



TO: Commissioners Schlossberg, Brown, Carlson, Barofsky, and McRae
FROM: Rod Price, Assistant General Manager, Jeannine Parisi, Resiliency Program Manager, Tyler Nice, Electric Division Manger
DATE: October 19, 2021 (Work Session)
SUBJECT: Draft Wildfire Mitigation Plan Approach and Review
OBJECTIVE: Discussion

Issue

Although EWEB has programs and practices in place to help prevent wildfires, staff is developing a distinct Wildfire Mitigation Plan (WMP) to meet expected state regulatory requirements and Board expectations. Based on work presented in the May work session, and experience to date, staff is presenting a working draft WMP to meet the Organizational Goal#4 in December.

Background

Wildfires are becoming more frequent and severe as drought conditions have increased throughout the Western U.S. Electric utilities are being impacted, in some cases as potential ignition sources, while in other cases suffering damages to infrastructure. Due to the increased risk and community impacts, the Oregon Public Utility Commission (PUC) is drafting new regulatory requirements that will require EWEB to have an adopted WMP by June of 2022.

In May of 2021, staff presented background information on programs EWEB is currently engaged in mitigating wildfire risk. In addition to consideration of input from the May work session, staff are participating in State PUC workshops and public hearings on upcoming wildfire mitigation regulatory efforts. EWEB has engaged a consultant experienced in WMP work to begin a fire risk assessment of our electric system and to assist in the completion of a WMP based on expected Oregon regulatory requirements and best practices from other utilities.

This work session will provide a forum for Board feedback on a draft WMP, Attachment A, and the overall Wildfire Mitigation program roadmap, Attachment B. From the discussion, feedback will be incorporated, along with the latest findings and updates for the Board's concurrence at the December 2021 Board meeting. A plan containing compliance-based revisions will be presented for Board discussion in May 2022 and for approval in June 2022 to meet the regulatory requirement.

Discussion

The EWEB WMP will incorporate the following major elements:

Compliance Requirements

The Oregon State Legislature recently adopted the Omnibus Wildfire Bill (SB 762), a comprehensive package of new rulemaking efforts and programs to address increased wildfire frequency and impacts. The mandate calls for electric utilities to file risk-based wildfire mitigation and protection plans, including criteria for preemptive public safety power shutoffs (PSPS). The Oregon PUC is charged with developing specific rules and plan requirements in response to SB 762. Staff is participating and engaged in the rule-making process. However, many details are not yet finalized and currently much of SB 726 only pertains to Investor-Owned

Utilities. The minimum portions that do apply to EWEB are listed in the Regulatory Background section of the draft WMP.

Overview of draft WMP

The WMP is in development with the goal of meeting the minimum regulatory requirements, as well as including elements that Staff feel will be included in the future or are considered best practices. The following summarizes the proposed plan elements and a brief status to date of each element.

WMP Objective (plan purpose) - likely to be required:

Drafted and presented to the Board for feedback:

EWEB's Wildfire Risk Mitigation plan will meet the legislative intent of SB 762 and related PUC rules to protect public safety, reduce risk to utility customers, and promote electric system resilience to wildfire damage. The plan will provide a foundation for continuous improvement to evolve our operational practices, communication plans and mitigation efforts as best practices and regulations are updated.

Risk Analysis - required:

- a. Current EWEB Fire Ignition and Damage Risk maps were created two years ago and refined over time to break out critical fire risk circuits. The WMP records our risk circuits and methodology. Our consultant will review and update our Risk maps through February 2022. Risk review will include urban areas such as the South Eugene hills, as well as the more rural service territory up the McKenzie River.
- b. Enterprise Risk factors and cost benefit modeling is in initial phase, with detailed work planned over next year. Focus on legal risks and incorporating fire risk factors into capital and O and M planning.
- c. Will include system criticality, community impact, and event driven safety logistics such as evacuation and communications.

Mitigation Actions – likely to be required:

The draft plan highlights fire risk mitigation programs and projects currently in place, including enhanced systems operations and maintenance, targeted vegetation management, grid hardening, and equipment and practices to improve situational awareness during wildfire season. Examples are:

- Increasing sensitivity of BPA/EWEB protection on transmission lines in fire season
- In spring this year, EWEB inspected 300 line miles in our fire risk areas over a period of five weeks. EWEB is completing the accelerated replacement of around 100 rotten cross-arms and related hardware upriver.
- Upriver change out of 400 12kV transformers and conversion of five line miles to single phase construction.

Future mitigation strategies, programs, and budget – best practice:

Future mitigation projects will be identified as the Enterprise Risk analysis matures and Capital planning process goes through its annual review cycles. For 2022, we have allocated \$1 million in the Capital Plan towards mitigation projects. More details will emerge in the normal capital planning cycle prior to initial plan approval. A sample project already in progress:

- The Dillard 4724 – Monroe 3722 project consists of both undergrounding portions of these lines as well as converting from 3-phase to single phase taps in other areas. This \$1.6 million project will improve reliability as well as reduce wildfire risk to over 1500 residences in the South Hills of Eugene. The project will be in design in 2022 for construction to be completed by the end of 2023.

PSPS Section – likely to be required:

EWEB has developed and refined operational procedures to mitigate wildfire risk during Red Flag events. This involves changing operational settings and procedures in high wildfire risk areas, as well as a series of internal and external communications protocols prior to the event. As the new state standards are developed, our consultant will review procedures as well as the applicability of additional PSPS actions for inclusion in the next iteration of the plan.

Community outreach section - best practice:

EWEB's Communications Team has developed wildfire awareness messaging over the past summer to blend with our emergency preparedness messaging, including a social media campaign around a Red Flag event that garnered a reach of over 8000 customers. This public response is similar to the amount of engagement seen during high profile winter storm outage and restoration posts. The draft WMP includes our current Communications Plan and wildfire awareness brochure with more work planned to include other utilities and agencies. Future work also includes targeted outreach and support to vulnerable populations during power outages.

Stakeholder collaboration - best practice:

EWEB is engaged in numerous multi-agency forums that include emergency managers, area utilities and other key staff involved with mitigation planning and natural disaster response, including the more recent focus on wildfire work. This will be an ongoing process to increase overall effectiveness by aligning public education and outreach messages and seeking opportunities to leverage outside resources and coordinate activities.

Performance metrics and monitoring section – likely to be required:

This is a placeholder section pending regulatory requirements, operational needs, and Board feedback on the final draft. Plan metrics will be part of quarterly reporting and the WMP will be subject to annual Board review.

Drafting, review and approval of the WMP - required:

We continue to gain resources and knowledge needed to complete the compliance draft by May 2022 to meet regulatory requirements for Board approval. Key components still needed are identifying our areas of high wildfire risk and finalized state regulations.

Board Questions and Feedback

In the December meeting, Commissioners will be asked to concur with the initial WMP approach and working draft. Board feedback is welcome in all areas, but staff is requesting thoughts in the following areas:

1. Alignment with plan approach:
 - a. The roadmap and timelines,
 - b. Meeting minimum expected state requirements and building towards industry best practices over time,
 - c. EWEB and Consultant formulated plan
2. Plan Purpose/Role and Responsibilities as presented in the draft WMP.
3. \$1 million level of 2022 mitigation investments.
4. Types of performance metrics/benchmarks and annual reporting in May?
5. Community engagement goals and strategies.
6. Further thoughts on PSPS?
7. Any gaps in content or areas of focus?

Requested Board Action

No action is requested at this work session. Management is seeking feedback on the Draft WMP.

