# 2022 WILDFIRE MITIGATION PLAN

## HERMISTON ENERGY SERVICES

**DATE: JUNE, 2022**
**VERSION: V1**

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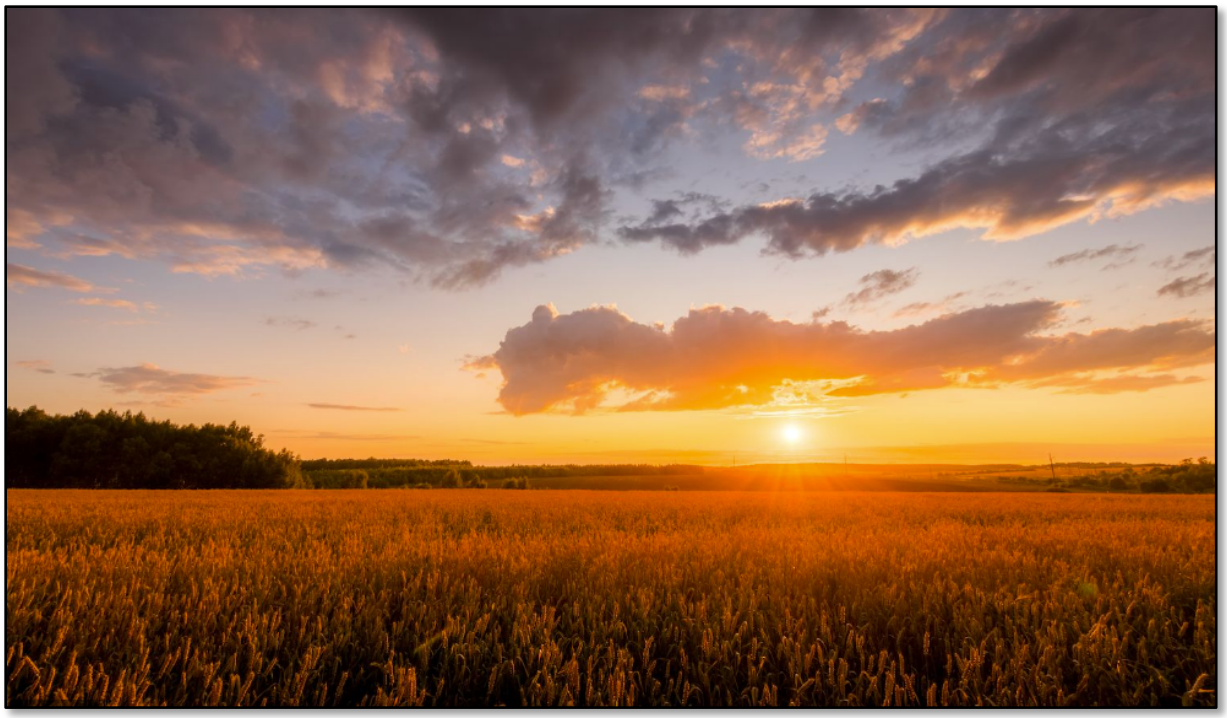


# 1 Introduction

The Pacific Northwest experiences some of the most devastating and catastrophic wildfires in the country. Despite a mild fire season in 2019 due to cooler temperatures, Oregon's 2020 wildfire season became the most destructive in the state's history, burning more than 1.5 million acres[1].

Wildfire mitigation has played an essential role in operational practices and decision-making at Hermiston Energy Services (HES). HES through our contract with Umatilla Electric Cooperative has existing policies, programs, and procedures to directly or indirectly manage wildfire risk. Going forward, HES will implement additional programs to adapt to evolving fire related conditions, incorporate technological advances, and improve operational practices to mitigate the potential for ignitions and more effectively respond to increasing wildfire risk conditions.

The HES Wildfire Mitigation Plan (WMP or Plan) takes an active approach to reduce fire-related risks for its customers while allowing for retooling and improvement over time. As new technology and information emerge, HES will assess, enhance, and refine its practices. The Plan describes HES' ongoing vegetation management (VM), asset inspection and maintenance, de-energization, communication plans, and restoration of

[1] The Oregon Department of Forestry; https://apps.odf.oregon.gov/DIVISIONS/protection/fire_protection/fires/dailyFireReps.asp

service processes. Additionally, the WMP outlines roles and responsibilities for its implementation, performance metrics, deficiency identification, and the audit process.

## 1.1 Purpose of the Plan

The Plan describes HES' strategies and programs to mitigate the threat of electrical equipment ignited wildfires, and addresses the unique features of its service territory, such as topography, weather, infrastructure, grid configuration, and areas most prone to wildfire risks.

HES' General Manager in coordination with Umatilla Electric Cooperative reviews and approves the Plan as needed, while the General Manger is responsible for its implementation.

## 1.2 Objectives of the WMP

The main objectives of this WMP are to:

1. Implement an actionable plan to increase reliability and safety while minimizing likelihood of HES assets becoming the origin or contributing factor for wildfire.
2. Maintain a plan that prioritizes safety, situational awareness, preventative methods, and recovery.
3. Continue to assess and incorporate new industry best practices, technologies, and risk mitigation activities.
4. Measure the effectiveness of HES' wildfire mitigation strategies through annual evaluation of the WMP.

## 1.3 HES Profile and History

HES is a Consumer-Owned, Non-Profit Electric Municipality formed October 1, 2001, after acquiring PacifiCorps' Hermiston distribution facilities. HES currently serves 5,356 customers, with annual sales of 110 million kilowatt-hours.

HES' facilities consists of 36.3 miles of overhead and 19.6 miles of underground primary distribution lines. HES serves approximately 63% of the area of Hermiston. 51.5% of sales to residential customers and 47.9% to commercial customers. The utility has invested millions of dollars into new and upgraded infrastructure since its inception.

HES upholds a commitment to service excellence while delivering safe, affordable, and reliable electricity to its customers. These principal focuses are further enhanced with

innovative energy solutions and a deep-rooted involvement in the communities it serves.

Hermiston uses a "Council-Manager" form of government; all powers of the city are vested in the City Council. The Council, made up of eight elected Hermiston residents, ultimately decides the policies and procedures of HES. The Mayor is elected separately from the City Council, and only votes in the event of a tie. The Council hires a City Manager to manage day-to-day decisions of the city and oversee and retains the General Manager who is responsible for HES' overall management and operations.

