size of the project area. Level 8 hexagons are approximately 1100 meters from centroid to centroid and 200 acres in size. Level 9 hexagons are approximately 425 meters from centroid to centroid and 26 acres in size.

Level 8 hexagons were used in this analysis.

It is important to note that analysis was only conducted for plexels where population or buildings are located. Areas without population or buildings are not included in the analysis as these do not represent current areas of concern.

Locational Risk Factors and Asset Fire Susceptibility

RAVE data was calculated using both static data (Locational Risk Factors), and dynamic data (Asset Fire Susceptibility) using outputs from fire simulations derived using customer weather scenarios. By default, the series of historical weather scenarios identified from the customer's climatology has been used.

Locational Risk Factors Locational Risk Factors reflect more static data as they do not change frequently. These include data primarily related to population, buildings, and manmade infrastructure. Current metrics calculated and summarized on a per plexel basis are:

- Population Density Population Count Building Density
- Number of Buildings
- Building Loss Factor • Road Density – major and minor
- Fire Station Density
- Social vulnerability characteristics such as senior population ratio, disability population ratio, and poverty population ratio
- Majority Fuel Model
- Terrain Difficulty Index
- Road Availability (with and without social vulnerability factors)
- Years Since Last Fire

Figure PAC B-1 below presents an example of Senior Population data for the service territory. This metric is classified as percent of population as shown in the adjacent legend.

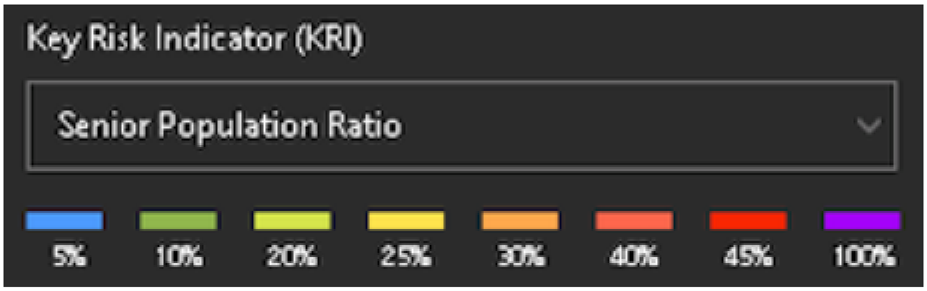


Figure PAC B-1: Example of Senior Population Data for the Service Territory

Asset Fire Susceptibility Factors

Asset Fire Susceptibility Factors are calculated based on fire simulations from asset ignition points and aggregated on a per plexel basis. The metrics represent vulnerability based only on asset ignited fires. By default, historical weather scenarios identified for the climatology have been used, although daily weather forecasts could be used, and RAVE metrics calculated on a daily forecast basis if desired.

These metrics include:

- Acres Burned (8-hour simulations)
- Population Impacted
- Buildings Threatened
- Estimated Buildings Destroyed
- Building Loss Factor

- Fire Behavior Index • Flame Length
- Rate of Spread
- Burn Frequency – the number of times the plexel was burned from fire simulations from asset ignitions
- Building Loss Factor

The Asset Fire Susceptibility data provided with the RAVE delivery are derived using the same weather scenarios used for FireSight data analysis. This is the default RAVE analysis provided.

It is important to note that these dynamic factors will change as weather scenarios change (i.e. more are added), fuels are updated, and asset data is updated.

Asset Susceptibility

Asset Susceptibility results are dynamic, based on the number of weather days used in the analysis. Analysis outputs are assigned to the landscape as plexels (hexagons), not back to the asset ignition source. The following

Table PAC B-4 lists the layers provided:

Table PAC B-4: Asset Fire Susceptibility Layers

Layer	Description	Units
Burn Frequency	Burn Frequency is the number of times a plexels is touched from all asset ignited simulations run for the selected weather days. It is similar to traditional burn probability although this only represents a frequency, not a probability.	Number of times impacted by a fire simulation
Fire Behavior Index	The Fire Behavior Index layer group includes FBI results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Fire Behavior Index within the plexel
Acres	The Acres layer group includes acres results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8- hour simulation runs.	Acres burned within the plexel
Buildings Threatened	The Buildings Threatened layer group includes buildings impacted results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Number of buildings impacted within the plexel
Buildings Destroyed	The Buildings Destroyed layer group includes buildings destroyed results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Estimated number of buildings destroyed within the plexel
Building Loss Factor	The Building Loss Factor layer group includes building loss factor results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Estimated building loss factor within the plexel
Population	The Population layer group includes population impacted results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Number of population (people) impacted within the plexel
Flame Length	The Flame Length layer group includes flame length results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs.	Flame Length in feet within the plexel

Layer	Description	Units
Rate of Spread	The Rate of Spread layer group includes rate of spread results for percentiles 100, 98, 95, 90, 80, 60, 40, 20, and 0 for 8-hour simulation runs	Rate of Spread in chains / hour within the plexel

Locational Risk Factors

Locational Risk Factors are static results, calculated from the ESRI Living Atlas and Technosylva source data.

Table PAC B-5: Locational Risk Factors Layers

Layer	Description	Units
Total Miles—Major Roads	Total miles of major roads by plexel	Miles
Total Miles—Minor Roads	Total miles of minor roads by plexel	Miles
Fuel Model Majority	Majority fuel model within each plexel	Fuel model number of fuels that have the most acres within the plexel
Building Density	Building Density by plexel	Buildings per acre
Number of Buildings	Number of Buildings by plexel	Number of buildings
Building Loss Factor (Median)	Median building loss factor by plexel	Percent
Building Loss Factor (Mean)	Average building loss factor by plexel	Percent
Population Count	Population Count by plexel	Number of People
Population Density	Population Density by plexel	Population Per Acre
Fire Stations Density	Density of Fire Stations by plexel. Represents a mean value of a density surface created from station points using a Kernel interpolation method.	Stations per sq. mile using a 20-mile search distance.
Terrain Difficulty Index	Technosylva's Terrain Difficulty Index (2022) by plexel	Values from Very Low to Extreme
Disability Population Ratio	Disability population ratio by plexel	Percent of population identified as disabled within the plexel
Poverty Population Ratio	Poverty population ratio by plexel	Percent of population identified as under the poverty level within the plexel

Layer	Description	Units
Senior Population Ratio	Senior population ratio by plexel	Percent of population identified as senior (GE 65 years of age) within the plexel
Road Availability (without social vulnerability)	Road Availability without factoring social vulnerability (disability, poverty, and senior) population ratios by plexel	Poor to Good Egress
Road Availability (with social vulnerability)	Road Availability using social vulnerability (disability, poverty, and senior) population ratios by plexel	Poor to Good Egress
Years Since Last Fire	Years since last fire by plexel (calculated for 2022)	Years

For all fields containing raw values they are classified either using a Natural Breaks (Jenks) classification or a qualitative classification from Very Low to Very High.