Attachment(s)

- A - Risk-Based Wildfire Mitigation Plan – Draft Outline (initial draft October 10, 2021)
- B - EWEB WFM Roadmap – Draft October 10, 2021



Wildfire Mitigation Plan

Draft October 2021



EWEB Risk-Based Wildfire Mitigation Plan

October 2021 DRAFT

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I. Executive Summary – <<placeholder>>

II. Introduction and Background

Utility Background

EWEB is the largest publicly owned electric and water utility in Oregon. The City of Eugene (the City) commenced utility operations in 1908 with the purchase of a privately-owned water system. In 1911, upon completion of the City's first municipal hydroelectric power plant, the City organized the Eugene Water Board to operate the City's electric and water utilities. The name of the Eugene Water Board was changed to the Eugene Water & Electric Board in 1949.

EWEB is chartered by the City to supply electric and water service within the city limits of Eugene and to certain areas outside the city limits, including the lower McKenzie River Valley. Employing about 500 people, EWEB is defined as a political subdivision of the City, a municipal corporation. Per its by-laws, EWEB's principal purpose is to benefit the citizens of Eugene by providing water, electric and other physical energy services to its customers while maintaining cost-based rates. As determined by City Charter, EWEB is governed by a five-member Board of Commissioners who are elected by voters residing inside the city limits. The Board is responsible for overall utility governance.

- Population served: 176,654 (2020 estimate, U.S. Census Bureau)
- Land area served: 236 square miles
- Land area owned: 44.15 square miles

The electric system supplies service to about 96,000 residential, commercial, and industrial customers within the City of Eugene and areas along the McKenzie River between the cities of Waltherville and Vida, where two of EWEB's hydro-power plants are located.

Power delivered to customers is supplied by Bonneville Power Administration (BPA) contracts, EWEB-owned generation resources, other contracted resources, and purchases from the wholesale energy markets. EWEB's power supply sources are primarily hydro-power, but also includes wind, biomass, and solar. The electric utility's 2021 operating budget was \$217.M, with over \$50M budgeted for capital work.

- Total Electric System Service Area: 236 square miles
- Transmission and distribution lines: 1300 miles
- Substations: 39
- Utility-owned hydroelectric facilities: 4

Plan Context

Wildfires play an important role in the ecological health of natural areas. However, a number of complex issues have converged resulting in wildland fire activity that is much more dangerous and destructive than in the past. These factors include increased vegetative fuel loads from decades of fire suppression activities, the presence of non-native species that can act as ladder fuels, more development in the wildland/urban fringe, and frequency of erratic climate patterns such as drought, extreme heat and severe storms.

This convergence of factors was apparent in the 2020 Labor Day fires that burned over a million acres in Oregon, destroyed some 4000 structures, and resulted in several fatalities. While 10% of the state was under evacuation orders, much more of the population was exposed to dangerous air quality conditions. The unprecedented nature of the 2020 wildfire season and its direct impacts to Oregonians was a call to action during the 2021 legislative session, resulting in the passage of Senate Bill 762.

Regulatory Background

The \$190 million Omnibus Wildfire Bill (SB 762) is a comprehensive package of new rulemaking efforts and programs to address increased wildfire frequency and impacts. The bill requires development of a statewide map of wildfire risk, supports community recovery from fire damage, and funds numerous fire prevention and adaptation programs. A key legislative component is a new mandate for electric utilities to file risk-based wildfire mitigation and protection plans with the Oregon Public Utility Commission (PUC). For investor-owned utilities, these plans need to be submitted for PUC review by the end of 2021. As a municipal utility, EWEB's wildfire mitigation plan must first be approved by its governing board by June 30, 2022, and then filed with the PUC within 30 days.

The minimum standards described in SB 762 serve as a framework for EWEB's initial plan:

- i. A consumer-owned utility must have and operate in compliance with a risk-based Wildfire Mitigation Plan (WMP) approved by the governing body of the utility. The plan must be designed to protect public safety, reduce risk to utility customers and promote electrical system resilience to wildfire damage.
- ii. The consumer-owned utility shall regularly update the risk-based wildfire mitigation plan on a schedule the governing body deems consistent with prudent utility practices.
- iii. A consumer-owned utility shall conduct a wildfire risk assessment of utility facilities. The utility shall review and revise the assessment on a schedule the governing body deems consistent with prudent utility practices.
- iv. A consumer-owned utility shall submit a copy of the risk-based wildfire mitigation plan approved by the utility governing body to the Public Utility Commission to facilitate commission functions regarding statewide wildfire mitigation planning and wildfire.

Plan Approach

With the exception of the filing date, PUC rules for wildfire mitigation plans are still in draft form at this time. The EWEB WMP will adhere to final PUC rules for consumer-owned utilities and where prudent and feasible to do so, EWEB may elect to adopt more rigorous standards. Fortunately, EWEB already has a number of programs and policies in place for grid reliability and safety that also aid in wildfire risk mitigation. The utility's first WMP will formalize and consolidate these existing efforts, with particular focus on enhancements to address increased wildfire risks, while ramping up interagency coordination and community engagement efforts.

The plan will be highly adaptive, building on new information as risk assessment analyses are completed and investment needs are further defined. As such, the plan is a work in progress informed by best practices from other electric utilities, PUC rulemaking guidance, outside consultant expertise and EWEB's strategic priorities.

The overall approach to completing the plan for EWEB Board approval in May will be to:

- Complete a gap analysis and updated risk assessment of the electric system to focus mitigation actions to areas with greater wildfire potential;
- Incorporate Board approved best practices that reduce wildfire risk and offer other co-benefits to utility customers, such as increased reliability during winter storms; and
- Target community engagement and inter-agency coordination efforts to strengthen wildfire prevention partnerships.

Regular plan updates are crucial to track progress, integrate related work, identify gaps and respond to emerging information and conditions. EWEB Board of Commissioner direction will determine the appropriate level of investment to mitigate wildfire risk, key metrics for progress reporting, frequency of plan updates, and ensuring alignment with Board priorities and community values. EWEB will engage our Continuous Improvement principles to review and evolve our WMP as time goes on. The WMP will be reviewed yearly in May, prior to the start of wildfire season and in conjunction with our Capital Improvement Plan (CIP) process.

III. Plan Purpose

EWEB's Wildfire Risk Mitigation plan will meet the legislative intent of SB 762 and related PUC rules to protect public safety, reduce risk to utility customers and promote electric system resilience to wildfire damage. The plan will provide a foundation for continuous improvement to evolve our operational practices, communication plans and mitigation efforts as best practices and regulations are updated.

IV. EWEB Policy Objectives

While filing an approved plan with the PUC is a compliance requirement, a formal risk-based wildfire mitigation plan also aligns with several other EWEB strategic priorities, policy objectives, planning documents and core values.

EWEB's Strategic Plan provides the basis for policies, decisions, and the annual goals established for the utility. 2021 Organizational Goal #4 is to: *Collaborate and align with the Board to develop directional guidelines and decision criteria on issues having long-term strategic and policy-setting impacts, including development and approval of an initial risk-based Wildfire Mitigation Plan (WMP).*

The safety of our workforce and community is our first organizational core value and fundamentally drives how we deliver essential utility services to the public we serve. Our strategic plan identifies decisions supporting community resiliency and disaster recovery as the utility's top ten year priority.

