WILDFIRE MITIGATION PLAN

OCTOBER 31, 2024

PUGET SOUND ENERGY

ACKNOWLEDGEMENTS

This plan is the result of the work of numerous staff at PSE whose contributions are briefly described and acknowledged below. It also incorporates the feedback, research, and best practices of industry organizations, peer utilities, fire and emergency response partners, and the communities we serve. While it is impossible to mention everyone here by name, this plan would not be possible without their contributions.

WRITING THE PLAN

The plan was primarily written by the Wildfire Risk Management Program team. Michelle Boll (Sr. Program Manager, Wildfire Risk Management) managed the plan development process in addition to writing portions of the plan. Primary authors of the plan include Jenna Rahm (Communications, Wildfire Risk Management), Victoria Eder (Engineer, Wildfire Risk Management), and Stephanie Kreshel (Manager, Wildfire Program Management).

SUBJECT MATTER EXPERTS

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REVIEW OF THE PLAN

Senior leaders served as advisors, reviewers, and editors of this plan throughout its development, including Gretchen Aliabadi (Director, Customer Engagement), Roque Bamba (Director, Project Delivery), David Bayard (Manager, Wildfire Risk Management), Jennifer Boyer(Director of Engineering and GIS), Kendall Cammermeyer (Chief Ethics and Compliance Officer, Assistant General Counsel), Nathen Davern (Manager, Government Affairs and Public Policy), Christina Donegan (Director, Communications), Susan Free (Director, Revenue Requirements and Regulation Compliance, State Regulatory Affairs), Wendy Gerlitz (Director, Regulatory Policy), Jaie Jones (Manager, Electric Meter Operations), Erik McCoy (Supervisor, Operational Training), Ryan Murphy (Director, Electric Operations), Troy Nutter (Manager, Operational Training), Tony Pagano (Manager, Project Management), Diane Perry (Director, IT Application Services), Cara Peterman (Director, Chief Risk Officer and Corporate Treasurer), Jon Piliaris (VP, Regulatory Affairs), David Sanders (Director, Safety, Prevention, Emergency Management, training, and Operation Solutions), Steve Schmidt (Manager, Load Office), Reid Shibata (Manager of Grid Modernization and Strategy Enablement), (Kyle Stewart (Director, Enterprise Risk Management) and Michelle Vargo (Sr. Vice President, Energy Operations).

FINALIZATION AND LAYOUT

Thank you to Shelby Naten (Major Projects Communications) and Colleen Roberts (Legal) for providing a final review of the plan, and to Nathen Graey (Brand and Marketing) for designing the final document.

SPECIAL THANKS

We want to extend our gratitude to those external partners who reviewed and provided their feedback on this plan as well.

1.0 EXECUTIVE SUMMARY

As Washington state's largest utility, Puget Sound Energy (PSE) is taking a comprehensive approach to mitigating the risk of utility-related wildfires and working to ensure safety while balancing the reliable delivery of energy to our communities. PSE's Wildfire Mitigation Plan (WMP) outlines our strategies, programs, procedures, and partnerships to mitigate the potential for ignition from PSE's electric system, respond to fires in our service area, and increase wildfire resiliency in our operations and in the communities we serve.

Organized under four Core Elements, the objectives of the WMP are as follows:

SITUATIONAL AWARENESS	**To understand** the real-time and long-term wildfire risk in PSE's service area through development and maturity of the appropriate assessment tools.
GRID HARDENING	**To leverage** grid hardening and modernization programs to reduce utility-related ignitions and improve wildfire resiliency. **To embed** equity into the planning and execution of wildfire mitigation strategies.
OPERATIONAL PROCEDURES	**To uphold** the safety of PSE's communities and employees as a core operating principle. **To implement** mitigation solutions that balance the risk of wildfire with the safe and reliable delivery of energy by prioritizing higher risk assets and geographic areas.
COMMUNICATIONS AND OUTREACH	**To engage** with customers and communities in the ongoing development of the WMP and acquire and incorporate feedback, particularly as it relates to customer safety and electric reliability. **To inform** customers of PSE's wildfire preparedness and risk reduction measures, where to find information and how to prepare for a Public Safety Power Shutoff (PSPS), and available resources and community support. **To collaborate** with fire agencies and emergency response partners to develop operational and communications processes that promote the safety of PSE employees and the public during an emergency. **To continuously** improve the WMP by advancing our knowledge, incorporating best practices, and learning from others.

The WMP describes the organization, roles and responsibilities of PSE's senior leadership, Wildfire Program team, and Incident Management Team. It also details how we coordinate with emergency response partners, Tribal entities, and critical infrastructure customers on our risk reduction strategies and emergency response activities.

Included in this plan are descriptions of PSE's risk model and situational awareness tools, which help us understand the environment around our infrastructure and other factors that can impact wildfire risk. This allows us to focus our efforts and resources on grid hardening projects and additional mitigation tools, modeling, and operational procedures to reduce risk.

The document outlines our prevention strategies and planned updates in the following areas:

- Weather monitoring
- Design and construction standards
- Fuel and vegetation management
- Asset inspection and risk mitigation
- Workforce training
- Relay and recloser practices
- De-energization / Public Safety Power Shutoff (PSPS)

For the last three years, we have been actively engaging with customers and communities to share information about PSE's wildfire risk mitigation and response plans, and how they can prepare for wildfire season. Through various outreach and public awareness campaigns, PSE has solicited and incorporated feedback from customers and partners to inform our planning efforts, and this will continue in future years as the WPM matures.

In the event of an outage, including a Public Safety Power Shutoff (PSPS), PSE has plans in place to reestablish power safely and efficiently with our customers in mind. During a PSPS, early mobilization of highly trained field personnel allows for rapid inspection and system repairs once the weather "all clear" is given. Our comprehensive Energy System Restoration Plan (ESRP) lays the groundwork to prioritize areas of restoration including those that serve critical infrastructure and Medical Life Support customers.

Finally, this document outlines PSE's process for evaluating our strategies, identifying areas for continued improvement, and updating our Wildfire Mitigation Plan, including performance metrics, best practices, and lessons learned.

For more information about PSE's Wildfire Mitigation and Response Program, visit pse.com/wildfire.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

2.0 WILDFIRE MITIGATION PLAN OVERVIEW

2.1 PURPOSE OF THE WILDFIRE MITIGATION PLAN

PSE's Wildfire Mitigation Plan (WMP) documents our strategies, programs, procedures, and specific actions to respond to and mitigate the potential of ignition from energized equipment. The WMP incorporates best practice models from risk management, operations, emergency management, communications, training, and continuous improvement. The ultimate priority is the safety of our employees and the communities and customers that PSE serves.

This plan complies with the requirements of HB1032 for investor-owned electric utilities (IOU) to prepare a wildfire mitigation plan by October 31, 2024. WMP will be updated at least every 3 years as required by HB1032. Additionally, PSE plans to review this plan internally each year.

2.2 DESCRIPTION OF WHERE WMP CAN BE FOUND ONLINE

> *Provide a description of how the public and other reviewers can find WMP information online, if available. It is recommended that utilities host their WMP on the utility website in a location that is relatively easy to find and prioritizes the most current and up to date WMP.*

PSE's Wildfire Mitigation Plan can be found and downloaded from our webpage: pse.com/wildfireplan

2.3 BEST PRACTICES CROSS-REFERENCE TABLE

> *Provide any industry standard or other best practices[1] referenced within the WMP including what section and page number in the form of hyperlinks. Standards that do not have a specific reference within the text but apply to the entirely of the plan can be listed without additional information. If no industry-wide standards or practices are utilized, this table may be left blank.*

Table 1. Best practices cross-reference table

STANDARD OR BEST PRACTICE DESCRIPTION	DOCUMENT, PAGE NUMBER, OR CITATION
Situational Awareness General situational awareness tools: PSE's situational awareness tools development is the result of understanding industry best practices and lessons learned, harnessed through peer-utility benchmarking.	Section 4.1.1, pg. 11
Situational Awareness Risk Modeling: To mature our risk modeling capabilities, PSE consulted several fire-risk model experts as well as peer utilities to learn about their risk models and best practices in the industry. As a result of this research, PSE implemented the FireRisk Model described in Section 6.0.	Section 6.2.2, pg. 28
Grid Hardening PSE continues to participate in industry working groups and one-on-one collaboration with peer utilities to inform and advance our grid hardening strategies as they apply to PSE's system. These information exchanges coupled with ongoing risk modeling will continue to inform our future investments in grid hardening.	Section 4.1.2, pg. 12

1 Standards may include guidance from FEMA, US Forest Service, NERC regulations, NST, OSHA guidelines, etc.

STANDARD OR BEST PRACTICE DESCRIPTION	DOCUMENT, PAGE NUMBER, OR CITATION
Operational Procedures Enhanced Powerline Settings (EPS): PSE has expanded our use of EPS based on benchmarking other utilities' use of this tool. Benchmarking identified significant reductions in ignitions by peer utilities when implementing EPS.	Section 7.6, pg. 38
Operational Procedures Public Safety Power Shutoff (PSPS) procedure: PSE benchmarked with several utilities via one-on-one sessions and through industry working groups, in developing our PSPS procedure.	Section 4.2.2, pg. 13
Operational Procedures National Incident Management System ("NIMS"), a consistent, nationwide framework and approach that enables government at all levels (federal, state, local, Tribal), the private sector and non-governmental organizations to work together to prepare for, respond to, and recover from the effects of incidents, regardless of cause, size, or complexity.	Section 5.0, pg. 18 Section 9.0, pg. 46 Citation: National Incident Management System
Communications and outreach Web Content Accessibility Guidelines 2.0 Checklist that helps web developers identify potential accessibility issues affecting their websites or applications, such as features that may inhibit the use of screen readers.	Section 8.0, pg. 42 Section 10.0, pg. 49 Citation: 18F.gov
Communications and outreach Standards, core values and best practices of the International Association for Public Participation (IAP2) for effective participation and engagement of impacted persons.	Section 8.0, pg. 42 Section 10.0, pg. 49 Citation: IAP2 webpage
Industry best practices Best Practice Partnerships: PSE has worked closely with industry working groups, such as Edison Electric Institute (EEI), to exchange best practices and co-develop our wildfire mitigation strategies, identify emerging technologies and share lessons learned. Much of this industry knowledge has been compiled by EPRI and can be reviewed in their Wildfire Risk Reduction database.	Section 4.3.3, pg. 17 Citation: EPRI Wildfire Risk Reduction database

3.0 UTILITY OVERVIEW

> *In the following sections, provide an overview of the utility, its service area, and general description of the purpose of the Wildfire Mitigation Plan (WMP).*

PSE owns, operates, and maintains 21,545 miles of electric distribution and 2,590 miles of electric transmission systems in the state of Washington. In total, our service territory spans approximately 6,000 square miles, primarily in western Washington, but also includes portions of central and eastern Washington.

3.1 DISTRIBUTION SYSTEM OVERVIEW

PSE's distribution system is comprised of both overhead and underground infrastructure. Forty-one percent (9,778 circuit miles) of distribution infrastructure has overhead lines, and 10 percent (998 circuit miles) of that overhead system uses "covered conductor". PSE's distribution infrastructure east of the Cascade Mountains, where wildfire risk is historically higher according to the risk models described in Section 6.0, accounts for 4 percent of the total system (987 circuit miles), and 53 percent of that eastern portion is underground. Across the distribution system, there are nearly 350,000 poles.

3.2 TRANSMISSION SYSTEM OVERVIEW

PSE's transmission system is comprised primarily of overhead infrastructure. Less than 4 circuit miles of the transmission system is underground, and this underground mileage is located on the west side of the Cascade Mountains. Across PSE's system, there are 34,862 transmission structures (some structures including more than one pole), and 90 percent are made of wood. PSE's transmission system includes multiple lines that cross the Cascade Mountains. While portions border highways and access roads, many miles of these lines are in very remote locations and run through state and national forests, watersheds, Tribal lands, and private property.

3.3 CONTEXT-SETTING INFORMATION

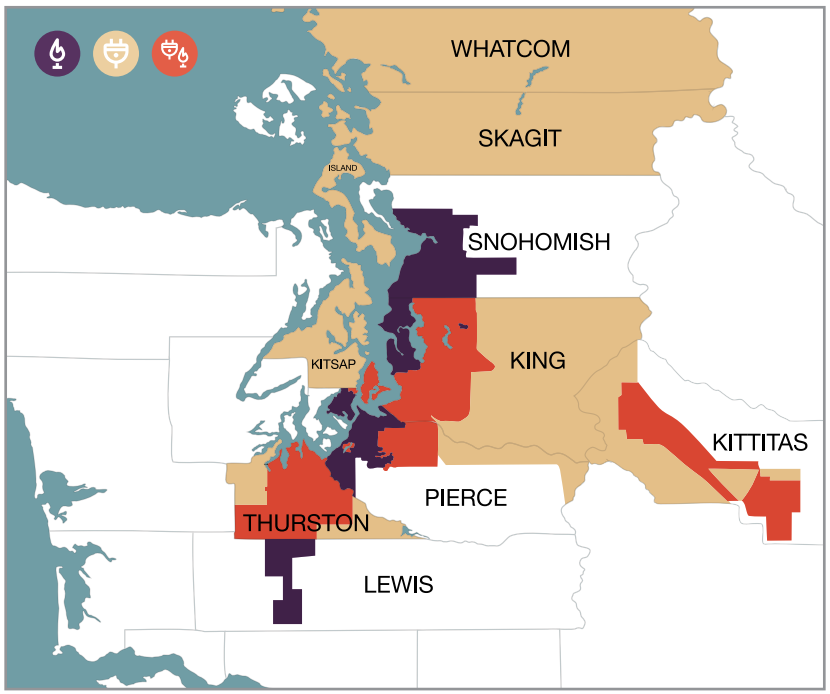
Table 2 provides more context for PSE's service area. Values are rounded to the nearest whole number. When applicable, specific data sources are cited.

Table 2. Context-setting information

UTILITY NAME	PUGET SOUND ENERGY
Service territory size (sq miles) Value based off Right to Serve	9,874 square miles
Service territory make-up Sourced from USGS National Land Cover 2021	26%, Evergreen Forest 13%, Open Water 10%, Mixed Forest 10%, Hay/Pasture 8%, Developed, Low Intensity 6%, Developed, Open Space 5%, Developed, Medium Intensity 5%, Shrub/Scrub 3%, Deciduous Forest 3%, Cultivated Crops 3%, Woody Wetlands 3%, Herbaceous 2%, Emergent Herbaceous Wetland 2%, Developed, High Intensity 1%, Unclassified <1%, Perennial Ice/Snow

UTILITY NAME	PUGET SOUND ENERGY
Service territory Wildland Urban Interface (based on total area) Service territory shown in Figure 1.	6% Wildland Urban Interface 33% Wildland Urban Intermix 61% No classification
Customers served	1,247,156 customers
Account demographic *[Note: Please provide as a percent of total customers served]* Account demographics are based on meter counts by classification. PSE does not have a meter classification for Agricultural.	88% Residential 12% Commercial/Industrial
Utility equipment make-up (circuit miles) *[Note: Please provide brief description of how line miles are measured or calculated]* TSG (Transmission System Geographic) dataset used to determine transmission system mileage. Distribution is medium voltage only. They are GIS distances and are tabulated within ESRI ArcGIS Pro software, the industry standard.	**Overhead distribution** (12.47kV to 34.5kV) 9,778 circuit miles **Overhead transmission** (55kV to 230kv) 2,590 circuit miles **Underground distribution** (12.47kV to 34.5kV) 14,267 circuit miles **Underground transmission** (115kv-230kv) <4 circuit miles
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks? A summary of PSE's Critical Fire Weather Operational Procedures, including our Public Safety Power Shutoff plan, is included in Section 4.2.2.	Yes ☒ No ☐
Has previously pre-emptively shut off electricity in response to elevated wildfire risk? Appendix A.3 includes detailed metrics.	Yes ☐ No ☒

Figure 1. PSE's service area



4.0 OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

> *In this section, please state the objectives of the mitigation plan and how each objective supports a response and recovery system that is focused on public safety.*
>
> *For any section where a program overlaps two or more elements of the plan, it is acceptable to select the most applicable element to describe the program and reference that section where applicable for other areas. It is not necessary to repeat the program description multiple times.*

PSE's Wildfire Mitigation Plan (WMP) focuses on four themes or "Core Elements" which are comprised of specific investments, strategies, and tactics detailed in Section 4.1 and throughout this plan:

1. Situational awareness
2. Grid hardening
3. Operational procedures
4. Communications and outreach

Each of the Core Elements include associated WMP objectives:

SITUATIONAL AWARENESS	**To understand** the real-time and long-term wildfire risk in PSE's service area through development and maturity of the appropriate assessment tools.
GRID HARDENING	**To leverage** grid hardening and modernization programs to reduce utility-related ignitions and improve wildfire resiliency. **To embed** equity into the planning and execution of wildfire mitigation strategies.
OPERATIONAL PROCEDURES	**To uphold** the safety of PSE's communities and employees as a core operating principle. **To implement** mitigation solutions that balance the risk of wildfire with the safe and reliable delivery of energy by prioritizing higher risk assets and geographic areas.
COMMUNICATIONS AND OUTREACH	**To engage** with customers and communities in the ongoing development of the WMP and acquire and incorporate feedback, particularly as it relates to customer safety and electric reliability. **To inform** customers of PSE's wildfire preparedness and risk reduction measures, where to find information and how to prepare for a Public Safety Power Shutoff (PSPS), and available resources and community support. **To collaborate** with fire agencies and emergency response partners to develop operational and communications processes that promote the safety of PSE employees and the public during an emergency. **To continuously** improve the WMP by advancing our knowledge, incorporating best practices, and learning from others.

4.1 CORE ELEMENTS OF THE WMP

The Core Elements of PSE's WMP are comprised of the following activities and actions which support achievement of the associated objectives.

4.1.1 SITUATIONAL AWARENESS

Situational awareness tools enable our system planners and grid operators to proactively identify emerging risks, monitor real-time conditions and target our investments in future mitigation efforts.

PSE's tools that inform situational awareness are listed below and detailed throughout this plan:

- **Risk models**: PSE's risk models consider dynamic factors in combination to identify areas of highest risk in our service territory, which informs real-time operational decision-making as well as investment strategies in situational awareness tools and grid hardening projects. (Section 6.2.2).
- **Weather monitoring**: PSE's meteorologist monitors publicly available wind and weather forecasts and models and data from PSE weather stations to provide daily weather outlooks and interpret fire weather conditions (Section 7.1).
- **A.I. smoke detecting cameras**: PSE has partnered with Pano cameras to install artificial intelligence (A.I.) cameras to monitor remote areas of our system and detect smoke much earlier than other detection methods. These alerts are shared with fire response agencies enabling faster response times which may greatly reduce a fire's severity (Section 5.4.4).

4.1.2 GRID HARDENING

PSE invests in projects and develops best practices to reduce the risk of ignitions from electric equipment, prevent service disruptions, and improve the resilience of our grid. This includes developing and implementing design and construction standards to reduce wildfire risk and when extending or upgrading the existing grid in areas with higher wildfire risk.

PSE's planning framework identifies potential risks and proposes solutions through grid hardening projects. These solutions are evaluated and prioritized using PSE's risk models (Section 6.2.2) and the investment optimization tool (iDOT). PSE also uses iDOT and input from our Equity Advisory Group to evaluate equity considerations when prioritizing and siting grid hardening projects.

Grid hardening efforts fall into one of two categories, fault reduction or fault protection. A fault is the abnormal flow of electric current, such a disruption caused by a tree limb falling on a line. Faults can result in damage to our infrastructure that could cause an ignition. Fault reduction projects reduce the likelihood that a fault will occur, and fault protection projects reduce the likelihood that a fault will have enough energy to result in an ignition.

The types of projects in these categories include:

- **Fault reduction**: Programs or projects that decrease the number of faults occurring on the system, including enhanced vegetation management (Section 7.3), pre-high wildfire risk season asset inspections and repair of high-risk powerlines (Section 7.4), and overhead and underground upgrades (Section 4.3.1).
- **Fault protection**: Fault protection investments are intended to prevent utility equipment from igniting dry grass or vegetation during fire weather conditions. Projects in this category use protection, controls, and automation to reduce the risk of utility-related ignitions by reducing the duration and extent of fault energy during a failure occurrence, including the benefits of providing greater sectionalization capability, SCADA control, and visibility for operators (Section 4.3.1).

4.1.3 OPERATIONAL PROCEDURES

Operational procedures and best practices allow grid operators to identify emerging risks associated with critical wildfire weather, take proactive actions to reduce the risk of ignition on the electric system, respond to active wildfires in our service territory, and restore electric service as safely and quickly as possible. These procedures include:

- **Critical Fire Weather Operational Procedures:** These procedures provide proactive and real-time guidelines for monitoring and operating our electric system during critical wildfire weather conditions. More details on PSE's Critical Fire Weather Operational Procedures are found throughout this WMP and a high-level summary of the procedures are included in Section 4.2.2.
- **Emergency response procedures:** System operators communicate and coordinate with emergency response partners to respond to emergencies in our service area, including active wildfires. Emergency response best practices and coordination details are included in Section 5.4.
- **Energy System Restoration Plan:** PSE has a service restoration plan, which is described in Section 9.0.

4.1.4 COMMUNICATION AND OUTREACH

PSE's Wildfire Program is built on the principles of partnership and collaboration with those communities, response agencies and organizations impacted by our wildfire risk mitigation activities and protocols. PSE keeps customers and communities informed about and engaged in our Wildfire Program through education, equitable public involvement, community partnership building, and timely and accessible communications. Detailed descriptions of our communication and outreach activities to date, notification processes for PSPS, and plans for future engagement including partnering with emergency management and community organizations are included in Section 5.0 and Section 8.0 of this report. Examples include:

- **Partnership building:** PSE maintains longstanding relationships with emergency response partners, Tribal nations, local governments, and organizations who serve the communities in our service area and vulnerable populations. We coordinate with these partners year-round to share PSE's Wildfire Mitigation Plan, develop communication channels for emergencies, understand unique community impacts, and identify gaps in community resources. This outreach and collaboration efforts are detailed in Section 5.2, Section 5.3, and Section 5.4.
- **Wildfire Program community education and outreach:** PSE is committed to ongoing engagement with affected communities to inform and educate them about the different aspects of the wildfire program. The purpose of this outreach is to build lasting relationships in the communities we serve by listening to and understanding their concerns, anticipating, and engaging potential impacts, providing education, and integrating feedback into relevant strategies, including communication strategies. This engagement is achieved through various methods, including in-person and virtual town hall events, printed materials, digital content delivery, and websites. See detailed examples of our education and outreach campaigns in Section 8.1.1.
- **PSPS notifications and updates:** PSE recognizes the potential impacts of PSPS on our customers, and the importance of ensuring that our partners and communities understand what a PSPS is and why it may be necessary and ensuring timely information in the days/hours before, during, and after a PSPS event. PSE's PSPS communications plans include automated customer notifications of potential PSPS events, enhanced communications for Medical Life Support customers, and accessible channels for finding PSPS information such as PSE's webpage, outage map, social media, and in-person at Customer Resource Centers. This plan is detailed in Section 8.1.2. Emergency response partner coordination and notifications are detailed in Section 5.4.4

4.2 MINIMIZING LIKELIHOOD OF IGNITION

Describe steps taken to reduce likelihood of ignitions from energized equipment.

The WMP utilizes several tools and tactics to reduce the likelihood of utility-related ignitions, including grid hardening investments, and implementation of Critical Fire Weather Operational Procedures.