Composite Risk

Integrating RAVE with existing RAIL risk metrics allows for calculation of a composite risk metric for electric utility assets that incorporates local risk factors that can substantially increase risk for possible fires caused by an asset, i.e., increase the asset risk.

For example, if an area potentially impacted from an asset ignited fire has certain risk factors, such as:

- Significant terrain difficulty for suppression or egress issues (local characteristics),
- High crown fire potential and majority of volatile fuels (fire spread exposure), and/or
- High senior age and poverty ratio (vulnerability),

then the possibility of damage or loss is amplified by these risk factors. Accordingly, the risk score for an asset that impacts an area with these characteristics should be increased as it is worse than risk for another asset source that may impact areas without these factors present.

How the outputs will be characterized and presented

Figure PAC B-2 is an illustration of how outputs can be characterized and presented. On the right is the estimate of acres burned at the 50th percentile of worst-weather conditions, on the left is the estimate of acres burned at the 99th percentile of worst-weather conditions.

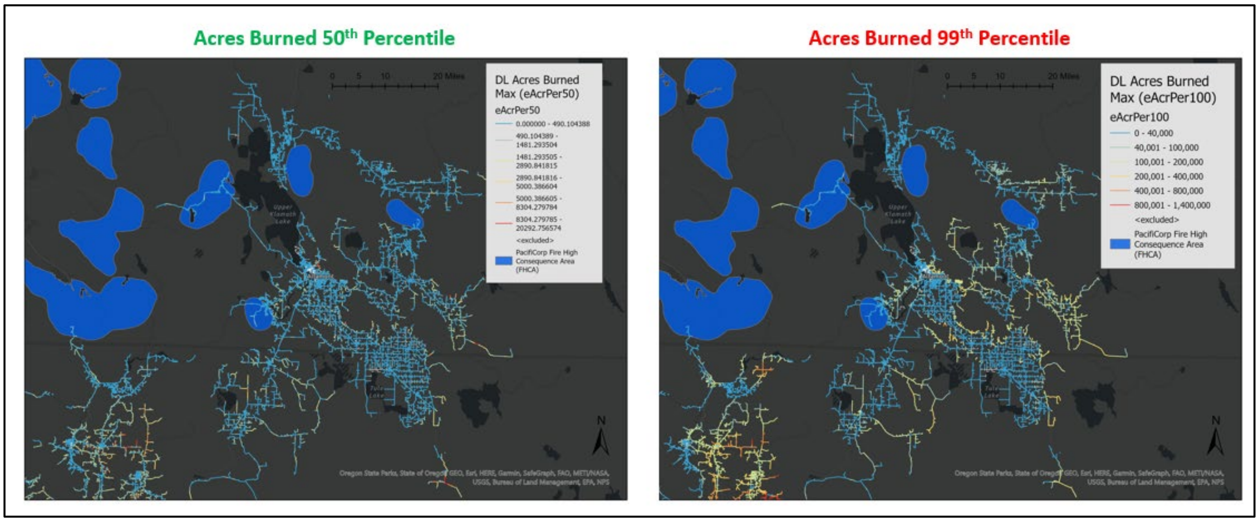


Figure PAC B-2: Example of FireSight Output

Appendix C Additional Maps

Consistent with the 2026-2028 WMP Guidelines[24], the following maps are provided in the plan:

- Figure 4-1: Service Territory and Customer Distribution.
- Figure 4-2: Map of Frequently Deenergized Circuits. At the time of filing, PacifiCorp does not have circuits that meet the criteria to be presented geospatially.
- Figure 5-3 Geospatial Maps of Top Risk Areas within the High Fire Risk Area (HFRA)

Consistent with Energy Safety guidelines, these maps are accessible publicly at PacifiCorp 2026-2028 WMP Additional Maps.

24 California Office of Energy Infrastructure Safety. TN15406_20250224T150025_Wildfire_Mitigation_Plan_Guidelines. Page 6.

Appendix D Areas for Continued Improvement

In this appendix, the electrical corporation must provide responses to its areas for continued improvement as identified in the Decisions on the previous Base WMP and WMP Update.

Risk Methodology and Assessment

PC-25U-01. Proposed Changes to the HFTD

Description: PacifiCorp has not demonstrated the differences in risk between its HFRA and HFTD, nor undergone the formal process of getting additional high-risk areas recognized beyond the CPUC-established HFTD.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide:

- A process outlining how it compares areas in its HFRA to the current HFTD; and
- Its plan for submitting a proposed change to the CPUC to modify the CPUC-defined HFTD for any areas that PacifiCorp finds should be prioritized for mitigation efforts and considered for recognition.

Section and Page Number of Any Improvements: Section 5.5.1.2 Page 100, Section 5.7 Pages 111, 118

PacifiCorp Response: Upon each major model release, PacifiCorp will create a new HFRA boundary based on the top 85% of wind or terrain risk using its wildfire risk planning model. The HFRA risk is then compared to the HFTD risk by aggregating the FireSight RAIL attributes per boundary as demonstrated in Table PAC 5-4 in Section 5.5.1.2.

PacifiCorp has developed a HFRA for its California service territory. This boundary was based on the top 85% of wind or terrain risk from its wildfire risk model that is not currently included within the HFTD boundary. In comparing its HFRA with the current HFTD, PacifiCorp evaluates FireSight RAIL and RAVE model outputs to compare median 95th percentile consequence results for simulated ignition points for assets in either area. This analysis is used to validate that the PacifiCorp defined HFRA have average potential fire consequences as least as severe as the HFTD. PacifiCorp plans to file a request to the CPUC no later than 2026 for inclusion of the HFRA into the HFTD using the established protocol for HFTD updates. The Company plans to continue evaluating the HFRA and update its boundaries on a regular cycle, as needed, using its most updated wildfire risk models. In determining the planned update frequency of the HFRA, PacifiCorp considered both the duration of the update itself as well as the intended use of the assessment and the impacts to corresponding programs or projects. Because the HFTD and HFRA will be used to inform multiyear programs, such as asset inspections and vegetation management, modifying geographic boundaries too frequently would be disruptive to making and tracking progress on these programs. As a general baseline, the Company plans to evaluate on an annual nominal cycle, coinciding with each annual model release.

PC-23B-02. Calculating Risk Scores Using 95th Percentile Values

Description: PacifiCorp's use of 95th percentile values, as opposed to probability distributions, to aggregate risk scores is not aligned with fundamental mathematical standards and could lead to suboptimal mitigation prioritization decisions.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

Provide a plan with milestones for transitioning from using 95th percentile values to probability distributions in its 2026-2028 Base WMP when aggregating risk scores for the following:

- Mitigation evaluation.
- Cost/benefit calculations.