In addition to aligning with EWEB core values and strategic priorities, this initial WMP will also build on existing planning documents, programs and practices, such as the 10-year Electric Capital Improvement Plan, our Incident Command Structure, as well as our robust public engagement efforts around emergency preparedness. The WMP also strives to reinforce linkages between other risk mitigation and response plans, such as the Eugene-Springfield Natural Hazard Mitigation Plan and various management plans associated with our hydro-electric facility licenses.

<<Placeholder for Table/List of Related Policies and Plans>>

The Board is responsible for the adoption of the WMP and funding for priority mitigation activities. The General Manager will ensure the plan meets all regulatory compliance thresholds, and the Assistant General Manager and Chief Operating Officer will oversee plan implementation.

V. Preliminary Wildfire Risk Assessment

EWEB Electric System Risk Analysis

Understanding wildfire risk potential for the electric system at a scale that can inform the location and types of mitigation investments is a cornerstone to an effective WMP.

EWEB's electric system consists of approximately 160 line miles of overhead transmission and 563 line miles of overhead distribution. While most of electric infrastructure is in urban areas at relatively low risk for wildfire, long portions of the electric system run through heavily forested terrain, and EWEB serves several thousand customers who live in the wildland-urban

interface. Based on a review of the Oregon Wildfire Risk Explorer tool, coupled with on-the-ground experience of system operators, the utility has identified a preliminary list of circuits located in terrain considered at higher risk for wildfire. In general, this includes a small area in the southeast hills in Eugene, as well as the McKenzie Valley. Early identification of these circuits is helping to focus the initial wildfire mitigations described in this plan. These areas of higher wildfire risk are also where EWEB may change the operational settings to make the electric system more sensitive to faults during hot, dry and windy conditions, such as [Red Flag Warning](#) events.

Table 1. Higher Risk Distribution Circuits (preliminary analysis)

Substation Name and Circuit ID	Conductor Length (miles)*
Dillard 4734	31
Thurston 2312	39
Walterville 2222	59
Walterville 2224	66
Holden Creek 7124	74
Holden Creek 7134	25
Hayden Bridge 2406	15

**Conductor mile length represents all primary distribution attached to breaker, not just feeder.*

Proposed PUC rules require public utilities to describe wildfire risk both within their service territories and within the right of way for generation and transmission assets, even if located outside their service territories. Table 2 lists EWEB transmission assets located in higher wildfire risk areas.

Table 2. Higher Risk Transmission Lines (preliminary analysis)

Transmission Description	Length (miles)
115 kV Thurston – Carmen Line	18.5 miles EWEB owned 48 miles BPA owned
69 kV Thurston – Walterville Line	5.4 miles
69 kV Walterville – Hayden Bridge Line	6.6 miles
115 kV Currin- Laurel Line	2 miles
115 kV Currin – BPA Alvey Line	5.8 miles
115 kV Dillard Tap	0.7 miles

In 2020, Lane County completed its second [Community Wildfire Protection Plan](#). A primary component of this 146-page plan was an updated Wildfire Risk Assessment that evaluates the potential loss of lives, property, and essential infrastructure in a wildfire event.

The County’s plan breaks Lane County into three eco-regions and found that overall wildfire risk¹ was generally low to moderate risk for the Willamette Valley and Cascade Ecoregions, which encompass EWEB’s service territory. The assessment relied largely on the statewide Oregon Wildfire Risk Explorer tool, supplemented with information from the Oregon Department of Forestry, US Forest Service and other stakeholders and is in general agreement with EWEB’s current geographical risk assessments.

EWEB has engaged the technical expertise of an experienced WMP consultant, ICF Incorporated, to assist in core facets of the initial WMP. The first phase of this engagement is to review relevant programs and procedures for compliance with upcoming PUC wildfire regulations. This assessment will result in a gaps analysis and recommendations that ensure adherence with newly promulgated rules while also incorporating industry best practices.

ICF will also conduct a thorough review of the potential role of pre-emptive power shut-offs (PSPS) as part of EWEB’s wildfire mitigation strategies. This review will determine if PSPS has applicability given the electric system and environmental conditions, and recommend specific PSPS criteria, such as weather conditions, balancing those thresholds with real-world tradeoffs of power outages for residents that are not under mandatory evacuation orders.

The third deliverable is fire behavioral modeling for the high-risk circuits listed above. This analysis is intended to guide and direct mitigation and public notification strategies, including fuels reduction plans, ignition risk potential and to support fire response/evacuation plans.

<<Placeholder for [Enterprise Wildfire Risk Assessment](#) >>

<<Placeholder for [Cost/Benefit Risk Based Analysis](#)

VI. Wildfire Risk Mitigation Actions

Experience of California electric utilities shows that utility-caused wildfires are typically associated with faulty equipment or vegetation contacting wires. Under certain weather conditions, this can cause a fast-moving and dangerous wildfire. Thus, WMPs seek to bolster system maintenance and vegetation management activities as the first line of defense, focusing on areas of the electric system with higher wildfire potential. Other common focus areas are grid-hardening investments that enhance the resiliency of the electric system to wildfires, automation, and environmental conditions technology for improved situational awareness, such as local weather stations, and modified operational practices during wildfire season.

¹ Overall wildfire risk is the product of the likelihood of a fire greater than 250 acres and consequence of wildfire on all mapped highly valued resources and assets (critical infrastructure, timber, housing unit density, etc.)

Finally, a Public Safety Power Shutoff (PSPS) program will be developed to support utility response and prepare customers for potential service interruptions during extreme fire conditions.

Likewise, EWEB's initial wildfire mitigation plan contains current and planned actions in each of these categories to enhance public safety and reduce risk. Activities will be informed by the research and recommendations of our consultant, EWEB Board input, and area subject matter experts.

The following outlines initial mitigation actions that are currently underway and/or planned for 2022. Recall that this plan is iterative and will be updated to address applicable regulations when finalized, consultant recommendations, and to include levels of investment planned for the next several years.

Current System Operations & Maintenance

- Enhanced PUC Inspections: As part of normal operations, a portion of the system every year is inspected and maintained for rotten poles and cross arms, clearances and component issues. For areas identified as higher risk for wildfire, crews are visually inspecting the upriver service territory and select circuits in south Eugene more frequently. It is anticipated that the frequency and type of inspections for areas identified as higher risk of wildfire will be a PUC requirement and as such, will be more formally addressed in the next draft.
- Targeted Reliability Work: Maintenance activities like the PUC Pole Test and Treatment Program, and conversion to FR3² fluid in transformers can have both reliability and fire risk reduction benefits. EWEB will work with its consultant to determine where and which of EWEB's maintenance activities should be emphasized in the WMP.
- Electric System Reconfiguration: Staff are currently in the planning stages of removing the A/B 69kV line, eliminating over five miles of older of poles and wires from the EWEB system from Walterville to the Thurston substation. In addition to fire-risk reduction, co-benefits of this project include avoidance of replacement costs of lines, poles, cross arms, and other components that are near end of life, as well as reduced vegetation management and equipment inspection and repair needs.

Vegetation Management

See Appendix B for full EWEB Right of Way Vegetation Management Program.

- Higher Risk Circuit Plans: Routine pruning is critical to maintain clearance from electrical equipment, particularly to avoid limbs contacting wires during high wind events.

² FR3 is a natural, vegetable-based product that not only has environmental and operational benefits, is less combustible.

EWEB's Vegetation Management Plan uses a five-year cycle for completing tree-trimming activities throughout the entire EWEB system. In addition, 250 line-miles are inspected and pruned annually to encompass the higher risk circuits. Frequency and specific clearance requirements in high wildfire risk areas are under development as part of the PUC rulemaking process and will be incorporated into the final WMP.