4.2.1 GRID HARDENING

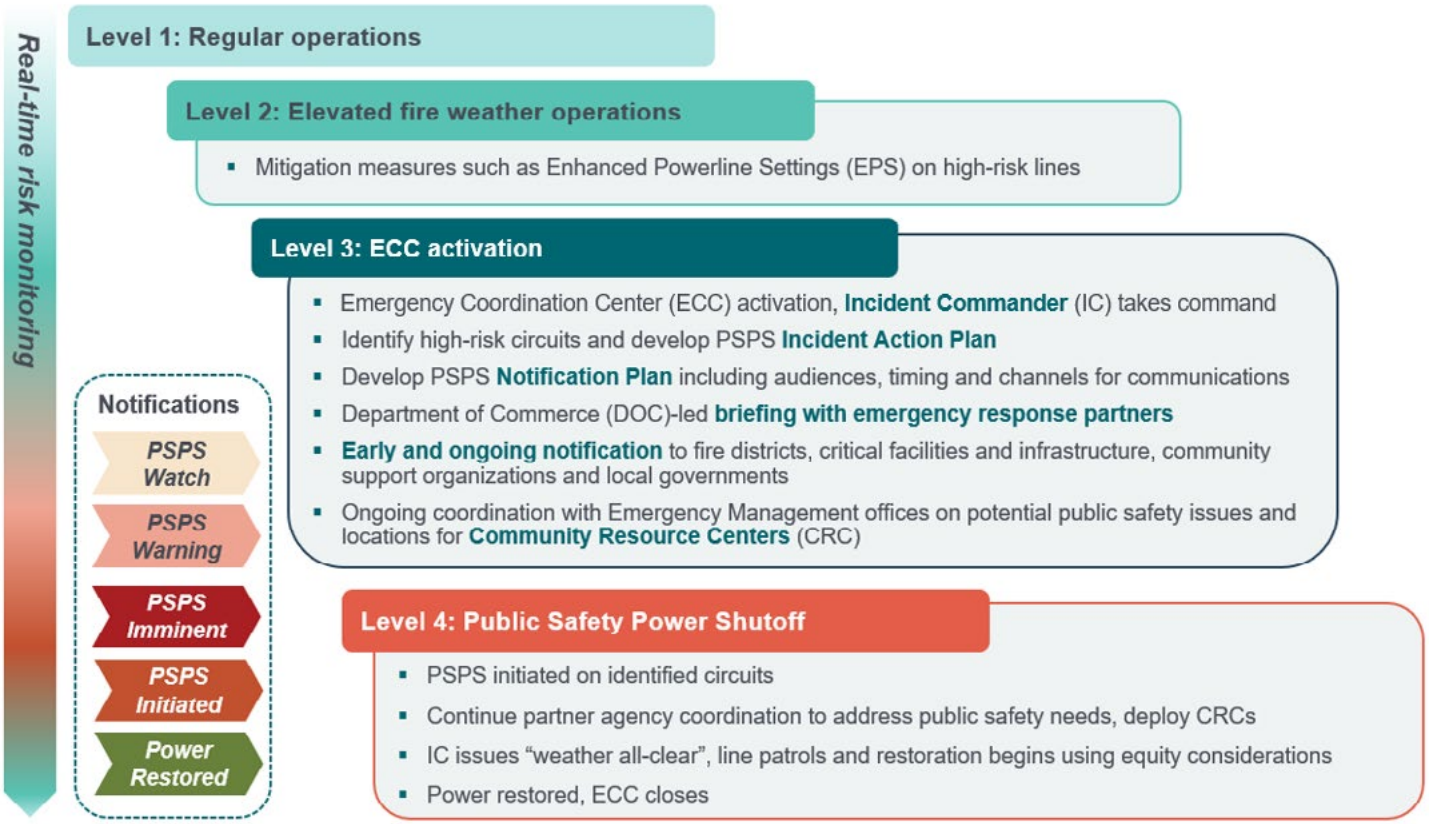
- Enhanced vegetation management (Section 7.3)
- Pre-season asset and vegetation management inspections in high-risk areas (Section 7.4)
- Overhead, underground and equipment upgrades (Section 4.3.1)
- SCADA upgrades (Section 4.3.1)
- Grid automation (Section 4.3.1)

4.2.2 CRITICAL FIRE WEATHER OPERATIONAL PROCEDURES

PSE's Critical Fire Weather Operational Procedures outline the proactive and real-time steps we will take to modify system operations to prevent utility-related ignitions during periods of elevated wildfire risk. The procedures outline operational response from periods of low or no fire risk to extreme fire risk conditions – including conditions that might warrant, as a measure of last resort, a Public Safety Power Shutoff (PSPS), detailed in Section 7.7.

PSE has categorized response escalation into four operational levels based on weather outlooks and forecasts from fire risk modeling software, outlined in Figure 2.

Figure 2. Overview of Critical Fire Weather Operational Procedures levels



Level 1: Normal operations to early warning of fire weather

PSE's operations teams and meteorologist monitor weather and fire risk modeling 24/7. More detail about PSE's weather monitoring capabilities and what conditions we evaluate when moving through the operational levels described below are included in Section 7.1. Details about the fire risk modeling are included in Section 6.2.2.

Level 2: Elevated fire weather conditions

During elevated fire weather conditions, PSE will take proactive steps to reduce ignitions by proactively changing the settings on targeted protection devices to make them more sensitive to potential faults, including enabling Enhanced Powerline Settings (EPS). Level 2 actions are described in more detail in Section 7.6.

Level 3: Severe fire weather forecast

PSE moves to Level 3 when severe fire weather conditions and fire risk potential are forecast, and we start to evaluate whether to use Public Safety Power Shutoff as a tool of last resort.

During Level 3, planning and coordination for a potential PSPS includes:

- **Emergency Coordination Center (ECC) activated:** PSE will activate the ECC to expand our resources, analyze conditions, and prepare teams for proactive communications to partner agencies, customers, and the public. Once the ECC is opened, an Incident Commander (IC) takes command. Emergency management and incident response procedures are detailed in Section 5.4. Additionally, the ECC organizational chart is Figure 6 in Section 5.1.1.
- **Incident Action Plan (IAP):** The Operations Chief prepares the PSPS IAP, which includes distribution and transmission lines meeting de-energization criteria, fire weather summary and relevant insights from local fire districts, plans to isolate the impacted zone, assessment of customer and critical infrastructure impacts and options to limit impacted areas, and proposed de-energization plan. The IC approves the IAP. Details about the IAP and other operational procedures for PSPS are included in Section 7.7.
- **Notification Plan:** The Public Information Officer (PIO) prepares the Notification Plan which includes audiences, timing and channels for notifications and communications related to the PSPS event. The IC approves the Notification Plan, and the PIO and Communications Leads execute the Notification Plan. Details about PSPS notifications and communications are included in Section 8.1.2.
- **Emergency Management coordination:** ECC Manager coordinates with county emergency management office(s) in impacted areas to understand potential public safety issues and identify locations for Community Resource Centers (CRC). More details about CRCs in Section 8.2.3.
- **Partner notifications and briefings:** Early notifications of the potential PSPS are sent to emergency response partners, critical facilities and infrastructure, local governments, and community support organizations. Department of Commerce holds an emergency response partner briefing call. More details about partner notifications are included in Section 5.2, Section 5.4 and Section 8.1.2.

Level 4: Severe fire weather imminent

Level 4 is triggered when real-time weather conditions and field observations match forecasts and risk modeling data continues to indicate a highly active or extreme fire condition. During Level 4, the IC will confirm a de-energization time and the PSPS plan will be initiated. Level 4 operational actions are discussed in more detail in Section 7.7.

After the weather event has passed, the IC will issue the weather "all clear", and line patrols and restoration begins. Restoration procedures are detailed in Section 9.0.

4.3 RESILIENCY OF THE ELECTRIC GRID

Describe the utility's ability to withstand fire weather conditions and quickly recover services.

PSE's WMP identifies emerging risks and prioritizes investments in the safety, reliability, and resilience of our grid operations. Grid hardening projects, expanded situational awareness, new technologies, and company standards and best practices improve our ability to monitor, respond to, withstand, and recover from critical fire weather conditions.

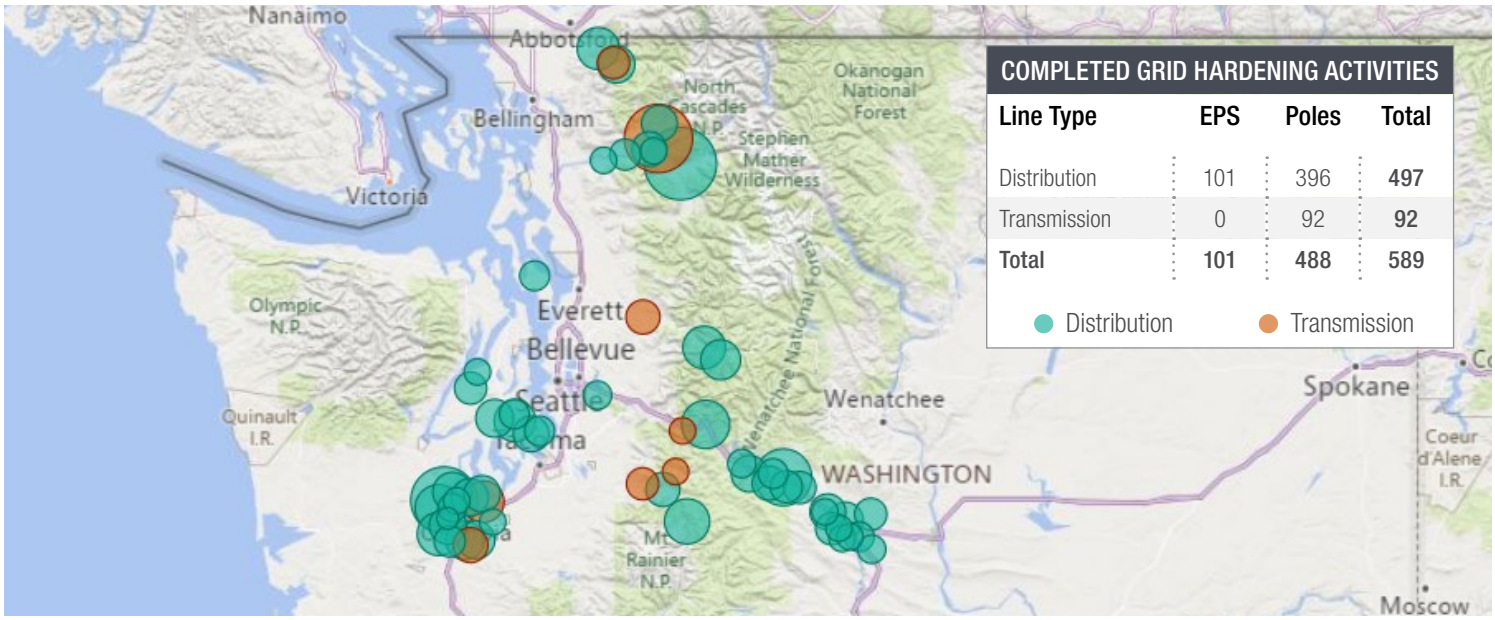
4.3.1 INVESTING IN THE GRID

PSE invests in grid hardening projects that will improve the resilience of our grid and reduce the risk of ignitions associated with PSE's electrical infrastructure. Examples of grid hardening investments include:

- **Vegetation management:** Routine and enhanced vegetation management patrols identify mitigation trees that need to be trimmed and hazard trees that need to be removed. (Section 7.3)
- **Asset inspections and repair:** Routine and targeted inspections identify maintenance projects and pole replacement priorities, leading to hardening of targeted transmission and distribution infrastructure (Section 7.4).
- **Overhead upgrades:** Upgrades to overhead electric infrastructure leads to increased resiliency to hazardous weather conditions. These upgrades include replacing aging overhead wire, installing covered conductor (also called "tree wire"), eliminating small-diameter conductor, and upgrading aging infrastructure components.
- **Strategic undergrounding:** In areas of higher fire risk, converting overhead lines to underground minimizes the amount of above ground infrastructure that could be damaged by an active wildfire or by high winds during critical fire weather, improving resilience.
- **SCADA upgrades:** These projects enable remote visibility and control of substation, distribution, and transmission components, resulting in the ability to remotely de-energize and re-energize substations or circuits as needed to make the grid more resilient to wildfire risk.
- **Grid automation:** Grid resiliency is enhanced through programs that automate the detection and isolation of faults, as well as expanding protective devices on the system to give operators flexibility in isolating higher risk portions of the system during warranted conditions. Recloser installations in the distribution system provide similar resiliency benefits. Grid automation also includes the design and implementation of Enhanced Powerline Settings (Section 7.6). When EPS is enabled, the sensitivity and speed of fault detection and isolation is increased, thereby improving the responsiveness of the grid.

Examples of grid hardening projects completed in 2024 (through October 31) are shown in Figure 3.

Figure 3. 2024 pole replacements and Enhanced Powerline Settings (EPS) upgrades*



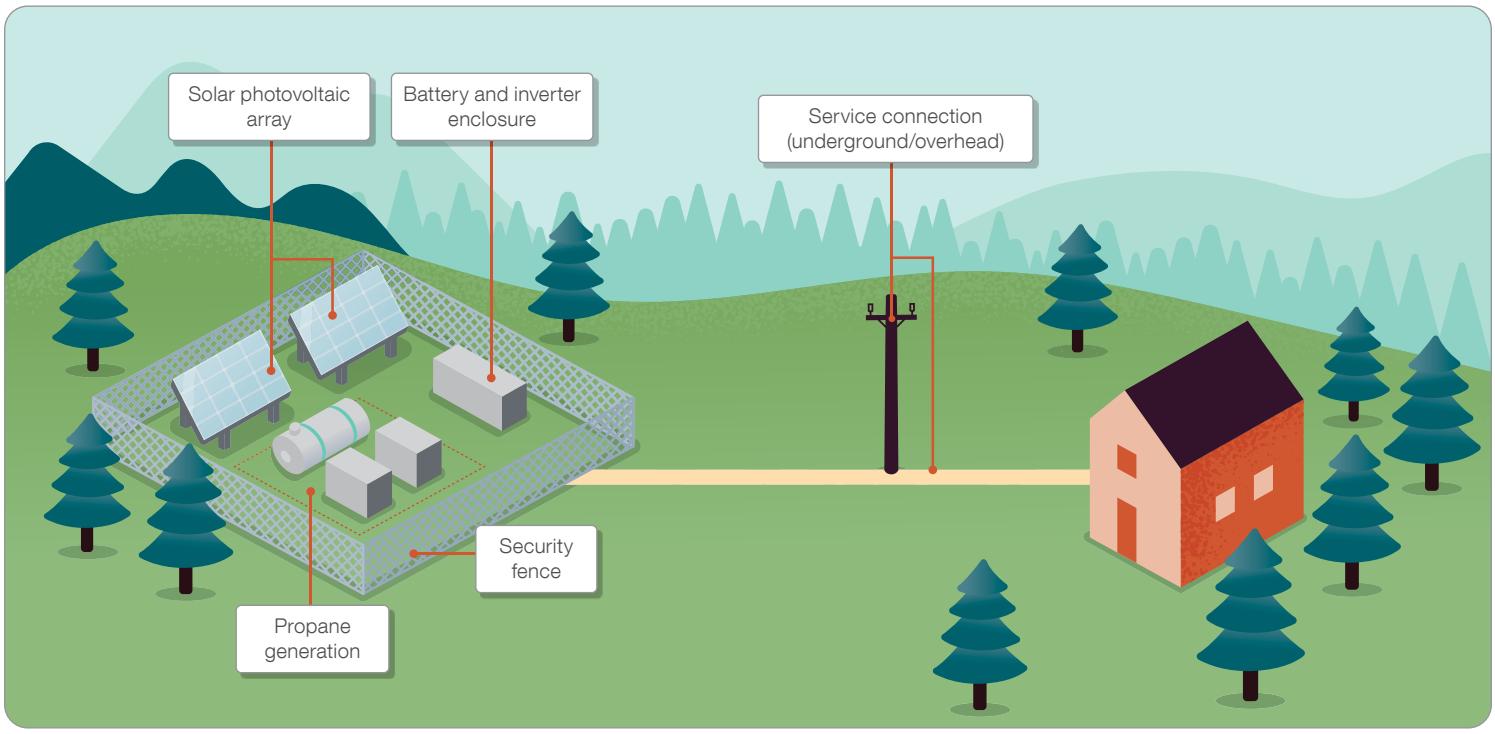
Line Type	EPS	Poles	Total
Distribution	101	396	**497**
Transmission	0	92	**92**
Total	**101**	**488**	**589**

* 2024 numbers are reflective of work completed between January 1 and October 31, 2024.

4.3.1.1 Remote grid systems feasibility analysis

PSE has partnered with a third-party vendor to perform a feasibility analysis on remote grid systems as a potential solution for wildfire mitigation. These remote grid systems serve customers with a combination of solar, batteries, and generators when power lines are de-energized. This alternative can be more cost-effective than undergrounding, particularly when there are limited customers at the end of long line segments. A depiction of a site is included below in Figure 4.

Figure 4. Depiction of potential remote grid system



4.3.2 ENHANCING SITUATIONAL AWARENESS

PSE will continue to build on existing situational awareness tools and resources to improve our ability to forecast critical fire weather conditions, quickly identify and respond to utility-related ignitions, model fire risk in our service area and evaluate and adapt our plans to emerging risks due to climate change.

- **Forecasting and monitoring weather:** Current tactics and plans to enhance weather monitoring capabilities are included in Section 7.1.
- **Identifying and responding to wildfire:** PSE is collaborating with emergency responders to provide access to our artificial intelligence high-definition smoke detecting cameras, which can help identify the location of smoke faster and substantially improve response times. Learn more in Section 5.4.4.
- **Fire risk modeling:** Identifying and understanding the risks posed to the system from the circuit-level up to a regional level informs where to focus investments for grid hardening projects to further reduce risk, establish additional situational awareness tools, and target the use of Critical Fire Weather Operational Procedures during high wildfire risk weather conditions. Section 6.2.2 discusses our risk modeling in more detail.

4.3.3 STANDARDS, BEST PRACTICES, AND WORKFORCE TRAINING

PSE has embedded wildfire mitigation into standards, restoration plans, workforce training and development. Wildfire risk awareness and mitigation best practices are frequently discussed at all levels throughout the organization, making wildfire mitigation part of our culture.

- **Design standards:** New electric system construction and maintenance activities follow PSE's Wildfire Mitigation Design and Construction Standards as specified in Section 7.2.
- **Restoration:** A newly updated Energy System Restoration Plan (ESRP) that includes restoration considerations for restoring service following a PSPS (Section 9.0).
- **Best practices:** PSE has worked closely with several industry working groups for years to exchange best practices and develop our wildfire mitigation strategies. These groups include the Electric Power Research Institute (EPRI) Climate READi, EPRI's Wildfire Advisory Group, Edison Electrical Institute (EEI), Department of Commerce Energy Resiliency and Emergency Management meetings, The WA Dept. of Natural Resources' Utility Wildland Fire Prevention Advisory Committee, and the Pacific Northwest Wildfire Working Group. PSE also met with many partner utilities one-on-one to share lessons learned, benchmark our work against that of our peers, and accelerate the maturity of our plan. This has included sharing risk modeling and weather monitoring strategies, grid hardening practices, operational procedures, and communications and outreach strategies.
- **Workforce training and development:** PSE has provided training and development related to our Critical Fire Weather Operational Procedures, situational awareness tools, communication tools, field safety protocols, as well as for our service providers (Section 7.5).

5.0 ROLES AND RESPONSIBILITIES

> *Provide within these sections an organizational overview of the utility and wildfire management or response personnel, coordination efforts with other local utilities and infrastructure providers, and any currently obligated or voluntary emergency management communication efforts. It is up to the discretion of each utility to determine the specific needs of the communities they serve and how best to prepare for any emergency, including wildfire.*

While PSE has a dedicated Wildfire Risk Management Team, roles and responsibilities related to wildfire risk reduction span across the company.

5.1 UTILITY ROLES AND RESPONSIBILITIES

> *Please provide a utility wildfire program organizational chart highlighting the wildfire specific staff/positions within the utility. The utility should also provide a detailed description of the wildfire specific roles within the utility and the responsibilities of said roles.*

Included in this section are PSE's primary Wildfire Program Organizational Chart, Organizational Chart for the Wildfire Steering Committee, a list of company individuals and their respective roles and responsibilities in supporting PSE Wildfire Risk Management efforts, as well as the Organization Chart for Incident Management Team that is activated during PSPS and their respective roles and responsibilities.