- Risk ranking.

If PacifiCorp is unable to transition to using probability distributions, it must:

- Propose an alternative strategy or demonstrate that its current methodologies are providing accurate outputs for calculating known risk. PacifiCorp must provide concrete validations, including estimations for usage of percentiles and probability distributions where possible. Explain why or how it is unable to move toward the use of probability distributions when calculating and aggregating risk scores. This must include discussion of any existing limitations or potential weaknesses.
- Provide an explanation for each calculation of risk scores where PacifiCorp is calculating or aggregating risk scores in which percentiles were used.
- Describe any steps PacifiCorp is taking to explore the use of probability distributions in the future.

Section and Page Number of Any Improvements: Section 5.3.1 Page 91, Section 5.7 Page 111, 119

PacifiCorp Response: While the 95th percentiles used in the Wind and Fuel/Terrain risk scores described in Section 5.2 provide a reasonable assessment of risk in the tail section of the Expected wildfire risk simulations, PacifiCorp is planning to move towards the inclusion of probability distributions consistent with ACI as part of the initiative "Move from using 95th Percentiles to Probability Distributions."

Target Completion: 2027.

PC-25U-02. PSPS and Wildfire Risk Trade-Off Transparency

Description: PacifiCorp has not yet developed its PSPS risk assessment within its risk modeling, which is necessary for quantifying and understanding PSPS risk along its system in comparison to wildfire risk.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

- Provide a description of how it plans to quantify and integrate PSPS risk into its overall risk assessment. The plan must demonstrate how PacifiCorp will analyze the trade-offs between PSPS risk and wildfire risk.
- Provide a plan, timeline, and milestones for implementing PSPS risk calculations into its risk modeling tools. These must include a description of where specifically PSPS risk impacts PacifiCorp's:
    - Decision making framework.
    - Process for mitigation selection.
    - Prioritization of mitigation initiatives.

Section and Page Number of Any Improvements: Section 5.7 Pages 110, 112

PacifiCorp Response: PacifiCorp is actively building the components of a PSPS risk model and plans to integrate it with its wildfire risk model by end of year 2025. The PSPS Likelihood of Risk Event (LoRE) model component will consist of expected annual PSPS events and is based on a PSPS scenario outlined by PacifiCorp's Meteorology department. Based on a set of criteria spanning the Hot Dry Windy (HDW) Index, the Energy Release Component (ERC), and wind gusts, the LoRE will assess the expected annual events per circuit referencing historical weather data.

The PSPS Consequence of Risk Event (CoRE) model component will consist of customer impacts per circuit. Customer impacts will be assessed based on residential and commercial designations.

Attributes such as AFN and critical facilities will be evaluated for inclusion to PSPS CoRE as well. At this point in time, PacifiCorp has no established monetized values assigned to PSPS consequence attributes; however, a study is currently underway to establish these monetized values with the results expected to be added to the model by year-end 2025.

PacifiCorp does not intend to make trade-offs between wildfire risk and PSPS risk. The intent of the PSPS risk model is to understand the added benefits of PSPS risk reduction as part of PacifiCorp's wildfire mitigation portfolio. With the adoption of the PSPS risk model, it is expected that wildfire risk will continue to drive grid hardening projects. PSPS risk reduction is expected to play a part in the portfolio optimization module of the planning model when wildfire risk reduction benefits are similarly matched.

Target completion: 2025

PC-25U-03. Independent Review Transparency

Description: Description: In response to PC-23B-05, PacifiCorp did not provide a detailed plan for implementing review procedures and contracting with an independent third-party reviewer for its risk model, which is necessary for model validation.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

- Provide a detailed plan for implementing new procedures relating to reviewing and validating its wildfire risk models. This plan must be more detailed than the plan PacifiCorp provided in its 2025 WMP Update, and must include:
- Attachments of any associated procedures,
- All discrete tasks related to review and validation of PacifiCorp's risk models.

- Provide a status update regarding PacifiCorp's plan to obtain an independent third-party to review its risk models, including discrete dates for when PacifiCorp will obtain a third-party contractor and when the third-party review will be completed.
- Provide a plan, timeline, and milestones (include target completion dates) for incorporating any changes to its risk model based on the third-party review. The plan must include a description of any potential complicating factors relating to implementation.

Section and Page Number of Any Improvements: Section 5.7 Page 117-118.

PacifiCorp Response: Upon completion of its next risk model evolution, which encompasses the addition of PSPS risk, PEDS risk, as well as a major architectural overhaul, PacifiCorp will engage with third-party consultants to review and interrogate the current modeling strategy. PacifiCorp expects this independent review to begin in mid-2026 in parallel with formalizing its independent review to begin in mid-2026 in parallel with formalizing its internal review policy for completion in 2027 subject to vendor availability.

Target Completion: 2027

Wildfire Mitigation Strategy Development

PC-25U-04. Vendor Fire Risk Model Implementation Milestones and Dates

Description: In response to PC-23B-06, PacifiCorp marked some parts of its model implementation as deferred, and other parts of its model implementation as scheduled for 2025 and 2026. Due to these deferrals and timing, PacifiCorp must continue to report updates for its risk modeling implementation, including any associated delays.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

- Provide its most recent plan and timeline for risk model implementation, including milestones and associated target completion dates, a detailed breakdown of the components and objectives required to complete a given task, and steps taken while implementation is in progress.
- Provide an update on any deferred steps listed in Table 6-7 including the reason for any further deferrals.

Section and Page Number of Any Improvements: Section 5.7 Pages 112-113

PacifiCorp Response:

PacifiCorp has implemented the FireSight risk model, as described in Section 5.2. The outputs of the model are being used to calculate the wildfire risk and applied to identify the highest risk circuits as shown in Table 5-5, and prioritized areas for mitigation as shown in Table 6-1 and the highest risk areas within the HFRA as shown Figure 5-3.

The activities listed below and noted as deferred in the 2023-2025 Base WMP Revision 6 are not components of FireSight risk model. As PacifiCorp assessed the work to be done to establish the base wildfire modeling, it deferred some activities to ensure that this work was complete. The status of the deferred activities is below.

- Evaluate Adding Timber Loss as a Consideration to FireSight RAVE Calculation: This work will be included in the scope of the initiative "Monetization of Risk Events for Application in Mitigation Alternatives Analysis."

  Targeted Completion: 2025

- Centralized Solution to track Wildfire and PSPS Risks: This work will now be included in the scope of the "Model Architecture Improvements" initiative.