## 1.4 HES Contract with Umatilla Electric Cooperative (UEC)

In 2001, The City of Hermiston entered into an agreement with PacifiCorp to purchase PacifiCorp's electric distribution system within the City. Upon completion, it was the City's desire for UEC to provide certain services to the City in connection with the City's municipal electric utility (HES) operation.

The City entered into a Management, Operation & Maintenance Service Agreement between the City of Hermiston and UEC that was updated July 1, 2012 and is effective through June 30, 2032.

As part of this agreement, UEC provides technical operation services, including line work, meter reading, tree trimming, drafting, dispatch, supervision, repairs, inspection, maintenance, and day-to-day engineering and planning services for the HES system.

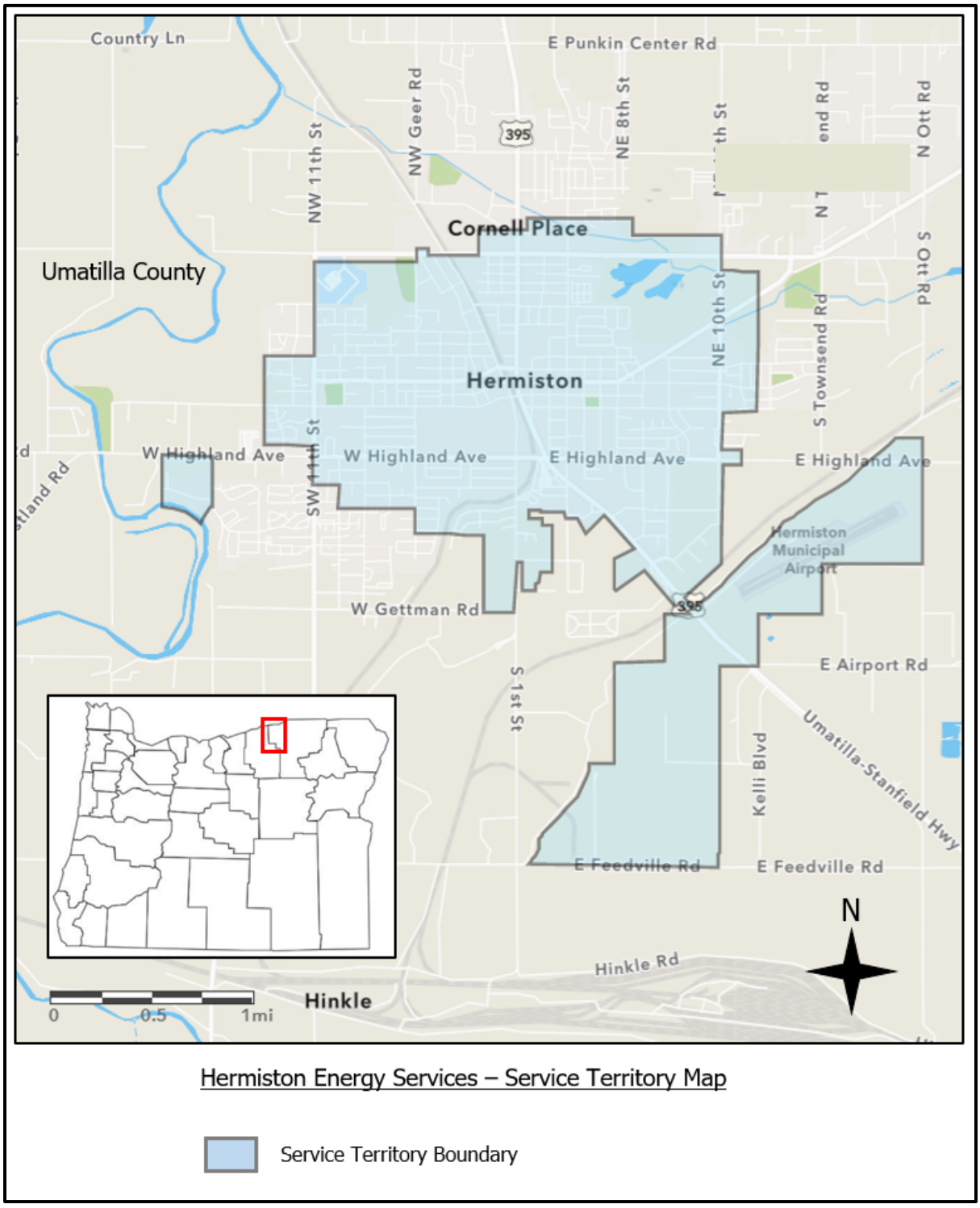
Specifically related to this plan is the contractual agreement of after-hour outage response, including operation, construction, and maintenance services for all storm damages, other catastrophic events, and emergency recovery and restoration.

## 1.5 The Service Area

HES has been granted an exclusive service territory by the Oregon Public Utilities Commission (OPUC) that includes approximately 60 percent of the City of Hermiston located in Umatilla County along the Columbia River in north-central Oregon.

Overall, the climate in the HES service area is temperate and semi-arid. Low annual precipitation, low winter temperatures, and high summer temperatures are typical. August is the hottest month with an average high above 90 degrees. The MES service territory is shown in Figure 1 on the following page.

**Figure 1. HES Service Territory Map**



# 2 Overview of HES' Fire Mitigation Strategies

## 2.1 Strategy and Program Overview

HES' wildfire prevention strategies are implemented by Umatilla Electric Cooperative (UEC) and are comprised of five main components. Together they create a comprehensive wildfire preparedness and response plan with a principal focus on construction standards, ignition reduction through system design, proactive operations, maintenance programs, specialized operating procedures, and staff training.

- **Design & Construction:** HES' design and construction strategies are intended to improve system hardening to prevent contact between infrastructure and fuel sources and minimize the risk of HES' electrical system becoming an ignition source.
- **Inspection & Maintenance:** HES' inspection and maintenance strategies consist of diagnostic activities, maintenance methods and inspection schedules to ensure all equipment and infrastructure are in excellent working condition.
- **Operational Practices:** Pro-active, day-to-day actions include safety training, emergency planning, system mapping, and protection device settings. Measures to mitigate wildfire risks are taken to ensure preparedness in high-risk situations, such as dry and windy climatological conditions.
- **Situational & Conditional Awareness:** This component consists of methods to improve system visualization and awareness of environmental conditions. The practices in this category provide tools to strengthen the Plan's other features.
- **Response & Recovery:** These strategies consist of HES' procedures and protocols for response to wildfire and other emergency events, and the process for restoring power after a major outage, as well as methods for efficient communications with emergency responders as well, emergency response, and recovery efforts.