Figure 5. PSE Wildfire Program organizational chart

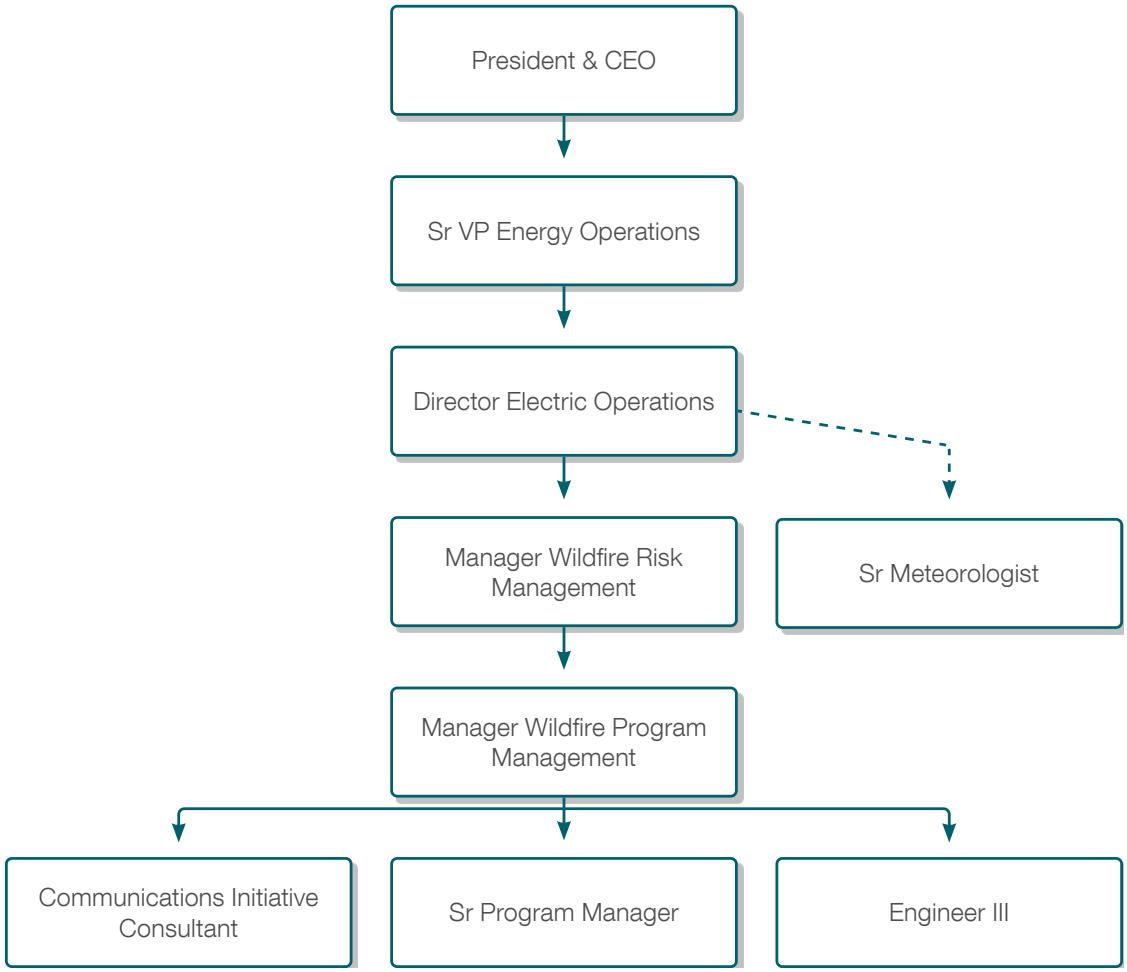


Figure 6. PSE Wildfire Steering Committee organizational chart

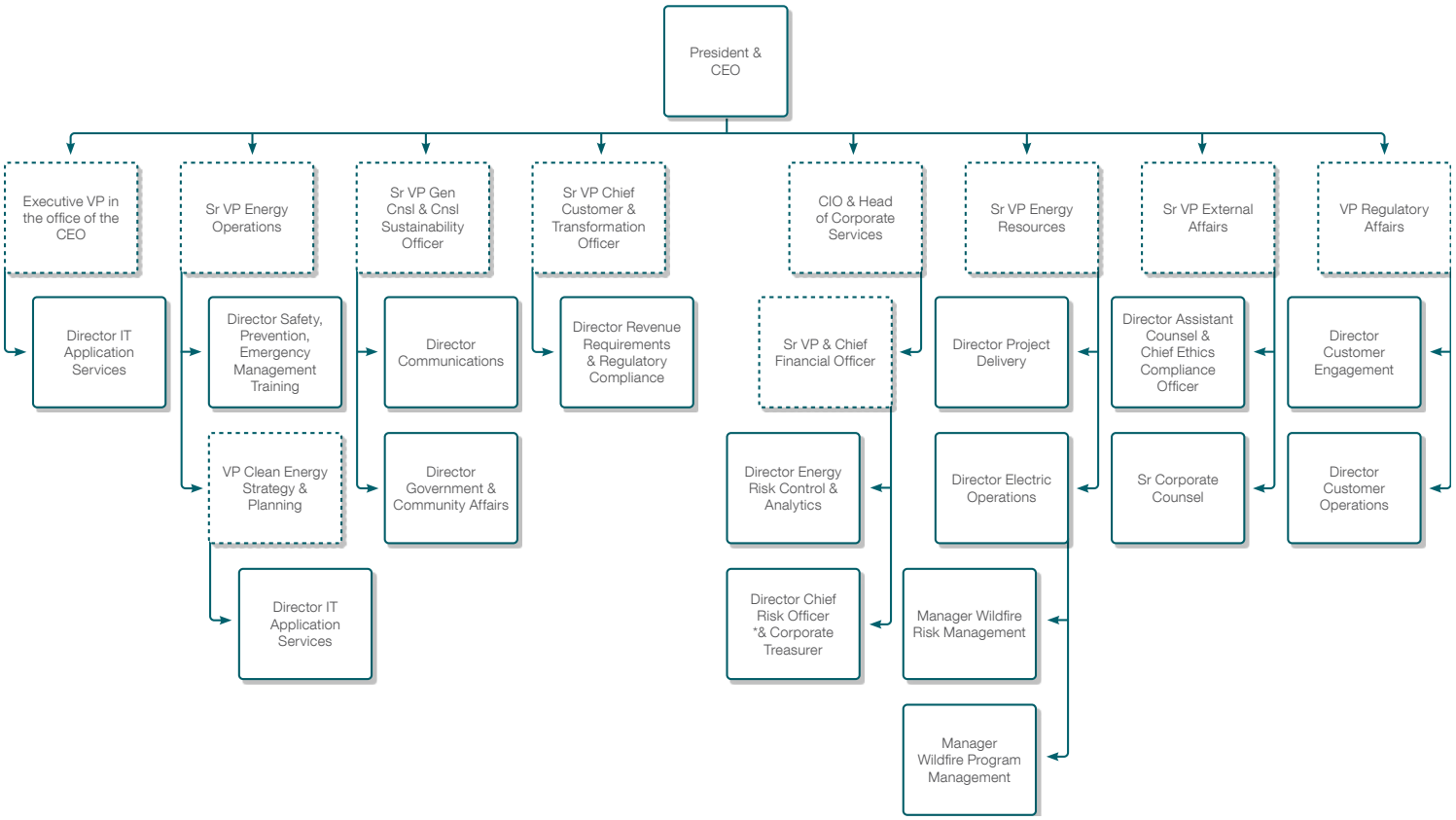


Table 3. PSE Wildfire Program roles and responsibilities

TITLE	ROLE	RESPONSIBILITIES
Energy Operations, Sr. Vice President	**Sponsor**	• Approves overall direction and strategy associated with the Wildfire Program • Helps remove obstacles that prevent Wildfire Task Force members from accomplishing objectives • Ensures alignment with PSE's and Energy Operations organizational strategy and goals
Assistant General Counsel and Chief Equity Compliance Officer, Director Communications, Director Chief Risk Officer & Corporate Treasurer, Director Customer Engagement, Director Customer Operations, Director Electric Operations, Director Energy Risk Control & Analytics, Director Government and Community Affairs, Director IT Application and Services, Director Legal, Senior Corporate Counsel Planning, Director Project Delivery, Director Revenue Requirements and Regulatory Compliance, Director Safety, Prevention, Emergency Management, Training, Director Wildfire Program Management, Manager Wildfire Risk Management, Manager	**Steering Committee**	• Provides direction and input in support of achieving the objectives contained within PSE's Wildfire Mitigation Plan • Aids in the decision making related to the strategic direction of projects and initiatives associated with wildfire mitigation • Acts as an advocate for wildfire mitigation initiatives and projects across their organization • Assures adequate resources are allocated to deliver work plan tasks • Provides guidance to ensure PSE complies with current and future regulations related to wildfire preparedness and mitigation

TITLE	ROLE	RESPONSIBILITIES
Wildfire Risk Management, Manager Wildfire Program Management, Manager Wildfire Program Management, Sr. Program Manager Wildfire Program Management, Engineer Wildfire Program Management, Communication Initiatives Consultant	**Wildfire Risk Mitigation Team**	• Ensures cross department alignment and progress of PSE wildfire mitigation strategies and activities • Maintains wildfire risk dashboard and identifies critical path items at risk • Develops the Wildfire Task Force Charter • Manages overall completion of the Wildfire Program deliverables set forth in the work plan • Annually updates the Wildfire Mitigation Plan in compliance with WUTC requirements • Benchmarks utility best practices and makes recommendations to leadership taking into consideration which practices are appropriate to implement for PSE's system based on the specific wildfire risks in our service territory • Provides regular program updates to internal and external stakeholders
System Planning, Manager Asset Management of System Planning, Supervisor Asset Management of System Planning, Data Scientist	**Planning Support**	• Develops and updates the wildfire business case that includes holistic strategies and processes for reducing wildfire risk and improving reliability and resiliency equitably • Provides technical expertise and guidance to the Wildfire Mitigation Program Manager • Assesses equipment reliability and performance needs from an asset management perspective • Develops and implements asset management strategies for long-term system hardening in higher wildfire risk areas • Engages with the industry and vendors to align with best practices and evaluate the potential for integrating new technologies or approaches to reduce wildfire risk • Works with Innovation and Field Engineering and Standards to improve equipment specification and exploring new technologies • Defines and reviews metrics by which PSE can quantify the value of decisions based on risk, performance, and cost • Leverages data, internal and external, to develop different operational models for a predictive approach to wildfire mitigation • Develops visualization for real-time monitoring and evaluation of data models
Electric Operations, Electric First Response, Manager Electric Operations, Substations, Manager Electric Operations, Sr. Meteorologist Electric Operations, System Management and Ops, Manager Transmission Load Office, Manager Vegetation Management, Manager	**Operational Support**	• Identifies and executes annual pre-season wildfire preparations such as pre-season vegetation inspections and maintenance of high-risk portions of the electrical system • Identifies and executes annual pre-season wildfire preparations such as pre-season inspections and repairs of high-risk portions of the electrical system and training on wildfire operational and response protocols • Leads in developing, executing, and providing continuous improvement of operational protocols needed during times of heightened wildfire risk, wildfire response, and Public Safety Power Shutoff ("PSPS") events • Leads in identifying and executing operational requirements needed to be fully capable of implementing a PSPS

TITLE	ROLE	RESPONSIBILITIES
Communication Initiatives Consultant, Wildfire Program Management Communications Initiatives Consultant, System and Customer Projects Communications Initiatives, Manager Communication Initiatives, Major Projects and Initiatives, Supervisor	**Communication Support**	• Develops and executes an overall communications and outreach strategy to support the Wildfire Program, including key messages, public engagement strategy, and education and outreach campaigns • Liaisons with PSE Media Team to respond to media requests related to the Wildfire Program • Leads Wildfire Public Affairs Team • Takes lead in developing, executing, and continuously improving a PSPS communication plan, including customer and partner notifications • Coordinates with ECC Communications Leads and PIO to integrate PSPS communication elements into ECC operations • Helps develop and participates in exercising the PSPS communication plan annually once the plan has been developed
Communication Initiatives Consultant, Wildfire Program Management Government Affairs, Senior Rep Community Engagement, Manager Customer and Community Outreach, Manager	**Public Affairs Team**	• Develops strategic direction and messages for customers, governmental agencies, and community partner agencies • Coordinates public affairs support elements and event staffing among responsible internal parties, including Government Affairs, Community Engagement, Customer Outreach, and others as needed • Leads external coordination and relationship-building focused primarily on education and outreach, and with organizations/entities that serve Named Communities and the public at large • Understands and mitigates customer impacts, including developing strategy for Customer Information and Outreach ("CIO") role within ECC (in coordination with ECC Communications Leads), and cultivating partnerships with community organizations or local agencies that provide potential support and resources • Helps develop and participates in exercising the PSPS communication plan annually once the plan has been developed
Innovation & Field Engineering, Supervisor Engineering Innovation & Field Engineering, Engineer Ops Training Electric, Supervisor	**Operational Training/ Procedures Support**	• Works with Wildfire Asset Engineer to improve equipment specification and exploring new technologies to reduce wildfire risks • Works with Ops Training and Procedures to ensure all appropriate personnel have completed training on new technologies and equipment • Works with Wildfire Asset Engineer to develop construction standards for higher wildfire risk areas
Emergency Management and Resiliency, Manager Emergency Management, Planning Manager	**Emergency Management Support**	• Ensures wildfire response plans align overall with the PSE Energy Restoration Plan • Acts as a liaison to external emergency management agency partners • Takes lead in developing wildfire related exercises

5.1.1 INCIDENT MANAGEMENT TEAM

When implementing the Critical Fire Weather Operational Procedures Levels 3 and 4, PSE will open the ECC and use the Incident Management Team structure depicted in Figure 7 below. Roles and responsibilities for the Incident Management Team during PSPS are included in Table 4.

Figure 7. Incident Management Team organizational chart

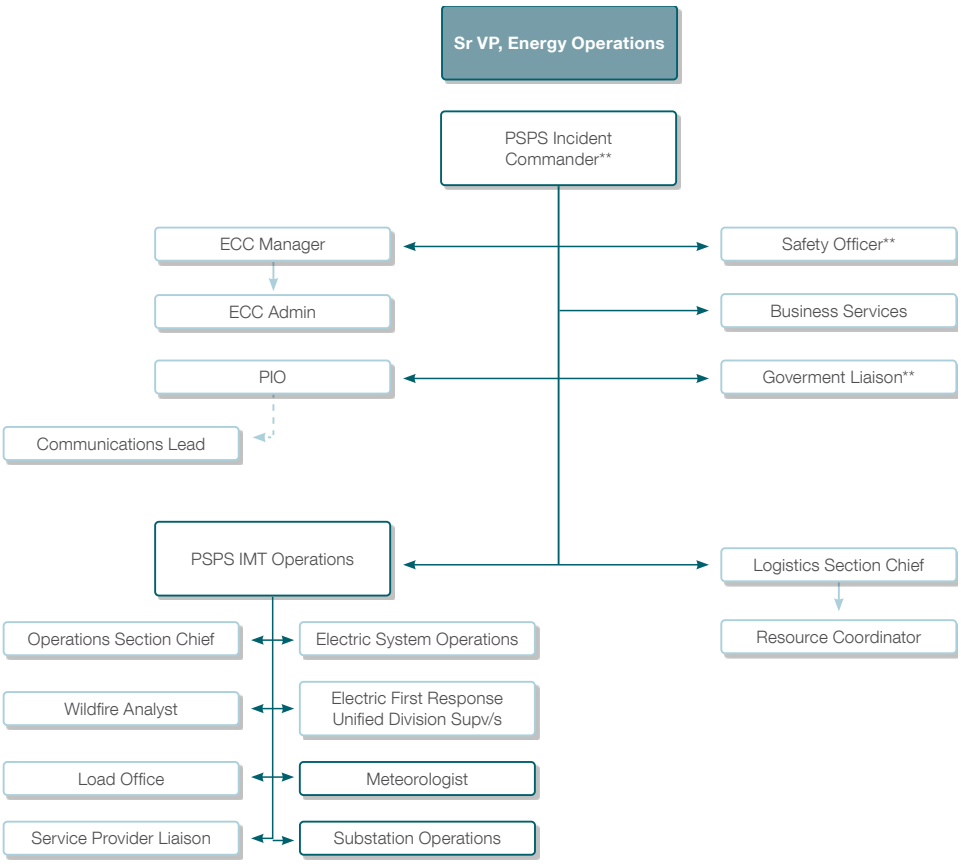


Table 4. Critical Fire Weather Operational Procedures IMT roles and responsibilities

ROLE	RESPONSIBILITIES
Sr. VP, Energy Operations	Approves PSPS, informs senior leadership as appropriate.
PSPS IMT Operations Section	Makes recommendations to SVP, Energy Operations or their designee of whether to initiate a PSPS or not. Once authorized, approves operational Incident Action Plan (including de-energization and re-energization timeline), approves communication strategy and messaging, and keeps senior leadership advised. Oversees ECC operations and expands ICS as needed for overlapping response activity (i.e., storm response, natural gas emergency, etc.)
Wildfire Analyst	Provides wildfire analyst support, utilizing Technosylva FireRisk analysis tools.
Meteorologist	Provides weather summaries and forecasts to include current weather and each day weather for the following 5 days. Monitors weather changes, updating weather models as needed.
Communications Lead and PIO	Develops PSPS Notification Plan and timeline, adding information to the PSPS IAP. PIO and Comms Lead develop PSPS key messaging. IC approves Notification Plan and messaging. PIO assures key messaging is added to ECC Situation Report. Disseminates messaging to Call Center, Business Services, Government Liaison and Legal. Recommends deployment of CIO's. Determines and arranges PSE outage map messaging.

5.2 COORDINATION WITH LOCAL UTILITY AND INFRASTRUCTURE PROVIDERS

Describe any coordination and communication involving other local utilities and infrastructure providers which are essential to wildfire response and recovery (e.g., water utilities, gas utilities, phone/cable/internet providers, local emergency management and first responders).

5.2.1 COORDINATION WITH CRITICAL INFRASTRUCTURE AND FACILITIES CUSTOMERS

While preparing our WMP and Critical Fire Weather Operational Procedures, PSE coordinated with critical infrastructure and facilities operators to understand potential impacts of a PSPS to their facilities and the community at-large and ensure effective emergency coordination and communications. PSE has notified and offered briefings or presentations to county and municipal public works departments, neighboring utilities, water districts, telecommunications service providers, and critical facilities like hospitals or data centers.

- **Identification of critical services:** System Operations maintains information about services and facilities critical to life safety, like hospitals, to inform planning, switching plans and restoration. In addition, PSE coordinates with critical infrastructure and facilities operators, local jurisdictions and neighboring utilities to discuss PSPS implementation and procedures, understand potential impacts of a shutoff to their services, discuss their emergency plans for an outage or PSPS, and verify emergency contact information for PSPS priority notifications
- **Emergency contacts:** PSE identifies and updates emergency contact information for critical service providers to provide PSPS notifications and updates as outlined in Section 5.4.2.
- **Restoration:** During the system restoration phase following either an unplanned outage (ex: major windstorm) or a planned outage (ex: PSPS), PSE follows the restoration prioritization guidelines articulated in the Energy System Restoration Plan, which include guidance on restoring critical infrastructure assets and services. Details on these restoration plans can be found in Section 9.2.1 and Section 9.3.3, respectively.

5.2.2 EQUITY CONSIDERATIONS AND VULNERABLE POPULATIONS

- **Understanding vulnerable communities:** PSE holds one-on-one conversations and provides briefings to local governments, emergency preparedness organizations and organizations who serve medically vulnerable or other highly impacted communities, with particular emphasis in high-risk areas, to understand unique community impacts and identify gaps in community resources. This feedback is incorporated into our PSPS notification plan (Section 8.1.2) and helps inform priorities for community support actions (Section 8.2.3).
- **Medical Life Support designation:** PSE works hard to provide reliable service to all customers, and we understand that is especially important for customers that have life support equipment that is dependent on electricity. As part of our PSPS notification plan (Section 8.1.2), customers with Medical Life Support status noted in their PSE account will receive earlier notification, when possible, via phone call from PSE Customer Care, in addition to receiving automated customer alerts. Customers can learn more about Medical Life Support status at pse.com/medical.
- **Community investments:** PSE proactively invests in Community Based Organizations (CBOs), who serve as trusted, local, and culturally relevant third parties, to provide educational programs and outreach related to helping customers plan and get prepared for emergency events such as electric service disruptions and wildfire. We support first responders by providing funding for the direct purchase of tools, equipment, or other needs they deem most beneficial for wildland fire response efforts. PSE works to increase the region's resiliency through corporate board engagement and the underwriting of the American Red Cross of the Pacific Northwest's Disaster Cycle Services program in partnership with the PSE Foundation. We also support areas impacted by active emergency events with flexible deployable funding to support first responder efforts and CBO's that help maintain the essential resources or services needed by our customers and communities.
- **Equity considerations in restoration:** PSE developed restoration guidelines based on vulnerable populations data to inform response planning, resource assignment and repair priorities. Detailed information can be found in Section 9.0.

5.3 COORDINATION WITH LOCAL TRIBAL ENTITIES

Describe any coordination with adjacent Tribes that may be impacted or have emergency response needs in the event of a wildfire scenario.

PSE works in partnership with sovereign Tribal nations to foster trusted, long-lasting relationships and find creative opportunities for collaboration. These partnerships include long-standing established relationships between PSE's Emergency Management and Resiliency Department and Tribal entities for emergency response coordination as well as new partnership opportunities to address the growing risk of wildfire throughout our service area.

5.3.1 OPEN HOUSE OUTREACH

In the spring of 2024, PSE hosted open houses in seven high-risk communities throughout our service area. Prior to these community events, pre-briefing invitations were extended to Tribes in high-risk areas or areas adjacent to open house locations (see Section 8.1.1 for more details about spring open houses). In addition, PSE offered Tribal partners informational toolkits that included information and resources that can be tailored to their needs and shared with their communities through trusted channels. The Tribes included in these coordination efforts included the Muckleshoot Indian Tribe, Upper Skagit Indian Tribe, Suquamish Tribe, and the Yakama Nation.

5.3.2 FEDERAL GRANT APPLICATIONS

PSE is also coordinating with Tribes more broadly to identify and apply for grants to support projects that improve resiliency, enhance situational awareness, and minimize impacts to culturally significant resources.

For example, PSE engaged with the Upper Skagit Indian Tribe to submit a federal grant application to the Department of Energy's Grid Resilience and Innovation Partnerships (GRIP) program. The project, which includes undergrounding infrastructure and installing Gridscope (down-wire detection) sensors and smoke-detecting (Pano) cameras, was designed to better serve customers in the Skagit River Valley and address heightened resiliency risks to the electric grid, including wildfires. PSE and the Tribe intend to work jointly and collaboratively on the proposed projects and PSE will provide funding for additional emergency services training for the Upper Skagit Indian Tribal community.

5.4 EMERGENCY MANAGEMENT / INCIDENT RESPONSE ORGANIZATION

Describe utility's efforts (if any) to coordinate with relevant safety agencies as well as other relevant local and state agencies to establish roles, responsibilities, and structure of communication for emergency management system alerts.

5.4.1 NATIONAL INCIDENT MANAGEMENT SYSTEM

During a significant emergency response or elevation to Level 3 and 4 of PSE's Critical Fire Weather Operational Procedures (definitions of levels detailed in Section 4.2.2), PSE activates our Emergency Coordination Center (ECC) and utilizes the industry-recognized National Incident Management System (NIMS) and adapts the Incident Command System (ICS) into our response process. NIMS guides all levels of government, nongovernmental organizations, and the private sector to work together during incidents by providing shared vocabulary, systems, and processes.

PSE's Incident Management Team organizational chart, roles and responsibilities are detailed in Section 5.1.1.

5.4.2 COORDINATION WITH EMERGENCY MANAGEMENT AGENCIES

PSE's Emergency Management and Resiliency Department has long-standing, established relationships with emergency management agencies throughout our service area, including agencies at the city, county, Tribal, and state level. These relationships also extend to fire departments and regional authorities.

During an emergency event, PSE communicates with emergency response partners through:

- **Emergency contact information:** PSE provides 24/7 emergency contact numbers for our System Operators and ECC.
- **Situation reports:** PSE communicates with agencies through regular situation reports during an emergency event or PSPS.
- **PSPS response partners briefing:** PSE is partnering with the Department of Commerce (DOC) Energy Resilience and Emergency Management Office (EREMO) to host a PSPS response partners call to brief emergency response agencies about a potential PSPS event.
- **Priority PSPS notifications:** Throughout the year, PSE collects and updates contact information for emergency response partners and sends automated priority notifications of PSPS watch or warning to these partners (with a goal of 48 – 72 hours in advance of shutoff start time).

5.4.3 PLANNING, TRAINING, AND EXERCISES

Throughout the year, PSE participates in various planning and coordination meetings, committees, trainings, and exercises with emergency response partners.

- **Seasonal readiness workshops:** PSE participates in county and local emergency management office seasonal readiness workshops and DOC pre- and post-season utility wildfire workshops.
- **Interagency meetings:** PSE staff serve on county and state emergency committees, participate in internal and external exercises, and organize or attend after-action debriefs and improvement planning meetings with emergency partners.
- **Industry groups:** PSE participates in industry emergency response and mutual aid committees through the Edison Electric Institute (EEI) and the Western Electric Institute (WEI). PSE is also a member of the Western Region Mutual Assistance Group (WRMAG). By participating in these interagency groups, we can continually improve our coordination efforts and right-size PSE roles and responsibilities in emergency response.
- **Emergency response training:** PSE provides instructor-led training on natural gas and electric (high voltage) safety best practices to emergency responders, law enforcement agencies, 911 call centers, utilities, public works departments, and the public.

5.4.4 CULTIVATING PARTNERSHIPS

While developing our PSPS procedures, PSE staff met with county emergency management offices and local jurisdictions to discuss potential impacts and community needs, identify collaboration opportunities, and determine best practices to provide support during a PSPS event. More details about these outcomes, including PSE's plans for Community Resource Centers during a PSPS, are detailed in Section 8.1.2. These partnerships continue to prove extremely valuable, enabling PSE to enhance relationships and better understand nuances in emergency response across the diverse communities and jurisdictions in our service territory.

PSE is also collaborating with emergency responders to offer access to our artificial intelligence high-definition smoke detecting cameras. This technology can help identify the location of smoke indication (from utility-related or other ignitions) and allows for substantially improved response times that could reduce the impact of a fire. Entities that have been offered to share access include DNR dispatch centers, local dispatch centers, local fire agencies, county emergency management, as well as local cities and tribes. PSE has met with DNR, and they are actively monitoring these cameras to improve response times to smoke indications and determining which are appropriate to investigate.

6.0 WILDFIRE RISKS AND DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

Within these sections, provide any specific information regarding the risks and risk drivers specific to the utility service territory and surrounding areas as well as enterprise-wide safety risks.

