

*approximately three years at a cost of approximately \$1.9 million. Because this work will be conducted in Red Risk Zones, the company does not anticipate replacing fuses in Oregon at this time.*

**Spark Prevention Units**—Porcelain arresters used for overvoltage protection will be changed out with arresters utilizing Spark Prevention Units (SPU). The SPU acts to eliminate the potential of catastrophic failure during arrester operation. This work includes all distribution arresters located on primary distribution lines in Red Risk Zones. In 2019, Idaho Power piloted new arrester technology to determine performance characteristics, installation requirements, and potential benefits in reducing ignition risk. As part of the pilot, Idaho Power compared different manufacturers with similar technology and conducted performance analysis to determine the most cost-effective solution. *Replacement of the arresters is expected to take approximately three years to complete and will cost approximately \$1.7 million. Because this work will be conducted in Red Risk Zones, the company does not anticipate replacing arresters in Oregon at this time.*

**Fiberglass Crossarms**—Idaho Power began piloting fiberglass crossarms in 2018 to determine potential cross-functional benefits associated with fiberglass. The pilot focused on cost, ease of installation, strength, supply availability, and reduced potential for tracking of electrical current. Tracking is known as the flow of current over an insulator, which can generate heat. The company compared different crossarm types and manufacturers and determined that fiberglass was most cost effective when considering up-front capital and installation costs. The pilot program, along with benchmarking of peer utilities, helped determine that fiberglass crossarms provided a number benefits relative to improved safety and reliability. Therefore, Idaho Power’s hardening program includes the installation of both tangent and dead-end fiberglass crossarms in Red Risk Zones. However, Idaho Power does not intend to replace all wood crossarms with fiberglass immediately. As part of the fielding phase, company distribution designers will assess wood crossarms and initially change those showing signs of defects or damage. Identified crossarms utilizing wood pins will also be replaced with fiberglass. This approach will spread the cost out over time and help reduce the upfront cost of the program.

**Small Conductor**—In the early stages of developing the WMP, Idaho Power considered the possible risk associated with small conductor and the potential for breakage. As a result of this exercise, the company’s WMP hardening program includes the replacement of overhead distribution conductor that meets certain criteria which includes approximately 60 miles in Red Risk Zones. Conductor losses were analyzed and showed that replacing the conductor will result in an approximately 50% reduction of line losses, resulting in co-benefits for the company and customers in terms of greater reliability and line loss improvements.

**Porcelain Switches**—Idaho Power’s Outage Management System and feedback from field personnel revealed potential benefits of switches made of material other than porcelain. Therefore, porcelain switches installed in Red Risk Zones will be changed out with cutouts featuring Ethylene Propylene Diene Monomer Rubber (EPDM). Idaho Power’s Methods and Materials Department trialed different cutout switches made up of different material, including silicone and polymer, to determine the most cost-effective solution. The results of



the trial highlighted the potential for avian issues with silicone (i.e., ravens tended to eat the silicone), and the cost of EPDM versus polymer was nearly equivalent. The financial analysis determined that EPDM would preserve the integrity of the insulator body, prevent outages, and provide an estimated savings of \$10,798 per year over silicone.

**Avian Protection**—Idaho Power employs several different protection measures to protect wildlife on existing structures including but not limited to covers, insulated conductor, diverters, perches, nesting platforms, and structural modifications. The company has an extensive history working with manufacturers of animal guards/covers and regularly seeks new solutions for avian issues to prevent mortalities, increase reliability, and eliminate other risks. The company's Avian Protection Plan (APP) was developed in the mid-2000s and many of the practices identified in the APP are used for wildfire mitigation in Red and Yellow Risk Zones. For example, new wildlife guards were recently developed and installed in conjunction with the installation of new power fuses and SPUs. Idaho Power consulted with different manufacturers to develop new products that would accomplish the dual goals of avian protection and wildfire mitigation. The best solution is determined on a case-by-case basis depending on the specific location, the type and extent of avian presence, and other relevant factors.

#### **4.4.8.2. Overhead to Underground Conversions**

Another aspect of Idaho Power's system hardening program is the select conversion of overhead to underground distribution lines in Red Risk Zones. In 2022, the company will convert 1.5 miles of overhead distribution lines to underground lines. In 2023 and beyond, the company will work to build a strategic undergrounding program to weigh the cost-benefit of undergrounding versus other circuit hardening measures. While underground distribution lines offer benefits associated with being less exposed to the elements and external forces, conversion may not be possible, advisable, or economical in certain situations. The company will continue to evaluate the feasibility of underground conversions as well as the relative value and cost effectiveness as part of the WMP.

#### **4.4.8.3. Transmission Steel Poles**

In 2021 and as part of its WMP, Idaho Power revised its transmission construction standards to utilize steel poles and structures for new line construction built to 138 kV and above in elevated wildfire risk zones. This change is intended to minimize the potential for wildfire damage, improve transmission line resiliency, and increase reliability for customers. Wood poles continue to be accepted and used in the industry, and the company will still utilize wood poles in many transmission system applications in consideration of the availability of steel poles, the specific engineering, right-of-way, permitting, and scheduling requirements for each project.

In addition, wood poles will continue to be the standard construction practice for transmission line voltages below 138 kV unless a different material is needed to meet specific engineering or planning requirements. As discussed above, Idaho Power will wrap wood poles located in Red and Yellow Risk Zones with fire-proof mesh.



## 5. SITUATIONAL AWARENESS

### 5.1. Overview

Visibility and readily available access to current and forecasted meteorological conditions and fuel conditions is a key aspect of Idaho Power's wildfire mitigation strategy. Meteorological and fuel conditions can vary significantly across Idaho Power's service area. Idaho Power leverages its internal atmospheric science department's modeling/forecasting capabilities, its existing field weather stations, and publicly available weather/fuel data to develop projections of current and future wildfire potential across Idaho Power's service area. This wildfire potential information is then available to operations personnel to factor into their operational decision-making.

### 5.2. Fire Potential Index

Idaho Power has developed an FPI tool based upon original work completed by San Diego Gas and Electric, the National Forest Service, and the National Interagency Fire Center and modified for Idaho Power's Idaho and Oregon service area. This tool is designed to support operational decision-making to reduce fire threats and risks. This tool converts environmental, statistical, and scientific data into an easily understood forecast of the short-term fire threat which could exist for different geographical areas in the Idaho Power service area. The FPI is issued for a seven-day period to provide for planning of upcoming events by Idaho Power personnel.

The FPI reflects key variables, such as the state of native vegetation across the service area ("green-up"), fuels (ratio of dead fuel moisture component to live fuel moisture component), and weather (sustained wind speed and dew point depression). Each of these variables is assigned a numeric value and those individual numeric values are summed to generate a Fire Potential value from zero to sixteen, each of which expresses the degree of fire threat expected for each of the 7 days included in the forecast. The FPI scores are grouped into the following index levels:

- **Green:** FPI score of 1 through 11 indicates low potential for a large fire to develop and spread as there is normal vegetation and fuel moisture content as well as weak winds and high relative humidity.
- **Yellow:** FPI score of 12 through 14 indicates an elevated potential for a large fire to develop and spread as there are lower than normal vegetation and fuel moisture content as well as moderate winds and lower than normal relative humidity.
- **Red:** FPI score of 15 through 16 indicates a higher potential for a large fire to develop and spread as there are well below normal vegetation and fuel moisture content as well as strong winds and low relative humidity.



Fire Potential Index (FPI) Category			
	Normal	Elevated	High
FPI Range	1 to 11	12 to 14	15 - 16

The state of native grasses and shrubs, or **Green-Up Component**, of the FPI is determined using satellite data for locations throughout the Idaho Power areas of interest. This component is rated on a 0-to-5 scale ranging from very wet (or “lush”) to very dry (or “cured”). The scale is tied to the Normalized Difference Vegetations Index (NDVI), which ranges from 0 to 1, as follows:

Green-Up Component						
NDVI	Very Wet/Lush: 1.00 to 0.65	0.64 to 0.60	0.59 to 0.55	0.54 to 0.50	0.49 to 0.40	Very Dry/Cured 0.39 to 0.00
Score	0	1	2	3	4	5

The **Fuels Component (FC)** of the FPI measures the overall state of potential fuels which could support a wildfire. Values are assigned based on the overall state of available fuels (dead or live) for a fire using the following equation:

$$FC = FD / LFM$$

Where FC represents Fuels Component in the scale below, FD represents 10-hour Dead Fuel Moisture (using a 1-to-3 scale), and LFM represents Live Fuel Moisture (percentage). This data will be collected from satellite sources and regional databases supported by state and federal agencies.

The product of this equation represents the fuels component that is reflected in the FPI as follows:

Very Wet					Very Dry
0	1	2	3	4	5

The **weather component** of the FPI represents a combination of sustained wind speeds and dew-point depression as determined using the following scale. Regional adjustment to criteria limits for the upper wind speeds may occur after further discussion with subject matter experts from each of the regional operations. This data will be sourced from the weather, research and forecasting (WRF) products produced by Idaho Power using its High-Performance Computing (HPC) system. In addition to the HPC system produced WRF data, several national level



meteorological products will be used. These products will include regional weather observations used to validate model information.

Dewpoint Depression/Wind	≤5 mph	6 to 11 mph	12 to 18 mph	19 to 25 mph	26 to 32 mph	≥33 mph
≥50°F	4	4	4	5	5	6
40°F to 49°F	3	3	4	4	5	5
30°F to 39°F	3	3	3	4	4	5
20°F to 29°F	3	3	3	3	3	4
10°F to 19°F	2	2	2	2	2	3
<10°F	0	1	1	1	1	2

### 5.3. FPI Annual Process Review

The FPI process will be reviewed annually after completion of the fire season and, with consultation of interested parties (e.g., Load Serving Operator, Line Crews, and others), will be updated to enhance Idaho Power's wildfire preparedness.



## 6. MITIGATION—FIELD PERSONNEL PRACTICES

### 6.1. Overview

A component of Idaho Power's wildfire mitigation strategy is to prevent the accidental ignition and spread of wildfires due to employee work activities. Idaho Power developed the *Wildland Fire Preparedness and Prevention Plan* (Appendix A) to provide guidance to Idaho Power employees and contractors to help prevent the accidental ignition and spread of wildfires due to company work activities in locations and under conditions where wildfire risk is heightened. All Idaho Power crews and certain field personnel performing work on or near Idaho Power's facilities are expected to operate in accordance with the Plan and continue to conduct themselves in a fire-safe manner.

### 6.2. Wildland Fire Preparedness and Prevention Plan

The *Wildland Fire Preparedness and Prevention Plan* informs Idaho Power personnel and its line construction contractors about the following factors:

- Annual fire season tools and equipment to be available when on the job site
- Daily situational awareness regarding locations of heightened potential for fire risk and weather conditions in those areas
- Expected wildfire ignition prevention actions while working and reporting instructions in the event of fire ignition
- Training and compliance requirements



## 7. MITIGATION—OPERATIONS

### 7.1. Overview

A component of Idaho Power's wildfire mitigation strategy is to continue safe and reliable operation of its T&D lines while also reducing wildfire risk. These operational practices primarily center around the following:

- Temporary operating procedures for transmission lines during the fire season<sup>17</sup>
- An operational strategy for T&D lines during time periods of elevated wildfire risk during the fire season
- A PSPS strategy for Idaho Power's service area and transmission corridors

### 7.2. Operational Protection Strategy

Operational protection strategies were developed to reduce the probability of ignition during fault events on Idaho Power's transmission and distribution system. Analysis was performed by Reliability Engineers to assess the available fault energy under different protection schemes and configurations and the effect each would have on customers in terms of increased and extended outages. Idaho Power analyzed the following configurations for automatic reclosing devices:

- Reclose off
- Limited energy reclose
- Limited energy lockout

The analysis performed included assessing Time Current Curves and fault energy of different circuits to gauge the overall reduction in energy between different protection configurations and coordination challenges. Figure 13 below summarizes the different protection configurations evaluated along with estimated benefits in terms of reduced fault energy and impacts to customers. At this time, reclose off appears to provide the best balance between reducing fire ignition risk and customer reliability impacts.