## 2.2 Mitigation Strategies and Programs

This WMP integrates and interfaces with HES' existing operations plans, asset management, and engineering principles, which are themselves subject to change. Future iterations of the WMP will reflect any changes to these strategies and will incorporate new best management practices as they are developed and adopted.

Table 1 summarizes HES' five mitigation components with associated programs and activities that support our ongoing commitment to wildfire prevention and mitigation.

**Table 1. Mitigation Programs/Activities**

| |
|---|
| **DESIGN AND CONSTRUCTION** |
| • Underground distribution lines |
| • Field recloser to vacuum-type breaker with communications change-out program |
| • Covered jumpers and animal guards |
| • Non-expulsion fuses in select high-risk areas |
| • Avian protection construction standards |
| **INSPECTION AND MAINTENANCE** |
| • Wood pole intrusive inspection and testing |
| • Distribution system line patrols and detailed inspections |
| • Distribution system vegetation management program |
| • Removal of hazard trees along the Right-Of-Way (ROW) |
| • Enhanced line patrols during fire season |
| • ROW maintenance standards |
| **OPERATIONAL PRACTICES** |
| • Work procedures and Fire Hazard training for persons working in locations with elevated fire risk conditions |
| • Community outreach/wildfire safety awareness |
| • Contractor/staff safety training and orientation for vegetation management work |
| • Alternate system protection device settings during fire season |
| • Fire suppression equipment on worksite during fire season |
| • Provide liaison to county offices of emergency services (OES) during fire event |
| **SITUATIONAL & CONDITIONAL AWARENESS** |
| • Weather Monitoring in the service area |
| • Monitoring active fires in the Pacific Northwest |
| **RESPONSE AND RECOVERY** |
| • Pre-emptive de-energization protocols |
| • Coordination with local Department of Emergency Management |
| • Customer assistance programs for post-disaster recovery |
| • Line patrols before re-energization |
| • Emergency Restoration Plan |

# 3 HES Asset Overview

As part of the risk analysis process, HES examined its asset locations to identify risks unique to its service area. This chapter will provide an overview of the service area properties and associated risks, which are factored into the wildfire mitigation strategy. See section 1.5 for a service area description. Power is provided to HES customers by way of overhead and underground distribution line assets. Table 2 depicts a high-level description of HES' distribution assets.

**Table 2. Asset Description**

| ASSET CLASSIFICATION | ASSET DESCRIPTION |
|---|---|
| Distribution | • Approximately 36.3 miles of overhead (OH) lines, transformers, voltage regulators, capacitors, switches, and line protective devices operating at 7.2kV phase to ground voltage<br>• Approximately 19.6 miles of underground (UG) lines, transformers, switches, and line protective devices operating at 7.2kV. |

## 3.1 The Electric System

HES owns and contracts its operation of electric distribution facilities, which delivers more than 100 million kWh of energy to its customers each year. Power is purchased from the Bonneville Power Administration (BPA). The purchased power is wheeled over others' transmission lines to the HES system.

HES takes delivery of purchased power at three Umatilla Electric substations. Distribution Approximately 36.3 miles of overhead (OH) lines, transformers, voltage regulators, capacitors, switches, and line protective devices operating at 7.2kV phase to ground voltage Approximately 19.6 miles of underground (UG) lines, transformers, switches, and line protective devices operating at 7.2kV.

In addition to residential usage, HES provides service to small and large commercial, industrial, and irrigation customers.

# 4 Risk Analysis and Risk Drivers

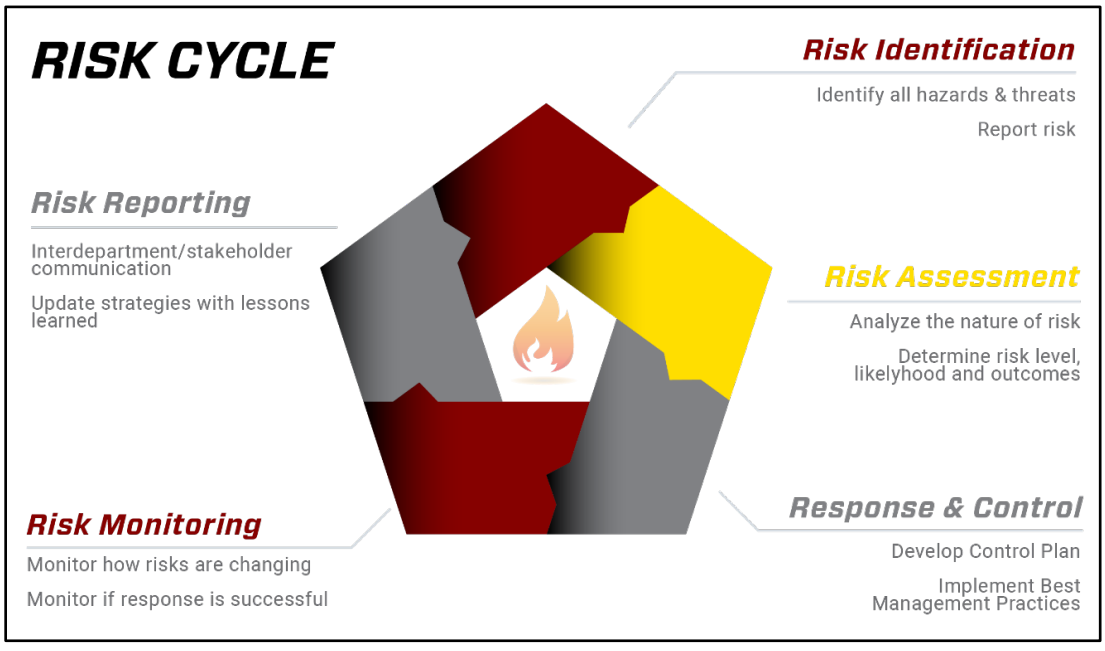
HES examined its exposure to fire-related hazards to establish a baseline understanding of the risks and risk drivers involved in a wildfire mitigation plan. Although inherent risks exist in operating an electric utility, there are strategies and processes to better plan and manage them. After identifying key risk factors, HES incorporated best available utility practices where necessary to bolster existing mitigation strategies and programs. This combination of existing and soon to be implemented practices has been incorporated in this plan to mitigate the identified risk factors identified in this section.

## 4.1 Enterprise Risk Management

The Enterprise Risk Management process is not a periodic "Risk Assessment," but an ongoing and forward-looking management discipline enabling HES to analyze risks continually and adapt to changing conditions. The key or critical risks affect the entire community and are interrelated. Therefore, they are managed holistically with a structured approach. Figure 2 illustrates the risk management process.