6.1 RISKS AND RISK DRIVERS ASSOCIATED WITH TOPOGRAPHIC AND CLIMATOLOGICAL RISK FACTORS

List primary risk drivers for wildfires specific to the utility service area and briefly describe the utility's prioritization of stated risks (what is most important in a service area), and what climate conditions or geographic characteristics the utility's wildfire mitigation strategy incorporates. Example risk drivers may include extended drought, vegetation type, high winds, steep terrain, lack of early fall rains, etc.

PSE's service territory spans both sides of the Cascade Mountains, and covers a topographically and climatologically diverse area, which includes shrub steppe, coniferous forest, wetlands, and more. PSE evaluates risk factors related to these climate conditions and geographic characteristics, including terrain and Wildland Urban Interface (WUI), winds and precipitation, and type and density of vegetation.

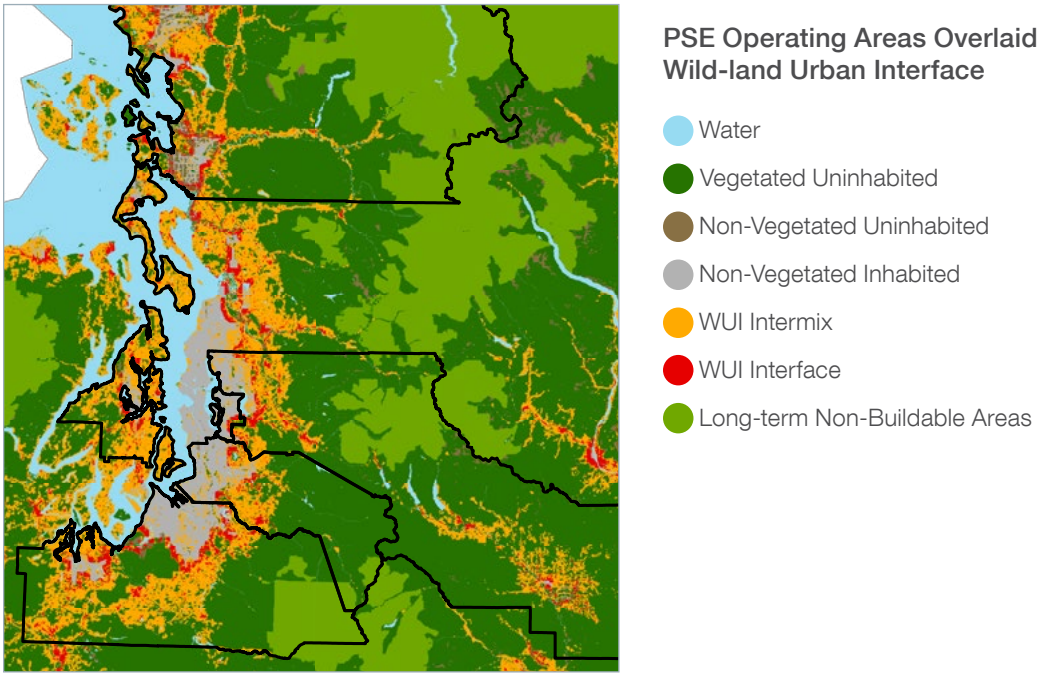
6.1.1 TERRAIN AND WINDS

Wildfire risk is higher in the steep river drainages on the west and east sides of the Cascades. Strong downslope wind events on the leeward side occur several times a year, starting in spring and continuing through early fall, which can create hazardous wildfire conditions.

West of the Cascades, wildfire risk is heightened in late summer and early fall after vegetation has "cured", or dried out, over time. Given that this terrain favors strong downslope easterly wind events, factors can align to produce dangerous wildfire conditions in higher-population areas. While downslope windstorms on the west side of the Cascades occur less often than on the east side, the consequence of a wildfire is still much greater due to higher population densities.

Figure 8 below depicts Washington DNR's Wildland Urban Interface (WUI) map with PSE's service territory. WUI identifies the zones of transition between unoccupied land and human development. It marks the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation.

Figure 8. Department of Natural Resources Wildland Urban Interface map



6.1.2 PRECIPITATION

Recently the elevation at which rain turns to snow in Washington state has been higher than historical averages due to climate change. This has led to less snowpack in the mountains and less runoff/lower river flows in late summer. Consequently, wildfire season durations in the western United States are now longer – starting earlier in the summer and lasting later in the fall.

While extended droughts are not common in Washington state, they do occasionally occur. During periods when precipitation is below normal for multiple consecutive years, wildfire risk can be much greater than usual. This is especially true along the western slopes of the Cascade Mountains where vegetation is typically denser.

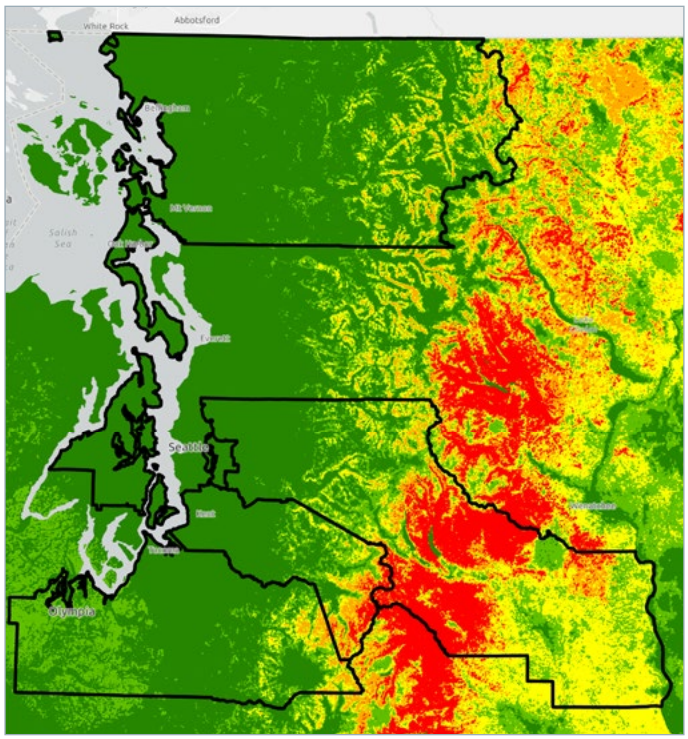
6.1.3 VEGETATION

On the east side of the Cascade Mountains, vegetation is finer and dries out earlier during warmer months. This poses a wildfire threat that begins in the spring and lasts until fall – or until a prolonged period of wetting rains arrives. The east side's finer vegetation means wildfires can spread more rapidly, but they have less intense heat at the flaming front.

On the west side of the mountains, rainfall amounts are much heavier during the winter season, and vegetation is much larger and denser. This means it takes more time for vegetation on the west side to cure. As a result, the vegetation does not often reach critical levels until early-to-mid-summer, lasting into fall when wetting rains arrive. The west side's larger, denser vegetation can burn much hotter, but the rate of spread tends to be slower. Additionally, the forests on the west side are dense and comprised of larger trees, making the historically narrow rights-of-ways more complicated to manage. When these trees are outside of the right of way, they are often tall enough to have limbs blow in or fall into utility infrastructure. The declining health of off-ROW trees due to disease and climate and vegetation species with fast growth cycles exacerbate these challenges.

The USFS Wildland Hazard Potential ("Burn Potential") map, shown below in Figure 9, shows these trends across PSE's service territory. This map depicts the relative potential for wildfires that would be difficult for suppression resources to contain, and combines it with information on wildfire likelihood, intensity, and fuels.

Figure 9. USFS Wildland Hazard Potential ("Burn Potential") map



6.2 ENTERPRISE-WIDE SAFETY RISKS

Describe the utility's methodology for identifying and assessing enterprise-wide safety risks related to wildfires.

6.2.1 ENTERPRISE RISK ASSESSMENT

PSE's Enterprise Risk Management (ERM) team conducts an annual Enterprise Risk Assessment (ERA) process to identify the top risks facing the company and select where to focus mitigation efforts for the coming year. The ERA process includes the following steps:

- **Identify:** ERM interviews PSE Officers and surveys senior leadership and the Board of Directors to determine which risks may impede PSE's ability to achieve strategic objectives or threaten the going concern of the company over the coming year. Collectively, these responses inform discussions with the Officer team to aid them in selecting the list of enterprise risks.
- **Assess and respond:** Once the enterprise risks have been selected, ERM works with executive risk owners and risk subject matter experts ("SMEs") to assess current (inherent) risk profiles, create and pressure-test mitigation plans, assess targeted residual (post-mitigation) risk profiles, and identify appropriate performance metrics to monitor mitigation progress.
- **Monitor and report:** Once mitigation begins, progress on mitigation activities, and impacts to individual risk profiles, are reported on a quarterly basis to the Officers and the Audit Committee.

Wildfire-related risks have been identified as enterprise risks for several years. As a first line of defense function, PSE's Wildfire Program is responsible for managing wildfire-related risks day-to-day, which includes developing and implementing the company's wildfire mitigation plan. ERM collaborates with the Wildfire Program team to monitor and report on mitigation progress.

6.2.2 RISK MODELING

Assessing and mitigating risk is a central component of PSE's Wildfire Program. PSE's risk models and mitigation plans consider dynamic factors in combination to identify areas of highest risk in our service territory, including:

- Climate conditions and geographic characteristics
- Areas with historically correlated weather patterns
- Wildfire probability, risk, and potential impact
- Historical fire data
- Existing grid infrastructure and past grid performance

Identifying and understanding the risks posed to the system from a circuit-level up to a regional level informs where to focus investments for grid hardening projects to further reduce risk, establish additional situational awareness tools, and target the use of Critical Fire Weather Operational Procedures during high wildfire risk weather conditions.

PSE continues to invest in the grid and expand our situational awareness capabilities, and we will regularly update our models to account for the changes to our infrastructure and our ability to capture more detailed real-time data.

PSE has developed two primary risk models – the FireRisk Model (Section 6.2.2.1) and the Gridded Risk Model (Section 6.2.2.2). The FireRisk model was developed by Technosylva, a consulting company that specializes in wildfire risk science. The Gridded Risk Model was developed by PSE. The gridded risk model is used to inform design and construction practices, while FireRisk is used to guide operational procedures and grid hardening strategies.

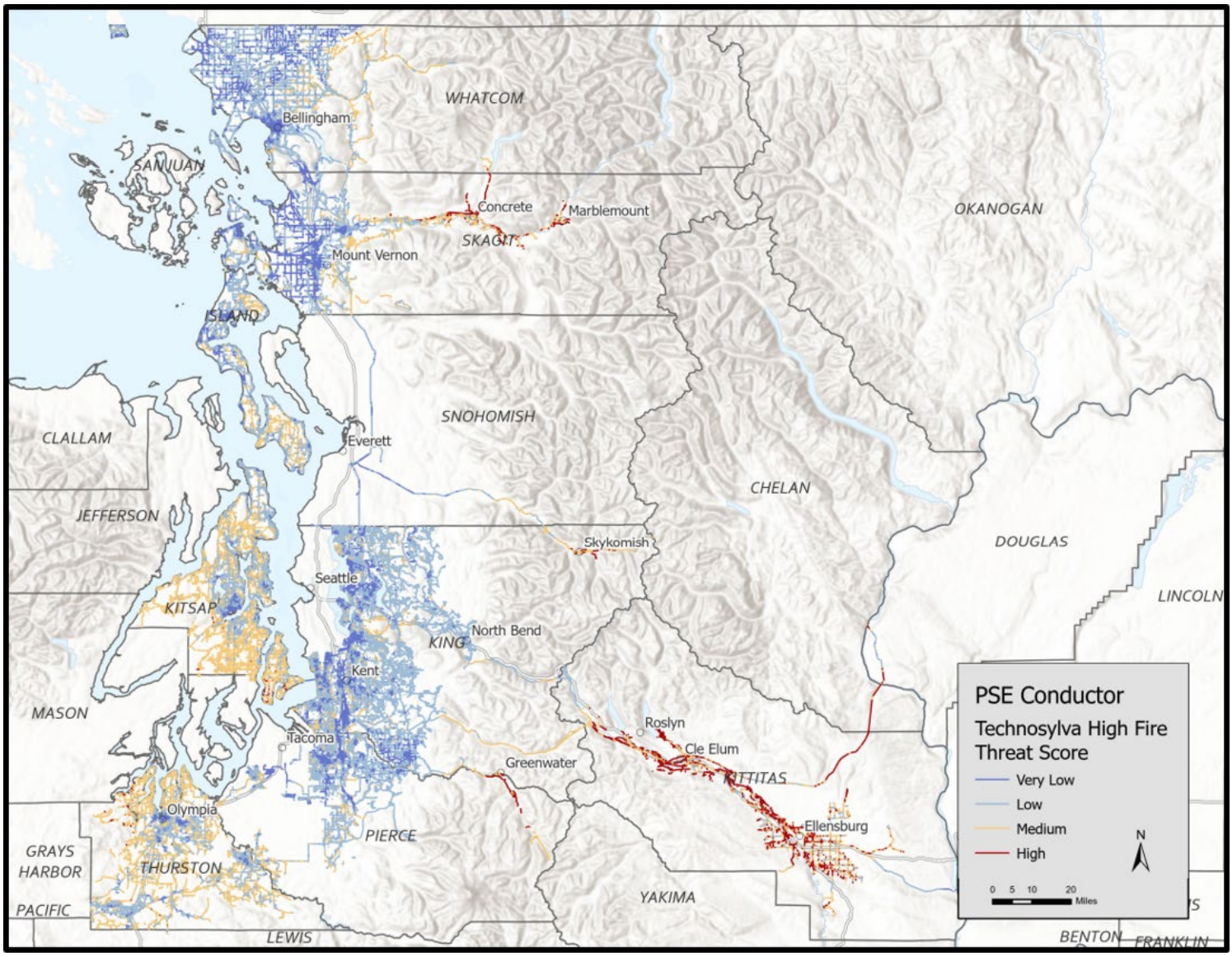
6.2.2.1 FireRisk Model

Technosylva provides PSE with several datasets and models used to evaluate environmental risks, including historic weather events around our infrastructure, the level of sustained wind speed and wind gusts that could cause damage to our infrastructure, and regional analysis to identify where weather events are historically correlated. The combination of the aforementioned analysis enables PSE to identify and define which circuits must be considered a high wildfire risk. likely to have high risk conditions at the same time. All of this data aids in PSE's wildfire mitigation planning and real-time operational decision-making to reduce risk.

6.2.2.1.1 High Fire Threat index

Technosylva developed a High Fire Threat (HFT) index for PSE's overhead electric lines, which provides an index measure of the historic coincidence of vegetation (fuel density and moisture) and severe weather conditions. This measure is used to rank PSE's distribution and transmission lines and indicate where they occur in higher wildfire risk areas. These HFT scores are utilized to guide situational awareness and grid hardening investments, as well as PSE's operational decision making. Figure 10 shows HFT risk levels throughout PSE's service territory.

Figure 10. PSE High Fire Threat (HFT) map



PSE PUGET SOUND ENERGY

6.2.2.1.2 Probability of Fault curves

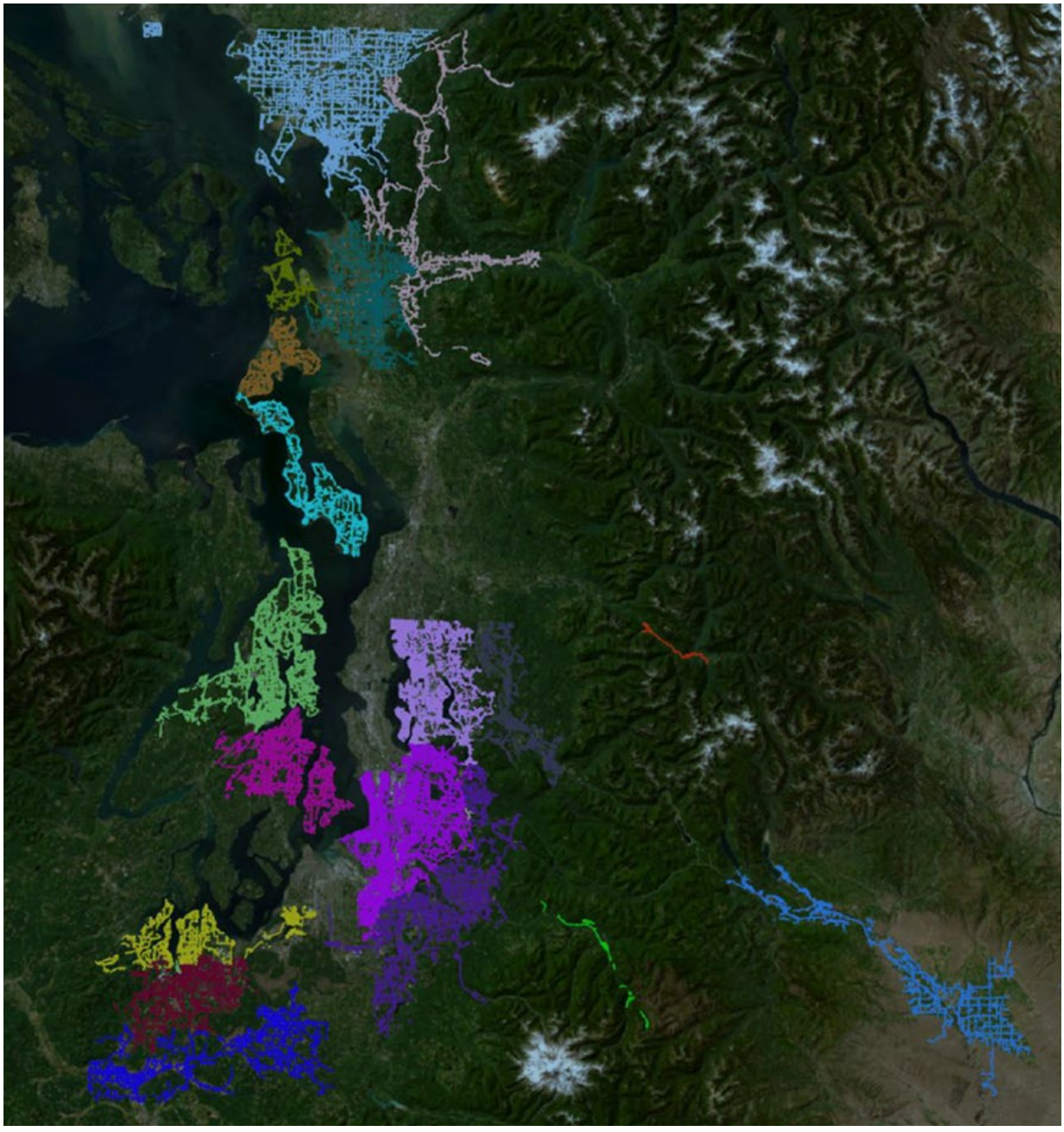
PSE uses Probability of Fault to predict potential utility-related ignition events on our lines. Probability of Fault curves are an industry standard way of modeling the probability of asset failure for each circuit based on highest sustained wind speeds and highest wind gusts within our service territory. This risk modeling analysis aligns historical outage data from PSE's Outage Management System (OMS) with historical weather from applicable weather stations.

We are using outages as a proxy for potential utility-related ignition events and analyzing outages at different wind speeds on our circuits. This analysis provides more accurate wind trigger thresholds for PSE's Critical Fire Weather Operational Procedures (described in Section 4.2.2).

6.2.2.1.3 Correlated weather regions

Technosylva also created a map of areas with historically correlated weather, shown in Figure 11, to demonstrate which regions are likely to be impacted by the same weather event. All the circuits within the same region could potentially be impacted by a severe weather event.

Figure 11. Correlated Weather Regions and PSE electric system map



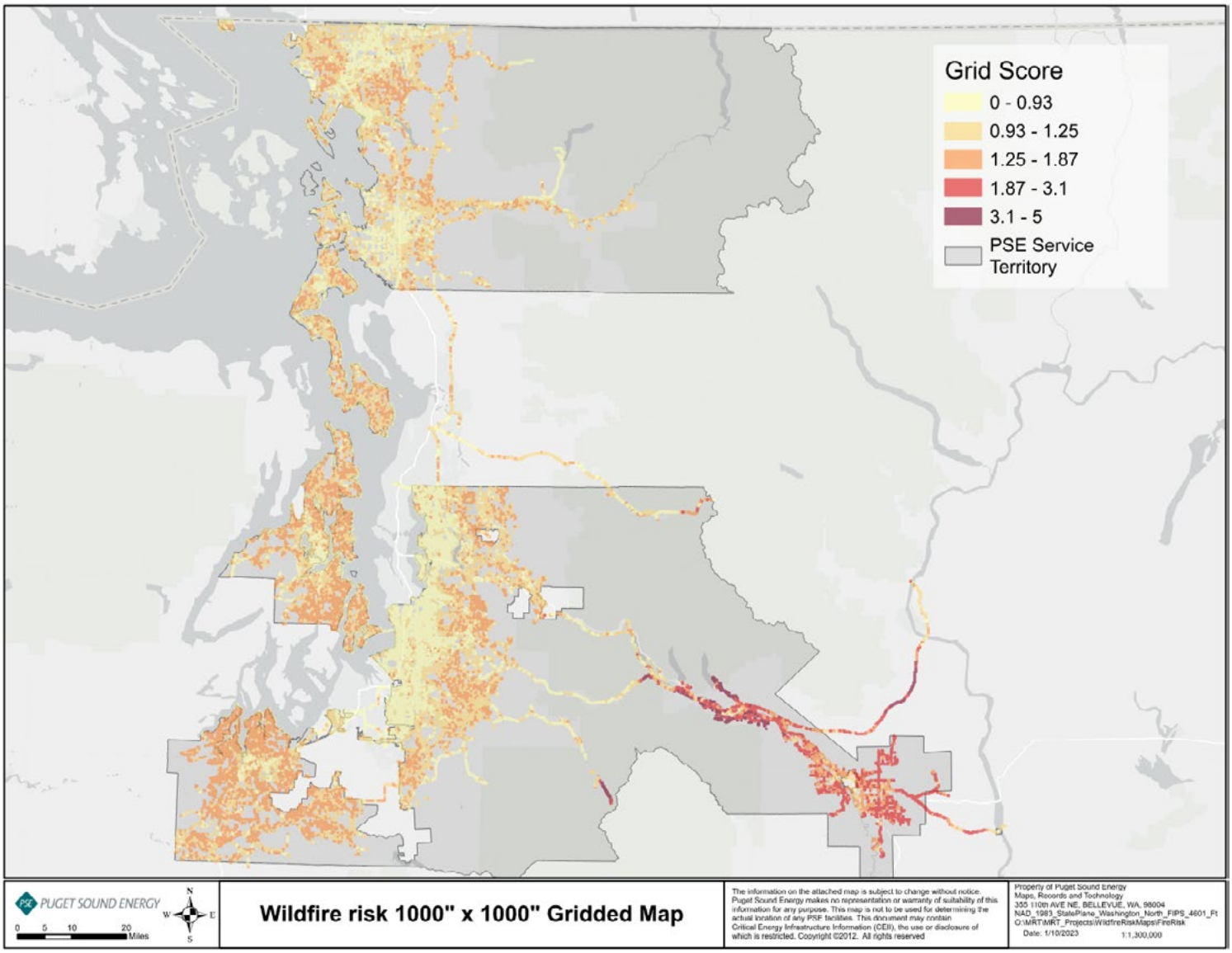
6.2.2.2 Gridded Risk Model

PSE's Gridded Risk Model quantifies risk by considering the likelihood of a wildfire event occurring in a particular area in PSE's service territory and multiplying that figure by the event's anticipated impact. To perform this modeling, PSE uses publicly available datasets like the DNR's WUI map (Figure 8), USFS Wildland Hazard Potential ("Burn Potential") map (Figure 9) and the USFS Wildfire Burn Probability map.