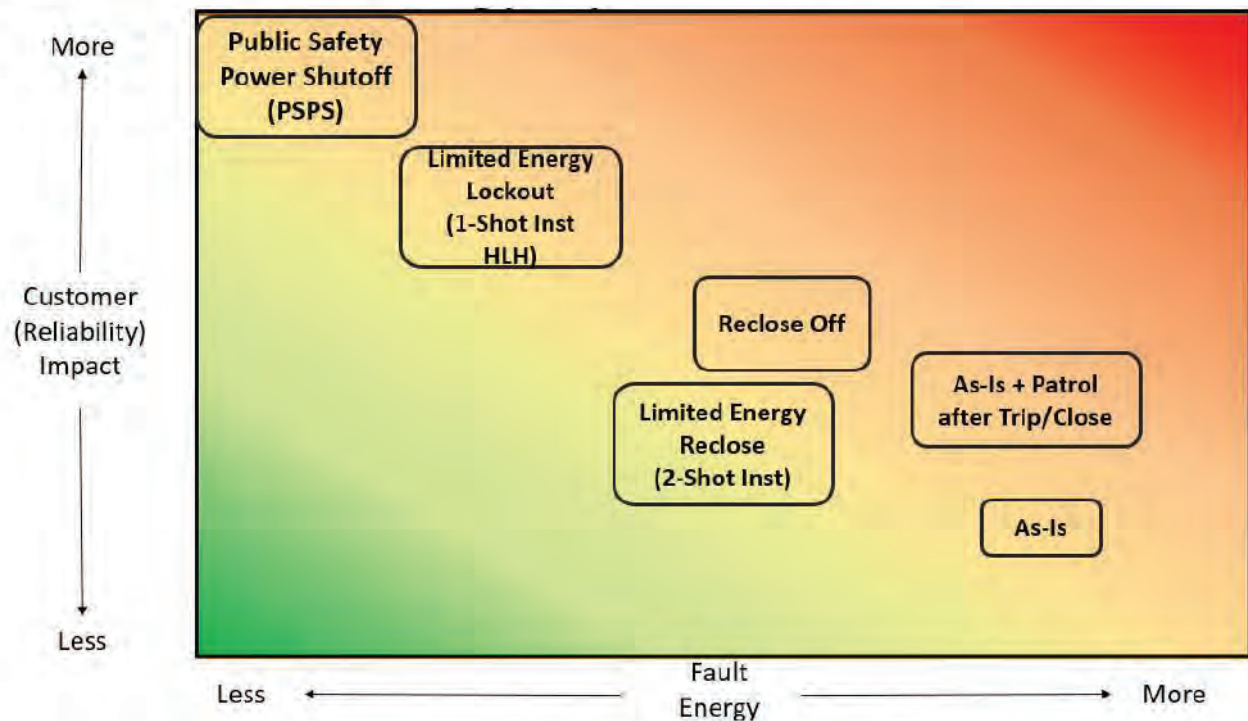
This analysis, along with consideration of historic outage events associated with reclose off, led to the determination that enhanced protection strategies were warranted only in RRZs due to their higher level of wildfire risk. Idaho Power plans to evaluate the effectiveness of protection strategies and will work to mature in this area. New advancements in relay protection used to decrease wildfire risk were evaluated in 2022. The company plans to further our understanding

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<sup>17</sup> The duration of the fire season will be reviewed and defined annually.



of their capabilities and integration into existing relay apparatus by testing new algorithms and schemes as part of the company’s wildfire technology roadmap from 2024 through 2028.



**Figure 13**  
Comparison of reclosing strategies with respect to customer reliability and wildfire risk

### 7.3. Transmission Line Operational Strategy

#### 7.3.1. Fire Season Temporary Operating Procedure for Transmission Lines

Each year, typically in May, leadership within Idaho Power’s Load Serving Operations (LSO) department updates and issues its Fire Season Temporary Operating Procedure. The purpose of this temporary operating procedure is to provide LSO employees with guidelines for operating transmission lines during the summer fire season. The procedure aims to reduce wildfire risk through practices relating to information collection, notification, and procedures for testing/closing in on locked-out transmission lines.

#### 7.3.2. Red Risk Zone Transmission Operational Strategy

During wildfire season, Idaho Power determines a daily FPI as described in Section 5 of this WMP. The FPI informs the transmission line operational strategy for those lines owned, operated, and located in RRZs. These lines will be operated in normal settings mode but with no



“testing”<sup>18</sup> of a line that may have “locked out” during the time of a red FPI. Essentially, in the event of a fault on the specified transmission line(s) during a red FPI, the line will operate as normal and may “lock out,” at which time the line(s) will either need to be patrolled before “testing” or wait until the FPI level drops out of the red category prior to being reenergized.

## 7.4. Distribution Line Operational Strategy

### 7.4.1. Red Risk Zone Distribution Operational Strategy

During wildfire season, Idaho Power determines a daily FPI as described in Section 5 of this WMP. The FPI informs the distribution line operational strategy for those lines located in the wildfire RRZs. These lines will be operated in a non-reclosing<sup>19</sup> state during the time of red FPI. Essentially, in the event of a fault on the specified distribution line(s) during the red FPI, the line(s) will be automatically de-energized with no reclosing attempts until either the line(s) has been patrolled or the FPI level drops out of the red category.

## 7.5. Public Safety Power Shutoff

### 7.5.1. PSPS Definition

PSPS, as used in this WMP, is defined as the proactive de-energization of electric transmission and/or distribution facilities during extreme weather events to reduce the potential of those electrical facilities becoming a wildfire ignition source or contributing to the spread of wildfires. The concept is as follows: if significant weather events can be predicted far enough in advance, the resulting proactive line de-energization before the forecasted weather conditions materialize could mitigate the risk of a wildfire. A PSPS event has significant customer impact and requires significant planning.

PSPS is not the practice of de-energizing lines in the following types of situations:

- Unplanned de-energization of lines required for emergencies and during outage restoration situations.
- Planned line or station work activities that require a planned outage (Idaho Power currently has a planned outage customer notification process in place for this).
- Reactive de-energization of electric transmission and/or distribution facilities, which may be either at Idaho Power’s determination or at the request of fire managers (e.g., BLM,

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<sup>18</sup> Transmission line “testing” refers to the human act of re-energizing a line without completing a physical field patrol or observation of a line.

<sup>19</sup> Distribution line “non-reclosing” refers to the deactivation of automatic re-energization of a distribution line or use of a non-reclosing device such as a fuse.



U.S. Forest Service, or other fire-fighting managers) in response to existing/encroaching wildfire threatening to burn into such facilities.

- Automated de-energization of electric transmission and/or distribution facilities due to smoke/fire from an existing fire causing a fault on the line.

Idaho Power will continue its current de-energization practices in the above referenced, and comparable situations. Such outage situations are not defined as PSPS events in the context used here and, as a result, would not trigger PSPS protocols.

### **7.5.2. PPS Plan**

Idaho Power developed a PPS Plan (see Appendix B) that operates in parallel with its wildfire mitigation strategy. Although the wind patterns in Idaho Power's service area are generally of a much lower sustained velocity and often less predictable (i.e., micro-bursts) than other utilities' service areas where PPS has most frequently been utilized (i.e., California), the company's PPS Plan generally follows industry best practices by considering other utilities' PPS plans and incorporating input from Idaho Power's external consultant, discussed in 3.2 above, which developed the company's WMP risk maps.



## 8. MITIGATION—T&D PROGRAMS

### 8.1. Overview

Idaho Power's wildfire mitigation strategy relies in part on its various asset management programs and vegetation management program to maintain safe and reliable operation of its T&D facilities in reducing wildfire risk.

### 8.2. T&D Asset Management Programs

In addition to maintaining a number of existing and newly implemented robust asset management programs intended to reduce wildfire risk, Idaho Power continues to research, monitor, and pilot emerging technologies and strategies to manage its T&D infrastructure.

Idaho Power's key asset management programs supporting wildfire prevention and mitigation are summarized in the table below.

**Table 7**

Summarized T&D asset management programs (associated with the WMP)

#### Transmission

##### Transmission Asset Management Programs

- Aerial Visual Inspection Program
- Ground Visual Inspection Program
- Detailed Visual (High Resolution Photography) Inspection Program
- Wood Pole Inspection and Treatment Program
- Cathodic Protection and Inspection Program
- Thermal Imaging (Infra-Red) Inspections
- Wood Pole Wildfire Protection Program (enhanced)
- Steel Pole (Structures) (enhanced)

#### Distribution

##### Distribution Asset Management Programs

- Ground Detail Inspection Program (enhanced)
- Wood Pole Inspection and Treatment
- Wood Pole Fire Protection Program (enhanced)
- Line Equipment Inspection Program
- Thermal Imaging (Infra-Red) Inspections
- Overhead Primary Harden Program
  - Replace "small conductor" with new 4acsr or larger conductor (new)
  - Replace or repair damaged conductor
  - Re-tension loose conductors including "flying taps" and slack spans as required



- Replace wood-stubbed poles with new wood poles (enhanced)
  - Replace white and yellow square tagged poles with new wood poles
  - Replace wood pins/wood crossarm with new steel pins/fiberglass crossarms
  - Replace steel insulator brackets with new steel pins/fiberglass crossarms (new)
  - Replace wedge deadends on primary taps with new polymer deadend strain insulators
  - Replace aluminum deadend strain insulators with new polymer deadend strain insulators (new)
  - Replace porcelain switches with new polymer switches
  - Replace hot line clamps
    - Replace aluminum stirrups
    - Install avian cover
    - Relocate arresters
  - Install bird/animal guarding
  - Update capacitor banks
    - Replace swelling capacitors
    - Replace oil-filled switches with vacuum style
    - Replace porcelain switches with polymer switches
  - Install disconnect switches on CSP transformers
    - Install avian cover
  - Update down guys
    - Replace/Install down-guy insulators with fiberglass insulators
    - Tighten down guys
  - Tighten hardware
  - Correct 3rd party pole attachment clearances (report to Joint Use Department)
- 

Idaho Power has a robust and proven inspection and correction strategy and schedule. Current practices will continue in YRZs. Risk quantification and modeling performed shows that RRZs have a higher level of risk from wildfires so, in addition to its current practices, Idaho Power believes it is prudent to add an annual inspection to minimize the likelihood of a wildfire ignition as well as targeted infrared inspections in select RRZs to identify any potential issues that may not be apparent on visual inspection. As part of the ISO 31000 risk management process, Idaho Power plans to evaluate the effectiveness of inspection and correction activities and schedules and further grow in this area as wildfire risk evolves. The following table summarizes inspection work performed and inspection frequency with respect to wildfire risk zones.



**Table 8**  
Summary of asset inspections and schedules by state and zone

Asset Inspection Type	Inspection Interval				
	Idaho Non-Risk Zone	Oregon Non-Risk Zone	Idaho YRZ	Oregon YRZ	Idaho RRZ
<b>Transmission Defect Inspections</b>					
Visual	Annually	Annually	Annually	Annually	Annually
Detailed	10 Years	10 Years	10 Years	10 Years	10 Years
Groundline (Wood Pole Test and Treat)	10 Years	10 Years	10 Years	10 Years	10 Years
Wildfire Mitigation Patrol	None	None	None	None	Annually
Infrared Patrol	None	None	None	None	Annually
<b>Distribution OH Defect Inspections</b>					
Visual/Detailed	3 Years	2 Years	3 Years	2 Years	3 Years
Groundline (Wood Pole Test and Treat)	10 Years	10 Years	10 Years	10 Years	10 Years
Wildfire Mitigation Patrol	None	None	None	None	Annually
Infrared Inspections	None	None	None	None	Targeted

### 8.2.1. Transmission Asset Management Programs

Several of Idaho Power's transmission management programs have been in place for decades and include condition-based aerial visual inspections, ground visual inspections, detailed visual (generally using high-resolution photography) inspections, transmission wood pole inspection and treatment, and cathodic protection. Additionally, Idaho Power has used various methods and materials to prevent wildfire from damaging wood structures and now intends to use a fire-resistant mesh wraps installed on structures located in the RRZ and YRZs.

#### 8.2.1.1. Aerial Visual Inspection Program

Annually, Idaho Power uses helicopters to assist Idaho Power qualified personnel in the visual aerial inspection of transmission lines identified as WECC Path Lines. This method of line inspection is now used for transmission lines located in the RRZs. In addition, unmanned aerial vehicles with high-definition cameras are now used in certain situations to inspect facilities on these lines. These inspections allow personnel to look for potential line defects, which, if found, are noted and scheduled for repair.

All noted defects are prioritized as Priority 1, Priority 2, or Priority 3, based on the criteria listed below:

- **Priority 1:** Defects that, depending on the circumstances, require reporting and repair as soon as reasonably possible.
- **Priority 2:** Defects that, depending on the circumstances, generally require reporting and correction within 24 months of identification. The correction of these defects should be scheduled during crews' normal work schedules. Priority 2 defects not assigned a



corrective plan within 24 months will be reviewed by the T&D vegetation and maintenance engineering leader.

- **Priority 3:** Potential issues that may need correction but do not pose a threat to the system and should be monitored. A Priority 3 designation may also be used by Idaho Power personnel for tracking of certain line construction practices.

Corrective action plans for Priority 1 and 2 defects are determined by engineering personnel for each prioritized defect and are scheduled and repaired.