The Risk Assessment process began with the General Manager, consultation with Umatilla Electric Cooperative and stakeholders working together to collect information on all potential and perceived risks. Relevant local plans such as the Umatilla Emergency Operations Plan and the Umatilla County Wildfire Plan, were reviewed for additional data. Also analyzed were the risks, drivers, key impacts, mitigations, controls, and HES' policies and procedures.

**Figure 2. HES Enterprise Risk Management Process**



## 4.2 Climate Change

The *Fourth Oregon Climate Change Assessment* has determined that climate change would make forests more susceptible to extreme wildfires due to overall warming in the Pacific Northwest. The years from 2016-2018 were all warmer than the 1970-1999 average, and 2015 still stands as Oregon's warmest year on record. Fire is the most obvious impact of climate change in recent years, with the extreme wildfires occurring extensively in hot and dry summers. Record-breaking catastrophic fires in California and Oregon in 2020 highlight increased vulnerability in a warming climate. The report projects fire risk will only increase across the entire state by midcentury, especially in eastern Oregon and the Willamette Valley[2].

## 4.3 Wildfire History and Outlook

Generally speaking, fire season in Oregon lasts from June through the end of October, but research indicates that this is changing. Fire seasons from 2003 through 2012 averaged more than 84 days longer than in 1973 to 1982[2]. The largest fires years coincide with warm spring and summer temperatures, and early spring snowmelt. Annual large wildfire frequency in USFS, National Park Service and Bureau of Indian Affairs (BIA) forests is significantly correlated with spring and summer temperature. Projected warmer and drier summers and declining snowpack and correlated decreases in summer soil moisture will increase the risk of wildfires, particularly in forested areas where fuels are abundant[3].

Historically, most large fires have occurred along the Columbia River where dry rangeland grasses and shrubs provide an easily ignitable and continuous fuel source. These grass and brush fires are a regular occurrence and tend to cover large areas very quickly. No history of wildfires within HES' service territory could be found in the available mapping data[4].

## 4.4 Fire Threat Assessment Mapping

The Wildfire Hazard Potential (WHP) map used in this plan is a raster geospatial dataset produced by the USDA Forest Service, Fire Modeling Institute that can help to inform evaluations of wildfire risk or prioritization of fuels management needs across very large landscapes. The specific objective of the WHP map is to depict the relative potential for wildfire that would be difficult for suppression resources to contain. The 2020 version

[2] Fourth Oregon Climate Assessment Report 2019. Oregon Climate Change Research Institute
[3] Westerling, A.L. 2016 Increasing Western US Forest Wildfire Activity; https://royalsocietypublishing.org/doi/10.1098/rstb.2015.0178
[4] 1950 to present-https://giscenter.isu.edu/styler/?appid=90212d475d044f159f286fb0e1a3980c

was built upon spatial datasets of wildfire likelihood and intensity generated for the conterminous U.S. in 2016 with the Large Fire Simulator (FSim), as well as spatial fuels and vegetation data from LANDFIRE 2014 and point locations of past fire occurrence (ca. 1992 - 2015). Areas mapped with higher WHP values represent fuels with a higher probability of experiencing torching, crowning, and other forms of extreme fire behavior under conducive weather conditions, based primarily on landscape conditions at the end of 2014[5].

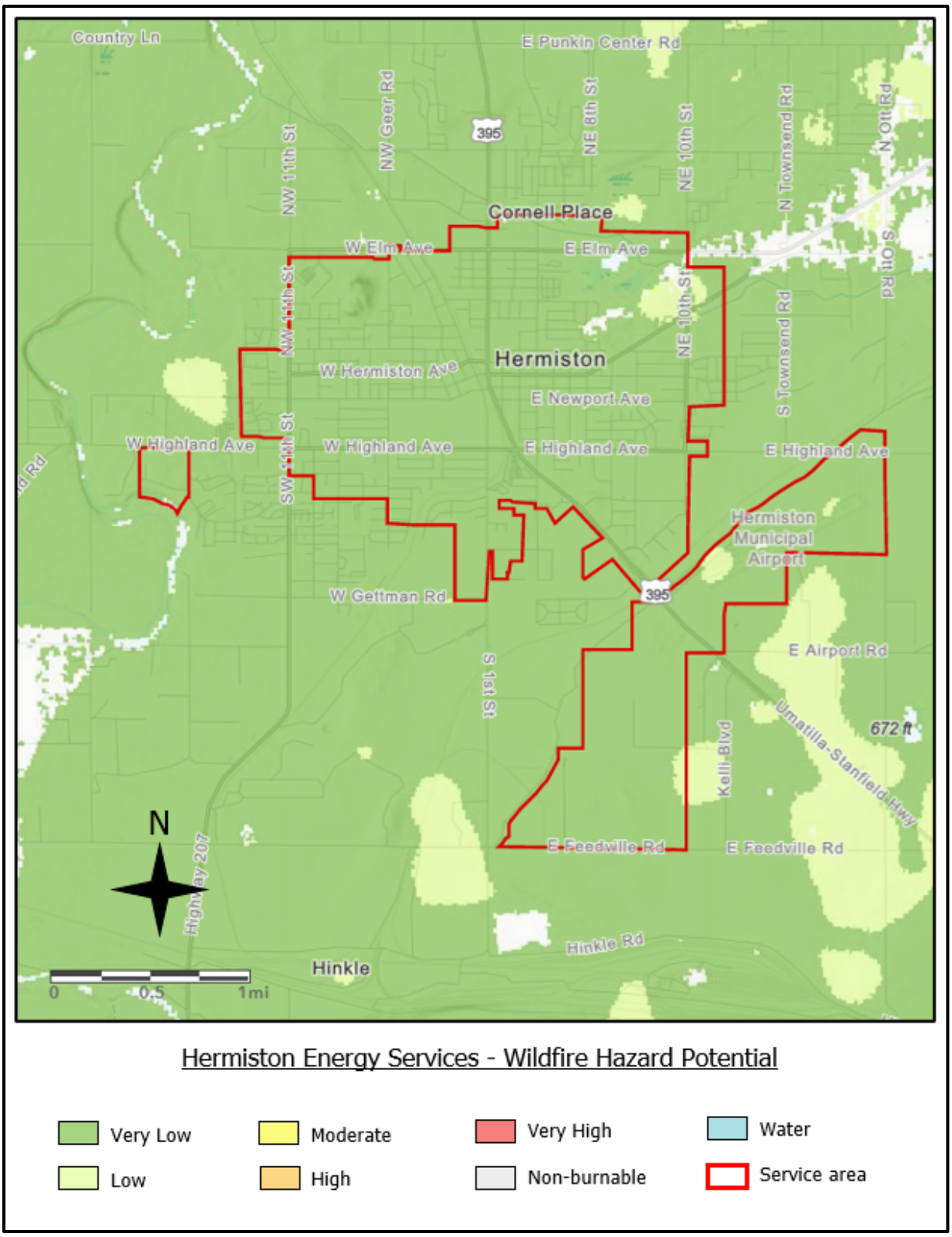
On its own, WHP is not an explicit map of wildfire threat or risk, but when paired with spatial data depicting highly valued resources and assets such as communities, structures, or powerlines, it can approximate relative wildfire risk to those resources and assets. WHP is not a forecast or wildfire outlook for any particular season as it does not include any information on current or forecasted weather or fuel moisture conditions. It is instead intended for long-term strategic planning and fuels management tool.