- Wildfire Circuit Prioritization: Areas identified as higher wildfire risk are prioritized and all wildfire high risk circuits are current for annual inspection and pruning. One tree crew has been dedicated to responding to 'cycle-buster' trees that pose the greatest clearance problems as identified by EWEB foresters.
- New ROW Clearance Methods: As an immediate vegetation clearance measure, helicopter trimming is planned along the transmission corridor from Blue River to the Carmen Smith hydro-electric plant later this year. This will re-establish EWEB's full right-of-Way and reduce future patrol/inspection needs in an area where winter storms and lightening events are more frequent. Helicopter trimming is novel to our utility but is expected to be fraction of the cost to do the same work using ground crews. Trimming this corridor is estimated to take 5 - 7 days compared to an equivalent of three years of groundwork typically needed to reset this right-of-way.
- Green Infrastructure/Floodplain Restoration Projects: EWEB is working with numerous federal, state and non-profit partners to implement large-scale floodplain restoration projects in the middle McKenzie valley. The primary goal of these projects is to protect drinking water quality and to improve ecological function of these complex riparian systems post-Holiday Farm Fire. These projects also create wetland and slow-water habitat that hold more water on the land, even during dry conditions, acting as fire breaks and offering greater protection from wildfire damage.

System Hardening (Capital Programs)

- Updated Capital Planning Goals: EWEB's capital improvement plan includes a robust set of investments to replace aging equipment and upgrade infrastructure for increased resiliency. Layering on wildfire risk mitigation to these planned investments may result in use of more fire-resistant equipment as part of these projects. For example, ductile iron poles were installed in place of wooden transmission poles in the Deer Creek area.
- Revised Construction Standards: In addition to transitioning to FR3 transformer fluid across the entire system, EWEB is replacing 12 kV dual bushing transformers with 7.2kV single bushing transformers in the McKenzie Valley. This change reduces the number of energized conductors from two to one, reducing the likelihood that any falling branches getting cradled in the lines, which can cause heating and sparking. Similarly, the utility looks for opportunities to reconfigure 3-phase overhead distribution to single phase.

This slim-line format removes cross arms as potential points of failure and substantially reduces the likelihood of vegetation getting caught on energized lines.

- Targeted Primary Underground Conversions: Converting overhead (OH) circuits to underground (UG) reduces the exposure of energized wires to vegetation and therefore reduces ignition risks. However, underground construction is relatively expensive and can easily be 4-5 times more expensive than overhead construction. Due to the expense of undergrounding, it is not reasonably feasible to UG our entire system, therefore EWEB has been targeting overhead circuits with the worst reliability for conversion projects. Our WMP will continue to enhance our Capital Oh to UG conversion planning efforts to include fire resiliency. The utility has received FEMA funding approval to proceed with hazard mitigation projects initially proposed to improve reliability during winter storms. See Appendix A for example projects. To help diffuse future costs and will continue to look for other grants and aid money.
- New Secondary Service Undergrounding Incentive Program: The utility is offering financial assistance to help customers rebuilding their homes after the Holiday Farm Fire underground their electric service. By reimbursing eligible expenses at 100 percent, EWEB is partnering with homeowners to improve the design up our upriver distribution system for enhanced reliability and wildfire resilience.

Situational Awareness

- During wildfire season, EWEB will modify the hours, type and location of field work to limit the potential for equipment-related fire incidents. This includes monitoring and adhering to Industrial Fire Protection Levels, localized weather monitoring, and coordination with public safety partners when crews are working in areas with high fuel loads.
- The utility has equipped vehicles with additional fire suppression equipment. This includes a bed-mounted water tank, additional fire suppression tools and capability for off-road and communications in remote areas. These trucks will be used during wildfire season to allow for wetting down in areas that EWEB's water trailer cannot access, as well as for visual patrols of the upriver system during Red Flag Warnings. Using these vehicles will enable field staff to access the remote areas more quickly and with better maneuverability, while equipping staff to extinguish incipient flames for safety.
- EWEB is pursuing a partnership with the Hazards Lab at the University of Oregon to install an [ALERTWildfire](#) camera at the Smith Ridge telecommunications site. This would be the first wildfire camera with public viewing access in the McKenzie Valley.

Future Wildfire Mitigation Projects

Following the completion of the first draft (Stage 2) of the WMP in early 2022, EWEB will begin a comprehensive initial version (stage 3), which will include additional elements for consideration in future WMPs. The initial version of the plan will formalize applicable practices, procedures, and analysis to meet State and PUC requirements. After PUC acceptance of the Board approved WMP, the implementation phase will expand the fire modeling to include additional EWEB territory, develop an investment plan around system updates and cooperative weather condition monitoring. New technologies and construction standards will be assessed and applied as feasible to reduce risk of wildfire.

An initial investment of \$1 Million will be allotted in the 2022 Capital plan for wildfire management related projects. This may include activities such as targeted overhead to underground conversions, fire resistant pole and materials replacements, communication, control and protection upgrades, patrol and inspection systems and tools, and remote weather monitoring equipment. Additionally, operations related funding will be included to reduce inspection and maintenance cycles on key equipment such as cross arms, clearance corrections, insulator replacements, and vegetation maintenance.

VII. Public Safety Power Shut Off (PSPS) Program

A PSPS program involves both operational changes to parts of the electric system at higher risk for wildfire events and as importantly, outreach to the community and public safety partners. While PSPS is often associated with proactively de-energizing electric lines, modifying reclosers to increase the sensitivity of electric equipment to irregularities is an additional PSPS program option.

EWEB system operators have the authority to de-energize portions of the distribution system during emergency events when requested by police or fire officials, such as if a car hits a power pole. Operators can also de-energize portions of the electric system if there is an active fire nearby or imminent fire danger in the area. While a pre-emptive power shut off removes a potential ignition source during extreme wildfire conditions, it also introduces other public safety risks. Of notable concern is potential loss of telecommunications, drinking and fire suppression water supplied by electric pumps, and loss of refrigeration and cooling for the medically fragile. As such, coordination and communication with critical infrastructure owners, public safety partners and customers is essential to a fully formed PSPS program. This includes procedures for advance notifications, utility support during the PSPS event, and post-event notifications.

EWEB's PSPS program is in the early stages of development and will be a key focus area moving forward. In the near-term, the utility has adopted protocols (Appendix B) to initiate power line

protective measures during Red Flag Warning events. This extra level of protection applies to equipment in the McKenzie Valley and a smaller section of the system in the southeast hills in Eugene. Activation of powerline protective settings is triggered by Red Flag Warnings and at the discretion of system operators. Once in place, the protocol requires visual inspection of the power line if it trips off to ensure its safe to re-energize, and confirmation with public safety partners there is no fire in the area. Field staff conducting the visual patrols are responsible for ignition reporting and outfitted with fire-suppression equipment for their own protection and public safety. Enabling protective settings may increase the frequency of outages and extend restoration times, but on balance are less disruptive than pre-emptive power shut offs, so are a valuable alternative under less than extreme fire conditions.

VIII. Community Engagement and Interagency Coordination

PUC proposed rules require public utilities to develop a public engagement strategy as part of the WMP. The engagement strategy should describe the utility's efforts to collaborate with public safety partners and community members "in the preparation of the WMP and identification of related investments and activities." Additionally, the proposal delineates communication requirements prior, during and after a PSPS event.