#### **8.2.1.2. Ground Visual Inspection Program**

Annually, Idaho Power qualified personnel (i.e., trained in transmission line inspection procedures and experienced in transmission line construction) complete ground visual inspections of all transmission lines. Ground patrols are completed using four-wheel-drive vehicles, all-terrain vehicles, utility terrain vehicles, and/or on foot. These inspections identify potential line defects that are noted and scheduled for repair following the same process as described in 8.2.1.1.

#### **8.2.1.3. Detailed Visual (High-resolution Photography) Inspection Program**

In addition to the annual inspections and associated maintenance, Idaho Power also completes detailed visual inspections generally utilizing high resolution photography. This detailed inspection is typically completed using helicopters, unmanned aerial vehicles, and contracted professionals operating high-definition cameras and, if potential line defects are noted, they are scheduled for repair following the same process as described in 8.2.1.1. The detailed inspections are completed on a 10-year cycle in conjunction with the 10-year cycle of wood pole ground line inspection and treatment (see 8.2.1.4).

#### **8.2.1.4. Wood Pole Inspection and Treatment Program**

All wood poles are visually inspected, sounded, and bored for defects and decay on a 10-year cycle. The poles are categorized according to the following:

- **Reported:** Any wood pole inspected and found to be installed within 10 years of the manufactured date or last inspection date.
- **Treated:** Any wood pole inspected and found to be installed 11 years or more prior to the inspection date and is determined to be in sound enough condition to warrant treatment.
- **Rejected:** Any wood pole determined to fit the following criteria:
  - Have less than 4 inches of shell at 48 inches above the ground line; and/or
  - Less than 2 inches of shell at 15 inches above the ground line; and/or
  - Less than 2 inches of shell at the ground line; or



- Is deteriorated and does not meet minimum strength criteria; or
- Fails a visual inspection.

Rejected poles are categorized as: reinforceable with steel, non-reinforceable and are to be replaced.

- **Visually Rejected:** Any wood pole that has been damaged (i.e., burned, split, broken, hit by a vehicle, damaged by animals, etc.) above the ground line to such an extent as to warrant rejection and that cannot be further tested to determine priority status.
- **Sounded, Bored, and Treated:** Any wood pole set in concrete, asphalt, or solid rock 11 years or more prior to the inspection date is internally treated. Internal treatment involves fumigating the good wood and flooding the voids with fumigant.

#### 8.2.1.5. Cathodic Protection and Inspection Program

Cathodic protection systems are employed on select steel transmission towers. These systems use either an impressed current corrosion protection system (ICCP) or direct-buried sacrificial magnesium anodes. Included in Idaho Power's tower maintenance plan, every 10 years, structure-to-soil potential testing is performed on select towers with direct-buried anodes. For ICCP systems, rectifiers and ground-beds are tested to ensure they are functioning properly. Based on test results repairs and adjustments are completed. Each year all rectifiers are inspected, and direct current (DC) voltage and DC current readings noted.

#### 8.2.1.6. Thermal Imaging (Infra-red) Inspections

Idaho Power will complete annual inspections of lines and equipment using thermal imaging (infra-red) cameras. This inspection methodology, although not new to Idaho Power, is being expanded to specifically include the RRZs. Compromised electrical connections and overloaded equipment may be identified using thermal imagery. Identified risks will be prioritized and mitigated using the prioritization methodology noted in 8.2.2.1 of this WMP.

#### 8.2.1.7. Wood Pole Wildfire Protection Program

Idaho Power has utilized numerous technologies to minimize the damage to wood poles that have been exposed to wildfires. The current technology of "mesh wraps" is utilized on transmission wood poles located in the RRZs and YRZs.

#### 8.2.1.8. Transmission Steel Poles

Idaho Power will utilize steel poles or structures for new transmission line construction projects built to 138 kV standards and above in an attempt to minimize wildfire damage and improve transmission line resilience. Wood poles may be used on 138 kV structures for emergency and maintenance replacements based on the specific engineering, right-of-way, permitting, and scheduling requirements for each project. Wood construction is used for voltages below 138 kV unless a different material is needed to meet specific engineering or planning requirements.



## 8.2.2. Distribution Asset Management Programs

Idaho Power has several distribution asset management programs that are mature, have been implemented for decades, and will continue to be utilized in the RRZs. These programs include condition-based, detailed, and ground visual inspection; distribution wood pole inspection and treatment; and line equipment inspection.

Idaho Power also has an enhanced overhead distribution “hardening” program to implement in the RRZs. Examples of specific work include replacement of small conductors and associated hardware and replacement of wooden pins and associated wooden crossarms.

### 8.2.2.1. Ground Visual Inspection Program

Annually, qualified line patrol personnel (trained in distribution line inspection procedures and experienced in distribution line construction) complete visual wildfire mitigation inspections of the distribution lines located in the RRZs to identify Priority 1 defects and those that may cause an outage or possible ignition. The ground patrols are completed using four-wheel-drive vehicles, all-terrain vehicles, utility terrain vehicles, or on foot. These inspections identify potential line defects that are noted and scheduled for repair. Detailed distribution inspections are completed on a predetermined schedule and may be performed in conjunction with annual visual inspections.

All noted defects are prioritized as Priority 1, Priority 2, or Priority 3, based on the criteria listed below:

- **Priority 1:** Defects that, depending on the circumstances, require reporting and repair as soon as reasonably possible.
- **Priority 2:** Defects that, depending on the circumstances, generally require reporting and correction within 24 months of identification. The correction of these defects should be scheduled during crews’ normal work schedules. Priority 2 defects not assigned a corrective plan within 24 months will be reviewed by the T&D Vegetation and maintenance engineering leader.
- **Priority 3:** Potential issues that may need correction but do not pose a threat to the system and should be monitored; or tracking of certain line construction practices.

Corrective action plans for Priority 1 and 2 defects are determined by engineering personnel for each prioritized defect and are scheduled and repaired.

### 8.2.2.2. Wood Pole Inspection and Treatment Program

All wood poles are visually inspected, sounded, and bored for defects and decay. The procedure is noted in 8.2.1.4.



### **8.2.2.3. Line Equipment Inspection Program**

Line equipment in wildfire risk zones, including capacitor banks, automatic reclosing devices, and regulators, are inspected annually prior to wildfire season by line operations technicians. The inspection includes a visual inspection and, when electronic controls are present, data is retrieved and analyzed for proper operation.

### **8.2.2.4. Thermal Imaging (Infra-red) Inspections**

Idaho Power will complete annual inspections of lines and equipment using thermal imaging (infra-red) cameras. This inspection methodology, although not new to Idaho Power, is being expanded to specifically include the RRZs. Compromised electrical connections and overloaded equipment may be identified using thermal imagery. Identified risks will be prioritized and mitigated using the prioritization methodology noted in 8.2.2.1 of this WMP.

### **8.2.2.5. Overhead Primary Hardening Program**

Overhead distribution infrastructure located in the RRZs will be analyzed and may be inspected and hardened depending upon proximity to fuels conducive to wildfires in the unlikely event of failure of the line infrastructure. It is expected to take multiple years to inspect and harden all applicable overhead distribution lines.

The Overhead Primary Hardening program is intended to upgrade or repair certain overhead distribution infrastructure. Criteria as outlined in Table 7 drives the program work. Notable criteria are further explained in the following sections of this WMP.

#### ***8.2.2.5.1. Conductor “Small” Replacement***

Idaho Power is implementing replacement of small conductors in the RRZs. Small conductors are those in sizes less than that of 4ACSR conductor. Examples of small wires include 6Cu, 6-3SS, 8A, 8A CW, 9IR, etc. These small conductors will be replaced with standard larger conductors, primarily with 4ACSR conductor.

#### ***8.2.2.5.2. Wood Pin and Crossarm Replacement***

Wooden crossarms installed with wooden pins will continue to be replaced with fiberglass crossarms and steel pins. This work will be coordinated and included in the overhead primary hardening program. And, whenever work is being completed on a structure that requires replacement of wooden crossarms, Idaho Power will, generally, install fiberglass crossarms.

#### ***8.2.2.5.3. Porcelain Switch Replacement***

Porcelain switches located in the RRZs will continue to be replaced with polymer switches. Additionally, associated hot clamps and stirrups will be replaced. This work will be coordinated and included in the overhead primary hardening program.

#### ***8.2.2.5.4. Fuse Options***

Idaho Power investigated reasonable alternatives to replace certain expulsion fuses and expulsion arrestors. A pilot program was initiated in 2020 to replace several expulsion fuses with



non-expulsion fuses in the vicinity of the Boise foothills. This pilot program was successful and Idaho Power implemented a subsequent program to replace expulsion fuses with non-expulsion fuses in RRZs as a part of its distribution overhead primary wildfire hardening program.

**8.2.2.5.5. Wood Pole Wildfire Protection Program**

Idaho Power has utilized numerous technologies to minimize the damage to wood poles that have been exposed to wildfires. The current technology of “mesh wraps” is utilized on certain distribution wood poles located in the RRZs.

**8.3. T&D Vegetation Management**

Idaho Power’s T&D vegetation management program (VMP) addresses public safety and electric reliability and helps to safeguard T&D lines from trees and other vegetation that may cause an outage or damage to facilities. Specifically, the lines are inspected periodically, and trees and vegetation are cleared away from the line while certain trees are removed entirely. In addition, the VMP addresses the clearing of vegetation near the base of certain poles and line structures. The responsibilities of the VMP include the planning, scheduling, and quality control of VMP associated work. The VMP is active year-round and complies with applicable NESC, federal, and state requirements. Additional vegetation monitoring tools are in various stages of development, and Idaho Power will evaluate such tools for potential future implementation.

Idaho Power’s key components of its VMP, relative to the WMP, are summarized in the table below.

**Table 9**  
VMP summary

Vegetation Management
<p>Transmission</p> <ul style="list-style-type: none"> <li>Pre-Fire Season Inspection and Mitigation</li> <li>Line Clearing Cycle Goal: 3-year cycle for valley areas &amp; 6-year cycle for mountain areas</li> <li>Tree Removals - Hazard Trees</li> <li>Targeted Pole Clearing</li> <li>100% Quality Assurance/Quality Control Auditing in RRZs and YRZs</li> </ul>
<p>Distribution</p> <ul style="list-style-type: none"> <li>Pre-Fire Season Inspection and Mitigation</li> <li>Line Clearing Cycle Goal: 3-year cycle in all areas with mid-cycle pruning occurring in 2<sup>nd</sup> year in RRZs and YRZs*</li> <li>Tree Removals - Cycle Busters/Hazard Trees</li> <li>Targeted Pole Clearing</li> <li>100% Quality Assurance/Quality Control Auditing in RRZs and YRZs</li> </ul>

\*Distribution line clearing cycles vary by utility. Idaho Power has set a goal of achieving a 3-year cycle of distribution line clearing.



Vegetation contact with energized powerlines is a cause of outages and potential source of ignition for wildfires. Idaho Power’s transition to a sustainable three-year pruning cycle will help reduce wildfire risk across the company’s service area. In non-wildfire risk zones, distribution feeders and valley-located transmission lines will be patrolled and pruned on a three-year cycle. A six-year cycle will continue to be employed for transmission lines in mountain locations. Specific to each tree pruned, directional pruning methods will be employed where cuts will meet ANSI A300 standard and adequate clearance will be obtained that should accommodate regrowth without violating the prescribed minimum clearance throughout the cycle.

Reliability data has shown that vegetation contact is one of the most likely sources of faults and possible ignition on the system. As a result, Idaho Power employs the same enhanced vegetation management practices in both YRZs and RRZs despite the different levels of wildfire risk. These practices include mid-cycle patrols and pruning in the second year of the cycle to address “cycle buster” trees and annual “hotspot” patrols to address any new hazard trees or unexpected vegetative growth that poses an immediate threat of contact with energized facilities. In addition, the company strives to complete audits for all pruning work performed in YRZs and RRZs, regardless of reason for the pruning. The audits confirm that pruning cuts meet the specification and proper clearance was obtained. The following table summarizes vegetation management activities with respect to wildfire risk zones.

**Table 10**  
Summary of vegetation management activities and schedules

Vegetation Management Inspections and Activity Schedule	Inspection Interval				
	Idaho Non- Risk Zone	Oregon Non- Risk Zone	Idaho YRZ	Oregon YRZ	Idaho RRZ
<b>Transmission</b>					
Hazard Tree Patrol	Annually	Annually	Annually	Annually	Annually
Cycle Patrol/Pruning—Valley Locations	3 Years	3 Years	3 Years	3 Years	3 Years
Cycle Patrol/Pruning—Mountain Locations	6 Years	6 Years	6 Years	6 Years	6 Years
Wildfire Mitigation Patrol/Pruning	None	None	None	None	Annually
Cycle Buster Patrol/Pruning	18 Months	18 Months	18 Months	18 Months	18 Months
<b>Distribution</b>					
Wildfire Mitigation Patrol/Pruning	None	None	Annually	Annually	Annually
Cycle Patrol/Pruning	3 Years	3 Years	3 Years	3 Years	3 Years
Mid-Cycle Patrol/Pruning	None	None	2 Years after Cycle Prune	2 Years after Cycle Prune	2 Years after Cycle Prune
Cycle Buster Patrol/Pruning	None	18 Months	None	18 Months	None
<b>Quality Assurance (Transmission and Distribution)</b>					
Post-Pruning Audit Inspections	Sampling	Sampling	100%	100%	100%



### 8.3.1. Definitions

**Applicable Transmission Lines**—Each overhead transmission line operated within the WMP RRZ at 46 kilovolts (kV) or higher.