Targeted Completion: 2025

PC-25U-05. Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety

Description: PacifiCorp participated in past Energy Safety-led working groups on these topics and continued to participate in forums mentioned in its 2023 WMP Filing. However, PacifiCorp has not reported on any additional WMP-related collaboration with the other California IOUs as of its 2025 WMP Update filing.

Required Progress: : In its 2026-2028 Base WMP, PacifiCorp must continue its existing collaboration efforts and demonstrate that it has made efforts to specifically collaborate with PG&E, SDG&E, SCE, BVES, and Liberty, where appropriate and relevant to each IOU's interests. PacifiCorp must also document how its collaboration efforts with the other California IOUs impacted the WMP initiatives presented in its 2026-2028 Base WMP.

PacifiCorp must also continue to participate in all Energy Safety-organized activities related to best practices for:

- Inclusion of climate change forecasts in consequence modeling.
- Inclusion of community vulnerability in consequence modeling.
- Utility vegetation management for wildfire safety.

Section and Page Number of Any Improvements: Section 13.2. Page 435-437

PacifiCorp Response: PacifiCorp collaborates with other California IOUs at the direction of Energy Safety as well as other forums. PacifiCorp participates in the Risk Modeling Working Group and will participate in Energy Safety-organized activities related to best practices for inclusion of climate change forecasts in consequence modeling, inclusion of community vulnerability in consequence modeling and utility vegetation management for wildfire safety.

The Company participates in joint California IOU meetings to discuss related to wildfire mitigation work, including topics such as WMP development, undergrounding, and potential use of AMI to detect faults. In addition, Pacific Gas and Electric hosts meetings on system protection related to wildfire that PacifiCorp participates in.

As described in Table 11-1, PacifiCorp has an initiative CO-04, Western Wildfire Communications Workshop to meet with communications teams from western utilities in the United States and Canada to discuss wildfire communications. The first event was hosted by the Company in November 2024 and included discussions on internal communications, digital media, paid media, media relations, community engagement, lessons learned from the 2024 wildfire season and a look ahead to 2025 challenges. California IOUs were invited to the 2024 event which was attended by nine utilities and additional workshops are planned to continue among the utilities.

PacifiCorp also participates in the AFN Collaborative Council in response to the CPUC's Decision 21-06-034. The 2025 AFN Plan's operational priorities are the AFN initiatives and activities reflected in Table 11-1 of the 2026-2028 WMP.

In addition to collaboration with California IOUs, the Company is also an active member of the International Wildfire Risk Mitigation Consortium (IWRMC), an industry-sponsored collaborative designed to facilitate the sharing of wildfire risk mitigation insights and discovery of innovative and unique utility wildfire practices from across the globe. This consortium, with working groups focused on areas of asset management, operations and protocols, risk management, and vegetation management, facilitates a system of working and networking channels between members of the global utility community to support the ongoing sharing of data, information, technology, and practices.

Additionally, the PacifiCorp plays leadership and support roles through other organizations such as the Edison Electric Institute (EEI), and the Institute of Electrical and Electronics Engineers (IEEE). Within the western United States, PacifiCorp also engages with the Western Energy Institute (WEI) and also collaborates with Oregon IOUs on topics such as risk modeling. Collaboration also occurs regarding research and applications of technologies through the Company's parent company Berkshire Hathaway Energy, BHE and its affiliated companies.

Where applicable, lessons learned from collaboration with other utilities that are related to the 2026-2028 WMP are described in Table 13-1.

Grid Design, Operations, and Maintenance

PC-25U-06. QA/QC Pass Rate Targets

Description: In response to PC-23B-09 PacifiCorp did not set QA/QC pass rate targets for detailed and intrusive inspections between 95 and 100 percent, in alignment with its current maturity and the California industry standard due to its contractual QA/QC pass rate requirement established with contracted inspectors.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

- Discuss the outcome of its contract negotiations regarding its QA/QC requirements to reflect appropriate safety outcomes and industry standards.
- Provide its evaluation of new QA/QC processes.

- Provide a narrative explanation of why PacifiCorp's 2026-2028 pass rate targets are appropriate given its current maturity and how the pass rates are designed to achieve appropriate safety outcomes.

If PacifiCorp does not increase its pass rate targets for 2026-2028, PacifiCorp must provide:

- Its actual pass rates for each QA/QC program in 2023 and 2024.
- A list and description of all criteria that result in an inspection failing to pass QA/QC.
- A table of all inspections in 2023 and 2024 that failed QA/QC containing the following information:
- Inspection type (detailed, intrusive pole, etc.).
- Inspection identifier.
- Inspection date.
- QA/QC failure reason(s).
- An analysis demonstrating that PacifiCorp's 2026-2028 QA/QC process and pass rate targets drive improvement in the quality of its inspections.

Section and Page Number of Any Improvements: Section 8.5. Page 220, Section 8.5.4 Pages 230-231

PacifiCorp Response: PacifiCorp has renewed its current Master Services contract for Inspection Services. In the renewed agreement, PacifiCorp has set the requirements for QA/QC to align with the current maturity and California industry standard of 95%-100%. The QA/QC requirement has been rolled out to the inspection crews for the 2025 Inspections.

PC-25U-07. Priority A/Level 1 Remediation and Imminent Threat Designation

Description: : In response to PC-23B-12, PacifiCorp did not provide a plan to engage a third party to audit all Priority A conditions identified from 2020 to 2023.

Required Progress: Required Progress: In its 2026-2028 Base WMP, PacifiCorp must:

- Provide a plan and timeline for a third-party audit, including milestones on all Priority A conditions identified in the HFTD from 2020 to 2023. For each condition, the audit must evaluate:
- If the condition should have been classified as an imminent threat.
- If the initially assigned remediation timeframe was appropriate given the condition.
- If the actual remediation timeframe was appropriate given the condition.

Section and Page Number of Any Improvements: Appendix D Pages 505-506

PacifiCorp Response: PacifiCorp acknowledges the requirement to provide a comprehensive plan and timeline for a third-party audit of all Priority A conditions identified from 2020 through 2023 in the HFTD. PacifiCorp is committed to completing this audit by December 2025, and provides the following plan and milestones to ensure full compliance:

1. Scope of the Audit

- The third-party audit will include a full review of all Priority A conditions identified in the HFTD from 2020 to 2023. For each condition, the audit will assess:
- Whether the condition should have been classified as an imminent threat;
- Whether the originally assigned remediation timeframe was appropriate given the nature of the condition;

- Whether the actual remediation timeframe was appropriate given the nature and severity of the condition.

2. Auditor Engagement and Selection Timeline

- May 2025: Finalize Request for Proposals (RFP) for qualified independent consultants.
- June 2025: Issue RFP and begin bid review process.
- July 2025: Select and contract with third-party auditor.