Recognizing heightened public interest in wildfire risk and the importance of a comprehensive community engagement plan, EWEB prepared its first WMP communications plan for the 2021 wildfire season. The plan includes key messages and outreach tactics for internal audiences, key community stakeholders and our customers at large (see Appendix E). Our communication strategy emphasizes that wildfire risk reduction is a shared responsibility and requires commitment and cooperation of many stakeholders. With numerous stakeholders, consistency in core content of our information campaigns and coordination among partners is important to align messaging and amplify calls to action. The 2021 communication plan will be updated to align with PUC-required outreach and reporting requirements.

External Communications Tactics

The current engagement strategy builds on a strong foundation of effective public outreach campaigns on resiliency and emergency preparedness, such as EWEB's Pledge to Prepare and Water Reliability initiatives. A dedicated landing page for wildfire safety is in place on our [website](#) and will grow over time as more information and resources are available for public consumption. This summer, the utility launched a wildfire awareness social media campaign to showcase risk mitigation work underway and share fire prevention messages from our partners.

A wildfire safety brochure has been created and is available for download from our website and can be used during community presentations post COVID restrictions (see Attachment D). In the meantime, EWEB plans to share the brochure with customers via our emergency preparation

email distribution list as well via selected neighborhood associations, with a focus on customers in south hills of Eugene. As we move towards winter storm season, there will be opportunities to weave key wildfire messages into our multi-channel outage preparation campaign. A related outreach effort in the planning stages is to encourage customers to update their contact information and alert the utility of any life-sustaining medical equipment needs. Preparing the medically fragile for potential loss of power due to wildfire risk will be addressed more directly in future iterations of our WMP.

During Red Flag warnings and events, communications to our customers is critical. Social media is a primary channel used for these communications. The utility made significant progress in developing greenfield messaging and collateral imagery regarding the use of powerline protective settings, which was used during two recent Red Flag Warning events. Red Flag messaging will continue to update as our requirements and procedures mature.

In support of these Red Flag Warning alerts, a “Higher Wildfire Risk Area” map will be published on-line to help customers determine if their residence is within an area where Red Flag or PSPS operational changes may be put in place. This map is preliminary and will be refined as additional risk-assessment information is available. Any outages associated with a proactive de-energization due to wildfire risk will be displayed on the EWEB Power Outage Map.

Interagency Coordination

The utility has also begun wildfire awareness and response coordination with our public safety, area electric utilities, local government agencies and critical infrastructure partners, such as private telecommunications providers. As a result of these conversations, EWEB has a Red Flag Warning notification list that includes about two dozen stakeholders to alert our partners of the potential for electric service disruptions. Furthermore, EWEB is collecting locational data for critical infrastructure to build a GIS map that can be overlaid with the Higher Wildfire Risk Area map. This layer can be used to identify assets like communication towers and pump stations that require back-up sources of power to maintain operability (and/or priority restoration) if impacted by a PSPS event.

EWEB maintains representation with several interagency teams focused on emergency preparedness and hazard mitigation planning. Of note, staff have begun participating in monthly Community Wildfire Protection Plan meetings for information sharing, resource alignment and joint public outreach and education efforts.

<< Placeholder for table of interagency partnership organizations here >>.

EWEB hopes to coordinate wildfire prevention and awareness communications with local utility partners more closely in the future. A kick-off meeting with area General Managers is planned for later this year. Future stakeholder collaborations include shared weather monitoring technologies for improved situational awareness, coordinated public education and outreach campaigns, and seeking opportunities to leverage resources and/or seek grant funding for

mitigation projects.

IX. Plan Metrics, Performance Tracking and Maintenance

Plan metrics and performance measures will be determined by PUC requirements, operational needs and direction from the Board of Commissioners. Key metrics may include:

- Community education and outreach campaign metrics
- Red flag warnings/protective settings incidents/outcomes
- Near miss/ignition events
- Mitigation action projects completed and associated financial investments
- Tracking relevant training on industry best practices and tabletop/functional exercises

The initial WMP will be provided for review and potential approval to EWEB Board in May 2022. This timeframe allows an opportunity for refinements based on Board feedback prior to filing the plan with the PUC in June. For plan maintenance purposes, an annual review in May is recommended so that levels of investment, reflecting contemporary research and current conditions, can be adjusted as part of the utility capital infrastructure planning process.

X. List of Appendices (TBD)

- A. FEMA UG to OH Example
- B. EWEB ROW Vegetation Management Program
- C. Red Flag Plan (PSPS) Process
- D. Wildfire Brochure
- E. Community Engagement Plan

Appendix A <<placeholder, partial material>>

SYSTEM RESILIENCY IMPROVEMENT PROJECTS
Mission: Service Through Storms

For more information, please contact:
Joe Harwood at Joe.Harwood@eweb.org / 541-685-7471

Project details:

1a. Palomino & Harlow

- Reconductor 2 phase #6CU backyard tap to 1 phase from pole 25252 to 14802 & 14812 at Palomino & Harlow

1b. Palomino & Dapple Way

- Reconductor 2 phase #6CU backyard tap to 1 phase from pole 14774 to 17007 at Palomino & Dapple Way

COMPLETE

2. Green Hill & W. 11th

- Reconductor 2 phase #6CU street tap to 1 phase from pole 20144 to 20155 at Green Hill & W11th

COMPLETE

3a. Debrick & Rio Glen

- Reconductor 2 phase #6CU backyard tap to 1 phase from pole 14382 to 14386 at Debrick & Rio Glen

3b. Willagillespie & Russet

- Reconductor 2 phase #6CU street tap to 1 phase from pole 14357 to 14359 at Willagillespie & Russet

4. Fox Hollow, west of Saratoga to Donald

- Convert 3 phase backyard tap from OH to UG from pole 23554 to 34615 at Fox Hollow, west of Saratoga to Donald

COMPLETE

5a. E. Amazon & 35th Pl.

- Reconductor 2 phase #6CU backyard tap to 1 phase from pole 11624 to 11648 at E. Amazon & 35th Pl.

COMPLETE

5b. W. 35th & McMillan

- Reconductor 2 phase #6CU street tap to 1 phase from pole 2419 to 22641 & 18408 at W. 35th & McMillan

COMPLETE

6. E. 31st & Ferry

- Reconductor 2 phase #6CU & #4CU street tap to 1 phase from pole 7331 to 7334 & 7336 & 9232 at E. 31st & Ferry

COMPLETE

7a. E. 28th & Central

- Reconductor 2 phase #6CU street tap to 1 phase from pole 5436 to 8302 & 20771 at E. 38th & Central

COMPLETE

7b. Agate & E. 27th

- Reconductor 2 phase #6CU street tap to 1 phase from pole 5422 to 5425 & 5420 at Agate & E. 27th

COMPLETE

8a. McLean & Fillmore

- Reconductor 2 phase #4CU street tap to 1 phase from pole 2142 to 12230 at McLean & Fillmore

COMPLETE

8b. W. 28th & Adams

- Reconductor 2 phase #6CU street tap to 1 phase from pole 11238 to 17022 at W. 28th & Adams

COMPLETE

9. Jefferson & 22nd

- Reconductor 2 phase #4CU backyard tap to 1 phase from pole 21636 to 5999 at Jefferson & 22nd

10a. Willamette & W. 31st

- Reconductor 2 phase #4CU backyard tap to 1 phase from pole 9666 to 9600 & 1555 at Willamette & W. 31st

10b. Washington & W. 29th

- Reconductor 2 phase #6CU street tap to 1 phase from pole 2286 to 2282 & 2289 at Washington & W. 29th

COMPLETE

11. W. 22nd & Olive Alley

- Reconductor 2 phase #6CU street tap to 1 phase from pole 4993 to 4915 at W. 22nd & Olive Alley

12. Blanton Rd.

- Convert 3 phase tap from OH to UG feeder from pole 34270 to 10735 on Blanton Rd.