We then combine these datasets with our grid infrastructure attributes and risk assessment. Each overhead circuit's conductor type is given a rating assessing their risk of potential fault, based on their material, size, and level of insulation.

This combined data produces a wildfire risk score that is normalized to a five-point scale and shown on the Gridded Risk Map in Figure 12. The Gridded Risk Model is updated annually and guides PSE's design and construction methodologies.

Figure 12. PSE's Gridded Risk map



7.0 WILDFIRE PREVENTATIVE STRATEGIES

Within these sections, provide any specific information regarding current prevention strategies, lessons learned from the prevention activities, and considerations for the future state.

7.1 WEATHER MONITORING

7.1.1 CURRENT STRATEGY OVERVIEW

Provide details on weather monitoring (if any) conducted by the utility.

7.1.1.1 Weather monitoring resources

PSE's real-time transmission and distribution operation teams monitor weather forecasts and weather conditions 24/7 using numerous sources. In 2024, PSE hired a meteorologist to assist with fire weather forecasting and monitoring critical fire weather conditions.

National Weather Service (NWS): There are three NWS offices that serve the PSE service territory, and we continuously monitor all NWS weather forecasts, advisories, and warnings including but not limited to: Fire Weather Watches, Red Flag Warnings, Wind Advisories, and High Wind Warnings.

Northwest Interagency Geographic Area Coordination Center: PSE closely monitors weather forecasts and fuel conditions from the Coordination Center, including the 7-Day Significant Fire Potential forecast.

National Interagency Fire Center (NIFC): PSE monitors forecasts from NIFC, particularly seasonal fire weather outlooks. PSE monitors the daily NIFC Incident Management Situation Report to monitor new and ongoing wildfires, as well as national and regional firefighting resources.

Fuels and wildfire threats: PSE also monitors the 7-day National Fire Danger Rating System, as well as the US Forest Service Wildland Fire Assessment System, to evaluate vegetation and wildfire threats.

7.1.1.2 Weather stations

PSE has installed 20 weather stations to date, prioritizing areas most likely to experience PSPS based on high fire threat score as described in Section 6.2.2. These stations provide more frequent weather data near PSE assets and supplement data from publicly available weather stations. PSE's weather stations observe weather conditions in up to 30-second increments and evaluate important fire weather elements in real time. This includes measuring wind, temperature, and relative humidity.

7.1.1.3 Critical Fire Weather Operational Procedures

PSE's Critical Fire Weather Operational Procedures, documented in Section 4.2.2, outlines proactive operational response from periods of low or no fire risk to extreme fire risk conditions. PSE has categorized response escalation into four operational levels based on weather monitoring and forecasting described above. Specific operational actions taken as fire risk conditions increase in severity are described in Section 7.6 and Section 7.7.

7.1.2 PLANNED UPDATES

Describe changes (if any) to weather monitoring that are anticipated in the upcoming three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented. If it is a pilot program, describe the pilot period.

PSE plans to continue enhancing our weather monitoring capabilities. These additional stations and cameras will increase our situational awareness of the real time conditions in our distribution network.

Installing additional weather stations: PSE plans to expand the network of weather stations. Weather stations will be strategically located adjacent to higher fire risk transmission and distribution infrastructure. These weather stations provide the benefit of providing real-time (30 second) updates of the weather happening near PSE infrastructure, thereby assisting PSE with operational decision-making.

Investing in smoke-detecting cameras: PSE plans to expand the network of smoke-detecting (Pano) cameras. These cameras will be strategically located to monitor remote and high-risk areas of our system.

Collecting empirical data: PSE continues to collect data about mitigation measures and outcomes to inform future situational awareness investments.

Critical Fire Weather Operational Procedures: PSE will continue to mature our Critical Fire Weather Operational Procedures as discussed in Section 7.6.2 (relay and recloser practices), Section 7.7.2 (PSPS) and Section 8.2 (communications).

7.2 DESIGN AND CONSTRUCTION STANDARDS

7.2.1 CURRENT STRATEGY OVERVIEW

> *Detail any instances where the utility is engaged in system re-design and hardening practices or other efforts for purposes of wildfire mitigation. If any industry best practices are being utilized, note the standard or code, as applicable, and how the utility achieves that standard in its processes.*

PSE has design and construction standards to mitigate potential ignitions on the electric system. These standards focus on grid hardening and fault reduction, and reference risk levels established by the Gridded Risk Model explained in Section 6.2.2. This risk model is included in our geographical information mapping systems and used to determine which design and construction measures PSE will utilize to mitigate potential utility-related ignitions. Some of PSE's mitigation measures also consider local conditions, such as landscape, ingress and egress, and risk to communities.

Currently, PSE's design and construction standards utilize many existing and emerging technologies and components to mitigate potential ignitions. These include covered conductor, fire-resistant components such as fiberglass cross arms, fiberglass poles, flame-resistant pole wraps, arc-suppression fuses, and reduced flammability transformers. Mitigation measures are intended, designed, and deployed to reduce the risk of an ignition source or to reduce the risk of structural failure where a fault or ignition could occur.

PSE has also updated standard practices around fault protection to reduce potential ignition sources in higher-risk areas. These updates can be found in Section 7.6.2.

7.2.2 PLANNED UPDATES

> *Describe any changes to design and construction standards that are anticipated in the upcoming three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.*

PSE monitors the effectiveness of existing standards and adjusts or optimizes, as needed. PSE evaluates new technologies, construction practices, and materials that can further harden the electric system and prevent utility-related ignitions. Any future changes to PSE's standards will be driven by on-going monitoring and evaluation efforts.

7.3 FUEL & VEGETATION MANAGEMENT

7.3.1 CURRENT STRATEGY OVERVIEW

> *Detail any instances where the utility has or is developing or implementing programs and practices to manage fuels and vegetation for purposes of wildfire mitigation. If any industry standards are used as a baseline for Vegetation Management, please cite and briefly describe the standard(s).*

PSE regularly inspects power lines throughout our service area and trims or removes vegetation that encroaches on overhead power lines. PSE's strategy for vegetation management in high wildfire risk areas includes a more frequent and rigorous approach to inspecting and trimming vegetation and removing hazard trees adjacent to the right-of-way.

PSE's standard vegetation inspection and maintenance cycles range from 4-6 years for distribution lines, every 3 years for 115 kV transmission lines, and annually for 230 kV transmission lines. In addition, PSE also performs proactive intermediate vegetation management activities through a hazard tree reporting function. PSE field personnel report observations or customers can submit hazard tree reports through the website and a PSE certified arborist will investigate and recommend mitigation as needed.

PSE inspects power lines in high wildfire risk areas every year in the months leading up to the start of high wildfire risk season. Each year, we update risk modeling data and incorporate operational experience and field personnel feedback to identify distribution and transmission lines for this preseason work.

7.3.2 PLANNED UPDATES

> *Describe changes to the utility's vegetation management practices (if any) that are anticipated in the upcoming three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.*

As risk knowledge improves and risks change due to climate change or system hardening investments, additional areas may be added to or removed from the scope of the pre-wildfire-season vegetation management work.

Additionally, PSE continues to investigate advanced technologies, such as satellite imagery, near infra-red, and machine-learning technologies, that may have applicability for identifying hazard trees that are not readily identifiable via standard inspection techniques. PSE is also collaborating with peer utilities to identify other vegetation mitigation techniques that may be applicable to PSE's system.

7.4 ASSET INSPECTIONS AND RISK MITIGATION

7.4.1 CURRENT STRATEGY OVERVIEW

Detail any instances where the utility is engaged in inspection practices or pilot projects (e.g., use of LiDAR, infrared, drones, etc.) for purposes of wildfire mitigation. For any inspection program descriptions, include detail on remediation practices. If industry standards are used as a basis for inspections, please cite and briefly describe the standard(s).

7.4.1.1 Pre-wildfire season patrols

In addition to the core vegetation management measures detailed above, PSE conducts targeted, annual pre-season inspections of distribution and transmission lines in higher-risk areas to assess conditions and perform proactive maintenance based on these findings. PSE works with all permitting agencies, jurisdictions, and land owners to expedite permits or easements to expedite permits and ensure this work is completed promptly.

7.4.1.2 Inspections and preventative maintenance

PSE's Electric Maintenance program also focuses on inspections, diagnostics, and planned preventive maintenance to proactively repair and/or replace infrastructure. A key Electric Maintenance program component is the Pole Inspection and Remediation program. This program assesses pole health, extends pole life, and addresses assets with declining health before they fail. PSE has prioritized the assets located within the high wildfire threat areas for pole inspection and remediation. The pole inspection program separates replacements into three categories, which include:

- **Reject (Replace in approximately 1-3 years):** Conditions that affect the integrity of the pole or would result in reduction of pole strength below NESC code requirements and should be targeted to be addressed in the next three years.
- **Priority Reject (Replace in approximately 0-12 months):** Condition represents significant structural concern and should be targeted to be addressed within the next year as a priority.
- **Emergency:** Condition represents imminent hazard or risk of catastrophic failure. Replaced in accordance with PSE's emergent process and do not follow the timeline above.

PSE's pole replacement program, which operates in parallel with the annual pre-season inspections, inspects distribution and transmission poles on a recurring 10-year basis. These program-based inspections assess pole condition at or near the ground and look for any obvious anomalies at the pole top. When these inspections identify transmission poles that need to be replaced, PSE collects end-to-end aerial LiDAR and aerial imagery which includes high-resolution photos. PSE then utilizes this LiDAR/imagery data to create 3D models of the transmission lines (in PLS-CADD). The LiDAR data is used to model the pole replacements which includes identifying potential clearance issues, encroaching vegetation, and access limitations/concerns.

Additional surveys that may be performed in conjunction with LiDAR inspections include UV imagery, which may be used to identify potential corona discharge. Corona discharge may indicate where there is potential electrical degradation and infrared imagery, which may be used to identify potential local heating. The decision to use ultraviolet or infrared inspections is based on various factors including wildfire risk, age, voltage, and maintenance history. The georeferenced LiDAR data is also being used to update PSE's transmission mapping, which will enable more accurate wildfire risk modeling of PSE's transmission assets.

7.4.2 PLANNED UPDATES

Describe any changes to the utility's inspection program that are anticipated in the next three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.

PSE is currently piloting Gridscope technology on targeted circuits to actively monitor asset conditions. These pole-mounted devices monitor local magnetic field changes, pole impacts, and other factors, and automatically alerts PSE System Operators about these events so they can dispatch line patrols to an exact location.

PSE is evaluating how to mature and expand asset inspection technologies described in the section above. This includes when to use ultraviolet or infrared imagery, drone-based photo inspections, and helicopter high-resolution photo and video. PSE is also evaluating opportunities to use LiDAR inspection data to identify vegetation near the lines or system damage to inform potential additional mitigation activities. PSE is evaluating the frequency of pole inspections in higher wildfire risk areas and may increase the frequency of these inspections in future years.

PSE will continue to assess existing inspection tools, new technologies, and industry best practices, and update plans to consider the most effective asset inspection tools and methods.

7.5 WORKFORCE TRAINING

7.5.1 CURRENT STRATEGY OVERVIEW

Describe any wildfire mitigation related workforce training or work rules/practices.

7.5.1.1 Critical Fire Weather Operational Procedures training and exercises

Training is provided at least annually to staff who play a role in implementing the Critical Fire Weather Operational Procedures, which are described in Section 4.2.2 (overview), Section 7.1 (weather monitoring), Section 7.6 (relay and recloser practices), and Section 7.7 (PSPS). Training materials were developed to allow for consistent, documented processes. Additional training may occur throughout wildfire season if procedures are updated.

Along with training, PSE conducts exercises to test both staff proficiency of Critical Fire Weather Operational Procedures and identify any gaps that need to be addressed. Multiple tabletop exercises surrounding PSPS procedures have taken place over the last two years, ranging from small group exercises to test specific portions of the procedures to larger-scale exercises that include representatives across the company and our contracted service providers. Further external exercises with partner agencies, such as local emergency management, have also been conducted to test the coordination and communication needs encompassing the deployment of Community Resource Centers (CRC) during a PSPS event.

When PSE implements Level 2 and higher actions in accordance with the Critical Fire Weather Operational Procedures, PSE notifies service providers of areas where non-emergency hot work and other major project work should be deferred.

7.5.1.2 Situational awareness tools training

New situational awareness tools implemented in 2024 created additional training needs for employees. Those who monitor awareness tools daily, around the clock, received more detailed training compared to staff who use the tools on an as-needed basis. User guides are available for quick reference, along with customer call support if staff have additional questions about the situational awareness tools.

7.5.1.3 Communication tools and procedures training

PSE developed and implemented new communication tools and procedures to support customer and partner notification in advance of and during a PSPS (details in Section 8.1.2). PSE staff with roles in the ECC, including PIOs, Communications Leads and other support staff, participated in training and exercises of new notification protocols. In addition, staff identified for a new ECC role as Targeted Notification Specialists (TNS) received training on the new emergency notification tool to send automated customer and partner notifications of PSPS. Employees identified to staff Community Incident Outreach (CIO) or at Community Resource Centers (CRCs) received Customer Support and De-escalation Training, which provides employees with tools and tactics to safely engage during high-emotion interactions.

7.5.1.4 Field safety training

Wildfire smoke is addressed in PSE's Yellow Book (Accident Prevention Program), in Appendix 5G Advisory Information for Employees Affected by Wildfire Smoke. This subsection outlines the responsibilities for both management and represented personnel in the event of working in wildfire smoke conditions. This includes specific Air Quality Index ("AQI") response levels, overview of controls, use of respiratory protection, training requirements, and two-way communication. Annual online training is conducted in the Yellow Book section addressing wildfire smoke.

The program outlines both administrative and engineering controls that may be used in the field in wildfire smoke conditions to reduce potential employee exposure. The forecasting of air quality (AQI) has been built into PSE's daily weather monitoring and forecasting analysis as provided by PSE's Meteorologist. PSE's two-way communication system is an automated notice that runs several times a day and alerts teams about potentially hazardous AQI levels, pending their location, as well as when the AQI has fallen under a hazardous threshold. The respiratory protection portion covers the use of N95 masks, with additional information within the formal Respiratory Protection Program. PSE deploys annual training on wildfire smoke safety precautions to all employees through an online training system, which is called PALMS. This training covers all elements mentioned in WAC 296-820.

Water trailers, also known as "water buffalos," are used to wet the ground near electric work in areas of higher wildfire risk. PSE's Electric First Response and Substation Operations staff complete a two-part classroom and hands-on training on how to safely use these trailers. Topics covered include equipment overview, basic operations, start/stop, water filling procedures of the tank, and water spraying from an assortment of attachments. Road hauling and potential maintenance issues are also covered in the course.

7.5.1.5 Service provider safety training

PSE service providers practice safety precautions during high fire danger as well. They adhere to the Industrial Fire Precaution Levels (IFPL) in Washington, managed by the Department of Natural Resources (DNR). The precautions are designed to reduce the risk of wildfires by regulating industrial activities on forest lands. These levels are activated as needed during the summer fire season and apply to approximately 13 million acres of private and state forestland. The IFPL system consists of four levels (these levels are different than the levels described in the PSE Critical Fire Weather Procedures):

- **Level 1 (Closed Season):** Fire equipment and a fire watch service are required. Operations are generally allowed but with precautions in place.
- **Level 2 (Partial Hootowl):** Certain activities, such as power saws, cable yarding, blasting, and welding or cutting of metal, are limited to the hours between 8 p.m. and 1 p.m. to reduce the risk of fire during the hottest part of the day.
- **Level 3 (Partial Shutdown):** Some activities are prohibited altogether, and others are limited to the hours between 8 p.m. and 1 p.m. This level is activated under higher fire danger conditions.
- **Level 4 (General Shutdown):** All industrial operations are prohibited. This level is implemented when fire danger is extreme.

For the line construction crews, their day begins with a companywide email communication detailing areas under a red flag warning as well as the 7-day significant fire potential forecast. Along with the daily tracking all crews carry multiple fire extinguishers along with wildfire specific tools consisting of a 5-gallon can, Pulaski, and round point shovels. In addition to the tools every yard has at least one water buffalo and drive-on fire blankets to deploy to higher risk jobs. All service provider field crews have completed wildfire training and their base leadership have been trained on the PSE wildfire operations procedures and work with the PSE Manager of Construction Management when PSE activates a Level 2 or higher operations to evaluate all work in construction and curtail any unnecessary energized work.

PSE's vegetation management service provider has established their own Wildland Fire Preparedness and Prevention Plan which outlines safety precautions that their field employees must take during high fire danger. Field staff are required to take part in training to become familiar with the safety requirements and protocols established in their plan.

7.5.2 PLANNED UPDATES

> *Describe any changes to workforce training efforts that are anticipated in the next three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.*

After action debriefs will be part of post PSPS activities as well as other operational activities. These lessons learned will be incorporated in future procedure updates and training refreshers. These debriefs will include both internal and external partners as appropriate.

In the next three years, PSE plans to continue training efforts with partner agencies to strengthen readiness for wildfire and PSPS events. This includes ongoing communication and tabletop exercises, including hazard workshops and other County EOC collaboration events.

PSE is assessing the need to use additional respiratory protection if work practices change and if personnel may be required to enter recently cleared wildfire locations in residential, commercial, or industrial areas. These additional safety measures may require use of a PAPR (Powered Air Purifying Respirator), due to unknown burning contaminants in these locations. If PAPR were implemented, field staff would receive training on how to effectively use the device.

Refresher training will continue to be provided each year on existing tools and technology. As new tools or technology and further refinement of procedures is incorporated, additional workforce training will be developed and implemented concurrently.

7.6 RELAY AND RECLOSER PRACTICES

7.6.1 CURRENT STRATEGY OVERVIEW

Describe the utility's associated protective devices and relay practices, including the use of pulse reclosers and other programmable controlled reclosers. Additionally, describe if the utility changes relay settings to more quickly or easily de-energize a circuit during certain conditions.

7.6.1.1 Fault protection technologies

PSE is deploying a variety of fault protection technologies and approaches that lower the impacts of faults. Combined, these measures help reduce the duration and available energy of a fault, thereby reducing ignition potential. While these technologies may result in larger and more frequent outages, they also are a valuable tool to reduce the amount of fault energy as an interim step prior to a PSPS in critical fire weather conditions.

PSE's fault protection technologies include:

- **Transmission and distribution automation:** These projects enable fault location detection, automatic isolation of faults, and the addition of more protective devices on the electrical system, which provides grid operators with increased flexibility to isolate higher-risk portions of the system during elevated fire weather conditions. Increasing the number of distribution system recloser installations provide similar wildfire benefits.
- **Enhanced Powerline Settings (EPS):** A key investment in 2024 was the design and implementation of Enhanced Powerline Settings. These settings have increased the sensitivity of fault detection for protective devices and removed any intentional time delay in tripping at reclosers to de-energize the line faster during a fault. When enabled, EPS reduces the amount of energy released during a fault. Furthermore, when EPS settings are active, automatic reclosing is disabled to avoid the potential for additional fault energy upon reenergization.
- **Substation upgrades:** These projects enable remote visibility and control of substation components via SCADA, resulting in the ability to remotely sectionalize and enable EPS.

7.6.1.2 Critical Fire Weather Operational Procedures Level 2 actions

During elevated fire risk weather conditions, PSE implements Level 2 actions in accordance with the Critical Fire Weather Operational Procedures, as described in Section 4.2.2. The actions and responsibilities for each action in Level 2 are summarized in Table 5 below.

Table 5. Critical Fire Weather Operational Procedures level 2 actions and responsibilities

ACTIONS	ACCOUNTABILITY
Disable reclosing for high-risk transmission lines	Load Office
Disable reclosing on high-risk distribution circuit and line reclosers (EPS)	System Operator
Enable instantaneous trip on high-risk distribution circuit and line reclosers (EPS)	System Operator
Develop recommendation to move to Level 3 or remain in Level 2	System Operations Supervisor
Make recommendation to move to Level 3	Incident Commander

A key goal of these activities is to reduce the duration and extent of energy that results during a fault, as well as reduce the arcing and expulsion of hot metal, which can occur in the operation of most standard fuses. These approaches include the enablement of Enhanced Powerline Settings and disabling automatic reclosing functions to avoid a second potential release of fault energy during high-fire risk conditions.

7.6.2 PLANNED UPDATES

Describe any changes to relay or recloser operations that are anticipated in the next three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.

Over the next three years, PSE will continue deploying EPS technology to additional high fire threat lines. Additional maturity in this area will include two areas of focus:

- **Enhancements to EPS:** PSE will install additional SCADA-enabled protective devices which will allow system operators to sectionalize the system remotely and deploy EPS at the sub-circuit level. This helps reduce the potential size and duration of reliability impacts while maximizing wildfire risk reduction.
- **Evaluating new technologies:** We continue to evaluate new electric system protection technologies and other tools that present opportunities to further improve EPS deployment. The results of these evaluations will inform the type and priority of EPS deployment based on the most effective risk reduction approach.

7.7 DE-ENERGIZATION / PUBLIC SAFETY POWER SHUTOFF

7.7.1 CURRENT STRATEGY OVERVIEW

Provide information about plans (if any) to proactively de-energize as it pertains to wildfire mitigation, this can include, but is not limited to Public Safety Power Shutoff guidelines. Summarize the conditions (if any) under which the utility may de-energize to prevent ignitions. Describe the protocols the utility would utilize when determining the appropriateness of proactive de-energization.

If a utility does not plan on enacting proactive de-energization, please list other mitigation strategies to limit asset related ignitions under critical fire weather conditions. Additionally, utilities describe notification protocols and procedures ahead of, during, and following a proactive de-energization.

Detail on restoration of service following a de-energization can be provided in Section 9.0.

7.7.1.1 Overview of Public Safety Power Shutoff procedures

In the spring of 2024, PSE updated our Critical Fire Weather Operational Procedures to include plans to implement a Public Safety Power Shutoff as a tool of last resort. These procedures, including an overview of operational levels and corresponding actions, are detailed in Section 4.2.2. Operational Levels 3 and 4 include protocols and actions relative to a PSPS. Level 3 includes planning and pre-shutoff activities, and Level 4 includes initiating the PSPS and restoring power after the weather "all clear".

7.7.1.2 Critical Fire Weather Operational Procedures Level 3

PSE will move to Level 3 when fire risk conditions are elevated and more than Level 2 thresholds. Weather forecasts and real-time fire risk modeling are continuously monitored as described in Section 7.1. The recommendation to move to Level 3 is made by the System Operations Supervisor. The decision to move to Level 3 is made by the Critical Fire Weather Incident Commander (IC). The IC is the Director of Electric Operations or other identified director with experience/training in the Critical Fire Weather Operational Procedures.

The following criteria are considered in making the decision to move to Level 3 or implement a PSPS:

- Pacific Northwest 7-Day Significant Fire Potential
- Red flag conditions are in effect or are forecasted
- Wind speed and wind gusts
- FireRisk data including:
  - Expected fire size potential
  - Fire size potential
  - Probability of fault
  - Fire Behavior Index (FBI)
  - Fire Potential Index (FPI)

In Level 3, PSE activates the ECC and staffs it with an Incident Management Team (IMT) who are trained in the requirements to plan for and implement a PSPS. IMT organizational structure and roles and responsibilities during a PSPS are detailed in Section 5.1.1.

The IC will determine which ECC positions to activate initially and expand the IMT as needed.

Detailed actions taken by the IMT during Level 3, including emergency partner coordination and communications, are detailed in Section 4.2.2.