3. Audit Execution Timeline

- August 2025: Auditor begins data collection and validation, including review of inspection records and applicable photographs for all Priority A conditions.
- September–October 2025: Auditor conducts evaluation and cross-verification of:
- Threat classification validity;
- Appropriateness of assigned remediation timelines;
- Timeliness of actual remediation activities.
- November 2025: Draft audit findings delivered to PacifiCorp for internal review and verification.
- December 2025: Final audit report completed and submitted, including detailed findings, any identified deficiencies, and recommendations for process improvement.

Target Completion: December 2025

PC-25U-08 Asset Management and Enterprise Systems

Description: In response to PC-23B-14, PacifiCorp did not discuss how it would migrate data from its legacy mainframe to its new enterprise asset management software suite, nor how it would update the software suite to reflect hardening or repair work.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must demonstrate its ability to migrate its asset inventory, inspection, and maintenance data from its legacy mainframe to its new enterprise asset management software suite. PacifiCorp must discuss:

- Its process to migrate data across systems.
    - Its process to maintain data integrity.
    - Its quality control to confirm migration is complete and accurate.
- Its process to update the new enterprise asset management system to reflect assets that have changed due to hardening or repair work.

Section and Page Number of Any Improvements: Section 12.2 Page 428.

PacifiCorp Response: PacifiCorp retained a systems integrator to assist PacifiCorp with its systems implementations, including the migration from the legacy mainframe to the new enterprise asset management software suite. This systems integrator assisted PacifiCorp's previous systems implementation in 2022 for substation asset management systems.

In addition to retaining the systems integrator, PacifiCorp utilizes industry best practices to maintain data integrity in preparation for systems implementations, including iterative practice data loads, iterative functionality testing and other industry standard practices to ensure quality results. PacifiCorp uses a robust, standardized process after implementation to ensure data quality and integrity, including a support function to correct any potential issues that may arise.

PacifiCorp has robust asset management processes to create and update asset information in the asset management system of record to reflect work done in the field, including updates from hardening or repair work.

PC-25U-09. Continued Monitoring of Enhanced Fire Risk (EFR) Settings

Description: In response to PC-23B-15, PacifiCorp stated that it does not currently have a quantitative assessment on the effectiveness or impact of its EFR settings.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide:

The following 2024 data when EFR settings were enabled:

- Number of outages.
- Duration of outages.
- Frequency of outages per circuit.
- Number of customers impacted.
- Response time for outages.

The most recent annual evaluation of circuits utilizing EFR settings including an evaluation of the impact on reliability, and a description of any short-term mitigation projects identified from the evaluation.

A quantitative assessment of the effectiveness and fire risk reduction due to PacifiCorp's implementation of EFR settings, which considers the number, duration, and frequency of outages; the number of customers impacted; the response time for outages; the number of EFR enabled devices; weather conditions; and other environmental factors.

A description of how PacifiCorp has implemented best practices from peer IOUs including relay thresholds and settings used by the IOUs to increase reliability while reducing fire risk.

Section and Page Number of Any Improvements: Section 8.7.1, Pages 246-248, 249-250

PacifiCorp Response: At the end of 2024, the company performed an annual evaluation of circuits utilizing ESS settings which included an evaluation of impact on reliability. The evaluation included the data as identified for required progress for the 2026-2028 WMP and has been included in Section 8.7.1.

From the evaluation results, the company identified circuits that were the worst performing. Circuits that were not included in the company's Wildfire Circuit Hardening Program were prioritized for short term mitigation projects to improve reliability performance while reducing wildfire risk. As mentioned in Section 8.7.1, an example of these projects includes implementing EFR settings, upgrading cutouts, fuses, crossarms, and insulators on circuits that experienced ESS outages in 2024. The company does not have a quantitative assessment of the effectiveness and fire risk reduction due to PacifiCorp's implementation of ESS settings for the 2026-2028 WMP. However, the company is in process of developing a plan and working with internal subject matter experts as well as collaborating with peer IOUs to determine the data requirements necessary and methodology to perform this assessment.

Vegetation Management and Inspections

PC-23B-16. Vegetation Management Priority Tagging

Description: While PacifiCorp sequences its inspections based on risk-related criteria (HFTD tier, last scheduled work, predominant species, etc.), its Red Dot priority tagging system does not adequately communicate varying degrees of priority of work identified during inspections.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide:

- Risk-based criteria for determining and assigning priority to work locations, including remediation timelines for each priority level. GO 95, Rule 18(A)(2), and Liberty's "Work Priority Levels" should serve as examples.
- A plan to operationalize risk-based criteria that includes specific, measurable, relevant, and timebound milestones.

Section and Page Number of Any Improvements: Section 9.2.1.6 Page 273. Section 12.2 Page 436

PacifiCorp Response: To address PC-23B-16 PacifiCorp will develop work prioritization to incorporate within its MDMS applicable to specific work activities. This initiative, "Develop work prioritization to incorporate within Mobile Data Management System (MDMS)" is in Table 12-1.

Targeted Completion: 2027

Emergency Preparedness

PC-25U-10. Emergency Resources for Responding to Faults and Ignitions

Description: In response to PC-23B-18, PacifiCorp stated that it does not use its emergency resources for wildfire response. As such, PacifiCorp did not provide an analysis of its response times in relation to its emergency resources, nor did PacifiCorp provide an evaluation of the deployment and storage of its emergency resources within California.

However, PacifiCorp acknowledged that it invests in and stages fire suppression tools and equipment for use throughout its California service territory for proactive and preventative wildfire risk mitigation. While PacifiCorp does not evaluate its resources for wildfire response, it should evaluate its resources for fault and ignition response.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide:

- An analysis of its prevention and suppression resources throughout its California service territory. This analysis must demonstrate the adequacy of its resources for preventing and responding to faults and suppressing ignitions associated with its assets.
- This analysis must cite to and provide PacifiCorp's internal prevention and suppression written procedure for its field personnel. A table (similar to Table 7.4 "List of firefighting equipment and locations" from PacifiCorp's 2022 WMP Update) that lists the fire prevention, suppression, and/or firefighting equipment it has available for use in its California service territory for fault and ignition response. This table must provide equipment description and location information.

Section and Page Number of Any Improvements: Section 8.7.3. Pages 255-256

PacifiCorp Response: PacifiCorp follows CPUC 4427 and 4428 rules regarding work practices and required equipment to carry "between April 1 and December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion permitting the spread of fire, without providing and maintaining, for firefighting purposes only, suitable and serviceable tools in the amounts, manner and location prescribed in this section." The Company also follows local United States Forest Service (USFS) work practice requirements as outlined in their Industrial Fire Precaution Levels. These are issued as forest orders and change depending on the time of year and the forest. Table PAC 8-3 shows the equipment carried or available and Figure PAC 8-4 shows the locations of the water trailers that can be deployed.