13. Oakway, north of Fair Oaks

- Convert 3 phase backyard tap from OH to UG from pole 17923 to 113 off Oakway, north of Fair Oaks

COMPLETE

14. Willow & Park

- Reconductor 2 phase #6CU street tap to 1 phase from pole 673 to 141 at Willow & Park

COMPLETE

15. Owosso & Carolyn

- Reconductor 2 phase #6CU street tap to 1 phase from pole 18246 to 18250 at Owosso & Carolyn

16. Willamette & Coachman to Kingswood & E. 50th

- Convert 3 phase backyard feeder to 1 phase tap from pole 21167 to 22470 from Willamette & Coachman to Kingswood & E. 50th & convert backyard feeder Dillard 4724 from OH to UG from pole 19423 to 11330 by Kingswood from Brookwood to Donald.

● Improvements to overhead lines.

EWEB will reconfigure and replace older overhead power lines that require two wires, and replace them with new, higher-capacity wire that requires only one wire. This will also allow for the removal of crossarms, which are susceptible to falling tree limbs and a common culprit in an outage. Replacement of damaged crossarms is time-consuming and slows power restoration efforts. Some lines may be rerouted.

● Conversion to underground service.

Four projects will convert overhead lines to underground service.



Revised 9-23-2019

Appendix B <<placeholder, partial material>>

DR.100.PRG.01-03



Eugene Water & Electric Board

Rely on us.

Right of Way Vegetation Management Program: Procedures, Clearances, and Technical Specifications

Document Owner: Right of Way Vegetation Program Supervisor
Authoring Department: Distribution Reliability Department
Resides with: Systems Engineering & Substation Reliability Administrative Assistant
Document Number: **DR.100.PRG.01-03**
Revision Number: 04
Approved/Revision Date:
On-Line Location: R:\Share\Elec Doc Mgmt
File Name: DR.100.PRG.01-03 Right of Way Vegetation Management Program: Procedures, Clearances, and Technical Specifications.docx

Approval	Signature	Date
Document Owner	<hr/> Julie Nuttall	
Electric Operations Manager	<hr/> Rod Price	

Rev. 12/18/18

Page 1 of 3

Appendix C <<< Insert Red Flag procedure here in future>>>

Appendix D

Wildfire Safety & Protection

Enhancing public safety and reducing risks



Even in historically wet, mild Oregon, summers are getting hotter and drier, with longer wildfire seasons. The overall risk of wildfires is growing. We are increasing our efforts to maintain and operate our electrical lines and equipment to minimize wildfire risk and keep our customers and community safe.

EWEB's Wildfire Prevention Efforts

We take wildfire risk seriously and we put the safety of our customers and community first. Most of EWEB's service territory is urban, which means the threat of wildfire is relatively low. Our service areas in the McKenzie Valley and South Hills with steeper terrain and dense vegetation are at a higher risk of wildfire. High winds during dry, hot weather increase the potential for vegetation to come in contact with power lines, so we are taking several actions to mitigate this risk.

Actions we take to enhance the safety and resiliency of our electric system include:



Vegetation management

We proactively prune trees, branches and shrubs to make sure they don't come in contact with power lines during high wind, snow or ice events. Maintaining clearance between trees and power lines helps reduce this risk. Each year, crews trim around 300 'line miles' of vegetation to minimize the chance of falling trees and branches. We inspect and prune an additional 250 'line miles' in high-risk areas such as south Eugene and the McKenzie Valley.



System inspection and maintenance

We conduct routine and proactive maintenance on more than 725 miles of overhead power lines to ensure our system is safe and reliable. We visually patrol and inspect the system and components, and replace worn or aging equipment throughout the system. Like our additional vegetation maintenance, we inspect areas with a higher risk of wildfire more frequently.



Proactive grid-hardening investments

We actively seek opportunities to replace older equipment such as power poles, crossarms and wires. In some cases, we take certain overhead distribution lines and put them underground. We are also starting to install more fire-resistant equipment, such as using ductile iron instead of wooden poles in a recently completed transmission line project in the upper McKenzie Valley.



Situational 'wildfire season' awareness

Situational awareness during fire season includes monitoring weather for high winds and low humidity, modifying field work practices to be more fire aware, bringing fire suppression equipment to every work site, and increased coordination with public safety partners when crews are working in areas with high fuel loads.



Power line protective measures

When weather conditions indicate there is a high risk of wildfire, we change the protective settings on our equipment in south Eugene and the McKenzie Valley. These protective measures include modifying high-voltage electric switches and relays. Just like a circuit breaker in your home, the switch senses when trouble occurs – such as a tree branch falling on the line – and shuts off the power. We will not reenergize the line until we visually inspect it and confirm with public safety partners there is no fire in the area.



Red flag warnings

We activate this extra level of protection in areas at high risk for wildfire when the National Weather Service issues a Red Flag Warning – typically related to high winds, high temperatures and low humidity. While enhanced protective settings help reduce wildfire risk, customers should anticipate that it will take longer to restore power when these more sensitive settings are in place.

Appendix D

Wildfire Safety & Protection

Enhancing public safety and reducing risks



Preparing for Outages

Most wildfires are started by lightning strikes or caused by human actions. Regardless of cause, if a fire starts in an area with power infrastructure, we may de-energize that part of the system. We are generally able to shut the system down in sections, and we work to minimize the size of the shutdown to affect as few customers as possible. The length and duration of a fire-related outage will vary based on where in the system it occurs and the situation on the ground.

Our goal is to provide safe and reliable power, but outages can happen year-round, not just during winter snow or ice storms. You should be prepared for 14 days without power. Unlike a winter outage, preparedness for a summer outage includes methods to stay cool and hydrated.

1 Emergency Plan Basics

You should be prepared to manage 14 days without power.

Be sure to plan with the following categories in mind:

- **Food and refrigeration/food preservation** (coolers, ice)
- **Cooking plan** (BBQ, cookstove and fuel – outside only)
- **Water** (have supplies of stored water and a plan if your home is served by a well)
- **Medical** (prescriptions, devices, first aid)
- **Pets and livestock** (food, water, evacuation plan)
- **Electronics, chargers, batteries**
- **Communications** (plan for charging, printed contact lists, radio)
- **Records** (vaccination records, insurance cards, ID, etc.)
- **Access** (manual overrides for electronic doors and garages)

FOR ADDITIONAL PLANNING TIPS, GO TO:

EWEB.ORG/EMERGENCYPREP

2 Know Your Zone and Evacuation Level

If we are in an active fire situation, be sure that you know your evacuation level and how to get out. Alerts will come from Lane County and public safety support.

MORE ABOUT EVACUATION LEVELS: EWEB.ORG/WILDFIRE

TO SIGN UP FOR ALERTS AND LEARN MORE, GO TO:

PUBLIC.ALERTSENSE.COM/SIGNUP

3 Plan for the Medically Fragile

Take a few moments to make sure we have your current contact information in case we need to reach out to you in an emergency. If you rely on electrically powered medical devices, or you care for someone who is medically fragile, we encourage you to let us know and to have a contingency plan in the event of a prolonged outage. **Contact us by email at eweb.answers@eweb.org.**

Learn more about wildfire preparedness and evacuation planning here: eweb.org/wildfire.
Follow us on Facebook, Instagram and Twitter for the latest updates and emergency information.