**Cycle Buster**—Trees that grow at a rapid rate, requiring a more frequent trimming schedule than the normal trim cycle.

**Hazard Tree**—Any vegetation issue that poses a threat of causing a line outage but has either a low or medium risk of failure in the next month. Hazard trees will be further defined as posing either a medium hazard or low hazard.

**High-Priority Tree**—Any vegetation condition likely to cause a line outage with a high risk of failure in the next few days or weeks. High-priority trees could also be vegetation that is in good condition but has grown so close to the lines that it could be brought into contact with the line through a combination of conductor sag and/or wind-induced movement in the conductor or the vegetation.

**Line Clearing Cycles**—T&D clearing of lines defined on a periodic basis.

### 8.3.2. Transmission Vegetation Management

Maintaining a zone near transmission lines that is free of vegetation has long been a priority for Idaho Power. The clearance zone is voltage-level dependent and defined by federal and state regulations.

#### 8.3.2.1. Transmission Vegetation Inspections

Utility arborists annually conduct aerial and/or ground patrols on each applicable transmission line to identify and mitigate vegetation hazards. In addition, transmission patrol personnel inspect all applicable transmission lines once a year to identify any transmission defects and vegetation hazards. During these inspections, the patrol personnel will identify hazardous vegetation, within or adjacent to the Right of Way (ROW), that could fall in or onto the transmission lines or associated facilities. The patrol personnel will evaluate the hazardous vegetation as to the level of threat posed by categorizing the vegetation as a *high priority*, *medium hazard*, or *low hazard*. Any hazardous vegetation found is reported to the utility arborist and documented. Any hazardous vegetation categorized as a *high priority* and that presents a risk to cause an outage at any moment shall also be reported without any intentional time delay to the grid operator. The utility arborist will conduct a follow-up inspection if potential hazard trees or grow-ins are identified. The utility arborist prioritizes and schedules any remedial action for all reported vegetation issues.

#### 8.3.2.2. Transmission Line Clearing Cycles

Transmission lines will be cleared on long-term cycles based on 3 years for urban and rural valley areas and 6 years for mountain areas. However, shorter clearing cycles may occur if conditions dictate out-of-cycle trimming. In most cases, vegetation is cleared primarily through



manual cutting of targeted trees and tall shrubs. However, when appropriate and in compliance and permission with federal and state requirements, tree-growth regulators and spot herbicide treatments are applied as effective techniques for reducing re-growth of sprouting deciduous shrubs and trees and extending maintenance cycles.

### **8.3.2.3. Transmission Line Clearing Quality Control and Assurance**

In non-wildfire risk zones, audits are performed on a random sample of pruning worksites. These audits are performed through a combination of the contracted arborists that planned the work and Idaho Power's utility arborists. Due to the elevated risk of wildfire in YRZs and RRZs, audits will be performed on pruning work performed in YRZs and RRZs regardless of the reason for the patrols and pruning. The audits will be performed by a combination of contracted arborists and Idaho Power's utility arborists to check whether pruning cuts meet specification and proper clearance was achieved.

### **8.3.3. Distribution Vegetation Management**

Idaho Power is actively working to clear distribution lines throughout Idaho Power's service area on a three-year cycle.<sup>20</sup> Additionally, in the RRZs and YRZs, Idaho Power completes annual vegetation line inspections and mid-cycle clearing of the lines in the second year, is increasing the number of trees removed, and is completing 100% quality control reviews of contractor line clearing work by certified arborists.

#### **8.3.3.1. Distribution Line Clearing Cycles**

Idaho Power is actively working to clear distribution lines on a three-year cycle. In RRZs and YRZs, Idaho Power's goal is to perform mid-cycle pruning in the second year to remove faster growing vegetation to ensure the lines are clear of vegetation for the full pruning cycle. In addition, Idaho Power clears lines based upon "special request" in the situations that fast growing, unexpected growth occurs and is reported by any employee or customer.

#### **8.3.3.2. Distribution Vegetation Inspections**

In addition to regular cycle pruning activities, utility arborists are annually conducting ground patrols to identify potential vegetation hazards of each distribution line identified in the RRZs and YRZs. In addition, distribution patrol personnel also inspect the lines in the RRZs annually. During these inspections, patrol personnel identify infrastructure defects and hazardous vegetation, within or adjacent to the ROWs, that could fall in or onto the distribution lines or associated facilities. The patrol personnel then evaluate the hazardous vegetation as to the level of threat posed by categorizing the vegetation as a *high priority*, *medium hazard*, or *low hazard*. Any hazardous vegetation found is reported to the utility arborist and documented. Any hazardous vegetation categorized as a *high priority* and that presents a risk to cause an outage at any moment shall also be reported without any intentional time delay to the Grid

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<sup>20</sup> Idaho Power will test a three-year cycle for a period of 4 or 5 years to verify that such a cycle can be maintained and that the expected benefits are realized.



Operator. The utility arborist will conduct a follow-up inspection if potential hazard trees or grow-ins are identified. The utility arborist prioritizes and schedules any remedial action for all reported vegetation issues.

#### **8.3.3.3. Distribution Line Clearing Procedures**

In most cases, vegetation is cleared as scheduled work and includes, but is not limited to, the removal of dead branches overhanging power lines, weak branch attachments, damaged root base or dead or dying trees leaning toward Idaho Power facilities. Vegetation clearing methods include crews using chain saws or specialized pruning machines. Trees are cleared using a pruning procedure called directional or natural pruning, a method recommended by the International Society of Arboriculture, and the ANSI A300 standards.

However, when appropriate and in compliance and permission with federal and state requirements, tree-growth regulators and spot herbicide treatments are applied as effective techniques for reducing re-growth of sprouting deciduous shrubs and trees and extending maintenance cycles.

Through its vegetation management program, Idaho Power has a target to maintain clearance distance between vegetation and conductors as follows:

- Five feet for conductors energized at 600 through 50,000 volts.
- Clearances may be reduced to three feet if the vegetation is not considered to be readily climbable because the lowest branch is greater than eight feet above ground level.
- New tree growth that is no larger than ½ inch in diameter may intrude into this minimum clearance area provided it does not come closer than six inches to the conductor. This new growth is identified during line patrols and removed.
- For conductors energized below 600 volts, vegetation is pruned to prevent the vegetation from causing unreasonable strain on electric conductors.

#### **8.3.3.4. Distribution Line Clearing Quality Control and Assurance**

Similar to the transmission section, in non-wildfire risk zones, audits are performed on a random sample of pruning worksites. These audits are performed through a combination of the contracted arborists that planned the work and Idaho Power's utility arborists. Due to the elevated risk of wildfire in YRZs and RRZs, audits will be performed on pruning work performed in YRZs and RRZs regardless of the reason for the patrols and pruning.

#### **8.3.4. Pole Clearing of Vegetation**

Idaho Power has historically cleared vegetation from the base of certain transmission wood poles and a limited number of distribution wood poles in Idaho. These vegetation clearing practices have been deemed an effective method of minimizing wildfire damage to existing wood poles. Where acceptable and permissible, Idaho Power removes or clears vegetation in a 20-foot radius



surrounding the wood poles and applies a 10-year weed-control ground sterilant (SpraKil SK-26 Granular). Idaho Power submitted an SF-299 application with the Oregon BLM Vale District Office to prepare an Environmental Assessment to use the same ground sterilant on transmission and distribution facilities in Oregon. BLM staff estimate issuing herbicide permits in mid-2024.



## 9. WILDFIRE RESPONSE

### 9.1. Overview

Idaho Power responds to wildfires involving or impacting its facilities and/or resulting in a system outage; depending on the specific circumstances, Idaho Power may also respond to wildfires with the potential to result in an outage. Idaho Power's actions include without limitation:

- Taking appropriate steps, where safe to do so, to protect Idaho Power-owned facilities from fire damage;
- Restoring electrical service following an outages; and,
- Communicating with and informing customers.

These actions are taken on a 24-hour basis.

### 9.2. Response to Active Wildfires

Idaho Power field crews are trained to respond to active wildfires to monitor the situation regarding Idaho Power's facilities. Although they carry certain fire suppression equipment for use on very small fires in limited situations, Idaho Power's crews are not professionally trained firefighters and are instructed not to place themselves in a hazardous position when responding to wildfires. When responding to an active wildfire, Idaho Power personnel immediately report to, and take appropriate direction from, the Incident Commander (IC) or other fire response entity official with jurisdiction over the incident.

### 9.3. Emergency Line Patrols

At certain times, unplanned de-energization of lines requires qualified line personnel to conduct "emergency" patrols (inspections) of the de-energized lines. These patrols identify outage causes, damaged facilities, ingress/egress routes, and restoration requirements (number of crews, crew sizes, and necessary materials).

### 9.4. Restoration of Electrical Service

Idaho Power personnel restore electrical service when it is safe to do so following a wildfire. Trained field crews report to the site where damage has occurred with equipment and new materials and develop a plan to remove and rebuild damaged facilities. Depending on the situation, contracted field crews—such as line crews and vegetation management crews—are also deployed to assist in restoration efforts. Restoration work may take hours or, in some rare cases, days to complete. Depending on the extent of damage, customers may need to



perform repairs on their facilities and pass inspections by local agencies prior to having full electric service restored.

Due to the unique construction, need for specialized equipment, and—in many cases—remote location of many of Idaho Power’s transmission lines, Idaho Power developed a *Transmission Emergency Response Plan*. This plan includes restoration processes related to all transmission voltage classes from 46 through 500 kV. The plan outlines the basic approach and certain details about notification, materials, damage assessment, coordination, and preparedness.

#### **9.4.1. Mutual Assistance**

Idaho Power is a member of the Western Region Mutual Assistance Agreement (WRMAA), of which the majority of western United States electric utilities are also members. Member utilities provide emergency repair and restoration assistance to other member utilities requesting assistance when dealing with damaged electric facilities following a significant wildfire or weather event. In the event of a catastrophic wildfire that causes widespread damage to Idaho Power’s system, Idaho Power may request restoration assistance via the WRMAA as a last resort option after utilizing available internal personnel and contracted entities.

### **9.5. Public Outreach and Communications**

In 2022, Idaho Power developed and began following an *Outage Communication Playbook* (Playbook) to guide PSPS and load shed protocols. The Playbook ensures consistent and reliable communication to internal and external stakeholders. External communication includes targeted customers, Public Safety Partners, and operators of critical facilities. The Playbook guides activities and identifies key roles and responsibilities of internal Idaho Power employees. Supplemental information and resources are also included to ensure effective and consistent communication is made prior to, during, and after an event.



## 10. COMMUNICATING ABOUT WILDFIRE

### 10.1. Objective

Idaho Power communicates information about this WMP, including PSPS, and wildfire issues in general, to employees, customers, government officials, the public and other stakeholders. Topics of these communications vary due to timing and audience. For example, all customers can benefit from outage preparedness tips and information about how we are hardening the grid. We discuss PSPS plans in greater detail with Public Safety Partners and operators of critical facilities, as well as customers who live in PSPS zones.

The following core messages are the foundation for all wildfire-related communications:

- How customers can prepare for wildfire-related outages, including where to find outage and PSPS information and how to sign up for alerts and update contact information
- Ways customers can reduce wildfire risk
- Idaho Power's work to protect the grid from wildfire and reduce wildfire risk

### 10.2. Community Outreach

#### 10.2.1. Community Engagement

Idaho Power presents and distributes information on its WMP to a wide variety of stakeholders including the BLM, U.S. Forest Service, and county and city officials.

Idaho Power engages with various Public Safety Partners, including local governments, emergency managers, and Idaho and Oregon's ESF-12 and social service and welfare agencies (e.g., Oregon's Department of Human Services). These engagements focus on wildfire awareness, prevention, and outage preparedness. For example, the company worked with the Boise City Fire Department to develop updates to the Boise City Fire Code related to Wildland-Urban interface areas.

Idaho Power meets with all Public Safety Partners at least once a year and more frequently as needed. In counties with active local emergency planning committees, Idaho Power is an engaged member. The company uses a variety of methods to communicate with Public Safety Partners, including personal contact via phone, email, and text. We meet with identified Public Safety Partners annually and document their communication preferences in our outreach database. During an event, this information will be used to contact each partner.