To determine fire threat levels within HES' service area, the service area was overlaid on the WHP map shown in Figure 3. Factors such as fire history, topography and physical access are considered in the risk analysis.

The WHP map below shows that HES' service territory made up almost entirely of Very Low WHP, with small portions containing "Low" hazard potential.

[5] Product citation: *Dillon, Gregory K. 2015. Wildfire Hazard Potential (WHP) for the conterminous United States (270-m GRID), version 2020 classified. 3rdd Edition. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2015-0047-3*

**Figure 3. Wildfire Hazard Potential Map**



# 5 Wildfire Prevention Strategy and Programs

In recent years, HES, through its contract with UEC has proactively implemented measures to address increased wildfire risks. This chapter outlines HES' existing fire mitigation efforts and identifies new processes and pilot programs HES may employ moving forward. Some of these programs are multi-year and programmatic, while others are situational and based on environmental conditions such as Red Flag Warnings or other high fire risk conditions. HES' community outreach and support for customers impacted by a wildfire are ongoing are also discussed.

HES continues to explore new technologies and approaches to determine their ability to reduce the probability of an ignition and improve system reliability. HES has implemented several newer industry practices such as electronic vacuum reclosers and non-expulsion fuses. It has initiated fire weather tracking and the incorporation of thermal imaging technology into the asset inspection program. HES updates its practices as new information emerges and then adopts improved strategies. Table 3 depicts the activities intended to address key wildfire risk factors.

**Table 3. Activities That Address Wildfire Risk Factors**

| RISK FACTOR | MITIGATION ACTIVITY |
|---|---|
| **Fuel Source** | • Comprehensive vegetation management program<br>• Enhanced vegetation Line Inspections<br>• Enhanced ROW maintenance and clearing specifications<br>• Enhanced inspection intervals and spot checks in high-risk areas<br>• Selective use of non-expulsion fuses<br>• Enhanced tree removal efforts |
| **Extreme Weather** | • National weather service monitoring<br>• USFS/WADNR IFPL monitoring<br>• Preemptive power shutdown during ongoing wildfires<br>• Emergency preparedness community outreach and education |
| **Contact with Foreign Objects** | • Avian Protection construction standards<br>• Insulated equipment<br>• Underground conversion of distribution lines<br>• Hazard tree removal |
| **Equipment Failure** | • Routine Maintenance<br>• Design and construction standards to reduce ignition sources<br>• Distribution line routine patrols<br>• De-energizing or alternate settings of lines during certain conditions<br>• Wood pole test and treatment program |
| **Field Work** | • HES worker/contractor education on fire ignition sources<br>• Tailgate meetings before fieldwork<br>• USFS fire restriction level monitoring |

## 5.1 Distribution Operational Practices

### 5.1.1 Situational Awareness and Assessment Tools

Situational assessment is the process by which current operating conditions are determined. Situational Awareness (SI) is the understanding of the working environment, which creates a foundation for successful decision making and the ability to predict how it might change due to various factors. HES uses all situational awareness resources at its disposal to monitor evolving fire weather, fuel, and other climatological conditions that may lead to fire events.

### 5.1.2 Public Safety Power Shutoff

A Public Safety Power Shutoff (PSPS) preemptively de-energizes power lines during high wind events combined with hot and dry weather conditions. When considering de-energization, HES through its contract with UEC examines the impacts on fire response, water supply, public safety, and emergency communications.

HES, through its contract with UEC, considers the external risks and potential consequences of de-energization while striving to meet its main priority of protecting the community and customers we serve. They include:

- Potential loss of water supply to fight wildfires due to loss of production wells and pumping facilities.
- Negative impacts to emergency response and public safety due to disruptions to the internet and mobile phone service during periods of extended power outages.
- Loss of key community infrastructure and operational efficiency that occurs during power outages.
- Medical emergencies for members of the community requiring powered medical equipment or refrigerated medication. Additionally, the lack of air conditioning can negatively impact medically vulnerable populations.
- Negative impacts on medical facilities.
- Traffic congestion resulting from the public evacuation in de-energized areas can lengthen response times for emergency responders.
- The inability to open garage doors or motorized gates during a wildfire event can lead to injuries and fatalities.

The risks and potential consequences of initiating a PSPS are significant and extremely complex. Based on the above considerations, HES, through its contract with UEC,

reserves the option of implementing a PSPS when conditions dictate. While HES believes the risks of implementing a PSPS far outweigh the chances of its electric overhead distribution system igniting a catastrophic wildfire, the PSPS provides a last resort tool and another mitigation option in a crisis.

On a case-by-case basis, HES has historically and will continue to consider de-energizing a portion of its system in response to a known public safety issue or response to a request from an outside emergency management/response agency. Any de-energizing of the lines is performed in coordination with key local partner agencies keeping all parties' best interests in mind.

## 5.2 Infrastructure Inspections and Maintenance

Recognizing the hazards of equipment that operate high voltage lines, HES, through its contract with UEC maintains formal time-based and risk-based inspection and maintenance programs for distribution equipment which play an essential role in wildfire prevention. The following sections outline the inspection practices for the utility.

### 5.2.1 Safety Patrol Inspections of Distribution Lines

HES, through its contract with UEC, has a system patrol process complying with OAR 860-024-0011 requirements, including biennial patrol inspections of Distribution system infrastructure. HES, through its contract with UEC, monitors vegetation during its system patrols and directs VM contractors to conduct additional inspections and VM as needed. Efforts are made by HES contract personnel to identify, geolocate, and document all hazard trees during routine system patrols using GIS enabled data collectors.