Working All Year to Keep You Safe!



YEAR-ROUND SYSTEM MAINTENANCE

Ongoing maintenance and system hardening; robust tree-trimming program.



TARGETED VEGETATION MANAGEMENT

More frequent inspection and pruning along 250 'line miles' in higher risk areas.



SITUATIONAL AWARENESS

Weather monitoring, fire aware work practices, outreach and education during wildfire season.



EXTREME RISK MANAGEMENT

Protective equipment settings.
De-energize lines as a last resort.

Appendix E

Project or Initiative
Wildfire Mitigation Strategic Communications Plan
Summary
<p>Due to the increased frequency and magnitude of wildfires in recent years, the Oregon Public Utilities Commission is expected to require wildfire mitigation plans (WMP) be completed and filed by mid-2022. EWEB will be required to complete a plan and have it adopted by the EWEB board, then filed with the PUC. EWEB has several programs in place for wildfire mitigation, and management plans to build on those to meet PUC requirement. Finally, while most wildfires are started by lightning strikes or caused by human actions, utilities such as EWEB have a role to play in risk reductions.</p> <p>EWEB has select areas of the territory with high fire risk where there is increased vegetation density or remoteness. This includes the upriver territory and select feeders in the southern territory of the Eugene urban area. EWEB will take a programmatic approach to a WMP which will include the following elements:</p> <ul style="list-style-type: none">• Operational Response – Trigger criteria and actions to be taken upon alert of a Red Flag event which result in changes to normal system controls and protection (not de-energization), and internal response and communication protocols around outage response and restoration.• Public Power Safety Shutoffs (PSPS) – evaluate efficacy of this approach for EWEB territory. If deemed appropriate, will include specific trigger criteria and actions to be taken which result in de-energization of equipment and systems proactively ahead of a Red Flag or triggered during a Red Flag event• Mitigation Program – enhancement measures through monitoring, vegetation management, capital improvements or design standards changes to mitigate damage to equipment in the event of a fire and reduce risk of ignition from the power system.• Communication Plan – internal and external communications around the above tactics, changes and protocols as well as internal and external education around the WMP.• Interagency Coordination – partnering with area agencies which are involved in the planning, response or recovery of wildfire related events.
Communication goals
<ul style="list-style-type: none">• Build customer trust and confidence.• Demonstrate to customers the efforts EWEB has taken and will take to mitigate the risk of wildfire ignition from the power system when a Red Flag warning is issued.• Create a sense of shared responsibility when it comes to preventing wildfires.• Work with county, city and state agencies to share messaging developed for this plan.• As criteria is established and PSPS program is developed, help customers prepare for a PSPS with as much notice as possible and help them understand why such an action is necessary.
Strategies
<ul style="list-style-type: none">• Enhance EWEB’s reputation as a “safety first” utility that puts the safety of the community and staff first in every instance. This can be emphasized by leveraging the wildfire mitigation communications plan with other safety-related activities, event and/or metrics.

- Partner with local, state and federal organizations to help educate customers about how to reduce wildfire risk at, near and around their homes in partnership with other community groups such as Team Up 4 Fire Safety and other urban/wildland interface fire prevention organizations.
- Educate customers about the dangerous combination of high winds, warm temperatures, low humidity and wind-related wildfires and about also about potential outages and to urge them to be aware of conditions and sign up and be proactive in receiving Red Flag alerts.
- Emphasize that EWEB works with other agencies, including the U.S. Forest Service, Oregon Department of Forestry, Lane County Emergency Management, Eugene Springfield Fire and others to review the combination of factors in deciding if power should be shut off.
- Socialize, through all available channels, the safety and PSPS messages in advance of fire season **once the program is finalized, approved and launched.**
- Give customers appropriate notice in advance of forecast conditions that may result in Operational Changes or PSPS (**once program is approved**) and direct them to the source of the information (NOAA, Lane County Emergency Management, LCSO, etc.)
- Recognize and empathize that shutting off power for safety reasons can present challenges for customers, especially those who live in rural areas and rely on electric pumps for wells, rely on power for communication, and give customers tools and information to mitigate those challenges (e.g. Pledge to Prepare).
- Highlight the programs EWEB created before and after the Holiday Farm Fire to help impacted residents (including the Generator Loan Program).
- Ensure staff, board and partner agencies have the information to respond to customer inquiries
- Educate customers how they can prepare for extended outages or more frequent interruptions as these events may be experienced more often. (Something similar to pledge to prepare).

Audiences

- All EWEB customers
- The larger community, including areas of the Upper McKenzie River Valley where EWEB has facilities
- EWEB Board and staff
- Partner agencies, including City of Eugene, Lane County and Oregon Department of Forestry

Key messages

Vegetation Management

- To help prevent tree-related outages and mitigate wildfire risk, EWEB proactively prunes trees and trims vegetation to help keep our equipment clear.
- Even as the protection systems do their job, arcs and sparks can happen before the electricity is removed which can quickly ignite grass and other vegetation, particularly in very dry conditions, and the fire can spread rapidly in high winds or gusts. EWEB cannot control all the fuels, except in the areas it owns and controls.
- Tree branches can cause faults in multiple ways. A tree falling across a line can tear the line down. If a limb falls on the line, it can produce an electrical arc. The arc itself has the possibility of sparking a fire if the conditions for fuel, wind and temperature exist, and if the branch remains in contact with the line, it may eventually break the line.

- Crews trim around 300 “line” miles of vegetation annually to minimize falling trees and branches for ongoing reliability maintenance, with an additional 250 “line” miles inspected and pruned specifically for fire protection in high-risk areas.
- Our vegetation management program is consistently recognized by state officials as a model for other utilities to follow.

Grid Operational Changes for Wildfire Mitigation

- When there is a high risk of wildfire, we modify the protection settings on power lines in certain areas and make safety-related operational changes to select substations.
- As each weather situation is unique, we work closely with other agencies such as Lane County Emergency Management, U.S. Forest Service, and Oregon Department of Forestry, and carefully review a combination of factors that dictate when to implement additional protective measures, including:
 - NOAA Red Flag Warning
 - High Wind Forecast
 - Wind-Related Outages
 - Low Humidity Levels
 - Dry Material on the Ground
 - Situational Awareness
- High winds are especially problematic in that they create more vegetation contacts with our electric wires, increasing spark potential, and those gusting winds can cause fires to spread faster than they can be contained.
- While most wildfires are started by lightning strikes or caused by human actions, utilities have a role to play in risk reduction.
- To decrease the risk that EWEB powerlines become a potential ignition point, we change the protective settings on our equipment during Red Flag Warning within our service territory. These enhanced protective steps are concentrated in areas at a higher risk of wildfire, including:
 - All lower McKenzie Valley circuits from Hayden Bridge/Camp Creek up to Leaburg.
 - South of S. 34th Ave. and east of Willamette St. to the intersection of Old Dillard Road and E. 43rd Ave.
 - South of Potter St. at the intersection of Amazon Dr., and north of E. 43rd Ave. going east to Spring Blvd.
- These protective measures include modifying high-voltage electric switches and relays. Just like a circuit breaker in your home, the switch senses when trouble occurs - such as a tree branch falling on the line - and shuts off the power.
- EWEB takes these steps during Red Flag Warning events for the safety of our customers, community and staff.