7.7.1.3 Incident Action Plan

Once the ECC is activated, the Operations Section will conduct fire weather analysis. The IC approves the PSPS Incident Action Plan (IAP) in accordance with the Critical Fire Weather Operational Procedures and NIMS. The IAP documents:

- Priorities: Overall areas of focus to be carried out through the incident and used to drive operational priorities and objectives
- Current electric system status and actions taken
- Fire weather summary information and relevant insights from local fire districts
- Transmission and distribution circuits meeting de-energization considerations including:
  - Substations impacted by any transmission line de-energizations
  - Reliability assessment of impact of PSPS on ability to serve load
  - Map of impacted circuits
  - PSPS de-energization action plan including sections to be de-energized, action plan to isolate impacted zone, options to limit customer impacts
- PSPS de-energization coordination including:
  - Timing to initiate the PSPS
  - Bases to be opened
  - Key contact information

7.7.1.4 Level 4

The IC is responsible for communicating with the SVP, Energy Operations (or their designee) their recommendation to move to Level 4 or initiate a PSPS. Decision criteria will include assessing real-time weather station data and/or field conditions to confirm that the forecasted weather event is being observed prior to implementing the final measure to shut off the power.

Once the SVP, Energy Operations (or their designee) approve the decision to move to Level 4, the IC in consultation will confirm a de-energization time. The System Operations Supervisor will instruct System Operations and the Load Office (if applicable), to commence with the de-energization plan as documented in the IAP. The IAP will continue to be updated and utilized while implementing the PSPS and restoring power.

The actions and responsibilities for each action in Level 4 are summarized in Table 6.

Table 6. Critical Fire Weather Operational Procedures level 4 actions and responsibilities

ACTIONS	ACCOUNTABILITY
Log all actions taken by Operations into OMS.	System Operations
Open appropriate distribution circuit breakers in substation.	System Operations
Create an outage in OMS for each circuit.	System Operations
After the substation distribution breakers are open initiating the PSPS, open pre-defined feeder switches and re-closers to enable step restoration following the PSPS. In addition to logging in OMS, all switches and reclosers will be tagged with a Do Not Operate (DNO) tag in the field.	System Operations
Log all actions into transmission system log.	Load Office
Commence transmission de-energization after System Operations has completed distribution de-energization and indicated that they are ready for substation de-energization.	Load Office
Document system damage discovered during the PSPS and recovery phases on the PSPS circuits, such as branches on lines, lines down, failed equipment.	Field Personnel

7.7.1.5 Considerations for ending a PSPS

To end a PSPS event, the IC will issue the weather "all clear" by considering the following criteria:

- Forecast and field observations indicate that the extreme weather event has passed
- Red Flag Warning or conditions end
- Observed wind speed or wind gust
- Fire agencies and emergency management partner feedback

Once the decision is made to end the PSPS, the IAP details process for patrolling the system prior to restoration and restoration priorities. Additional information about restoring service after a PSPS is provided in Section 9.0.

7.7.2 PLANNED UPDATES

> *Describe any changes to the de-energization strategy or program that are anticipated in the next three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.*

Over the next three years, PSE plans to mature our PSPS strategy in the following ways:

- **SCADA-enabled protective devices:** PSE plans to install additional SCADA-enabled protective devices which will provide system operators with controls and automation that can sectionalize the system remotely. This allows us to respond efficiently during critical fire weather conditions and reduce the potential size and duration of reliability impacts, including a PSPS. Further information about future fault protection investments can be found in Section 7.6.2.
- **PSPS implementation plans:** We will continue to mature our risk knowledge and update our PSPS implementation plans based on this new information. This will include considering local risk knowledge as well as risk model information to implement PSPS at a sub-circuit level for the highest risk sections and only implementing PSPS for the entire circuit when appropriate.
- **Remote grid systems:** As discussed in Section 4.3.1.1, PSE is assessing the feasibility of using remote grid systems for wildfire mitigation. When implemented, these remote grid systems would serve customers with a combination of solar, batteries, and/or generators when power lines are de-energized, reducing the impacts of PSPS on those customers.
- **PSPS communications:** Section 8.2 details how PSE plans to enhance partner and customer notifications, education and outreach campaigns, and community support during PSPS events.

8.0 COMMUNITY OUTREACH AND PUBLIC AWARENESS

8.1 CURRENT COMMUNITY OUTREACH AND PUBLIC AWARENESS PROGRAM

> *Provide a description of customer communication efforts or programs related to wildfire mitigation performed over the past three years. If any evaluations or assessments of customer communications were performed, briefly describe the findings as appropriate. This may include efforts to increase awareness that a WMP exists, notification of activities under the WMP, etc. If the Utility utilizes proactive de-energization (or PSPS) protocols, this section may be used to describe any efforts made to educate or interact with the public regarding customer awareness of the utility's protocols.*

8.1.1 PAST OUTREACH AND PUBLIC AWARENESS CAMPAIGNS

Over the past three years, Puget Sound Energy (PSE) has worked to communicate our wildfire risk mitigation and response plans, objectives, and tactics with the public to build trust and partnerships, understand community impacts of our mitigation efforts, provide resources, and to help our customers prepare for and increase resiliency to wildfire risks.

8.1.1.1 2022: Community conversations

In 2022, PSE held three community meetings in Kittitas and east Pierce counties regarding wildfire mitigation and response planning, which included two-way community discussion about potential implementation of PSPS, community questions and concerns, anticipated impacts, and community needs. This effort expanded our understanding of customer concerns and helped inform our communication plans and PSPS planning efforts in 2023.

8.1.1.2 2023: Incorporating community feedback

When developing our plans, PSE solicits and incorporates feedback from impacted customers and communities using tools like community meetings, partner briefings, workshops, and more. This type of feedback is used to:

- Develop Community Impact Assessments and mitigation strategies
- Identify opportunities for community partnership and future customer support efforts
- Identify communication tools, tactics and channels that are relevant in the community
- Inform operations and grid hardening planning efforts with community-specific knowledge

We worked in 2023 to assess, research and incorporate the community and partner feedback received during previous and ongoing outreach into the Critical Fire Weather Operational Procedures, and particularly our PSPS communication plans. Some consistent themes we heard in our outreach and incorporated in our plans are described in detail in Appendix A.4.

In 2023, our pre-wildfire season outreach focused on education and awareness for all customers, with an additional emphasis in higher risk areas. PSE provided information about our Wildfire Mitigation Plan, outlined steps customers can take to reduce risk and prevent wildfires, and directed customers to resources available to help prepare their families, homes, and communities for wildfire season. Examples of outreach include:

- **Pre-season email and postcards:** PSE sent communications to customers in higher risk areas which included more detailed wildfire season preparation and safety information, information about PSE's vegetation management practices, relevant system hardening projects in the area, and information about how PSE is incorporating the feedback from the 2022 community meetings to further develop PSPS plans.
- **Community events:** Examples include DNR's Wildfire Ready Neighbors events in Orting and Wilkeson, Washington, and Day of Preparedness events on Bainbridge and Whidbey Islands.
- **Customer bill inserts:** The June and August editions included wildfire season preparedness and wildfire season safety messages, respectively.
- **Social media:** Pre-wildfire season preparation messages were included on PSE's social media platforms.

8.1.1.3 2024: PSPS education and outreach

In 2024, PSE expanded upon previous pre-season engagement to prepare communities and customers for the potential use of PSPS, including more information about how and where to receive updates and notifications, how to prepare for PSPS, and additional resources available. PSE used several communication and outreach strategies ahead of wildfire season and throughout the summer:

- **Open houses and online open house:** PSE hosted seven open houses in the spring in higher risk areas, with a corresponding self-paced online open house, to share information with our customers about how PSE is reducing wildfire risk, PSPS, and how customers can prepare for wildfire season.
- **Partner coordination:** PSE coordinated with emergency response partners, Tribal nations, local governments and city councils, and organizations who serve high-risk communities and vulnerable populations in advance of the open houses described above. We offered pre-open house briefings to these partners as well as partner "toolkits" with template language, graphics, and resources like fact sheets for these organizations to tailor to their needs and share through their communication channels. Partners tabled and shared information at the open houses, including local fire districts and county emergency management offices, DNR, Red Cross, Vashon BePrepared, and Skagit Land Trust. Section 5.2, Section 5.3, and Section 5.4 detail our ongoing coordination with these partners.
- **Open house promotions:** The open house events were promoted via mailed invitations to customers in high-risk areas, newspaper advertising, social media advertising, content in PSE's "The Voice" bill insert, proactive media engagement, and partnerships with local emergency response groups and organizations.
- **Webpage updates:** Updated PSE's wildfire webpages to include detailed information about how to prepare for, and what to expect from, a PSPS. PSE's wildfire webpages include translation to six languages, making them an accessible resource for our communities and customers.
- **Print materials:** Created materials in English and Spanish on important wildfire topics, like what to expect and how to prepare for PSPS.
- **Partner briefings and toolkits:** Engaged with community partners, including those who serve non-English speaking populations, to increase awareness of PSPS, Medical Life Support program, and PSE's Wildfire Mitigation Plan. Shared toolkits with messages, print materials and graphics they could use to communicate through their channels.
- **Community events:** Attended local community events to share information on PSE's WMP, with emphasis on PSPS.
- **Medical Life Support:** Targeted outreach, including mailers, emails, and phone calls, to customers currently enrolled in PSE's Medical Life Support program to increase awareness and preparedness within that group.

A summary of 2024 communications and outreach "by the numbers" can be found in Appendix A.4.

8.1.2 PSPS COMMUNICATIONS AND NOTIFICATION PLAN

PSE will communicate with impacted customers, partners, and the public in advance of and during a PSPS. Our goal is to notify customers two days before a PSPS outage starts, but weather conditions can change quickly, and timing is dependent on the weather forecast.

We will continue to provide updates at least every 12 hours in the lead up to the outage, during the outage, and until power is restored.

8.1.2.1 PSPS notifications

PSE will communicate with potentially impacted customers, partners, and Medical Life Support customers via automated notifications and in some instances, phone calls to notify or coordinate directly.

Partner notifications and coordination: We will issue priority notifications to partner agencies when a PSPS is possible and will coordinate closely with emergency response partners to identify potential public safety concerns and identify locations for Community Resource Centers.

Customer notifications: PSE will communicate with impacted customers in advance of and during a PSPS. Our goal is to notify customers two days before a PSPS outage starts, but weather conditions can change quickly, and timing is dependent on the weather forecast. Customers will receive automated call, text, or email alerts, based on their account preferences.

Medical Life Support: Customers with Medical Life Support status noted in their PSE account will receive earlier notification, when possible, via phone call from PSE Customer Care, in addition to receiving regular customer alerts. Customers can learn more about Life Support status at pse.com/medical.

Figure 13. PSPS notification types

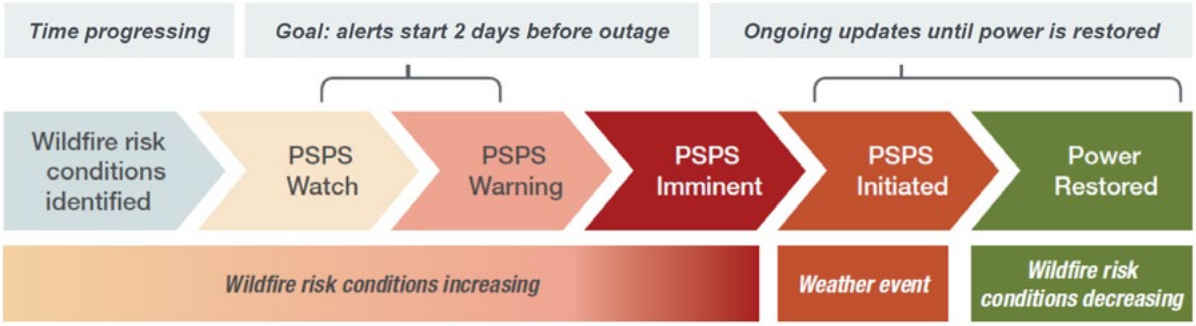


Table 7. PSPS notifications, timing, and messaging

TYPE	APPROXIMATE TIMING	MESSAGING
Watch	>48 hours before shutoff start	PSPS is possible
Warning	Goal: 48 hours before shutoff start	PSPS is probable/likely
Imminent	Once shutoff is confirmed	PSPS is imminent
Initiated	When shutoff starts	Power is out
Update	Ongoing	Status updates at least every 12 hours about weather event, restoration progress, estimated times of restoration, etc.
Restored	When power is restored	Power has been restored

8.1.2.2 Where to find PSPS updates

In addition to automated notifications to customers and partners, PSE will share updates about anticipated or ongoing PSPS outages in the following ways:

- **Website:** All PSPS notifications and updates will be shared on pse.com/alerts, which will include links to information about how to prepare, maps of potentially impacted customers, locations of Community Resource Centers, and more. The site translates to Spanish, Chinese (Mandarin), Russian, Vietnamese, Korean, and Hindi. It also allows for the use of ADA-accessibility tools such as screen readers.
- **Web banners:** Banners activated on pse.com to indicate that PSPS watch/warning/etc. is in effect and linking to the alerts page for more information.
- **Outage map:** After the weather "all clear", estimated times of restoration (ETRs) will begin to populate on the outage map as line patrols progress. People who do not have a PSE customer account can opt-in to receive status updates via email or text message about an active PSPS outage event by signing up on the outage map.
- **Media and social media:** Updates and notifications shared through the media and PSE's social media channels.
- **Partners:** Information and updates shared with and through partner agencies and community organizations.
- **Community Information Outreach:** PSE staff sharing PSPS information and updates at Community Resource Centers and other community locations. More details in the next section.

8.1.2.3 Community Incident Outreach and Community Resource Centers

Community Incident Outreach (CIO) staff are PSE employees who provide PSPS information and updates to the community via on-the-ground outreach. CIOs may conduct outreach and community awareness during the PSPS watch or warning phases at high-traffic community "hubs" like outside of a grocery store.

During a PSPS event, PSE may open Community Resource Centers (CRCs) where community members can access basic support including charging for electronic devices and medical equipment, water, snacks, ADA-accessible restrooms, updates about the PSPS event, and other items.

PSE will coordinate with county and local emergency management offices to understand current public safety concerns and select locations for the resource centers. The CRCs will be in or near the community impacted by the outage. The locations of CRCs will be shared on pse.com/alerts and through partner organizations.

Once the shutoff has started, CRCs will be open during daytime hours, and hours will be listed along with locations on our website. CRCs are not emergency shelters or evacuation centers and do not provide overnight services.

8.1.2.4 Post-event survey

After a PSPS event, PSE will send a survey to impacted customers to evaluate if and how well communication methods worked and identify issues or concerns to inform future communication plans or community resources.

8.2 PLANNED UPDATES

> *Describe any changes to customer communication and public awareness strategies or programs that are anticipated in the next three years. If applicable, describe what led to the change and the anticipated benefit or improvement once implemented.*

8.2.1 TECHNOLOGY IMPROVEMENTS

PSE will continue to identify and integrate technology to support communication with customers and partners about our Wildfire Mitigation Plan. Examples include:

- **Enhancing PSE's outage map capabilities:** PSE's outage map is an important resource for customers to see current system outages and estimated times of restoration (ETRs). With the recent implementation of a new Outage Management System (OMS) and Advanced Distribution Management System (ADMS), PSE is working to enhance our outage map to provide easily accessible information about potential/active PSPS outages. We are currently reviewing peer utility outage maps and consulting with IT and other internal users to identify desired features, with a target to publish the updated outage map ahead of the 2025 wildfire season.
- **Improving partner communication and contact information tracking:** PSE recently contracted with Consultation Manager to implement a database to track partner communication and contact information. This database will allow PSE staff to maintain updated emergency contact information for partners in a centralized location, document when and who we send PSPS priority partner notifications and track real-time conversations and elevate identified issues during an emergency response. This database will be implemented in fall 2024.

8.2.2 EDUCATION AND OUTREACH ENHANCEMENTS

PSE will evaluate the effectiveness of our existing education and outreach tactics and materials using community feedback, partner insights, lessons learned from previous outreach, and industry best practices. Areas of focus for future updates include:

- **Post-PSPS outreach:** PSE plans to hold follow up community meetings in any areas where PSPS is utilized, as applicable.
- **Expanding spring outreach:** Our goal is to expand our targeted spring outreach to audiences in medium risk areas, potentially including additional open houses, partner coordination, and community event outreach.
- **Language access:** PSE will expand our translated print materials and resources (currently available in Spanish) to include Russian, Vietnamese, Chinese, Korean, and Hindi.
- **Educational tools:** We will continue to develop more robust educational tools and ADA-accessible resources, potentially including videos, children's activities, and interactive multimedia.

8.2.3 COMMUNITY RESOURCES AND SUPPORT

PSE is fortunate that as of the writing of this document, we have not yet had to use PSPS as a tool of last resort. While we have collected feedback and discussed potential impacts with customers and partners, we lack direct experiential knowledge of the impacts such an event will have on the affected community, and of the efficacy of our current community support efforts.

Through benchmarking and inter-utility partnerships, PSE is also aware of additional steps some utilities with more experience and program maturity have taken to develop community support programs, which inform our "roadmap" of possible future investments to explore. Examples of these potential investments include enhancing direct support to customers with medical vulnerabilities, expanding the capacity and reach of our CRCs, and exploring institutional giving to increase community resilience.

9.0 RESTORATION OF SERVICE

Within this section, provide the detailed process for restoring service after an outage as outlined by the utility during high wildfire risk conditions or following a de-energization or wildfire event. When applicable, reference specific sections within the utility's restoration plan (if available) that detail the utility's protocols before during and after restoration.

9.1 OVERVIEW

The Energy System Restoration Plan (ESRP) provides a comprehensive framework for responding to incidents and is scalable for small to large outages. It also provides our regional emergency response partners with a summary of how PSE responds to energy system emergency incidents. This plan is used for restoration of services for all service interruption causes.

Details of the ESRP can be found at https://www.pse.com/-/media/PDFs/Energy_System_Restoration_Plan.pdf and both the standard and the PSPS-specific restoration processes are discussed below.

9.2 STANDARD SERVICE RESTORATION PROCESS

The ESRP is PSE's emergency response plan and includes a description of PSE's service territory, potential hazards, plan activation, training, organizational structure, and response strategies. This plan does not provide process-specific procedures already detailed in other PSE documents[2].

At the onset of an event, Electric System Operations centrally manages response efforts. When the number of outages and complexity of a situation increases, Electric System Operations transitions oversight of tactical restoration and dispatch to the impacted local electric Operating Base/s.

When an emergency is reported or anticipated, Electric System Operations will consult with appropriate leadership to determine whether to activate the Emergency Coordination Center (ECC). The opening of the ECC and Operating Bases is determined by the size, complexity, and nature of the event-response resources needed.

9.2.1 EVENT RESPONSE

Initial mobilization includes the calling out of a core team of storm room staff as well as field personnel including damage assessors, Public Safety Teams, Electric First Responders, and line crews. Once conditions in the field have stabilized and System Operations declares an "all-clear," damage assessment can safely begin in earnest.

Restoration work is assigned after a damage assessment has been performed. Once the type of damage and work is known, the appropriate resource is dispatched to begin restoration work. Generally, energy distribution facilities are restored in this order:

1. Transmission
2. Distribution
3. Individual services

The ESRP outlines PSE's restoration priorities. Preservation of life and safety are PSE's highest priorities. PSE learns of life and safety impacts or incidents in various ways, including 911 dispatcher intake, high-priority customer calls routed through the PSE Call Center, "windshield survey" or field discovery, and high priority calls from emergency response partners.

In-field and System Operations situational awareness will continue to drive reprioritization throughout the restoration phase. Similarly, restoration timelines are dependent on the location and severity of repairs discovered, as well as crew/resource availability.

2 Including Electric Line Work Practices and Standards, Electric Substation Work Standards, Electric Design Standards, and Energy Emergency Plan.

9.3 PSPS-SPECIFIC RESTORATION PROCESS

In the event of a service interruption from a PSPS, PSE generally adheres to the same ESRP processes summarized above, along with the additional considerations outlined below.

9.3.1 PRE-PSPS IMPLEMENTATION PREPARATIONS

A key component of PSE's preparation and response strategy is the early, strategic mobilization of qualified Electric First Response (EFR) employees, as well as repair crews, within the regional boundary of a PSPS. Safely mobilizing resources ahead of strong winds and critical fire weather, while keeping our employees at a safe distance, is crucial for ensuring a quick and effective response.

During the preparation and execution of a PSPS, PSE will activate the ECC, as well as one or more regional emergency Operating Bases. PSE adheres to the National Incident Management System (NIMS) Incident Command Structure . Details about PSE's Incident Management Team structure, roles and responsibilities are included in Section 5.1.1.

As described in Section 7.7.1, PSE develops an IAP prior to implementing a PSPS. This includes developing a restoration plan specific to the PSPS event and staging first response resources and repair crews within or near a PSPS area (PSE follows a similar process when de-energizing in response to an active fire as well). These crews are then ready to respond quickly when it is safe to do so.

9.3.2 PSPS EVENT RESPONSE

PSE will deploy qualified field employees to begin assessment and patrol of the electric system when the critical fire weather conditions have passed. Waiting for the weather to pass before initiating field inspections of electrical infrastructure is crucial for several reasons. First, this ensures employees remain at a safe location during hazardous conditions. Second, all impacted overhead infrastructure must be inspected prior to re-energizing because an ignition could occur if vegetation that fell into an electric line during a PSPS remained in contact after re-energizing.

Once field conditions are safe and the IC communicates the "all clear," restoration may begin. The ECC Operations Section will develop a recovery plan that will include:

- Circuit and/or transmission restoration prioritization
- Approximate date and time that restoration will begin
- The approximate resources required to perform work for each region and circuit/line
- Estimated time of restoration for each circuit/line

The recovery plan is distributed to regional storm base personnel who will coordinate any needed repairs to the system prior to restoration.

9.3.3 RESTORATION PRIORITIZATION

Following the intake and handling of life-safety/911 calls and those relative to customers with life support designations, which are always the paramount restoration priorities, PSE prioritizes restoration of the circuits serving the highest concentration (# of customers/circuit) of customers[3] identified as members of Vulnerable Populations[4]. PSE further prioritizes restoration based on the presence, volume, and type of critical infrastructure assets associated with a specific circuit.

9.4 AFTER RESTORATION OF SERVICE

After-Action Reviews (AAR) are conducted following ECC activations to examine how well our plans and preparedness efforts performed during the incident and where improvements may be appropriate. AARs are typically held within functional areas such as System Operations, Operating Bases, etc., with an overall AAR held to include the ECC as well as functional area representation. Following the initial PSPS event, PSE would anticipate conducting an AAR with input from partner agencies and interested parties including local emergency response partners, the office of Energy Resilience and Emergency Management, WUTC staff, and local fire departments.

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3 Organizational charts and detailed roles and responsibilities for positions activated during a response can be found in Sections 3.11. Section 3.15.3, Section 4.5 and Section 4.5.1.1 of the ESRP.

4 As defined by RCW 70A.02.010, which defines Vulnerable Populations as those that are more likely to be at higher risk for poor health outcomes in response to environmental harms due to adverse socioeconomic factors, high housing/transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes.

10.0 EVALUATING WMP

> *Within these sections, provide information on how the utility tracks and evaluates the performance of its wildfire mitigation plan and the associated mitigation efforts. If this is an initial WMP submission, some sections may not apply or have any historical context. In such cases, the section can be used to describe future states if such information is known. If leaving blank, please indicate that the information is not yet available.*

PSE has developed performance metrics to track, evaluate, and report progress on our strategies and tactics to reduce wildfire risks and meet the objectives of this plan. These metrics are reviewed in combination with customer and environmental risk metrics, and describe work delivered, evaluate the effectiveness of that work, and provide insights for improvement or new opportunities. We also incorporate lessons learned from previous wildfire seasons and interactions with regulators, customers and communities, peer utilities, emergency response agencies, industry groups, and others. Performance metrics are described in Section 10.1 and detailed data is included in Section Appendix A.