HES staff or contractors perform routine safety patrol inspections of overhead electric supply lines and accessible facilities using detailed line inspections. Inspectors look for visible signs of defects, structural damage, broken hardware, abnormally sagging lines, vegetation clearance issues, and wildlife contacts. Any anomalies found are addressed based on the severity of the defect.

### 5.2.2 Detailed Inspections of Distribution Lines

Detailed inspections of the 12.47kV distribution lines are performed on a 10-year cycle. The inspection cycles ensure safety and reliability based on standards found in Oregon Administrative Rules (OAR) 860-024-0011. System equipment found in need of maintenance or repair is categorized depending on the severity of the condition. Detailed Line Inspections (DLI) consist of foot patrols to examine all HES poles, conductors, and equipment. Visual aids assist with evaluating and detecting potential

damage to above-ground components. Inspectors look for visible signs of defects, structural damage, broken hardware, abnormally sagging lines, and wildlife contacts. Any anomalies found are addressed based on the severity of the defect. The DLI also provides ground-level evaluation of right-of-ways, access roads and vegetation-to-conductor clearances. The information accumulated informs planning and scheduling future maintenance to avoid major faults and ignition potential.

### 5.2.3 Wood Pole Intrusive Inspection

To maintain the utility's wood poles, a formal Wood Pole Assessment Plan was initiated with the goal to inspect 10% of the system each year. The pole inspection program also includes visual inspections of non-wood poles. Wood pole inspections are carried out on a planned basis to determine whether they have degraded below National Electric Safety Code (NESC) design strength requirements with safety factors.

A third-party contractor inspects and tests all poles on a cycle meeting the interval recommended in RUS Bulletin 1730B-121. Circuits are identified, mapped, and scheduled for inspection and testing using latest industry standards and practices. Inspectors are instructed to note any obvious deficiencies related to installed equipment in addition to the condition of the pole itself.

### 5.2.4 Instructions to Inspectors

HES considers and prioritizes maintenance work by assessing the most urgent needs. The inspector will document the overhead and underground systems' condition, recording defects, deterioration, violations, safety concerns, or any other factors requiring attention on the inspection records. The inspections focus on any hazards that could affect the system's integrity or the safety of line workers and the public.

### 5.2.5 Standards for Record-Keeping and Reporting

Facilities meeting standards and not requiring maintenance will be recorded and filed for future reference. Conditions other than satisfactory go into HES' asset management database, and the Operations Department generates a list of deficiencies and monitors the completion of repair work. Photos of the deficient asset accompany the inspection record.

OAR 860-024-0011(d) establishes records retention requirements for each level of inspection. The utility must maintain adequate written records of policies, plans, and schedules to show inspections and corrections meet compliance with this rule and OAR 860-024-0012. HES makes these records available to the Commission upon its request.

### 5.2.6 GIS Mapping

An electrical utility uses a network of physical facilities to provide electric power and energy to customers connected to those facilities throughout a geographical area. Each component of the distribution system (i.e., asset) and each meter have an approximate physical location and associated data. To plan, construct, maintain, and operate the distribution network it is necessary to create, manage and utilize this geospatial data. HES has integrated the ArcGIS Collector App into its inspection and maintenance program.

The Collector interface allows field workers to capture and return field data that integrates into ArcGIS mapping software. For any asset, inspectors, linemen, or VM crews can document any issues with equipment or vegetation clearance violations using handheld mobile devices. Photos are also collected during the asset and wood pole inspection process.

## 5.3 Vegetation Management

Trees that grow on or adjacent to powerline ROWs are a common cause of outages and damage to facilities and are a potential cause for wildfire. HES maintains its distribution ROWs to minimize interruptions of services and to provide a safe and reliable supply of electricity to its customers. This includes not only the maintenance of hardware, conductors, and poles, but trees and other vegetation that threatens to fall onto or grow into the electrical conductors. To this end, HES has developed a comprehensive Vegetation Management Plan outlining VM best management practices, trimming standards and technical specifications.

HES' VM program utilizes a mix of tools to accomplish the goal of reliability and public safety on its electrical system. Methods include a combination of mechanical pruning, mowing, tree removal, and herbicides for control of trees, seedlings, and protection of desirable low-growing shrubs and grasses to encourage a plant community under the powerlines that will never require or will require little maintenance. This management strategy is called Integrated Vegetation Management (IVM).

When work is well planned and completed, the overall impact on the desirable vegetation on the right-of-way will be reduced, and the neighboring landowners, the motoring public, and the wildlife that uses the right-of-way for nesting and foraging will benefit. With a prescriptive and balanced approach to VM, HES will be able to focus more of its energy and resources on quality pruning of trees along the powerline ROW,

replacement of undesirable urban trees under the lines, good customer service, while improving reliability and safety, and controlling maintenance costs.

### 5.3.1 Vegetation Management (VM) Trimming and Inspection Schedule

HES contracts tree trimming crews for year-round vegetation management work. HES contracted line crews also address vegetation concerns in response to service calls or field observations by line crews. Proactive maintenance during routine operations and prompt action during emergency events maintain system reliability, a safe work environment, and reduces fire danger. Any VM issues that cannot be immediately handled by the contracted line crews are referred to the VM contractor for priority trimming. Scheduled patrols ensure all lines are inspected for vegetation hazards and systematically trimmed. On-going, year-round field patrols identify targeted areas for vegetation pruning or removal and ensure compliance with state and federal regulatory requirements.

### 5.3.2 Vegetation to Conductor Clearance

HES' Vegetation Management Plan specifies clearance distances from any vegetation to the conductor. Since conductors move horizontally and vertically based on dynamics such as operating temperature, wind and loading, clearance is evaluated from all possible conductor positions. Clearance also accounts for vegetation that would grow into, bend into, swing into or fall into a clearance distance if not removed.

### 5.3.3 Controlling Incompatible Vegetation

In addition to the annual patrols by field staff observing and reporting on incompatible uses and encroachments, HES make efforts to educate public and private landowners about incompatible vegetation that can pose risks if planted under or near conductors.

## 5.4 Emerging Technologies

HES, through its contract with UEC, has initiated various pilot projects to explore new technologies and best management practices. These pilot projects will serve to evaluate the effectiveness of new technologies while controlling unwarranted expenditures on unproven methods. HES may elect to integrate these technologies or practices into its ongoing maintenance programs based on the outcomes. These technologies include, but are not limited to non-expulsion fuses, electronic reclosers, and fire protective coatings for wood poles.