- Unlike some utilities in California utilities that enact “Public Safety Power Shutoffs” (PSPS) during high wind, low humidity weather events, we do not plan (in 2021) to proactively de-energize power lines when officials declare a Red Flag Warning within our service area.
- However, turning up the sensitivity of the system to reduce the potential of sparking a fire increases the chances of power outages.
- If a powerline in this area does shut off when the protective measures are in place, crews will visually patrol the line to make sure equipment is safe to operate and work with our public safety partners to ensure there is no active fire in the vicinity before re-energizing the line. While these are prudent and safety-focused steps, we have alerted customers that in the event of an outage, restoration could take longer because we must first visually inspect the lines.
- As EWEB becomes more wildfire aware, we are also engaging our customers in this effort. We’ve started a wildfire awareness social media campaign, and have a brochure ready to share with customers to accompany information on our [website](#). A new map will soon be available on-line to show customers areas of our system that are at higher wildfire risk, to be refined as we learn more information over time.
- Because emergency preparedness is a shared responsibility, we encourage our customers and our staff to be ready year-round and have an emergency plan (and supplies) in place and ensure we are all ready for a prolonged power or water disruption – whether caused by snow, ice, wind or wildfire.
- EWEB frequently de-energizes power lines at the request of public safety agencies, such as the fire department, police or Lane County Emergency management. When a vehicle strikes a power pole, for example, police and/or fire often request that we re-energize a line to allow for extraction and public safety.
- During periods of high wildfire danger, EWEB would de-energize lines if asked to do by other agencies to ensure public safety.
- Safety remains our No. 1 priority, and EWEB reserves the right to de-energize power lines for safety reasons.

Public Safety Power Shutoff (Not approved for sharing publicly)

- A Public Safety Power Shutoff is a practice used to preemptively shut off power in certain high risk fire areas to reduce fire risk during extreme and potentially dangerous weather conditions. EWEB is currently evaluating the use of PSPS for the EWEB electric system. If deemed appropriate, EWEB will develop the PSPS program and that would launch after board adoption.
- We realize the proactive approach of preemptively shutting off power can present challenges, especially for those who live in rural areas and rely on electricity for pumps for wells, internet and communications. However, customer, community and staff safety is our No. 1 priority.

- If applied wisely, the relative inconvenience of a PSPS is a fair price to pay to avoid a wildfire that could result in the loss of life and property and any actions EWEB may take in the future using PSPSs will be in coordination with local agencies and as adopted by the board and PUC.
- If your power has been shut off, we will restore power as soon as the conditions permit, and crews have inspected the system to confirm it is safe to re-energize power lines.

What can customers do?

- Just as EWEB manages vegetation to keep trees away from power lines, it is important for everyone in our community to create a line of defense around their property by clearing dead trees and brush away, particularly if you live in the south hills and other heavily forested areas of our community. Contact [Eugene Wildfire Preparedness Coalition](#) for more information and guidance.
- When selecting a new tree to plant, follow the [Right Tree, Right Place](#) approach. By picking the proper species and planting procedure, you can increase public safety, reduce power outages, reduce the need for routine pruning, and promote healthy trees.
- Everyone should also have a plan for how you and your family will stay safe from wildfire. Find more information at <https://www.ready.gov/wildfires>.
- Outage preparation – pledge to prepare; water storage, flashlights, food, backup power, etc. family emergency plan go to www.eweb.org/emergencyprep for more information.

Tactics

Website – post information about vegetation management program, what PSPSs are, PSPS criteria (once finalized and adopted) and wildfire prevention and mitigation measures in the Newsroom and Electric Safety page.

Enhance the eweb.org page dedicated to wildfire safety and mitigation.

Visual media – Photos and videos of vegetation management and grid-hardening activities.

Email – send information about EWEB wildfire mitigation programs applicable listservs.

Bill message/insert – Wildfire mitigation brochure insert to go out in October 2021 (email) and June 2022.

Earned media – use earned media to promote EWEB’s proactive vegetation management program as well as the need to institute operational changes during Red Flag Warnings.

Social media – post regular educational materials about EWEB’s proactive vegetation management program as well as the need to institute PSPS under certain conditions and the shared responsibility of wildfire prevention.

EWEB’s new customer service portal – Once the new portal is operational in May 2021, we hope to be able to use that as a tool to communicate with customers, including providing notice of responses ahead of Red Flag warnings and during the events.

Collateral – prepare a PowerPoint slide deck, talking points, and digital/print assets that can be used by staff, shared in various forums and incorporated into communications and events.

Events/Sponsorship – Attend and participate in community events that focus on wildfire safety. Perhaps become a sponsor or partial sponsor of such an event.

Timing

May - July	Start educating customers about the steps EWEB takes to prevent our equipment from sparking a fire. This will help socialize the messages and strategies listed above.
August - October	Continue community education about wildfire mitigation and begin more frequent messaging that wildfire season is here. Build awareness that this is the time of year where EWEB is most likely have to de-energize lines for safety reasons.
October - November	Re-emphasize EWEB wildfire mitigation efforts customers, commissioners and staff.

Identified Risks & Mitigation Efforts

Risk	Mitigation Effort
Impacts to PSPS-impacted customers	Proactively promote wildfire mitigation efforts so customers understand why EWEB implements a PSPS.
Criticism re: PPS implemented, customers impacted by voluntary outage.	<ul style="list-style-type: none"> • Emphasize re: Customer and staff safety is our No. 1 priority. • The relative inconvenience of a PPS is a fair price to pay to avoid a wildfire that could result in the loss of life and property.
EWEB’s reputation if customers or the community see us as responsible for starting a fire.	<ul style="list-style-type: none"> • Create and implement a formal Wildfire Mitigation Action Plan. • Implement the Wildfire Mitigation Communications Plan.
Concerns re: potential for future wildfires in forested areas of EWEB’s service territory.	<ul style="list-style-type: none"> • Acknowledge that climate crisis has increased dangers to EWEB’s service area--including wildfire, algal blooms and drought--stemming from hotter, dryer summers. • Emphasize that degraded watersheds become more and more vulnerable to megafires, making McKenzie watershed restoration an urgent form of climate change remediation.



Wildfire Mitigation Plan Roadmap

HFF

SB 276

PUC Approvals

Pre-2021	Stage 1 Q1 - Q2 2021	Stage 2 Q3 - Q4 2021	Stage 3 Q1 - Q3 2022	Q4 2022	2023+
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Wildfire Mitigation Evolution

WMP Implementation

BOARD

	WMP work session	WMP work session Concurrence w/ Working Draft 12/21	Approval of WMP Compliance Plan 6/22		WMP annual review
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STAFF

				Implement WMP	
FEMA UG & conversions,	fire-focused PUC inspections/repairs & veg mgmt		Develop Capital, O&M programs based on gap findings	Continue enhanced 10-year CIP process Implement process & system fire resiliency projects >	
Focus on EWEB	EWEB program enhancements focus	Initial draft to Board for concurrence 12/7	ICF risk analysis		
Enhancing EWEB programs for WMF	Goal #4 assigned	0.5 FTE assigned to WMP	ICF gap analysis to state and best practice	Regional participation in resiliency & emergency mgmt programs, internal continuous improvement >	
Initial fire risk maps		Red Flag update	ICF update initial WMP		
Initial Ref Flag ops		Hire consultant, ICF	Draft to Board May		