These performance metrics and lessons learned are used to identify opportunities for continuous improvement, and Section 10.2 details the adjustments and improvements PSE has made to our Wildfire Mitigation Plan ahead of the 2024 wildfire season.

Additionally, Quality Management (QM) practices used to assess wildfire risk management work performed by PSE's service providers and contractors are detailed in Section 10.3.

10.1 METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

> *Provide metrics that are relevant to the utility's wildfire mitigation efforts described in the WMP and that measure or benchmark the utility's performance on such mitigation efforts. If desired, full metrics or tracking can be attached in the Appendix.*

The sections below detail the metrics PSE collects in each core element to measure the performance toward meeting our stated objectives for the Wildfire Mitigation Plan (introduced in Section 4.0).

10.1.1 SITUATIONAL AWARENESS

Objective: To understand the real-time and long-term wildfire risk in PSE's service area through development and maturity of the appropriate assessment tools.

PSE's work to enhance risk modeling capabilities are evaluated with the following metrics:

- Acceptance of Technosylva contract deliverables (number/type of deliverable)

PSE currently tracks progress to expand and operationalize our situational awareness tools through these metrics:

- Weather stations installed (number/location)
- Smoke-detecting (Pano) cameras installed (number/location)
- Training for situational awareness tools/processes (type/number)

As we integrate these tools into our operational procedures and decision-making processes, we will incorporate additional performance metrics to evaluate the effectiveness and inform planning for future investments.

Examples of potential/future metrics include:

- Alerts issued per PSE Pano camera (number annually)
- Occurrences when PSE weather stations informed decision to move to level 2/3/4 of Critical Fire Weather Operational Procedures (number annually)

10.1.2 GRID HARDENING

Objective: To leverage grid hardening and modernization programs to reduce ignitions and improve wildfire resiliency.

PSE conducts targeted, annual pre-season inspections and vegetation management of distribution and transmission lines in higher-risk areas to assess conditions and perform proactive maintenance, and documents the following metrics related to this work:

- Transmission and distribution lines inspected pre-wildfire season (miles)
- Findings and remediation activities (number)
- Pre-season vegetation management (miles)
- Trees trimmed and removed (number)

To document work completed over time to harden the electric grid, PSE tracks these metrics in areas with High Fire Threat scores (HFT described in Section 6.2.2):

- Covered conductor installed (miles)
- Poles replaced (number)
- Conductor undergrounded (miles)
- Devices upgraded with EPS (number)
- New SCADA-enabled reclosers installed (number)
- Upgraded SCADA-enabled reclosers installed (number)
- SCADA upgrades to circuit breakers (number)
- Transmission automation schemes installed (number)
- Distribution automation schemes installed (number)

Objective: To embed equity into the planning and execution of wildfire mitigation strategies.

As described in Section 4.1.2, PSE incorporates equity considerations when determining where to invest in grid hardening for wildfire mitigation. We are early in the process of collecting data related to this work and will plan to report metrics in future iterations of this Plan.

10.1.3 OPERATIONAL PROCEDURES

Objective: To uphold the safety of PSE's communities and employees as a core operating principle.

The below metrics help evaluate the operational safety of the electric system:

- Outages on transmission and distribution (number and cause, over time)

PSE tracks metrics to evaluate progress and effectiveness of educational campaigns and training programs, including:

- Wildfire-related all-employee safety messages (number/topic)
- Wildfire-related all-employee safety training and events (number/topic)
- De-escalation training for customer-facing employees (number of sessions/total attendance)
- Fire suppression/water buffalo training for field employees (number of sessions/total attendance)
- PSE gas and electric emergency responder training[5] provided (number)
- Wildfire-related safety messages included in all-customer communications (number/topic)

Objective: To implement mitigation solutions that balance the risk of wildfire with the safe and reliable delivery of energy by prioritizing higher risk assets and geographic areas.

PSE implemented our Critical Fire Weather Operational Procedures (as described in Section 4.2.2) in 2024, and we are in the early phases of collecting data on the use and effectiveness of these procedures. In future updates of this plan, PSE intends to track and evaluate performance metrics for Critical Fire Weather Operational Procedures.

Current metrics include:

- Public Safety Power Shutoff events (number)
  - PSPS events >10 minutes (number)
  - Average duration of PSPS event before power restored (minutes)

Potential future metrics include:

- Critical Fire Weather Operational Procedures levels
  - Incidents of implementing each level (number)
  - Time at each level (duration at each level, over time)
- SAIDI/SAIFI relative to circuits with EPS turned on
- SAIDI/SAIFI relative to circuits experiencing PSPS

10.1.4 COMMUNICATIONS AND OUTREACH

Objective: To engage with customers and communities in the ongoing development of the Plan and acquire and incorporate feedback, particularly as it relates to customer safety and electric reliability.

When developing our plans, PSE solicits and incorporates feedback from impacted customers and communities using tools like community meetings, partner briefings, workshops, and more. We document, analyze, and respond to this qualitative data using the following process:

- **Type of feedback we heard:** Includes opportunities, recommendations, potential impacts, and information gaps.
- **Incorporating feedback:** How we incorporated/addressed this feedback, or, if feedback was not incorporated, why it was not.

A high-level summary of feedback we have heard over the past three years and how/if it was incorporated into our plans is included in Appendix A.4.

Objective: To inform customers of PSE's wildfire preparedness and risk reduction measures, where to find information and how to prepare for a PSPS, and available resources and community support.

PSE documents the communication and outreach work completed in support of the Wildfire Mitigation Plan, such as tactics, timing, frequency, and reach. The 2024 "Communication and outreach by the numbers" summary is included in Appendix A.4.

5 PSE | Emergency Responders Training

Typical metrics may include:

- Number of PSE-hosted community meetings/open houses and attendance
- Participation in partner and community outreach events and approximate attendance
- Online open house page views and durations
- Social media reach and engagement metrics
- Earned media metrics
- Number of mailers, newsletters, postcards and more

PSE will collect and report in the future qualitative metrics about the effectiveness of our communication methods, outreach campaigns, and educational information through the following methods:

- Post-PSPS surveys to customers impacted by a PSPS to evaluate notification methods and timing and community support needs (Section 8.1.2.4).
- Post-wildfire season emergency response partner debriefs to evaluate coordination efforts and identify areas for improvement (Section 5.4).
- Comment cards and short surveys distributed at public events and community meetings.

PSE is investigating future evaluation metrics as well, including:

- Pre- and post-wildfire season all-customer surveys to better understand the effectiveness of our awareness campaigns and educational tools over time.

Objective: To collaborate with fire agencies and emergency response partners to develop operational and communications processes that promote the safety of PSE employees and the public during an emergency.

PSE documents collaboration efforts with fire agencies and emergency response partners. Typical metrics include:

- Partner briefings/presentations (number, by type)
- Elected official/council meeting presentations (number)
- List of emergency response/management workshops, seminars, working groups, etc.

Partner coordination summary and metrics are included in Appendix A.4.

Objective: To continuously improve the Plan by advancing our knowledge, incorporating best practices, and learning from others.

PSE's continuous improvement efforts are documented in Section 10.2.

10.1.5 CUSTOMER AND ENVIRONMENTAL RISK METRICS

In addition to collecting and evaluating performance metrics in support of our Wildfire Mitigation Plan objectives for each core element, PSE tracks additional customer and environmental risk metrics to inform our planning and continuous improvement efforts.

The following environmental risk metrics are included in Appendix A.5:

- Red flag warning (number of days in PSE service territory)
- High wind warning (number of days in PSE service territory)

Additionally, PSE plans to track customer metrics related to wildfire risk and mitigation over time, including:

- Customers on High Fire Threat circuits (average annual number)
- Customers with Medical Life Support designation (average annual number in HFT)

10.2 IDENTIFYING AND ADDRESSING AREAS OF CONTINUED IMPROVEMENT IN THE PLAN

> *When applicable, describe adjustments, improvements, or additions to the plan derived from established metrics including, lessons learned, or any other processes contributing to continuous improvement efforts.*

PSE identifies opportunities for continuous improvement of our Wildfire Mitigation Plan using the performance metrics, community and partner feedback, industry best practices and lessons learned described in Appendix 10.1.

Adjustments and additions made in preparation for the 2024 wildfire season are described below.

10.2.1 SITUATIONAL AWARENESS

Understanding risk is essential to maturing all facets of our Wildfire Mitigation Plan. In Section 6.0, we detail our wildfire risk modeling strategies, which included the following improvements or enhancements in 2024:

- Hiring consulting firm Technosylva to enhance our risk modeling data and develop a real-time fire risk platform for operational decision-making.
- Advancing our High Fire Threat and Probability of Fault assessment (Section 6.2.2), which expanded the focus areas for pre-season inspection and remediation work, planning for grid hardening investments, and audience identification for community outreach.
- Hiring a full-time meteorologist to support situational awareness and operational decision-making.
- Installed weather stations (Section 7.1) and smoke-detecting cameras (Section 5.4.4) in targeted high-risk locations to improve situational awareness, operational decision-making, and emergency response.

10.2.2 GRID HARDENING

Identifying and approving specific projects and strategies relies heavily on performance metrics, as well as risk modeling improvements and collaboration with peer utilities, industry associations and regulators to identify new technologies and incorporate lessons learned.

Figure 3 (Section 4.3) shows the grid hardening investments that were made in 2024 shows planned/future investments.

Examples of grid hardening projects that incorporate continuous improvement practices include:

- **Highway 903 Strategic Undergrounding Project:** Risk modeling conducted in 2022 identified the Hwy 903 corridor in Kittitas County as higher risk. During community meetings held that same year, we learned that this stretch of road also presents a community concern about ingress and egress, and potential evacuation routes during an emergency. As a result, PSE is investing in a project to move about 5 miles of overhead power lines underground along Hwy 903 near Cle Elum Lake. This project is in the design phase, and we anticipate it will be complete by 2025.
- **Highway 903 Lateral Undergrounding Project:** With the development of additional risk modeling data, including TechnoSylva's High Fire Threat map (details in Section 6.2.2) and feedback from Electric First Response personnel, PSE identified additional power lines for undergrounding along the Highway 903 corridor. PSE will move approximately 1 mile of overhead lateral power lines (or the lines that branch off to serve smaller areas like neighborhoods) to underground. Undergrounding these lateral lines will further reduce wildfire risk and the impacts to customers from using operational measures, such as PSPS. This project is currently in the initiation phase, and estimated to be complete by 2027.
- **Strategic Lateral Undergrounding Project:** Electric First Response (EFR) personnel, responsible for pre-wildfire season patrols and emergency electric response, made suggestions for lateral power lines in areas with high wildfire risk that are good candidates for undergrounding. EFR provided field observations to PSE's planners to help identify remote lateral lines in areas with limited roadway access that may be difficult to evacuate from or to access to make repairs. This information identified opportunities for risk reduction that could be overlooked using mapping tools alone. Based on their 2024 suggestions, reliability planning submitted just over 16 miles of existing overhead lateral power lines on six different circuits to be converted to underground. These projects are anticipated to be complete by 2027.

10.2.3 OPERATIONAL PROCEDURES

In 2024, PSE continued to expand the capacity and organization of our staff to support the operational procedures and mitigation strategies described in this plan, including:

- Formed dedicated Wildfire Risk Management team within Electric Operations. Added two full time managers to focus on wildfire risk management and wildfire program management.
- Hired an Emergency Management Manager and a Meteorologist to support PSE's Critical Fire Weather Operational Procedures.
- Executed an organization-wide change management effort to familiarize employees at every level of the company with our Critical Fire Weather Operational Procedures and successfully adopt new processes and procedures.

10.2.4 COMMUNICATIONS AND OUTREACH

Since 2018, PSE has collaborated with our customers and communities, emergency response partners, local governments, and community organizations to gather feedback and suggestions that were essential when developing our Critical Fire Weather Operational Procedures, completed in 2024. These improvements to our plan are reflected throughout this document, including:

- Comments and feedback informed PSPS operations and communication planning (see Appendix A.4 for examples).
- Planning for a coordinated response effort during an emergency or a PSPS (Section 5.4).
- Identifying critical infrastructure and facilities for planning purposes (Section 5.2).
- Understanding and planning for how to best support the community, including medically vulnerable customers, during a PSPS (Section 8.1.2.3).

PSE continuously incorporates industry best practices and standards to improve the effectiveness and accessibility of our communications and outreach efforts, including:

- Improving the accessibility of our web content
- Applying best practices for public participation into the planning and execution of our communication and outreach plans (International Association for Public Participation or IAP2)
- Expanding language accessibility of informational materials and at community events, including American Sign Language

10.3 MONITORING THE PERFORMANCE OF INSPECTIONS

> *Describe processes for monitoring the performance of inspections, including inspections performed by contractors. This section may include any assurance or control protocols for reviewing inspection quality.*

PSE's Quality Management (QM) team performs oversight of PSE's service providers and contractors that perform construction, operations, and maintenance work on the company's electric and natural gas transmission and distribution systems. QM requires and will oversee that service providers have a quality control plan (QCP) and that the plan is effective at ensuring the work adheres to PSE quality, design, and construction standards. QM then conducts routine meetings to review service provider internal inspections or audits, discuss findings, and to track any trends identified. We use a system of audit and inspection activities to monitor the quality control efforts of those performing work to assess whether the controls are adequate to meet our standards and procedures. As it relates specifically to wildfire mitigation, QA inspectors review 100% of vegetation management work completed on our 230 kV lines and sample inspect vegetation management work completed on our distribution and high-voltage distribution lines.

In addition to the oversight provided by PSE's QM team, our internal arborists oversee the wildfire vegetation management work done by our contractor. Similarly, PSE's Construction Performance Management team provides oversight of construction work that is performed by our Service Providers on a regular basis, which includes wildfire mitigation projects. This oversight occurs as the work is in-progress to ensure that it is performed safely and complies with PSE guidelines and construction standards.

APPENDIX A. PERFORMANCE METRICS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

A.1 SITUATIONAL AWARENESS METRICS

Table A-1: Technosylva contract deliverables

DELIVERABLE	DESCRIPTION	DATE RECEIVED
Fire Risk Software	Risk modeling software that provides a four day outlook of fire risk across PSE's electric service territory	2/29/2024
Standard Operating Procedure Onboarding Services	Consultation of PSPS procedures	5/21/2024
Upgrade to Enhanced Data	Upgrade to proprietary data including Weather Research and Forecasting (WRF) Historical Re-Analysis Weather Data, WRF Daily Weather Operational Data, Surface and Canopy Fuels Data	7/5/2024
Fire Potential Index	The Fire Potential Index (FPI) quantitatively estimates the fire activity potential territory-wide and leverages hourly 1km weather data and a remote-sensed daily fire occurrence dataset	8/16/2024
FBAN	Fire Behavior Analysis (FBAN), monitoring and analysis for active fires	Ongoing as needed through duration of contract

Table A-2: Device installations by year

DEVICE	2022*	2023*	2024**
Weather stations	N/A	N/A	20
Pano cameras	N/A	N/A	6

* Typical reporting will include preceding three years, but installation did not begin until 2024.

** YTD as of August 31, 2024.

Table A-3: Training for situational awareness tools/processes, 2024*

TOOL/PROCESS	NUMBER OF TRAINING EVENTS
Technoslyva	4
Weather stations	2
Pano Cameras	2

* YTD as of August 31, 2024.

A.2 GRID HARDENING METRICS

Table A-4: Targeted pre-season inspection miles by year

	2022	2023	2024
Distribution (miles)	460	460	608
Transmission (miles)	281	281	353

Table A-5: Distribution findings and remediation activities, by year

PRESEASON REMIDIATION ACTIVITIES (NUMBER)	2022	2023	2024
Cutout protectors	N/A	N/A	858
Cutouts	N/A	N/A	420
Crossarms	N/A	N/A	281
Poles	N/A	N/A	186
Transformers	N/A	N/A	50

Table A-6: Transmission findings and remediation activities, by year

PRESEASON REMIDIATION ACTIVITIES (NUMBER)	2022	2023	2024
Crossarms	N/A	N/A	38
Poles	N/A	N/A	62

Table A-7: Targeted pre-season vegetation management activity, by year

	2022	2023	2024
Vegetation management – distribution (miles)	460	460	608
Vegetation management – transmission (miles)	281	281	353
Trees trimmed (number)	2,400	6,582	8,298
Trees removed (number)	21	301	630

Table A-8: Grid hardening in High Fire Threat areas, by year

METRIC	2022	2023	2024*
Covered conductor installed	2.1	7.1	1.6
Pole replacement circuits[6] (number)	9	9	N/A
Poles replaced[6] (number)	N/A	N/A	488
Conductor undergrounded (miles)	4.9	3.8	0
Devices upgraded with EPS (number)	0	0	99
New SCADA-enabled reclosers installed (number)	4	17	27
Upgraded SCADA-enabled reclosers installed (number)	3	0	64
SCADA upgrades to circuit breakers (number)	0	7	11
Transmission automation schemes installed (number)	2	0	0
Distribution automation schemes installed (number)	0	1	3

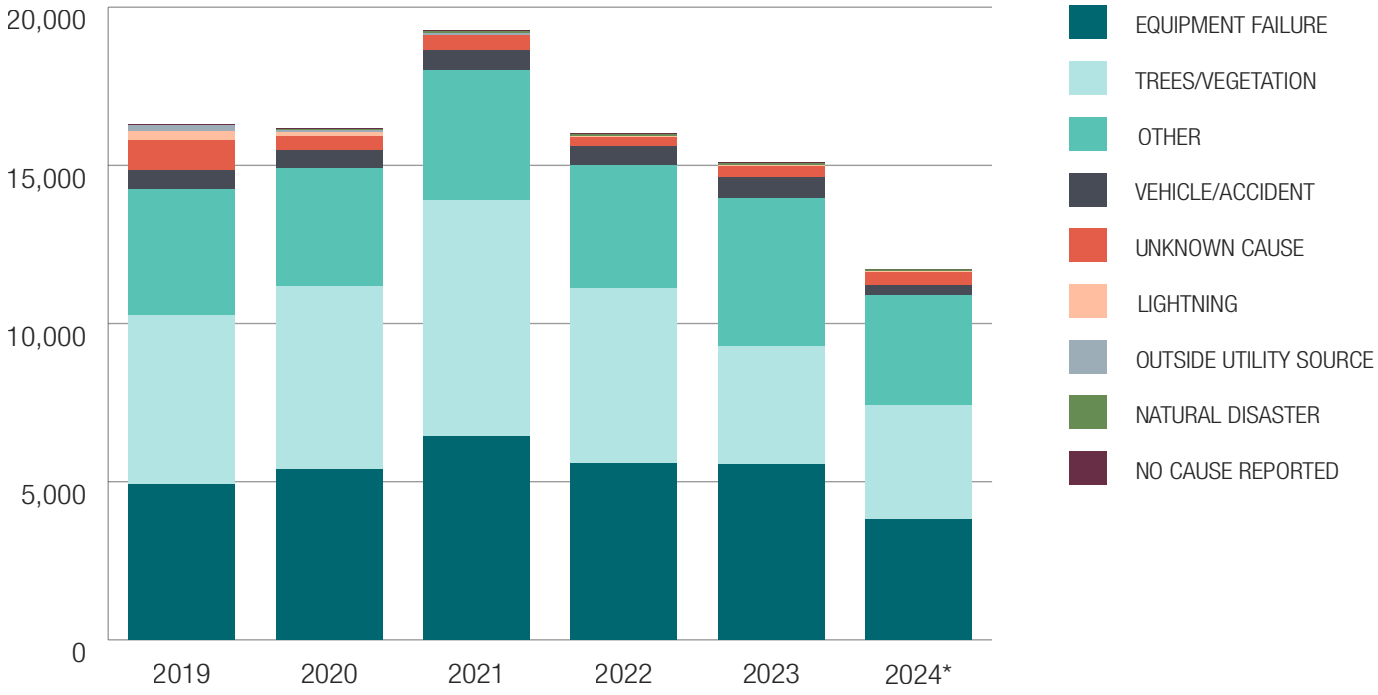
* YTD as of August 31, 2024

6 Prior to 2024, pole replacements were tracked by number of circuits. Starting in 2024, PSE began tracking this metric by number of poles replaced. These datasets are reported on two separate lines in this table for clarity, but are reflective of the same type of work.

A.3 OPERATIONAL PROCEDURES

Figure A-1: System-wide distribution outages and cause, by year

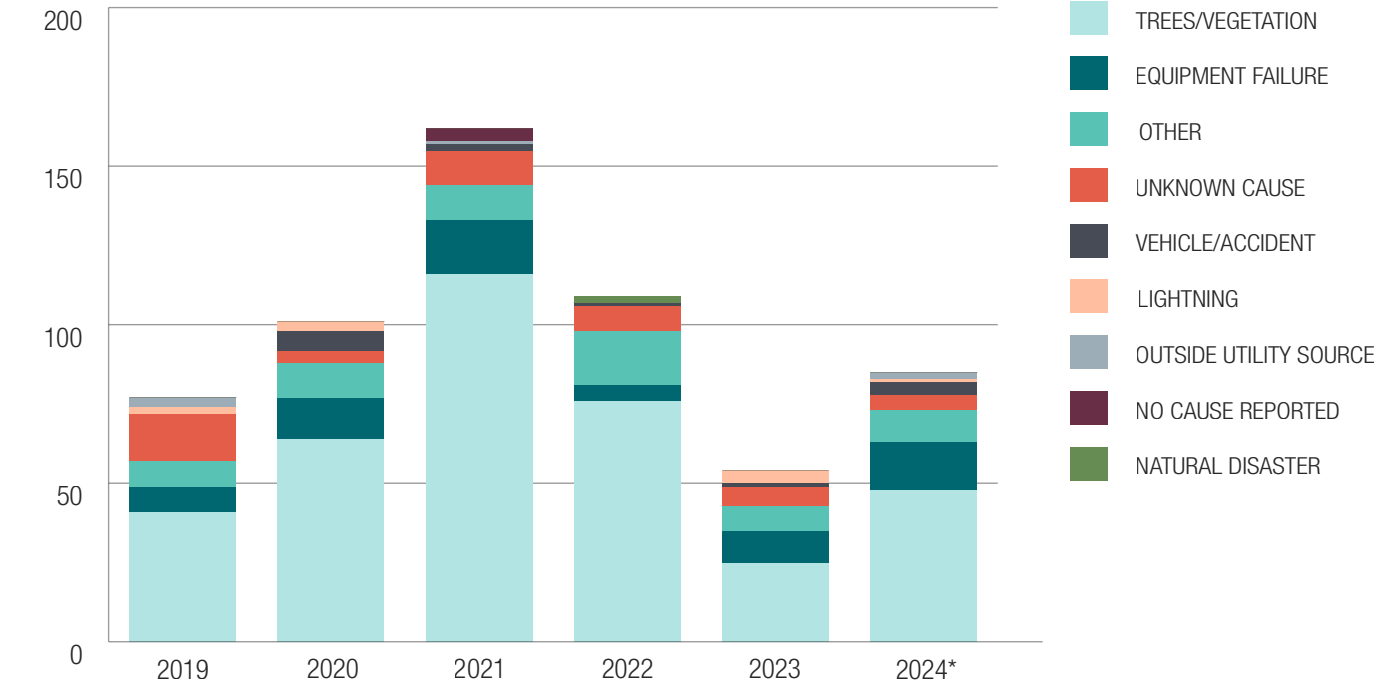
Distribution Outages by Cause



* YTD as of August 31, 2024

Figure A-2: System-wide transmission outages and cause, by year

Transmission Outages by Cause



* YTD as of August 31, 2024

Table A-9: Employee and public safety training and awareness campaigns

METRIC	2022	2023	2024*
Wildfire-related all-employee safety messages (number)	1	2	8
Wildfire-related all-employee safety training and events (number)	N/A	2	7
De-escalation training for customer-facing employees (number of sessions/total attendance)	N/A	N/A	4 session/ 44 attendees
Fire suppression/water buffalo training for field employees (number of sessions/total attendance)	N/A	N/A	9 session/ 208 attendees
PSE gas and electric emergency responder training provided (number)	24	29	15
Wildfire-related safety messages included in all-customer communications (number)	N/A	5	9

* YTD as of August 31, 2024

Table A-10: Public Safety Power Shutoff events, by year

METRIC	2022	2023	2024*
PSPS events (number)	N/A	N/A	0
- PSPS events > 10 minutes (number)	N/A	N/A	N/A
- Average duration before power restored (minutes)	N/A	N/A	N/A

* YTD as of August 31, 2024

A.4 COMMUNICATIONS AND OUTREACH

Table A-11: Community feedback

TOPIC	FEEDBACK WE HEARD	HOW IT WAS INCORPORATED/ADDRESSED
Timing/frequency of PSPS notifications	Customers wanted to receive communications 24 – 48 hours prior to a PSPS outage. Participants in all three 2022 community meetings stressed the importance of reliable and time-stamped informational updates sent out on a consistent and scheduled basis.	PSE's Critical Fire Weather Operational Procedures includes the goal that customer notifications begin two days in advance of a PSPS, when possible, with updates sent at least every 12 hours for the duration of the outage event, and once power has been restored.
Text message notifications	Customers would like to receive notifications via text message, in addition to email and/or robo-call, because text messages are easier to receive with limited cell reception.	To address this, PSE has developed and implemented a robust automated notification tool for customer alerts and updates. This tool will send customers PSPS notifications via robocall, email, and/or text message, depending on their customer account preferences.
Medically vulnerable customers	Community members were concerned about the potential impact of PSPS on medically vulnerable people.	Customers with a Medical Life Support designation on their account will receive earlier notification of PSPS, when possible, via a direct phone call from PSE Customer Care. We also conducted additional outreach to medically vulnerable customers in 2024 to encourage them to enroll in the Life Support program.
Critical infrastructure impacts	Customers and partner organizations expressed concern about the impacts to critical infrastructure, such as water pumps or cell towers, during a PSPS.	PSE has coordinated with public works departments and water districts, neighboring utility providers, and telecommunications companies to describe our Critical Fire Weather Operational Procedures and potential impacts of a PSPS and identify emergency contacts for advance notifications. In addition, we incorporated information about preparing for potential impacts to these services in our customer messages about preparing for PSPS.
Partnership and coordination	We heard consistent feedback from the community and partner agencies to continue partnership building and emergency response coordination to prepare for wildfire season and a potential PSPS.	While developing the Critical Fire Weather Operational Procedures, PSE met with county and local emergency management offices, fire districts, local elected officials, and community organizations to develop working relationships that allow us to identify and address impacts, open communication channels, and expand our reach into the community.
Customer back-up power solutions	Customers in high-risk communities expressed an interest in programs or rebates to support batteries or generators for emergency back-up power.	PSE is exploring potential programs, partnerships, and resources to address this concern in the future.