Idaho Power conducted over 20 WMP and PSPS plan presentations in 2022. At each one, stakeholders were asked to provide feedback to inform future versions of the WMP.

Notable presentations included:

- Local emergency management planning committee meetings across our service area
- Public meetings in communities with PSPS zones and in all Oregon counties we serve
- Idaho Emergency Preparedness Conference
- Idaho Public Health Planning Conference
- Snake River Fire Chiefs annual meeting held in Oregon
- Idaho VOAD (Volunteer Organizations Active in Disasters) Annual Conference
- Seven public meetings in Ontario, Huntington, and Halfway at the end of fire season to gain feedback from customers and stakeholders to help inform future plans. Similar meetings will be held in Idaho counties prior to the 2023 fire season.

Idaho Power has also conducted functional exercises with Public Safety Partners before wildfire season. These exercises mimic fire emergencies, including PSPS events, to improve all parties' wildfire preparedness. For example, in June 2022, Idaho Power conducted a PSPS mock event in our Idaho service area. Several Public Safety Partners were included in the event to test our communication and coordination protocols. The event was held over a three-day period and assumed PSPS events across several wildfire risk zones. Following the event, participants were asked to provide feedback, which has been incorporated into our plan. Feedback received included:

- Public Health Districts were added as Public Safety Partner contacts. Previously, the Idaho Department of Health and Welfare had planned to communicate to the Public Health Districts in case of a PSPS event. Through the event, we identified that this created a delay in communication to the Public Health Districts.
- Back-up contacts for the Idaho Public Utility Commission were identified in case our primary ESF-12 contact is unavailable.
- The Idaho Office of Emergency Management requested they receive a list of critical facilities that could be impacted by the PSPS event. We added this step to our protocols for Idaho and Oregon.

In addition, Idaho Power participated in two mock events, one conducted by Malheur County and the second with the Idaho Office of Emergency Management's Cascade Rising event. Each event mimicked large power outages. While these were not PSPS-specific, we were able to



test and discuss our outage communication protocols. Through those events, two opportunities were identified:

- The Red Cross was added as a Public Safety Partner in Malheur County based on their role in coordinating and supporting CRCs.
- The emPower program was identified as a tool to help notify customers on DMEs if a PSPS event is predicted. Idaho Power is working with the Idaho Department of Health and Welfare, the Independent Living Network, and the Idaho Office of Emergency Management to expand this program to all Idaho counties.

### **2022 Public Safety Partner Feedback Summary**

County emergency managers, the Idaho Office of Emergency Management, the Oregon Office of Emergency Management, and the Idaho Department of Health and Welfare reviewed Idaho Power's WMP plan, PSPS protocols, community outreach strategy and materials, critical facilities, and CRC strategies. Feedback received has been incorporated into our programs. Improvements based on this feedback include:

- Updates to identified critical facilities
- Changes to outreach materials to include county specific information as requested
  - Example: Sign-up information was included for counties with active emergency alert systems
- Revised GIS tools that will be provided to Public Safety Partners if a PSPS event is forecasted

### **10.2.2. Community Resource Centers**

Each county in Idaho Power's service area has unique needs during outage events and requires a customized, flexible approach. During annual meetings with county emergency managers, Idaho Power developed county-specific strategies in preparation for potential large-scale, extended outages. These strategies include working with emergency managers to identify CRC locations to be used, as needed, in a PSPS event. The company formulated strategies for Oregon counties in 2022 and will further explore county strategies for Idaho in 2023. If a PSPS event is forecasted, Idaho Power will strive to work directly with local Public Safety Partners to identify and meet the needs of the local community. Services provided in collaboration with emergency managers could include:

- Stand-up of CRC
- CRC location(s) and logistics included in community outreach/outage notifications



- CRC resources
  - Food, water, and other basic needs
  - Charging stations
  - Auxiliary service coordination such as medical services, housing assistance, family reunification, etc.

### **10.3. Customer Communications**

Safety is one of Idaho Power's core values. It guides our communication strategy for wildfire-related communication to our customers. Communication methods and timing vary based on the audience we are trying to reach and the goal of the communication.


Communication generally falls into two categories: 1) broad outreach to all customers, and 2) targeted outreach to customers in PSPS zones. The company uses a variety of outreach methods to reach a broad customer base with messages about wildfire safety, summer outage preparedness, and grid hardening efforts.

Outreach to customers in PSPS zones was more targeted and frequent. Idaho Power repeatedly urged these customers to update or confirm accurate contact information.



# Outreach Samples

# WILDFIRE SEASON 2022

## PUBLIC MEETING

Join Idaho Power for a town hall meeting on our **Wildfire Mitigation and Public Safety Power Shutoff (PSPS)** plans. Learn about:


- What to expect.
- How Idaho Power is protecting the grid from wildfire.
- What we're doing to deliver power safely and reliably.
- How to prepare and stay informed during outage.

**When is a PSPS used?**  
A PSPS is when a company like Idaho Power proactively turns off power in a certain area where wildfire risk is especially high due to extreme weather conditions. It is a last-resort effort to protect our customers, communities, employees and equipment from wildfire.

The decision to call a PSPS is based on forecasts and on-the-ground observations of many factors, including:

- High Temperature
- Low Humidity
- High Wind
- Dry Vegetation
- Risk Sites

Idaho Power has identified this area in the Crouch-Garden Valley area where a PSPS is most likely.



**Town Hall Meeting**  
Time: 5 p.m.  
Date: June 30, 2022  
Place: Crouch Town Hall

For an interactive map of all Idaho Power PSPS zones, visit [idahopower.com/PSPS](http://idahopower.com/PSPS).



## BE WILDFIRE READY





Every summer, wildfires threaten our forests, farms, homes and businesses. They can also cause power outages. In extreme weather conditions, these outages could last hours or even days, especially if a public safety power shutoff (PSPS) is necessary.

**Here are some tips for staying safe in a wildfire-related outage:**

- Update** your contact information at [idahopower.com/contact/update](http://idahopower.com/contact/update).
- Prepare** for medical needs like refrigerated medicine or electrically powered medical equipment. This could mean finding a place to go during an outage or using a back-up generator.
- Make a plan** for feeding and watering pets and livestock in case power to your well pump goes out.

Visit [idahopower.com/wildfire](http://idahopower.com/wildfire) for more tips on wildfire safety, such as how to build a summer outage kit, and to learn what Idaho Power is doing to protect the grid.

## GUARDING THE GRID



## AYUDANOS A PREVENIR INCENDIOS.

Siempre extingue tu fogata para la seguridad de todos.



**Figure 14**  
Outreach samples for the 2022 wildfire season



### 10.3.1. Key Communication Methods

Idaho Power communicates with customers and the public before and throughout wildfire season to inform them of steps the company is taking to reduce wildfire risk and ways they can help prevent wildfires and prepare for outages. Various communication mediums used to accomplish this include:

- **Connections** (This monthly newsletter is an effective way to give customers more in-depth information about the work Idaho Power does, but it is not an effective way to communicate urgent information.)



Figure 15  
May 2022 edition of *Connections*

- Videos on topics like vegetation management and PSPS





**Figure 16**  
[Idaho Power developed an educational video on how we protect wooden poles from wildfire](#)

- Emails, texts, and phone calls telling customers how to prepare for wildfires, encouraging them to update their contact information, and providing information about grid hardening efforts
  - The company used a new communication tool to notify all customers in PSPS zones by text message, phone call, or email. We mailed letters to customers we couldn't reach with this tool. Every year, the company will work to obtain accurate contact information for all customers in PSPS zones.
- News media (news releases, appearances on broadcast TV and radio shows, interviews, etc.)
- Social media (posts on Facebook, Instagram, and Twitter are an efficient way to reach large numbers of customers and the public in a timely manner). Social media continues to be a critical tool for engaging with customers and communicating wildfire safety. The company's social media campaign for wildfire season focused on three main themes:
  - Wildfire prevention: What Idaho Power is doing and what customers can do to reduce wildfire risk
  - Outage preparation: How customers, especially those who live or have businesses in high-risk areas, should prepare for wildfire-related outages
  - Grid maintenance: How Idaho Power protects the grid, keeping energy safe, reliable and affordable, even during wildfire season.





**Figure 17**  
Sample image of social media post

Social media posts are focused on various aspects of each theme, such as putting out campfires as shown in Figure 18 below; creating defensible spaces around homes and businesses; building a summer outage kit as shown in Figure 17, above; and updating contact information. Posts also include information on installing SPUs on the power distribution system and wrapping wood poles with fire-resistant mesh.

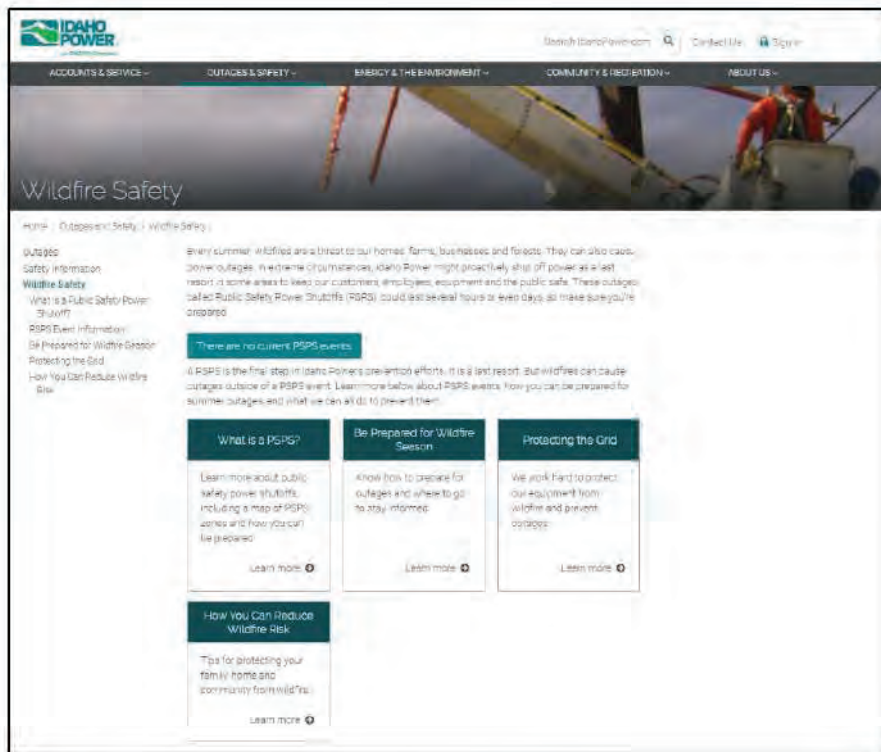


**Figure 18**  
Sample image of social media post

- Postcards and flyers
- Paid advertising (radio, digital, and print advertisements)



- Idaho Power's website (wildfire safety information, such as videos, safety tips, and the latest version of the WMP) can be found at <https://www.idahopower.com/outages-safety/wildfire-safety/>.



**Figure 19**  
Idaho Power's Wildfire Safety landing webpage

- As shown in Figure 19, on this webpage, the company introduces wildfire and its relationship to delivering power, information on PSPS, and the following links:
  - What is a PSPS?: Explanation of PSPS events, including a map customers can use to determine if their homes or businesses are inside a PSPS zone
  - Be Prepared for Wildfire Season: Preparation tips like building an outage kit and making a plan for feeding livestock, etc.
  - Protecting the Grid: Idaho Power measures to enhance grid resiliency and reduce wildfire risk; an interactive map showing red and yellow risk zones and a link to the WMP
  - How You Can Reduce Wildfire Risk: Tips for preventing wildfires when camping, using fireworks, hauling trailers, etc.
  - PSPS Event Information: Real-time information on active PSPS events, estimated shutoff time, outage duration, and customers impacted



- Public engagement with the company holding at least one public meeting per year in both Oregon and Idaho, offering a virtual meeting with additional access and functionality options. Feedback opportunities are also provided during and after the meetings.