## 5.5 Fire Mitigation Construction

HES is taking steps to harden the electrical system with upgrades and design changes. These designs stem from many decades of engineering experience and the adoption of emerging technologies. HES' design practices continue to advance with the addition of newer safety and reliability-related technologies. This advancement recognizes the importance of understanding and adapting to the challenges brought on by the use of public land, development in the WUI, and climate change.

### 5.5.1 Avian Protection Program

Birds tend to interact with overhead electrical assets by perching or nesting on utility poles or other electrical equipment such as substation transformers and switches. These interactions can lead to avian electrocutions and contacts, with the potential for outages and wildfire ignitions.

Since 2018, HES, through its contract with UEC, has implemented design and construction standards to protect raptor and migratory birds throughout the service area. These measures, outlined in its 2018 Avian Protection Plan (APP), have substantially reduced the electrocution risk to raptors and the number of injured wildlife. Concurrently, these measures have reduced the incidence of fire ignitions while also improving compliance with the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), and the Endangered Species Act (ESA).

# 6 Emergency Response

## 6.1 Preparedness and Response Planning

HES strives to minimize the impacts of any disruptive event regardless of the size or scope while consistently focusing attention on the community's most critical systems and infrastructure. HES' emergency preparedness and response planning is encapsulated in its longstanding Emergency Response and Disaster Recovery Plan (ERP). The emergency plan establishes defined responsibilities, actions, and procedures to recover the HES electrical and communications system in the event of an unexpected and unscheduled interruption. The plan is structured to attain the following objectives:

- To guide HES management in coping more effectively with unusual situations that could cause confusion and misunderstanding.
- To provide a framework for prompt, accurate and effective communications with key audiences, including employees, customers and the news media during crisis situations.
- Restore the physical network within the critical time frames established and accepted by management.
- Restore the applications within the critical time frames established and accepted by management.
- Restore the nominal course of HES business operations within the critical time frames established and accepted by management.
- Minimize the impact on HES and customers with respect to dollar losses and operational interference.

HES, with its partnership with UEC, will conduct annual exercises of the ERP, document the results, and implement lessons learned. Procedures for the development of the ERP can be found in RUS Guide 1730B-2.

### 6.1.1 Jurisdictional Structure

HES has considered the jurisdictional structure of the service area when developing or implementing its strategic plan, including those related to wildfires. HES coordinates with various land ownership and management entities such as ODF and BLM as needed.

### 6.1.2 Emergency Management Communication and Coordination

In response to active emergencies, HES, through its contract with UEC, coordinates and collaborates with the local Offices of Emergency Management (OEM) and relevant state agencies as partners. During such emergencies, HES provide a utility representative to the county and/or city OEM to ensure effective communication and coordination.

HES' primary coordination point is Umatilla County OEM. HES through UEC's Member Services Administrator (MSA) contacts the local OEM and establishes themselves as the duty officer for coordination. The MSA acts as the communications officer during an emergency, and is responsible for responding to public agencies, key accounts, the news media, and general membership.

Emergency responders and local, state, and federal agencies have direct access to operations department for information.

### 6.1.3 Coordination with Stakeholders

HES understands the importance of proactive planning and coordinating closely with local governments, agencies, and key accounts including critical infrastructure, emergency first responders, utility districts, confederated tribes, customers, and business groups. Contact information and coordination protocols are contained in the ERP.

### 6.1.4 Public Agency and Customer Communications for Outages

For scheduled maintenance outages, HES, through its contract with UEC provides as much advance notice as possible, depending on the number of customers impacted. Depending on the scope of the project and the length of time prior to the outage, customers receive personal or automated telephone calls advising of the outage and information is posted.

For unplanned outages and emergencies, staff in the Member Services Department respond by following guidelines in HES' Emergency Restoration Plan (ERP) to provide ongoing updates including safety messages as needed.

The Member Services Department calls key stakeholders and accounts including health care facilities affected by a de-energization of the power lines. County government officials are contacted prior to major planned outages.

### 6.1.5 Defensible Space / Community Outreach

Fuel reduction projects and vegetation treatments have been identified as an effective means of mitigating wildfire hazards. Each year, wildland fires consume hundreds of homes in the Wildland-Urban Interface. Studies show that as many as 80% of the homes lost to wildland fire could have been saved if their owners had only followed a few simple fire-safe practices.

Projects of this type include fuel breaks, thinning, pruning, landscape modifications, etc. Homeowners and local government bear much of the responsibility for improving the defensibility of homes in the WUI but may lack knowledge and information regarding what needs to be done and how to do it.

HES encourages its customers to take proactive measures to safeguard their homes from wildfire danger and to prepare for emergency events. To help create an awareness of fire danger, HES provides information on prevention and mitigation in publications, social media accounts (especially Facebook), and company website.

## 6.2 Actions Taken to Support Customers During and After A Wildfire

For customers who have experienced catastrophic losses to homes or businesses due to natural disaster, HES will take specific actions to support affected customers from the date of a disaster event included in a *Governor's State of Emergency Proclamation*. Customers can contact HES for additional information.

## 6.3 Restoration of Service

If an outside emergency management/emergency response agency requests a power shutdown, or if HES elects to de-energize segments of its system due to extreme weather, HES' contracted staff will patrol the affected portions of the system before the system can be re-energized. Suspect equipment or distribution lines that cannot immediately be patrolled will remain deenergized until HES' contracted staff can do so. Poles and structures damaged in a wildfire must be assessed and rebuilt as needed prior to re-energization. Periodic customer and media updates of restoration status prior to full restoration will be made.

### 6.3.1 Service Restoration Process

After a wide-spread outage, HES contract work crews take the following steps before restoring electrical service after a de-energization event. These measures intend to protect the worker, customers, the public, and the system's reliability.

- **Patrol:** Crews patrol every de-energized line to ensure no hazards have affected the system during the outage. If an outage is due to wildfire or other natural disasters, as soon as it is deemed safe by the appropriate officials, crews inspect lines and equipment for damage, foreign contacts and estimate equipment needed for repair and restoration. HES contract personnel assist in clearing downed trees and limbs as needed.
- **Isolate:** Isolate the outage and restore power to areas not affected.

- **Repair:** After the initial assessment, HES contract staff meet to plan the needed work. Rebuilding commences as soon as the affected areas become safe. Repair plans prioritize distribution circuits serving the most critical infrastructure needs. While the goal to reenergize all areas is as soon as possible, emergency services, medical facilities, and utilities receive first consideration when resources are limited. Additional crew and equipment are dispatched as necessary.
- **Restore:** Periodic customer and media updates of restoration status before full restoration are posted on social media platforms. After repairs are made, power is restored to homes and businesses as quickly as possible. Customers, local news, and other agencies receive notification of restored electric service.