By the end of 2028, PacifiCorp will discuss with other utilities their approach to fire prevention and suppression equipment to assess the Company's adequacy of resources when responding to faults or suppressing ignitions associated with its assets in the rare case when there is an ignition near a location they are working. PacifiCorp will speak with utilities with similar service territory characteristics (ex: size, terrain and number of customers) to perform the comparison.

PC-23B-20. Lessons Learned from Past Wildfires

Description: In response to a 2022 area for continued improvement (PC-22-06), PacifiCorp states that it is planning to implement fire incident tracking and expects to perform trend and root cause analysis for ignitions by the end of 2024. Given this timeline, PacifiCorp has not yet investigated the causes of its ignitions or PacifiCorp-reported wildfires and does not provide any associated lessons learned within its WMP.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must provide an update on its fire incident tracking database as it relates to PacifiCorp's analysis of the root causes of its ignitions and PacifiCorp-reported catastrophic wildfires as well as associated lessons learned. This update must provide information on and a response to all required progress listed in Energy Safety's 2022 area for continued improvement PC-22-06.

Section and Page Number of Any Improvements: Section 8.4, Pages 214-217

PacifiCorp Response: At the end of 2024, the company implemented its fire incident tracking database. This database includes fire incidents which potentially involve or are near PacifiCorp facilities. Generally, the Company becomes aware of fire incidents through monitoring of fire activity by the Company's emergency management personnel; in addition, the Company may become aware of a fire incident as the result of the Company's normal operations response to a power outage. Once a fire incident is reported, a fire incident report is created and tracked in the Company's fire incident database.

Generally, the investigation for the fire incident report includes gathering details from internal first responder to provide information for the Company's fire incident report. If it is found that a protective relay device operated at the time of the incident and the incident is a CPUC reportable incident, the Company performs an engineering investigation to verify protective relay device operation. The engineering investigation may include additional details regarding the event, including sequence of events and interpretation of relay event data (if available). As appropriate, the engineering investigation may also provide recommendations for corrective actions. If a corrective action is recommended, details regarding the action, assignment, and priority is provided and tracked in the Company's investigation portal. Once a corrective action is assigned, there is internal coordination for completion. Additionally, as a result of the investigation, there may be updates to Company material or construction standards, asset management policies and procedures, or no additional action if it was determined the equipment was performed as expected.

Non-reportable fire incidents are also captured in the company's fire incident database through the same process as reportable incidents. Currently, the company is working with internal subject matter experts to determine scope and develop processes to capture the necessary data for these incidents to inform future potential trends and root cause analysis.

Since the fire incident database was implemented in 2024, the company has not performed trending analysis for fire incidents due to insufficient data. The company plans to do this analysis when there is sufficient data available. For root cause analysis, the company has completed engineering investigations that have found certain conditions or equipment that may be more susceptible to energy release that could lead to an ignition event. For example, an incident that occurred last year involved an arrester failure that was an expulsion type arrester that emitted sparks when it operated. Replacing the expulsion type arrester with non-expulsion arrester could have prevented failure and would not have emitted sparks due to being non-expulsion.

Maturity Survey Responses

PC-25U-11. Actions Resulting from Reduced Projected Maturity

Description: PacifiCorp's response to the 2024 Maturity Survey showed lower projected maturity in numerous sub-capabilities for 2025 and 2026 compared to its response to the same survey in 2023.

Required Progress: In its 2026-2028 Base WMP, PacifiCorp must describe the actions it has implemented and the actions it plans to implement to ensure that its wildfire risk mitigation capabilities continue to mature throughout the 2026-2028 WMP cycle, based on lessons learned from the lower projected maturity in its 2024 Maturity Survey response.

Section and Page Number of Any Improvements: Appendix D. Pages 524-529

PacifiCorp Response: PacifiCorp recognizes that the maturity survey is a useful tool to help understand where the Company is at and where there is opportunity to progress in wildfire mitigation.

In the 2024 and 2025 surveys, PacifiCorp was consistent in its response approach. Timing and progression in maturity or capability must be supported by an activity or initiative with an approved plan and PacifiCorp can demonstrate that the progression has been achieved.

In developing the initiatives and activities for the 2026-2028 WMP filing, PacifiCorp used the 2024 and 2025 maturity surveys to identify where the company expected to progress and confirm that there are initiatives to support the maturation. Below in Table D- 1 are the 2025 Maturity Survey capabilities, categories, and sub-capabilities,[25] and, as appropriate, references in the WMP to where

25 TN15344-1_20250210T140712_Draft_WMP_Guidelines__Package_2_Maturity_Model_and_Survey_Guidelines. Pages 8-12.

PacifiCorp has an initiative or activity to mature in this area or has implemented the change to prove maturity.

Table D- 1: 2025 Maturity Survey Capabilities, Categories, and Sub-Capabilities Mapped to 2026-2028 WMP Initiatives

Category A: Risk Assessment and Mitigation Strategy						
	I.	II.	III.	IV.	V.	VI.
Capability	1. Statistical weather, climate, and wildfire modeling	2. Calculation of wildfire and PSPS hazard and exposure to societal values	3. Calculation of community vulnerability to wildfire and PSPS	4. Calculation of risk and risk components	5. Risk event tracking and integration of lessons learned	6. Risk-informed wildfire mitigation strategy
Sub capability	**Initiative or Activity**					
Automation		PC-25U-02: PSPS model will be onboarded by EOY 2025				
Climate change	Table 5-6: Implement a climate change planning model component		PC-25U-02: PSPS model will be onboarded by EOY 2025			
Comprehensiveness		PC-25U-02: PSPS model will be onboarded by EOY 2025				Table 5-6: Monetization of risk events for use in RSE calculations
Frequency & risk buy-down						Table 5-6: Monetization of risk events for use in RSE calculations
IT infrastructure and database management			Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions			
Modularization				Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions		
Quality assurance and quality control (QA/QC) and subject matter expert (SME) verification			PC-25U-02: PSPS model will be onboarded by EOY 2025			

Stability of assumptions	Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions			Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions		Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions
Transparency				Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions		
Validation		Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions				Table 5-6: -Create reproducible model development environment using Python, Azure Dev Ops (ADO), and Azure Cloud resources. -Implement a standardized model taxonomy to track release versions
Category B: Situational Awareness and Forecasting						
Capability	**I.**	**II.**	**III.**	**IV.**	**V.**	**VI.**
	7. Ignition likelihood estimation	**8. Weather forecasting ability**	**9. Wildfire spread forecasting**	**10. Data collection for near-real-time conditions**	**11. Wildfire detection and alarm systems**	**12. Centralized monitoring of real-time conditions**
Sub capability	**Initiative or Activity**					
Level of sophistication		Table 10-2: Implement WRF Ensemble Forecasting				
Category C: Grid Design, Inspections, and Maintenance						
Capability	**I.**	**II.**	**III.**	**IV.**	**V.**	**VI.**