**Figure 20**  
Wildfire mitigation meeting PowerPoint cover slide

### **10.3.2. Timing of Outreach**

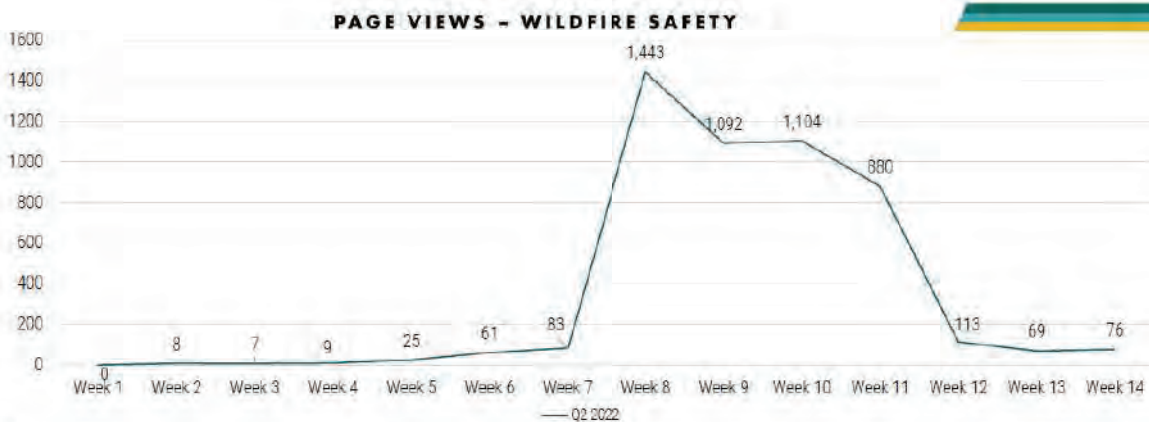
The timing of the outreach generally occurs before and during wildfire season. In 2022, Idaho Power originally planned to begin preseason wildfire outreach in early- to mid-April. Due to an unusually wet and cold spring (Boise had accumulating snow on the valley floor on May 9) and a desire to maximize impact, the company delayed release of social media posts, ads, and other communications until the weather changed such that wildfire was more prominently on people's minds. The tone of early communications was meant to encourage customers to think about wildfire season, how they could prepare for it, their role in preventing wildfires, and steps Idaho Power is taking to keep the grid safe and reduce wildfire risk. When the potential for wildfire increased, communications shifted in tone. Messaging put more emphasis on asking customers, especially those in PSPS zones, to update their contact information and prepare for wildfire.

### **10.3.3. Communication Metrics**

Idaho Power uses metrics and monitoring of communication activities to evaluate the effectiveness of our outreach efforts. Idaho Power published a [Wildfire Safety](#) landing webpage



in April 2022 with information on wildfire safety, PSPS, and interactive maps. In the roughly six weeks that followed, before general outreach efforts began, the page saw fewer than 200 hits. However, a campaign of radio, print, and online ads began in earnest in late June and traffic immediately jumped, with 1,443 hits the first week of the campaign as shown in the following graph. Traffic stayed high for about a month before dropping off again.



- This chart shows the Wildfire Safety page for Q2 2022 in green, (4/1/22-6/30/22- 4,970 page views).
- The campaign started during week 8, increasing the traffic drastically. Radio ended on the Sunday of Week 10, and Display ended during Week 11. Spotify ended during Week 14.

**Figure 21**  
Wildfire safety webpage views

The following is a summary of metrics from Idaho Power’s 2022 paid communication campaign.

- **Radio**—Idaho Power’s wildfire-safety radio ad campaign ran from May 16 to July 31 in the Idaho Falls, Twin Falls, and Boise markets. The Boise market includes eastern Oregon, reaching as far west as Baker City. The campaign included a total of 4,327 paid and public safety announcement (PSA) match spots; 967 of which were in Spanish and played on Spanish language stations.
- **Programmatic Display Ads**—Idaho Power’s digital display ads appeared on regional websites from May 16 to July 31. These ads resulted in a total of 3,496 clicks in Idaho and Oregon to our wildfire landing webpage, with almost 3.7 million impressions. Almost three-quarters (74.21%) of these impressions occurred via mobile devices.
- **2021 Versus 2022**—Idaho Power’s 2021 wildfire-safety campaign was comparable to what we deployed in previous years, with the company relying mainly on displays on the Idaho Power website. The 2022 campaign was a much more robust, intricately planned and carefully executed effort. It involved a larger outreach goal and more ads on radio and Spotify that ultimately led to 1.24 million more impressions than the 2021 wildfire-safety campaign.



### 2022 WMP Communication Summary

Idaho Power used traditional and social media in 2022 to inform customers about the company's WMP, efforts to protect the grid from wildfire, how customers could reduce wildfire risk, how to prepare for wildfire-related outages, and PSPS. Outlets included:

- Newspapers—Print ads and news coverage
- Radio—Paid ads in English and Spanish and news coverage
- TV news coverage
- Printed flyers
- Social media
- Idaho Power website
- Digital display ads
- Postcards—Used to inform customers of the PSPS program and invitations for public meetings
- Spotify—Paid ads
- News Releases—Includes news releases with other Oregon utilities
- Customer email
- Customer newsletters
- Text Messages—Customers in PSPS zones
- Phone Calls—Customers in PSPS zones
- Letters—Customers in PSPS zones

The following updates to the website were made to include new pages focused on wildfire safety in 2022:

- Searchable map of PSPS zones by customer address
- Summer outage preparation
- How Idaho Power protects the grid including mitigation efforts
- How customers can help prevent wildfires
- An active PSPS event page that provides details of active PSPS areas and outage duration information

Additionally:

- Postcards were sent to all customers in PSPS zones to inform them of program details
- Printed 2,600 outage preparedness flyers (English and Spanish) and gave to the Idaho Commission on Aging for delivery with Meals on Wheels
- Wildfire themed customer newsletter (*Connections*) was sent to all customers in May
- Wildfire themed customer email sent to all customers with email addresses on file (approx. 350,000) in May
- Implemented a “pop-up” in the customer My Account web page encouraging customers to update contact information
- Post fire-season postcards were mailed to all Oregon customers in November for invitation to public meetings



## 10.4. Idaho Power Internal Communications—Employees

Idaho Power communicates with its employees in a variety of ways:

- *News Scans* for all employees



Page 1 • May 2, 2022

### NewsScans

## Dave Spillett and Pule Alo Receive President's Awards for Safety

President and CEO Lisa Grow recently presented the President's Award for Safety to two deserving employees in Pocatello — Meter Specialist Pule Alo and Regional Customer Relations Manager Dave Spillett. Here are their stories.

In early February, Pule arrived at a customer's home in American Falls as part of an account call. As he walked up to the door, he thought he heard crying. Listening, he heard a faint voice calling out for help. He went inside and found the customer lying on the floor at the top of the stairs. The woman had fallen, seriously injured her hip and had been lying there for five days.

After reassuring her he would help, Pule went outside, found cell service and called 911. He returned to the customer, covered her with a blanket to keep her warm and gave her water to drink. He even helped gather some of her belongings she wanted to take with her to the hospital.

Reflecting on the event, Pule said, "I am thankful for the training that we have at Idaho Power and that I was able to help her. I assessed the situation, secured the area and called 911."

"You made a difference," Lisa told Pule.

This past winter, regional employees identified several safety issues at an apartment building that posed hazards to a tenant. The building owner had converted a meter-utility room into an apartment that was now occupied by a single mother and her young child. Our employees immediately contacted the landlord to resolve the unsafe situation which

### The PSPS Plan is Here. What is it?

For the first time in company history, we've developed a Public Safety Power Shutoff (PSPS) plan.

A PSPS is when a company like Idaho Power proactively turns off power to certain areas where wildfire risk is high due to extreme weather conditions. The outage is an effort to protect our customers, communities, employees and equipment from wildfire in windy, dry conditions.

A PSPS is different from a load shed, which is a proactive outage used to protect the grid if customers' need for power is too high due to growth, extreme weather or other factors. It's also different from outages we've used occasionally *after* a wildfire starts to protect firefighters and other crews near our lines.

**Figure 22**  
May 2, 2022, edition of *News Scans*

- Emails
- Leader communications
- GIS-based visual communication of risk zones and affected overhead lines
- Online training for employees influenced by the WMP
- In-person, hands-on, training for certain field employees



## 11. PERFORMANCE MONITORING AND METRICS

### 11.1. Wildfire Mitigation Plan Compliance

The Chief Operating Officer (COO) is the designated oversight officer for the Idaho Power WMP. The Vice President of Planning, Engineering and Construction (VP) is responsible for compliance monitoring, necessary training, and annual review of this WMP.

### 11.2. Internal Audit

Idaho Power's internal audit department, Audit Services, will periodically conduct an independent and objective evaluation of the WMP to assess compliance with policies and procedures and evaluate achievement of the Plan's objectives. Idaho Power's Compliance department will also periodically review Idaho Power's compliance with federal reliability standards regarding vegetation management practices.

### 11.3. Annual Review

Idaho Power will conduct an annual review of its WMP and incorporate necessary updates prior to wildfire season.

### 11.4. Wildfire Risk Map

The Wildfire Risk Map was established in 2020 by an external consultant. As noted in Section 2 of this report, the 2020 analysis was based, in part, on population census data from 2010. Idaho Power plans to reconduct risk modeling in 2023 to include 2020 Census data and explore other areas of consequence as described in Section 3.2.1. Idaho Power intends to review our risk modeling approach on an annual basis and perform modeling updates biennially.

### 11.5. Situational Awareness

Idaho Power will share its FPI regularly and broadly with Idaho Power personnel and contractors during wildfire season to ensure condition-specific operating requirements are met.

### 11.6. Wildfire Mitigation—Field Personnel Practices

Idaho Power crews and certain personnel are required to follow the *Field Personnel Practices* when working on lines in the RRZs and YRZs during a red FPI. Specific requirements are found in Idaho Power's *Field Personnel Practices* which is consulted by such crews working in these areas.



## 11.7. Wildfire Mitigation—Operations

Each year in preparation for the fire season, Idaho Power reviews and establishes:

- Temporary operating procedures for transmission lines during the fire season
- An operational strategy for distribution lines during time periods of elevated wildfire risk during the fire season
- Use of PSPS as a tool of last resort to prevent Idaho Power T&D facilities from becoming a wildfire ignition source or contributing to the spread of wildfires

## 11.8. Wildfire Mitigation—T&D Programs

This section lists metrics used to evaluate Idaho Power’s asset management and vegetation management programs. The metrics are based on progress made towards completing mitigation activities, such as quantities of inspected units. Work is identified and prioritized each year and approved by executive management. Idaho Power’s goal is to complete 100% of the work plan each year; however, emergencies or other unplanned events can occur and disrupt the annual work plan. All work is completed in accordance with safety and applicable requirements and industry standards.

**Table 11**  
T&D programs metrics

<b>Transmission</b>	
<b>Transmission Asset Management Programs</b>	<b>Description</b>
Aerial Visual Inspection Program	Perform annual patrols and document identified defects according to priority. Complete repairs according to priority definition.
Ground Visual Inspection Program	Perform annual patrols and document identified defects according to priority. Complete repairs according to priority definition.
Detailed Visual (High Resolution Photography) Inspection Program	Perform 10-year cycle patrols and document identified defects according to priority. Complete repairs according to priority definition.
Wood Pole Inspection and Treatment Program	Perform 10-year cycle patrols and document identified defects according to priority. Complete repairs according to priority definition.
Cathodic Protection and Inspection Program	Perform 10-year structure-to-soil potential testing on select towers with direct-buried anodes. Perform 10-year rectifier and ground-bed testing on ICCP systems. Annually inspect and record DC voltage and current readings of rectifiers. Complete repairs and adjustments.
Wood Pole Wildfire Protection Program	Inspect and install wraps on selected poles.
<b>Distribution</b>	
<b>Distribution Asset Management Programs</b>	<b>Description</b>
Wood Pole Inspection and Treatment Program	Perform 10-year cycle patrols and document identified defects according to priority. Complete repairs according to priority definition.
Line Equipment Inspection Program	Complete annual inspections and data analysis and mitigate defects



- Ground Detailed Inspection Program
- Thermography (Infra-Red) Inspections
- Distribution Infrastructure Hardening Program
  - Replace "small conductor" with new 4acsr or larger conductor
  - Replace or repair damaged conductor
  - Re-tension loose conductors including "flying taps" and slack spans as required
  - Replace wood-stubbed poles with new wood poles
  - Replace white and yellow square tagged poles with new wood poles
  - Replace wood pins/wood crossarm with new steel pins/fiberglass crossarms
  - Replace steel insulator brackets with new steel pins/fiberglass crossarms
  - Replace wedge deadends on primary taps with new polymer deadend strain insulators
  - Replace aluminum deadend strain insulators with new polymer deadend strain insulators
  - Replace porcelain switches with new polymer switches
    - Replace hot line clamps
    - Replace aluminum stirrups
    - Install avian cover
    - Relocate arresters
- Install bird/animal guarding
- Update capacitor banks
  - Replace swelling capacitors
  - Replace oil-filled switches with vacuum style
  - Replace porcelain switches with polymer switches
- Replace certain expulsion arresters
- Install disconnect switches on CSP transformers
  - Install avian cover
- Update down guys
  - Replace/Install down-guy insulators with fiberglass insulators
  - Tighten down guys
- Tighten hardware
- Correct 3rd party pole attachment violations (report to Joint Use Department)
- Replace certain expulsion fuses