# 7 Performance Metrics and Monitoring

In addition to a robust mitigation strategy, HES has developed performance metrics to monitor its efforts over time. The goal of these metrics is to provide a data-driven evaluation of plan performance to help determine the effectiveness of various programs and to identify areas for improvement.

This chapter identifies HES' contractor responsibilities for overseeing this WMP, the methods for identifying plan deficiencies and the inspection and VM program monitoring processes.

## 7.1 Plan Accountability

The General Manger makes policy decisions for HES – they will be responsible for approving the Wildfire Mitigation Plan.

- Through HES' contract with UEC, UEC's Vice President of Engineering and Operations (VP of E&O) is responsible for monitoring and auditing the targets specified in the WMP to confirm that the objectives of the WMP are met, as well as the implementation of the plan in general. Staff will be directed as to their roles and responsibilities.
- Through HES' contract with UEC, The UEC General Manager/ Chief Executive Officer (GM/CEO) and Vice President of Engineering and Operations determine when and how to notify outside agencies in cases of wildfire emergency events.
- Through HES' contract with UEC, The UEC Vice President of Administration leads the Communications Team, which is responsible for communicating with public safety, media outlets, public agencies, first responders, local offices of

emergency management, and health agencies during an emergency or planned maintenance outages.

- Through HES' contract with UEC, The UEC GM/CEO and VP's direct management staff responsible for operations, customer service, information technology, and finance.
- Through HES' contract with UEC, The UEC Manager of Operations oversees the Field Personnel.
- Through HES' contract with UEC, The UEC Manager of Engineering oversees the engineers and technical systems.
- Through HES' contract with UEC, The UEC Manager of Operations is responsible for oversight of the contracted VM operations.
- Through HES' contract with UEC, The UEC VP of Administration oversees the Customer Service Representatives.

## 7.2 Monitoring and Auditing of the WMP

The WMP will be included as a discussion item on the agenda of regularly scheduled management meetings. UEC monitors the WMP and reports to the HES General Manger on its effectiveness on an annual basis or after major events.

### 7.2.1 Identify Deficiencies in the WMP

Through HES' contract with UEC, The UEC VPE&O is responsible for ensuring the WMP meets all the applicable State of Oregon guidelines[6]. Staff responsible for assigned mitigation areas must vet current procedures and recommend changes or enhancements to build upon the Plan's strategies. Due to unforeseen circumstances, regulatory changes, emerging technologies, or other rationales, deficiencies within the WMP are reported to the UEC VPE&O.

The VPE&O or designee are responsible for spearheading discussions on addressing deficiencies and collaborating on solutions when updating the WMP. When deficiencies are identified, the designated staff evaluate each reported deficiency to determine its validity. The UEC GM/CEO and VPE&O record the agreed upon corrective actions, plan steps for implementation and inclusion in future iterations of the plan.

[6] https://oregon.public.law/rules/oar_chapter_860_division_24

## 7.3 Performance Metrics

HES is developing performance metrics intended to gauge the effectiveness of HES' various programs and strategies for mitigating wildfire ignitions. The annual tracking of these metrics will help identify circuits most susceptible to unexpected outages, time-of-year risks, and the adequacy of the VM and asset inspection schedules. HES will reassess its operations and identify areas for improvement as more data becomes available and refine the WMP as needed. The selected metrics, as with other aspects of the plan, will likely evolve in future iterations of the WMP.

### 7.3.1 Monitor and Audit the Effectiveness of Inspections

HES' compliance with OPUC, Rural Utility Services (RUS), and NESC regulations ensures facilities are inspected in accordance with current industry standards as well as federal and state mandated timeframes. Any issues found impacting safety and reliability are addressed as outlined in those regulations. In addition to the maintenance program, HES continuously evaluates its facilities while performing other activities such as outage patrols, new business planning, replacements, and related fieldwork.

### 7.3.2 Programmatic Metrics

HES outlines and schedules required work on an annual basis. Any incomplete work behind schedule is flagged for review or field verification. HES aims to complete 95-100% of the work within the initially scheduled time frame, however, emergencies or other unforeseen contingencies can occur, requiring material and labor resources to be otherwise assigned. When this happens, the delayed work receives prioritization for future time frames and completed allowing for safe and reliable operation following industry safety standards.

## 7.4 Programmatic QA/QC processes

### 7.4.1 Distribution System Inspection QC Process

Through HES' contract with UEC, The UEC Manager of Operations manages the distribution line assets and develops comprehensive inspection and maintenance programs following industry best practices. These programs ensure the safe operation of the distribution line facilities. The VPE&O or designated managers regularly monitor inspection and corrective maintenance records and diagnostic test results to adjust maintenance plans and develop new programs.

Key imperatives are to:

- Reduce the risk of power-related wildfire.
- Meet federal and state regulatory requirements.
- Achieve reliability performance within mandated limits and to optimize capital and O&M investments.

Through HES' contract with UEC, UEC's Engineering & Operations Department is responsible for performing the inspections and corrective maintenance. If deficiencies are found, service orders are created. The priority for corrective maintenance is to remove safety hazards immediately and repair minor deficiencies according to the type of defect, severity of the risk level associated with the location of the asset. Service orders are monitored throughout the year to ensure timely completion via regular internal reports.

### 7.4.2 Vegetation Management QC Process

Distribution system related VM work is field audited. Quality control efforts monitor program effectiveness, overall tree work performance, and determine the adequacy of the VM work schedule. GIS mapping software is used to track the quality assurance work and to monitor the VM program. The quality control results go under review, and deficient work is reissued to the contractor for corrective action.

## 7.5 Plan Approval Process

### 7.5.1 Public Comment

Although public input is welcomed and encouraged at any time, formal plan comment will not be taken during the Hermiston Council plan presentation and approval process.

### 7.5.2 Board Presentation

Plan presentation and approval will be performed at a regularly scheduled Hermiston City Council meeting. Meeting topic agenda and comment period announcements will follow normal Council protocols.

# Appendix A: Wildfire Mitigation Plan Version History

**Table 4. Plan Revision History**

| Version # | Change | By | Date |
|---|---|---|---|
| 1 | This is the first 2022 Version | BKI | June 1, 2022 |
| 2 | WMP Reviewed and no changes are needed | HES GM | June 1, 2022 |
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