	13. Asset inventory and condition database	14. Asset inspections	15. Asset maintenance and repair	16. Grid design and resiliency	17. Asset and grid personnel training and quality	N/A
Sub capability	**Initiative or Activity**					
Learning and improvement			Table 5-2: -Creation of PEDS Risk Model -Monetization of Risk Events for Application in Mitigation Alternatives Analysis -Dynamic Grid Hardening Efficacy Rates -Portfolio Optimization and Grid Hardening Recommendations			
Risk buy-down				Table 5-2: -Creation of PEDS Risk Model -Monetization of Risk Events for Application in Mitigation Alternatives Analysis -Dynamic Grid Hardening Efficacy Rates -Portfolio Optimization and Grid Hardening Recommendations		
Category D: Vegetation Management and Inspections						
	I.	**II.**	**III.**	**IV.**	**V.**	**VI.**
Capability	**18. Vegetation inventory and condition database**	**19. Vegetation inspections**	**20. Vegetation treatment**	**21. Vegetation personnel training and quality**	**22. Best Management Practices for Transmission Rights-of-Ways (ROWs)**	**N/A**
Sub capability	**Initiative or Activity**					
Quality assurance and quality control (QA/QC) and subject matter expert (SME) verification	Table 9-1: Quality Assurance/Quality Control: Create QA/QC process and procedure for reviewing data in the Vegetation Management			Table 9-1: Quality Assurance/Quality Control: Create QA/QC process and procedure for reviewing data in the Vegetation Management		

	database (Quality Reviews)			database (Quality Reviews)		
Spatial granularity		Table 9-1: Implement new vegetation management work management software				
Category G: Community Outreach and Engagement						
Capability	**I.**	**II.**	**III.**	**IV.**	**V.**	**VI.**
	34. Public outreach and education awareness	**35. Public engagement in electrical corporation wildfire mitigation planning process**	**36. Engagement with AFN and socially vulnerable populations**	**37. Collaboration on local wildfire mitigation planning**	**38. Cooperation and best practice sharing with other electrical corporations**	**N/A**
Sub capability	**Initiative or Activity**					
Effectiveness			Table 11-1: Conduct pre-season and post-season customer surveys to assess understanding of messaging and information shared by PacifiCorp and inform adjustments in messaging.			
Spatial granularity			2025: AFN Toolkit Implementation			

Appendix E Statutory Requirements

In this appendix, the electrical corporation must provide in tabulated format a list of referenced codes, regulations, and standards.

Table PAC E-1 presents a list of referenced codes, regulations and standards.

Table PAC E-1: Referenced Regulations, Codes, and Standards

Name of Regulation, Code, or Standard	Brief Description
CA CCR Title 14 Sections 1250-1258	Title 14 (Board of Forestry and Fire Protection Regulations). (14 CCR 1250). The purpose is to provide specific exemptions from: electric pole and tower firebreak clearance standards, electric conductor clearance standards and to specify when and where the standards apply.
CA CPUC 768.6(a)	The commission shall establish standards for disaster and emergency preparedness plans within an existing proceeding, including, but not limited to, use of weather reports to preposition manpower and equipment before anticipated severe weather, methods of improving communications between governmental agencies and the public, and methods of working to control and mitigate an emergency or disaster and its after effects.
CA CPUC 4427	During any time of the year when burning permits are required in an area pursuant to this article, no person shall use or operate any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices from which a spark, fire, or flame may originate, which is located on or near any forest-covered land, brush-covered land, or grass-covered land, without doing both of the following: (a)First clearing away all flammable material, including snags, from the area around such operation for a distance of 10 feet. (b)Maintain one serviceable round point shovel with an overall length of not less than forty-six (46) inches and one backpack pump water-type fire extinguisher fully equipped and ready for use at the immediate area during the operation. This section does not apply to portable power saws and other portable tools powered by a gasoline-fueled internal combustion engine.

Name of Regulation, Code, or Standard	Brief Description
CA CPUC 4428	No person, except any member of an emergency crew or except the driver or owner of any service vehicle owned or operated by or for, or operated under contract with, a publicly or privately owned utility, which is used in the construction, operation, removal, or repair of the property or facilities of such utility when engaged in emergency operations, shall use or operate any vehicle, machine, tool or equipment powered by an internal combustion engine operated on hydrocarbon fuels, in any industrial operation located on or near any forest, brush, or grass-covered land between April 1 and December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion permitting the spread of fire, without providing and maintaining, for firefighting purposes only, suitable and serviceable tools in the amounts, manner and location prescribed in this section. (a)On any such operation a sealed box of tools shall be located, within the operating area, at a point accessible in the event of fire. This fire toolbox shall contain: one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire. (b)One or more serviceable chainsaws of three and one-half or more horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area, or, in the alternative, a full set of timber-felling tools shall be located in the fire toolbox, including one crosscut falling saw six feet in length, one double-bit ax with a 36-inch handle, one sledge hammer or maul with a head weight of six, or more, pounds and handle length of 32 inches, or more, and not less than two falling wedges. (c)Each rail speeder and passenger vehicle, used on such operation shall be equipped with one shovel and one ax, and any other vehicle used on the operation shall be equipped with one shovel. Each tractor used in such operation shall be equipped with one shovel. (d)As used in this section: (1)“Vehicle” means a device by which any person or property may be propelled, moved, or drawn over any land surface, excepting a device moved by human power or used exclusively upon stationary rails or tracks. (2)“Passenger vehicle” means a vehicle which is self-propelled and which is designed for carrying not more than 10 persons including the driver, and which is used or maintained for the transportation of persons, but does not include any motortruck or truck tractor

Name of Regulation, Code, or Standard	Brief Description
CA CPUC 8386(a)	Each electrical corporation shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment.
CA CPUC 8386(c)(7), (11), (16), (19), (20).	Each electrical corporation shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment. Each electrical corporation shall annually prepare and submit a wildfire mitigation plan to the Wildfire Safety Division for review and approval. A description of the electrical corporation's appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. A description of the electrical corporation's protocols for the de-energization of the electrical corporation's transmission infrastructure, for instances when the de-energization may impact customers showing that the electrical corporation has an adequately sized and trained workforce to promptly restore service after a major event. A description of how the plan is consistent with the electrical corporation's disaster and emergency preparedness plan. A statement of how the electrical corporation will restore service after a wildfire.
CA CPUC D. 21-05-019	Electric utilities must develop disaster and emergency preparedness plans and seek local government input so as to improve communication with the public and mitigate the effects of catastrophic events.
CA CPUC R. 15-06-009	Requires, among other things, that water and electric utilities develop disaster and emergency preparedness plans and seek local government input so as to improve communication with the public and mitigate the effects of catastrophic events.
CA GO 165	This General Order applies to all electric distribution and transmission facilities (excluding those facilities contained in a substation) that come within the jurisdiction of this Commission, located outside of buildings, including electric distribution and transmission facilities that belong to non-electric utilities. The requirements of this order are in addition to the requirements imposed upon utilities under General Orders 95 and 128 to maintain a safe and reliable electric system.
CA GO 166	The purpose of these standards is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters to minimize damage and inconvenience to the public which may occur because of electric system failures, major outages, or hazards posed by damage to electric facilities. The standards will facilitate the Commission's investigations into the reasonableness of the utility's response to emergencies and major outages. Such investigations will be conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and Commission policy.