Perform annual patrols and document identified defects according to priority. Complete repairs according to priority definition.  
 Complete inspections of targeted lines and equipment using thermal imaging (infra-red) cameras.  
 Complete annual work plan

**Vegetation Management**

<b>Transmission</b>	<b>Description</b>
Pre-Fire Season Inspection and Mitigation	Perform annual pre-fire season inspections no later than June 15 of each year and mitigate noted "hot spots" Complete annual cycle pruning work plan
Line Clearing Cycles: Strive to maintain 3-year cycle for valley areas & 6-year cycle for mountain areas	
Tree Removals - Hazard Trees	Remove targeted hazard trees
Targeted Pole Clearing	Complete annually targeted structures
100% QA/QC Audits in RRZs and YRZs	Complete annually QA/QC audits
<b>Distribution</b>	<b>Description</b>
Pre-Fire Season Inspection and Mitigation	Perform annual pre-fire season inspections no later than June 15 of each year in RRZs and YRZs and mitigate noted "hot spots" Complete annual cycle pruning work plan
Line Clearing Cycle: Strive to maintain 3-year cycle	
Mid-Cycle Pruning in RRZs and YRZs	Complete annual mid-cycle pruning work plan in RRZs and YRZs



Tree Removals - Cycle Busters/Hazard Trees

Complete annual cycle pruning work plan

Targeted Pole Clearing

Complete annually targeted structures

100% QA/QC Audits in RRZs and YRZs

Complete annually QA/QC audits

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## 11.9. Long-term Metrics

In 2022, Idaho Power identified new metrics to measure the performance of the WMP and its effectiveness over time. Vegetation management and grid hardening work is expected to reduce outages and improve reliability in wildfire risk zones. A new approach in gauging the effectiveness of the WMP includes tracking reliability data and specific outage counts based on causes or failures that are considered potential drivers of ignition. The following outage causes were established as baseline potential drivers of ignition and will be monitored for each wildfire risk zone:

- Tree/Vegetation Contact
- Equipment Failure
- Loose Hardware
- Corrosion
- Animal Contact

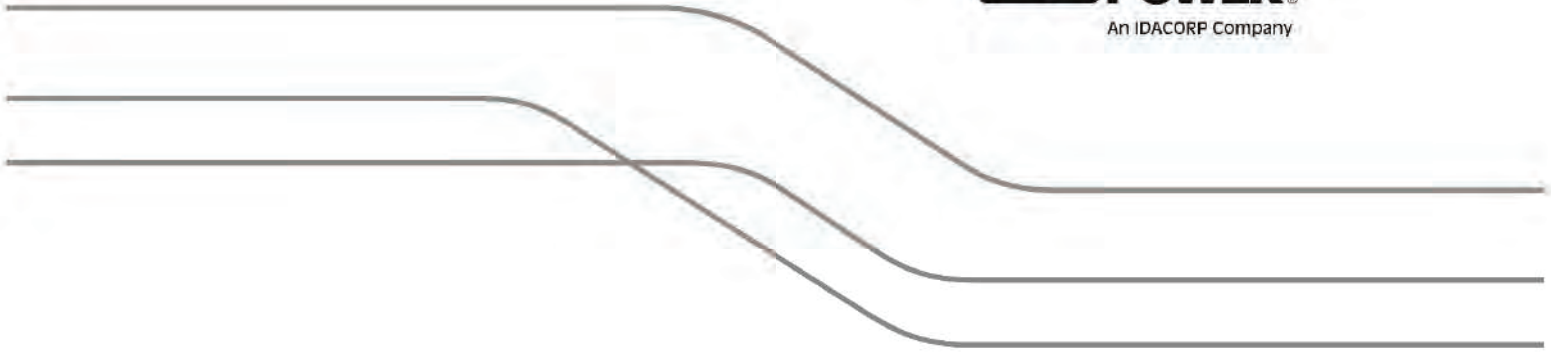
Historical data was analyzed in 2022 in both RRZ and YRZ to establish baseline metrics that will be used to measure performance over time. Potential drivers of ignition in wildfire risk zones through October have decreased by 8% compared to the previous four-year average. This improvement occurred despite being in early stages of wildfire hardening and enhanced vegetation management activities. The use of outage data to gauge overall WMP performance is expected to be a long-term metric and it takes several years to develop trendlines and averages to draw definitive conclusions and a causal relationship to wildfire mitigation activities. In 2023, the company plans to continue to develop long-term benchmarks based on outage counts and cause codes and will refine our approach by expanding the use of data analytics.



**Appendix A**

The Wildland Fire Preparedness and Prevention Plan.





# Wildland Fire Preparedness and Prevention Plan



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## 1. Plan Overview

### A. Intent of Plan

The purpose of this Wildland Fire Preparedness and Prevention Plan (Plan) is to provide guidance to Idaho Power Company (IPC) employees to help prevent the accidental ignition and spread of wildland fires (wildfires) due to employee work activities in locations and under conditions where wildfire risk is heightened. It is expected that all IPC employees be aware of the provisions of this Plan, operate in accordance with the Plan and conduct themselves in a fire-safe manner.

### B. Scope of Plan

The scope of this Plan includes tools, equipment, and field behaviors IPC employees incorporate when working in locations and under conditions where wildfire ignition is heightened.

Operations of Transmission and Distribution (T&D) lines facilities, vegetation management, and T&D lines programs that mitigate wildfire risks are not included in this Plan; they are referenced in the separate Wildfire Mitigation Plan.

## 2. Situational Overview and Applicability

### A. Wildfire Season

The provisions of this Plan shall be applicable during wildfire season. Within IPC's service area, wildfire season is defined as the closed fire season of May 10 through October 20 of each year, as established by Idaho State Law, Title 38-115.

Should any local, state, or federal government land management agency (i.e., the BLM, U.S. Forest Service, Oregon Department of Forestry, Idaho Department of Lands, etc.) issue any wildfire related order that extends wildfire season beyond that specified above, then compliance with that agency's order shall govern.

Many variables—such as drought conditions, weather, and fuel moisture—can cause the wildfire season to begin and/or end earlier or later. In summary, flexibility, judgment, attention to current and forecasted field conditions, and attention to governmental agency issued wildfire orders are necessary such that operational practices can be adjusted accordingly.

### B. Wildfire Risk Zones

IPC's Wildfire Mitigation Plan includes a Wildfire Risk Map of IPC's service area. This Wildfire Risk Map may be accessed at the Idaho Power SharePoint site. All lands in the vicinity of IPC facilities are mapped as Red Zone, Yellow Zone or areas of minimal wildfire risk (i.e., not within a Red or Yellow Zone). Red and Yellow Zones are designated as wildfire risk zones (WRZ). The provisions of this Plan shall apply to work activities taking place during wildfire season in these WRZs.



Should any local, state, or federal government land management agency (i.e., BLM, U.S. Forest Service, Oregon Department of Forestry, Idaho Department of Lands, etc.) issue any wildfire related order, then compliance with that agency's order shall govern if their order is more restrictive than that set forth in this Plan.

### C. Fire Potential Index

Idaho Power's Atmospheric Science department has developed an FPI rating system that forecasts wildfire potential across IPC's service area. The FPI considers many current and forecasted elements such as meteorological (winds-surface and aloft, temperatures, relative humidity, precipitation, etc.) and fuel state (both live and dead). The FPI is designed and calibrated for IPC's service area; specifically, those areas in proximity to IPC transmission, distribution, and generation facilities.

The FPI consists of a numerical score ranging from 1 (very green, wet fuels with low to no wind and high humidity) to 16 (very brown and dry, both live and dead dry fuels with low humidity and high temperatures). The FPI scores are grouped into the following 3 index levels:

- **Green:** FPI score of 1 through 11
- **Yellow:** FPI score of 12 through 14
- **Red:** FPI score of 15 through 16

During wildfire season, Idaho Power will determine a daily FPI as described in Section 5 of the WMP. This weather forecast and FPI dashboard is contained within IPC geographic information system (GIS) viewers available to all IPC employees.

### D. Decision Making for Field Work Activities

Employees working in the field shall be cognizant of current and forecasted weather and field conditions. Awareness of these conditions, and exercising appropriate judgment, is essential when considering whether to undertake work activities when combinations of high temperatures, low humidity, dry fuels, and/or wind are present or forecasted to be present.

The following process steps shall apply to employees and crews contemplating field work during wildfire season:

#### Planned or Scheduled Work Activities:

##### 1. Fire Potential Indices:

- a) Employees working in the field—NOT working on transmission or primary distribution lines should:



- i. Be aware of the current and forecasted weather and the FPI level for the area in which the work will be performed, through the FPI dashboard.
  - ii. Once the FPI level for the work zone is identified, proceed with work but consider utilizing Prevention—Practices of Field Personnel (see Section 6 of this Plan).
- b) Employees working in the field—working on transmission or primary distribution lines should:
- i. Be aware of the current and forecasted weather and the FPI level for the area in which the work will be performed.
  - ii. Once the FPI level for the work zone is identified, proceed as follows for each FPI level:
    1. **Green FPI in All Zones:** Proceed with the work.  
Consider utilizing Prevention—Practices of Field Personnel (see section 4 of this Plan)
    2. **Yellow FPI in All Zones:** Proceed with the work.  
Consider utilizing Prevention—Practices of Field Personnel (see section 4 of this plan)
    3. **Red FPI**
      - a) **In Normal Zone:** Proceed with the work.  
Consider utilizing Prevention—Practices of Field Personnel (see Section 6 of this plan)
      - b) **In Medium Zone:** Proceed with the work. However, it is a requirement to follow the Prevention—Practices of Field Personnel (see Section 6 of this plan)
      - c) **In High Zone: STOP.** No planned work activities shall take place unless approved by operations level manager. Work consideration will be restoration of electric service or work deemed critical to providing safe, reliable electric service. If work is approved to proceed it is a requirement to follow the Prevention—Practices of Field Personnel (see Section 6 of this plan).



Fire Potential Index (FPI)	High	15 to 16 (Red)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)	Proceed with work Utilize Prevention/ Practices of Field Personnel <b>REQUIRED</b>	<b>STOP/NO WORK</b>
	Elevated	12 to 14 (Yellow)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)
	Normal	1 to 11 (Green)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)	Proceed with work Utilize Prevention/ Practices of Field Personnel (Optional)
			None	Yellow (Tier 2)	Red (Tier 3)

2. Land Management Agency Restrictions: Follow the requirements and restrictions of any wildfire restrictions related order that is issued by local, state, or federal land management agencies.
  - a) Immediately upon receiving knowledge of an order, The Environmental Services department will notify, via email, operations leadership within Power Supply, Customer Operations and Business Development, and T&D Engineering and Construction of wildfire related requirements and restrictions orders that are issued by local, state, or federal land management agencies.

Emergency Response and Outage Restoration Work Activities:

Follow the same steps as identified above for planned work activities. However, it is recognized that the nature of emergency response and outage restoration situations will often require exceptions to the above. In these situations, leadership should be consulted, and appropriate judgment should be used given the nature of the emergency or outage at hand.

**3. Preparedness—Tools and Equipment**

A. Required Personal Protective Equipment



Standard IPC Personal Protective Equipment (PPE) shall be worn in accordance with the IPC Safety Standard.

When entering a designated fire area being managed by the BLM or the U.S. Forest Service, additional PPE requirements may be in force by those agencies. These typically include:

- Hardhat with chinstrap
- Long sleeve flame-resistant (FR) shirt and FR pants
- Leather gloves
- Exterior leather work boots, 8” high, lace-type with Vibram type soles
- Fire shelter

## B. Required Tools and Equipment

Employees NOT working on transmission or distribution lines: Standard tools and equipment in accordance with the IPC Safety Standard and Fleet Services.

Employees working on transmission or distribution lines: IPC and the State of Idaho BLM entered into a March 2019 Master Agreement that governs various IPC and BLM interactions, including wildfire prevention related provisions. In addition to State of Idaho BLM lands, IPC has elected to apply these requirements to all work activities taking place on all WRZ in Idaho, Nevada, Montana, and Oregon. These requirements include:

- During the wildfire season (May 10–October 20) or during any other wildfire season ordered by a local, state, or federal jurisdiction, IPC, including those working on IPC’s behalf, will equip at least 1 on-site vehicle with firefighting equipment, including, but not limited to:
  - a) Fire suppression hand tools (i.e. shovels, rakes, Pulaski’s, etc.),
  - b) a 16-20-pound fire extinguisher,
  - c) a supply of water, sufficient for initial attack, with a mechanism to effectively spray the water (i.e. backpack pumps, water sprayer, etc.). This requirement to carry water is dependent on the vehicle type and weight restrictions. For example, a mini-excavator would not be required to carry water since there is no safe way to do so, or a loaded bucket truck may not be required to carry water because of weight limitations.
- At a minimum, equip each truck that will be driven in the WRZs during wildfire season with at least:
  - a) One round, pointed shovel at least 8-inches wide, with a handle at least 26 inches long
  - b) One axe or Pulaski with a 26-inch handle or longer
  - c) A combination of shovels, axes, or Pulaskis available to each person on the crew



- d) One fire extinguisher rated no less than 2A:10BV (5 pounds)
- e) 30-200 gallons of water in a fire pumper and 5-gallon back packs

IPC personnel will be trained to use the above tools and equipment to aid in extinguishing a fire ignition before it gets out of control and take action that a prudent person would take to control the fire ignition while still accounting for their own personal safety.