Figure A-3: Communication and outreach “by the numbers”, 2024

- **7 open houses in high-risk areas** and a self-paced online open house 221 attendees in person and 1,500 visits online
- **1,482 customer conversations** across 82 events
- **470+ partner conversations** via briefings, presentations, phone calls, etc.
- **62,000+ open house invitations** sent via mail/email
- **131,000+ impressions** on social media ads
- **389 outreach phone calls and mailers sent** to Life Support customers
- **15 earned media** placements in local, industry and national publications

Table A-12: Partner briefings/presentations, by year*

ORGANIZATION TYPE	2022	2023	2024**
Emergency management/response agencies	N/A	N/A	18
Critical infrastructure/facilities	N/A	N/A	50
Tribes	N/A	N/A	2
Elected official/council meetings	N/A	N/A	15
Community organizations (total) and serving:	N/A	N/A	39
- Emergency preparedness	N/A	N/A	4
- Medically vulnerable	N/A	N/A	10
- Language accessibility	N/A	N/A	5
- Disability accessibility	N/A	N/A	3
- Other	N/A	N/A	17

* PSE will typically report these metrics for the preceding three years, but tracking of these metrics did not begin until 2024.

** YTD as of August 31, 2024.

Table A-13: Participation in applicable workshops, seminars, working groups, 2024

ACTIVITY	PARTICIPANTS	DATE
WA State Dept. of Commerce Wildfire Planning Workgroup Meeting	Utilities	Monthly
Kittitas County Fire Adapted Communities Coalition	Kittitas Fire Districts, local jurisdictions, land managers, Red Cross, and others	Monthly
EPRI Wildfire Advisory Group Meeting/Webcast	Utilities	Monthly
King County EOC Qualification Standards Development Board	King County emergency response agencies	Monthly
Utility Wildland Fire Prevention Advisory Committee	Utilities, partner agencies, and subject matter experts	Quarterly
Pierce County Electric Utility & Fire Department/District Work Group	Tacoma Power, PSE, Pierce County fire departments/districts	Semi-annually
PSPS coordination meeting: Kitsap County	PSE and Kitsap County Emergency Management	January 2024

ACTIVITY	PARTICIPANTS	DATE
PSPS coordination meeting: Island County	PSE and Island County Emergency Management	January 2024
PSPS coordination meeting: King County	PSE and King County Emergency Management	January 2024
Kitsap Local Emergency Preparedness Coalition	Kitsap County emergency response agencies, Port officials, Navy, Coast Guard, local jurisdictions, community-based organizations	February 2024
PIEP Feb. Webinar Washington's Department of Natural Resources Community Wildfire Resilience Team Confirmation	Wildfire Mitigation Partner Agencies	February 2024
PSPS coordination meeting: Pierce County	PSE and Pierce County Emergency Management	February 2024
PSPS coordination meeting: Thurston County	PSE and Thurston County Emergency Management	February 2024
PSPS coordination meeting: Whatcom County	PSE and Whatcom County Emergency Management	January 2024
PSPS coordination meeting: Skagit County	PSE and Skagit County Emergency Management	March 2024
PSPS coordination meeting: Kittitas County	PSE and Kittitas County Emergency Management	March 2024
Vashon Island Wildfire/PSPS coordination meeting	Vashon Fire and Rescue, Vashon BePrepared, Voice of Vashon	April 2024
WA State Dept. of Commerce Pre-Wildfire Season Workshop	Utilities, emergency response and partner agencies, and subject matter experts	April 2024
Pacific NW Wildfire Workgroup	Utilities	April 2024
Kittitas County Emergency Management IMT wildfire tabletop exercise	PSE and Kittitas County Emergency response agencies	May 2024
Skagit/Whatcom County PSPS Community Resource Center activation workshop	PSE, Skagit and Whatcom County Emergency Management	June 2024
Pierce County Emergency Management Pre-Summer Hazards Seminar	Emergency response and partner agencies in Pierce County	May 2024
King County Regional Summer Hazards Seminar	Emergency response and partner agencies in King County	May 2024
Thurston County Summer Weather Hazards Seminar	Emergency response and partner agencies in Thurston County	May 2024
Skagit County Summer Weather Hazards Seminar	Emergency response and partner agencies in Skagit County	May 2024
UW Climate Risk Lab/ MSBA Capstone - Wild Fire Impacts on Power Grid & Data Centers	Various	May 2024
Assess and Reduce the Risk of Electric Power Lines Igniting Wildfires	Various	June 2024
Thurston County Executive Seminar for Emergency Preparedness	County and local elected officials, emergency response agencies, community-based organizations	June 2024
Washington Camera Group Meeting	Wildfire mitigation partner agencies	June 2024
FEMA Mass Casualty full-scale exercise for CWU and City of Ellensburg	Federal, state and Kittitas County emergency management and response agencies, utilities, other community support agencies	June 2024
Snohomish County CWPP Planning Committee Meeting	Wildfire mitigation partner agencies	July 2024
King County Wildfire Risk Reduction Strategy Roundtable Event	Wildfire mitigation partner agencies and community organizations	July 2024

A.5 CUSTOMER AND ENVIRONMENTAL RISK METRICS

A.5.1 NATIONAL WEATHER SERVICE (NWS) WARNINGS

The following three maps provide the total number of red flag warning days that occurred during 2022, and 2023, and 2024 (YTD as of August 31, 2024) within each National Weather Service weather zone, respective to PSE's service area.

Figure A-4: Red flag warning days by weather zone, 2022

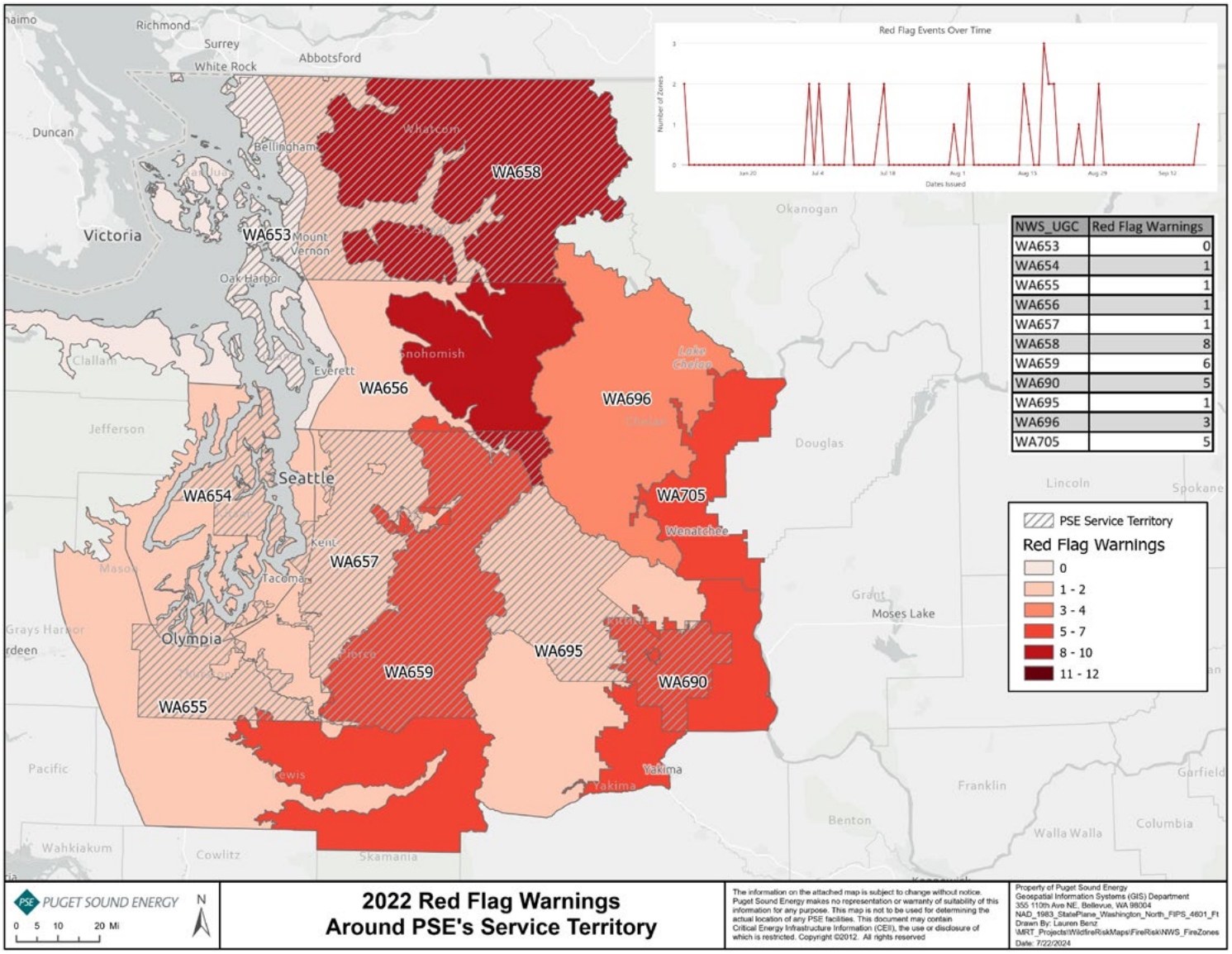


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Figure A-5: Red flag warning days by weather zone, 2023

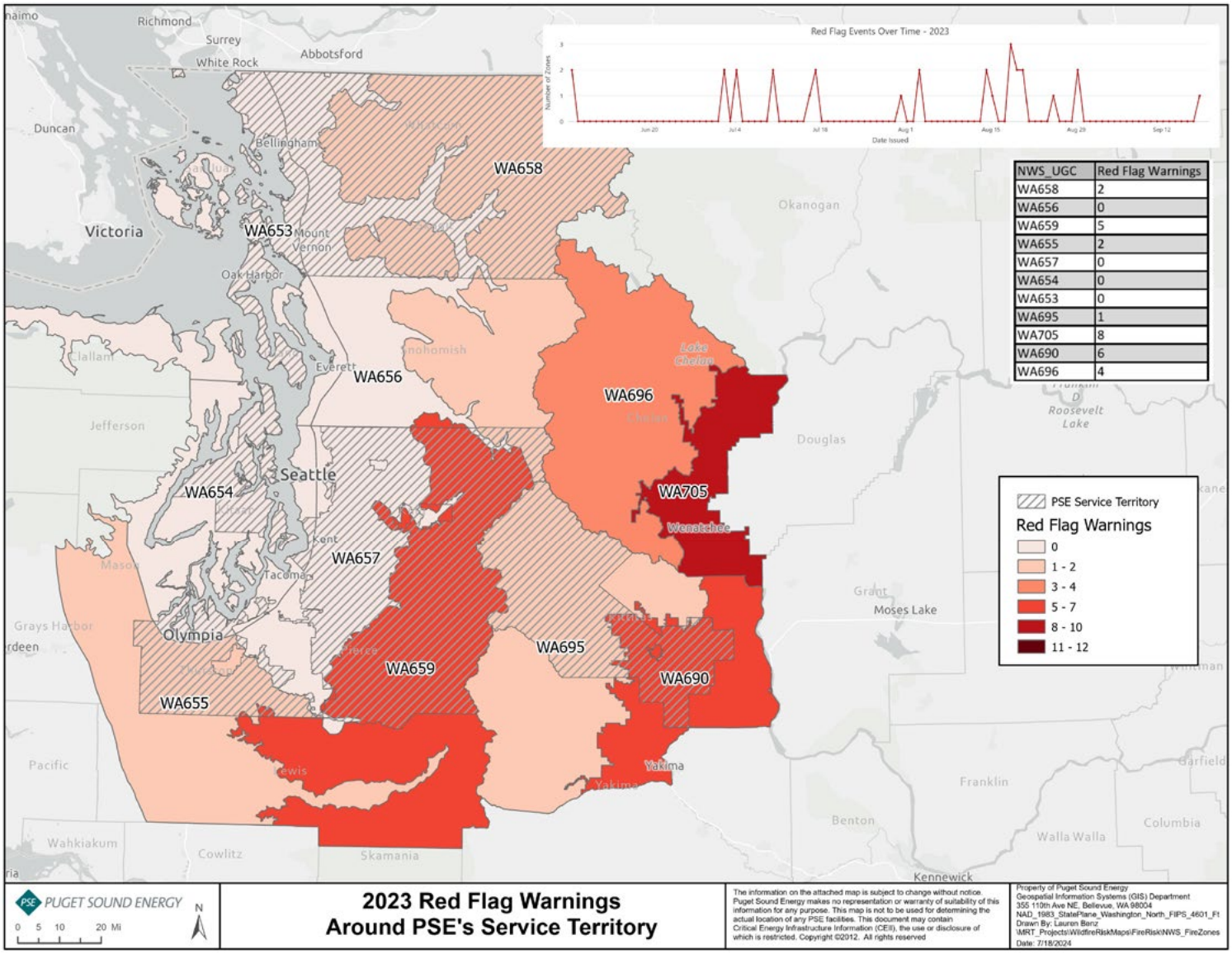

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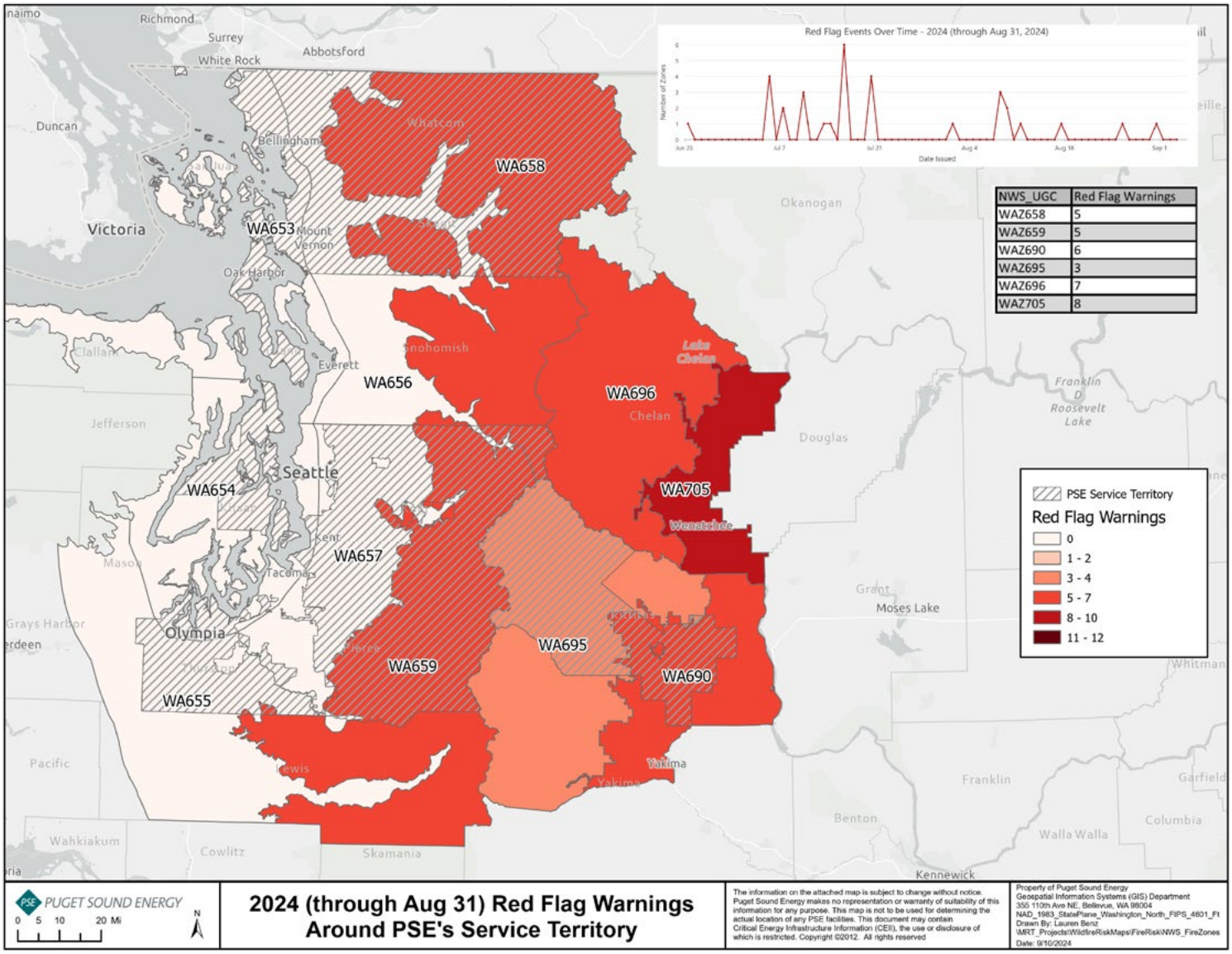
Figure A-6: Red flag warning days by weather zone, 2024*



* YTD as of August 31, 2024.

Table A-14: High wind warning days in PSE service territory, by year

YEAR	NUMBER OF DAYS
2022	11
2023	3
2024*	5

* YTD as of August 31, 2024.

APPENDIX B. GLOSSARY

After-Action Review (AAR)
A professional discussion of an event, focused on performance standards, that enables to discover what happened, why it happened, and how to sustain strengths and improve on weaknesses.

Air Quality Index (AQI)
A measurement of air pollutant concentrations in ambient air pollution and their associated health risks.

Burn Potential
The annual probability of wildfire burning in a specific location.

Burn Probability
The annual probability of wildfire occurrence at each specific pixel.

Community Based Organizations (CBOs)
Organizations that work primarily at the local level to provide services, outreach or education to communities and specific target audiences which improve a community's well-being.

Critical Fire Weather Operational Procedures (Critical Fire Weather Operational Procedures)
Operational Procedures which provides proactive and real-time guidelines for the operation of PSE's transmission and distribution electrical systems to help reduce the risk of PSE's system being the cause or contributing source to a catastrophic wildfire.

Enhanced Powerline Settings (EPS)
Proactive setting changes that decrease the amount of fault current required to trip the protective device; thereby increasing the sensitivity of the protective devices.

Emergency Coordination Center (ECC)
A physical or virtual location from which leaders from a jurisdiction or organization coordinate information and resources to support incident management activities.

Fast trip settings
Proactive protection settings changes that disable reclosing and enable instantaneous trip setting.

Fault
A fault in electrical equipment or apparatus is defined as an imperfection in the electrical circuit due to which current is deflected from the intended path.

High Fire Threat (HFT)
An annually updated index that provides a measure of the historic coincidence of fuels (fuel density and moisture) and severe weather conditions and is used to rank the distribution and transmission lines to indicate higher-risk areas of PSE's infrastructure.

Incident Commander (IC)
The ICS organizational element responsible for overall management of the incident and consisting of the Incident Commander or Unified Command and any additional Command Staff activated.

Instantaneous Trip
A setting on a protective device that has no intentional delay introduced and will trip as fast as it is able to trip.

Load Office
24/7 real-time operation that monitors, operates, and controls PSE's high voltage transmission system (55kV and above) and company-owned thermal and renewable generation assets.

Outage Management System (OMS)
A system that tracks outage calls from electric customers. The system links information provided by personnel who receive customer outage calls and those responsible for restoring electric service.

Powered Air Purifying Respirator (PAPR)
Battery-powered devices that use a blower to pull air through attached filters (for particles) or cartridges (for gases or vapors) to clean it before delivering it to the breathing zone of the wearer.

Power Dispatcher
Real-time operators that monitor, operate, and control PSE's high voltage transmission system (55kV and above) and company-owned thermal and renewable generation assets.

Probability of Fault (POF)
Represents the probability of having at least one sustained fault/outage on a circuit within a 24-hour period. This probability is calculated from a statistical model trained on historical weather data, historical outages, and asset information. The purpose of this layer is to highlight the circuits that have an elevated outage probability during a wind event.

Public Safety Power Shutoff (PSPS)
A tool of last resort, used by utilities to temporarily shut off power lines in some areas during high-risk wildfire to help prevent wildfires from starting.

Service Provider
Any contractor hired by Puget Sound Energy to provide a service. Examples include Potelco, Asplundh, and NW Utilities.

System Operations
Responsible for monitoring, issuing clearances, switching orders and deploying responses to outage and emergency situations for electric distribution.

Troubleman(men)
A qualified line worker (advanced line worker) for electric first response.

Unified Division Supervisor (UDS)
A supervisor that manages all staff that have been activated for an emergency for a specific regional operating base.

Vulnerable Populations (VP)
Populations that are more likely to be at higher risk for poor health outcomes in response to environmental harms due to adverse socioeconomic factors, high housing/transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes.

Wildland Urban Interface (WUI)
The geographical area where human development, including structures and other infrastructure meets or intermixes with undeveloped wildlands.

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