Name of Regulation, Code, or Standard	Brief Description
CA GO 174	"Rules for Electric Utility Substations": The purpose of these rules is to formulate, for the State of California, uniform requirements for substation inspection programs, the application of which will promote the safety of workers and the public and enable adequacy of service. Substations shall be designed, constructed and maintained for their intended use, regard being given to the conditions under which they are to be operated, to promote the safety of workers and the public and enable adequacy of service
CA GO 95 Rule 35	"Clearance Requirements for Overhead Wires". Where overhead conductors traverse trees and vegetation, safety and reliability of service demand that certain vegetation management activities be performed in order to establish necessary and reasonable clearances. These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies.
CA PRC 4291	A person who owns, leases, controls, operates, or maintains a building or structure in the state responsibility area shall at all times maintain defensible space of 100 feet from each side and from the front and rear of a structure, but not beyond the property line and shall maintained and space fuels in a condition so that a wildfire would be unlikely to ignite the structure.
CA PRC 4292	Any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower. This section does not, however, apply to any line which is used exclusively as telephone, telegraph, telephone or telegraph messenger call, fire or alarm line, or other line which is classed as a communication circuit by the Public Utilities Commission. The director or the agency which has primary fire protection responsibility for the protection of such areas may permit exceptions to the requirements of this section which are based upon the specific circumstances involved.

Name of Regulation, Code, or Standard	Brief Description
CA PRC 4293	Except as otherwise provided in Section 4294 to 4296, inclusive, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such areas, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current: (a)For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet. (b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet. (c)For any line which is operating at 110,000 or more volts, 10 feet. In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed to remove such hazard. The director or the agency which has primary responsibility for the fire protection of such areas may permit exceptions to the requirements of this section which are based upon the specific circumstances involved.
National Incident Management System	The National Incident Management System (NIMS) guides all levels of government, nongovernmental organizations and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents. NIMS provides stakeholders across the whole community with the shared vocabulary, systems and processes to successfully deliver the capabilities described in the National Preparedness System. NIMS defines operational systems that guide how personnel work together during incidents.
NERC FAC-003	“Transmission Vegetation Management”. Established to ensure that Transmission Owners have a vegetation management program to prevent transmission line contact with vegetation, and to ensure that certain vegetation-related outages are reported to the appropriate Regional Reliability Organization.

Appendix F PacifiCorp Standards and Policies

The following Table PAC F-1 lists PacifiCorp standards and policies referenced within the 2026-2028 WMP which are attached to this filing:

Table PAC F-1: PacifiCorp Referenced Policies and Standards in the 2026-2028 WMP

Standard or Policy	Section Referenced
Transmission and Distribution System Condition Priorities and Correction Timelines Asset Management Policy No 292	Section 8.5.2
Detailed Inspections for T&D Lines Asset Management Policy 009	Section 8.5
Clearance Table for Distribution and Transmission Line Inspectors NESC and GO 95 Grandfathering Matrix Facility Point Inspection NESC and GO 95 Frequently Asked Questions Condition Code Dropdowns Asset Management Procedure 069	Section 8.3
Visual Assurance Inspections —Safety Patrol of G Transmission and Distribution Lines Asset Management Policy No 011	Section 8.3
Helicopter Standard Operating Procedure for Line Inspections Facility Inspection Procedure No 203	Section 8.3
Wood Pole Test & Treatment Transmission and Distribution Lines Asset Management Policy 013	Section 8.3.3
Substation inspection Asset Management Policy No 034	Section 8.3.4
Policy 001 Maintenance Intervals for Apparatus, Relays, Meters, Line Patrol/Inspections, Wires Equipment and Communications Equipment	Section 8.4
Exhibit M.07 Performance Based Requirements for Pacific Power Detailed Inspections and Detailed Test and Treat Activity	Section 8.5
Operating Transmission and Distribution Assets During periods of Elevated Wildfire Risk Power Delivery Policy PAC-1000	Section 8.7
Operating Bulk Electric System (BES) Transmission Assets During Identified Wildfire Risk System Operations Procedure SOP-200	Section 8.7
Operating Sub-Transmission Assets During Identified Wildfire Risk System Operations Procedure SOP-201	Section 8.7
Operating Distribution Assets During Identified Wildfire Risk System Operations Procedure, SOP-202	Section 8.7
Example of a Daily Work Evaluation Summary Record	Section 8.7.3
PacifiCorp's Transmission & Distribution Vegetation Management Program Standard Operating Procedures (SOP), Revision 8, dated 8/29/2024	Section 9
Substation Manager Audits Procedures	Section 9.6
Transmission Grid Operations Operating Procedure PCC-215 Guidelines for Communication of Vegetation Conditions that Present an Imminent Threat of Transmission Line Outage	Section 9.2

Wildfire Encroachment System Operations Procedure SOP-203	Section 11
PSPS Execution Playbook	Section 11
Annex 01: 2025 Public Safety Power Shutoff Community Resource Center Playbook	Section 11
Emergency Response Plan (ERP), Sixth edition, dated April 23, 2025	Section 11
R1812005 PacifiCorp Annual AFN Plan 2025 1-31-25	Section 11

Appendix G Other Supporting Documents

Table PAC G-1 lists supporting documents PacifiCorp references in the 2026-2028 WMP, where appropriate the documents are included as an attachment to filing or as links to the organization website that has the full set of standards.

Table PAC G-1: Other Supporting Documents Referenced in the 2026-2028 WMP

Document	Section Reference
Wildfire Mapping Refresh & Benchmark	Section 5.6
ANSI A300 Tree Care Standards - Tree Care Industry Association, LLC.	Section 9
International Society of Arboriculture	Section 9.3
Marking Guidelines for Fire-Injured Trees in California	Section 9.10

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