### C. Land Management Agency Restrictions and Waivers

The Environmental Services department will notify operations leadership within Power Supply, Customer Operations and Business Development, and T&D Engineering and Construction of any wildfire related requirements and restrictions orders that are issued by local, state, or federal land management agencies. Typical orders issued each fire season include:

- BLM. During BLM's Stage II Fire Restrictions, IPC's Environmental Services department will obtain an appropriate waiver. Field personnel shall take appropriate precautions when conducting work activities that involve an internal combustion engine, involve generating a flame, involve driving over or parking on dry grass, involve the possibility of dropping a line to the ground, or involve explosives. Precautions include a Fire Prevention Watch Person who will remain in the area for 1 hour following the cessation of that activity. Also, IPC personnel will not smoke unless within an enclosed vehicle, building, or designated recreation site or while stopped in an area at least 3 feet in diameter that is barren or cleared of all flammable materials. All smoking materials will be removed from work sites. No smoking materials are to be discarded.
- State of Oregon Department of Forestry (ODF). Prior to each summer fire season, the ODF issues a "Fire Season Requirements" document that specifies required tools, equipment, and work practices. In addition to State of Oregon lands, IPC has elected to apply these requirements to all work activities taking place on all WRZ, BLM lands, and Forest Service lands within the State of Oregon. Go to <https://www.oregon.gov/ODF/Fire/Pages/Restrictions.aspx> for ODF's Fire Season Requirements order.
- Other sites for reference that contain fire restriction orders include:
  - Oregon— Blue Mountain Interagency Fire Center at <http://bmidc.org/index.shtml>
  - Nevada—Fire Information at <https://www.nevadafireinfo.org/restrictions-and-closures>
  - Montana—<https://firerestrictions.us/mt/>

## 4. Prevention—Practices of Field Personnel

### A. General Employee Practices

The below listing includes, but is not limited to, practices and behaviors employees shall incorporate depending on the FPI and level of WRZs during fire season.



1. Daily tailboards must include discussion around fire mitigation planning. Discussion topics include, but are not limited to:
  - a. Items 2 through 7 below
  - b. Water suppression
  - c. Hand tools
  - d. Welding blankets
  - e. Mowing high brush areas (weed wacker)
  - f. Watering down the worksite before setting up equipment
2. Weather conditions and terrain to be worked shall be considered and evaluated. Items to be considered include, but are not limited to:
  - a. Identify the FPI for the area being worked (see Section 3.2.2)
  - b. Monitor weather forecasts and wind and humidity conditions
  - c. Identify surroundings. i.e., wildland-urban interface, BLM lands, Forest Service lands, proximity to any homes and structures, etc.
  - d. Identify local fire departments and locations
  - e. Evaluate the terrain you are working in (steep or flat)
  - f. Consider whether the work will occur during the day or at night
3. Work procedures and tools that have potential to cause a spark or flash shall be considered and evaluated. Items to be considered include, but are not limited to:
  - a. Performing energized work
  - b. Grinding or welding
  - c. Trees contacting electrical conductors
  - d. Hot saws
  - e. Chainsaws
  - f. Weed wackers
  - g. Sawzalls
4. Monitoring the worksite throughout the project.

It is imperative that all crews and equipment working in the WRZs areas are continuously monitoring and thoroughly inspecting the worksite throughout the project. This includes prior to leaving the work area for the night or before moving on to the next structure.
5. Employee cooking stoves.

When working in remote locations, often employees bring food that needs to be cooked. Open flames should not be allowed. Cook stoves may be permitted by leadership but special precautions must be followed to use:

  - a. The stove or grill must be in good repair and of sturdy construction
  - b. Stoves must be kept clean, grease build up is not allowed
  - c. Fueling of the stove must follow the fueling procedures when liquid fuels are used
  - d. Cooking must be in areas free of combustible materials



6. Smoking on the job site.

Carelessly discarded smoking materials can result in wildfire ignition. The following practices shall be followed:

- a. Do not discard any tobacco products from a moving vehicle.
- b. Smoking while standing in or walking through forests or other outdoor areas when IPC's FPI rating is above a Green level is prohibited.
- c. All employees must smoke **only in designated areas** and smoking materials must be disposed of in half filled water bottles or coffee containers half filled with sand. Smoking materials shall not be discarded on any site.

7. Post job site inspection.

Final inspection or post-checking the work site for any ignition hazards that may remain is essential to the proper completion of the work and true mitigation of the hazards.

Post-checking the work will help ensure the hazards were mitigated and provide a final chance to see if any new hazards or hot spots exist before leaving the work site.

## B. Behaviors Relating to Vehicles and Combustion Engine Power Tools

It is important to consider work procedures, equipment conditions, employee actions, potential causes, and other sources that could lead to fire ignition. Some work practices may be performed on roadways that have little to no risk of fire ignition. Leadership should consider scheduling off-road equipment use during times of green fire risk. Employees should also consider alternative tools, work methods or enhanced suppression tools to reduce the risk or spread of fire.

1. Additional heat may bring vegetative materials to an easier point of ignition.

This includes, but is not limited to, the following vehicles:

- a. Pickups, crew cabs, line-beds, buckets trucks (large and small), backhoes, excavators and rope trucks, and any other motorized equipment.

2. Vehicle Procedures:

- a. Inspect all engine exhaust, spark arresters and electrical systems of vehicles used off road, daily for debris, holes or exposed hot components and to ensure that heat shields and protective components are in place.
- b. Conduct inspections of the vehicle undercarriage before entering or exiting the project area to clear vegetation that may have accumulated near the vehicle's exhaust system.
- c. Vehicles shall be parked overnight in areas free from flammable vegetation at a minimum distance of 10 feet.
- d. Vehicles and equipment will not be stationary or in use in areas where grass, weeds or other flammable vegetation will be in contact with the exhaust system.
- e. If there is no other workable option for the location that doesn't include weeds, grass or other flammable vegetation, the vegetation and debris will need to be removed.



- f. Consider using a fire-resistant material such as a welding blanket to cover flammable material to act as a heat shield; fire blankets may be a suitable option to avoid removal of vegetation.
3. Hot brakes on vehicles and equipment:
  - a. Park vehicles in areas free of combustible materials.
  - b. Hot brake emergency parking, during times of yellow or red FPI shall be cleared of combustible materials for a distance of at least 10 feet from the heat source.
4. Fueling procedures:
  - a. Tools or equipment should NOT be fueled while running.
  - b. Cool down period must be given to allow equipment time to no longer be considered a fire risk.
  - c. Allow for a ten-foot radius from all ignition sources.
  - d. Any combustible debris should be cleared from the immediate area.
  - e. Never smoke while fueling.
  - f. Designate fueling areas for all gas-powered tools.
5. Combustion engine power tools:

Poorly maintained or missing spark arrester screens may allow sparks to escape and cause ignition of vegetation. Ensure proper spark arrester screens are in place for the following tools:

  - a. Generators
  - b. Pony motors
  - c. Pumps
  - d. Chain saws
  - e. Hot saws
  - f. Weed eaters
  - g. Brush hog

Inspect spark arresters daily; clean or replace when clogged, damaged or missing or remove from service until repaired.

## 5. Reporting

### A. Fire Ignition

All fire ignitions shall be immediately reported to regional or system dispatch. Dispatch will notify local fire authorities. All work shall immediately stop and necessary steps taken to extinguish the fire with available tools, water, and equipment. If the fire gets too large to safely contain or extinguish, ensure all employees are accounted for and get to a safe location.

### B. Fire Reporting



When reporting a fire ignition to regional or system dispatch provide the following information:

1. Your name
2. Location-reference points including an address, road or street name, cross streets, mountain range, GPS coordinates, as applicable
3. Fire information
4. Size and behavior of the fire
5. Weather conditions

## **6. Training**

Each employee who performs work in wildland fire designated zones shall be trained on the content of this document and be required to complete annual refresher courses through the Workday system. Employees are required to complete fire extinguisher and fire shelter training annually as part of the lineman safety compliance. Documentation of all training shall be retained in Workday.



**7. Roles and Responsibilities**

Employee	<ol style="list-style-type: none"> <li>1. Be familiar with the requirements specified in this Plan and operate in accordance with this Plan.</li> <li>2. Be aware of daily weather forecast and FPI level.</li> <li>3. Be aware of whether field work will be performed in a WMZ.</li> </ol>
Crew Foreman and Front-Line Leaders	<ol style="list-style-type: none"> <li>1. Establish expectations to direct report employees they are to be familiar with, and follow, Plan requirements.</li> <li>2. Ensure the crew or team conducts field operations in accordance with this Plan.</li> <li>3. Be aware of daily weather forecast and FPI level (by viewing the FPI dashboard or by calling into dispatch or a leader):             <ol style="list-style-type: none"> <li>a) Ensure employees are aware of the FPI level.</li> <li>b) Ensure work practices comply with this Wildland Fire Preparedness and Prevention Plan when the FPI is "Red" and the WMZ is Yellow.</li> <li>c) Ensure no work takes place when FPI is "Red" and the WMZ is Red. Any exceptions to be discussed with manager.</li> </ol> </li> <li>4. Ensure annual training of employees is completed prior to wildfire season.</li> <li>5. Ensure required tools and equipment are in place prior to wildfire season.</li> </ol>
Manager (Regional Operations Manager, Area Manager, T&D Construction Manager)	<ol style="list-style-type: none"> <li>1. Establish expectations to Crew Foremen and Front-Line Leaders they are to operate in accordance with Plan requirements.</li> <li>2. Support Crew Foremen and Front-Line Leaders in scheduling training and making required tools and equipment available.</li> <li>3. View daily weather forecast and FPI dashboard:             <ol style="list-style-type: none"> <li>a) Authorize any exceptions to working when FPI is "Red" and the WRZ is Red.</li> <li>b) Ensure specified audits are timely completed.</li> </ol> </li> </ol>
Meteorology Department	<ol style="list-style-type: none"> <li>1. Provide daily weather forecast and update the FPI dashboard contained within the IPC Enviro Viewer.</li> </ol>
Environmental Services Department	<ol style="list-style-type: none"> <li>1. Monitor local, state, and federal land management agencies for any wildfire restriction orders that are issued.</li> <li>2. Communicate content of any orders issues to Power Supply, COBD, and PEC operations leadership.</li> </ol>
Operations Procurement Department	<ol style="list-style-type: none"> <li>1. Ensure contractors have a copy of this Plan and that contractual requirements are in place to ensure adherence to the Plan.</li> </ol>
Vice-President of Planning, Engineering and Construction (VP of PEC)	<ol style="list-style-type: none"> <li>1. Ensure annual review/update of this Plan is conducted following the completion of each wildfire season.</li> </ol>

**8. Audit**

Prior to the start of wildfire season (May 10), all vehicles associated with work on transmission and distribution lines will be audited by leadership to ensure that those working in WRZs are properly equipped with firefighting equipment. The following checklist must be completed, dated, and signed by a member of leadership (front-line supervisor or above) and kept with the crew or individual until fire season has ended (Oct 20). A copy of each audit checklist shall be sent to the respective manager and senior manager.



**Wildland Fire Preparedness Audit Checklist:**

Inspector: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Crew: \_\_\_\_\_

**Crew:**

At least 1 vehicle will be equipped with the following:

- Fire suppression hand tools (shovels, Pulaski, axes, etc.) for each member of the crew
- A 16–20-pound fire extinguisher (2-10-pound fire extinguishers)
- A supply of water, sufficient for initial attack, with an effective spraying mechanism (i.e., backpack pumps, water sprayer, etc.)
- 30–75-gallon mechanical fire pumper

**Individual Truck:**

- One round, pointed shovel at least 8-inches wide, with a handle at least 26 inches long
- One axe or Pulaski with a 26-inch handle or longer
- A combination of shovels, axes, or Pulaskis to each person on the crew
- One fire extinguisher rated no less than 2A:10BV (5 pounds)
- 30-200 gallons of water in a fire pumper and 5-gallon back packs

**Personal protective equipment (PPE) IPC and BLM standards: Each employee will be required to have the following PPE:**

- Hard hat with a chin strap
- Safety glasses
- Hearing protection
- Long sleeve FR shirt FR pants
- Leather gloves
- Exterior leather work boots 8" high lace type with Vibram type soles
- Fire shelter



