

# WILDFIRE MTIGATION PLAN

## WYOMING STATE

## BRIDGER VALLEY ELECTRIC ASSOCIATION

DATE: July, 2025 REVISION: V1 THIS PAGE INTENTIONALLY LEFT BLANK

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#### **Versioning Record**

The following table details the nature, date, and primary author of major revisions to the document. The location of significant changes and updates should be noted in the description column.

#### **Table 1. Plan Review and Revision Record**

Date	Version	Author	Revision Description
July, 2025	V1	Vantage Point Solutions	Original document adopted and submitted in 2025

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## 1 Introduction and Overview

Bridger Valley Electric Association's (BVEA's) service area covers approximately 3,170 square miles in southwestern Wyoming, as well as Summit and Daggett Counties in northeastern Utah (Figure 1). A large portion of BVEA's southern service area includes the Uinta-Wasatch-Cache National Forest, Ashley National Forest, and Flaming Gorge National Recreational Area. The Figure 1 also depicts the federal and state entities with land management responsibilities in the region.

BVEA's overhead transmission and distribution construction consists mainly of wooden western red cedar poles with ACSR conductor, and an underground distribution system that consists mainly of direct burial 25-kV 1/0 conductor. A high-level overview of BVEA's system assets is provided in Table 2.

ASSET CLASSIFICATION	DESCRIPTION		
Service Area	3,170 square miles in Wyoming and Utah		
Members	5,290		
Overhead Distribution Line Assets	Approximately 1,010 miles of overhead (OH) conductor, cabling, transformers, voltage regulators, capacitors, switches, and protective devices operating at or below 25kV.		
Underground Distribution Line Assets	Approximately 231 miles of underground (UG) conductor, cabling, transformers, voltage regulators, capacitors, switches, and protective devices operating at or below 25kV.		
Transmission Line Assets	Approximately 184 miles of overhead conductor, cabling, transformers, voltage regulators, capacitors, switches, and protective devices operating at 69kV.		
Substation Assets	Major equipment such as power transformers, voltage regulators, capacitors, reactors, protective devices, relays, open-air structures, switchgear, and control houses in 13 substation/switchyard facilities.		

#### Table 2. Service Area Statistics/Asset Overview



Figure 1. Service Area/Land Ownership

#### 1.1 Policy Statement

Given recent increases in wildfire frequency and severity throughout Wyoming, on March 6<sup>th</sup> of 2025, the Governor signed House Bill 0192 Public Utilities-Wildfire Mitigation and Liability Limits, a law that grants the Public Service Commission rulemaking authority to enact rules establishing procedures for the review and approval of wildland fire protection plans. The law requires qualified utility and electric cooperatives to prepare and submit for approval a wildland fire protection plan in accordance with the requirements outlined in the Bill<sup>1</sup>.

## 1.2 Purpose of the Wildland Fire Protection Plan

This Wildland Fire Protection Plan (WMP, or Plan) describes the range of activities that BVEA is taking or considering to mitigate the threat of power line-ignited wildfire, including the protocols and procedures that BVEA would undertake and industry best practices. The Plan complies with the requirements outlined under House Bill 192. All pertinent agencies have reviewed the final Plan and the BVEA Board of Directors duly adopted the Plan on 07/08/2025. All sections of the Plan will be reviewed annually, and the findings presented to the Board of Directors. The Plan will be fully revised every five years, including a revised risk analysis and development of plan recommendations to incorporate new technology and industry best practices.

### 1.3 Plan Objectives

BVEA's overarching goal is to provide safe, reliable, and economic electric service to its members. In order to meet this goal, BVEA routinely constructs, operates, and maintains its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment. The following outlines the objectives for wildfire mitigation identified in this document.

## 1.3.1 Minimizing Sources of Ignition

The goal of this Plan is to assess and minimize the probability that the BVEA transmission and distribution system may contribute to or be the origin of a wildfire ignition. In addition, the Plan identifies measures to be taken to protect the system from wildfire damage to secure service for BVEA members.

## 1.3.1 Resiliency of the Electric System

An additional goal of this Plan is to ensure long-term resilience of the BVEA electric grid. Through implementing this Plan, BVEA will be able to assess industry best practices and technologies to reduce the potential for a service interruption and improve and facilitate restoration of service.

<sup>&</sup>lt;sup>1</sup> https://www.wyoleg.gov/Legislation/2025/HB0192

### 1.4 Policy Changes

BVEA have remained consistent in regard to its approach to wildfire mitigation. In the past five years, BVEA has enhanced their wildfire mitigation strategies and policies, focusing on proactive inspection measures, technology upgrades, and grid hardening. This includes better situational awareness, implementing alternate recloser settings during high-risk weather conditions, and upgrading grid infrastructure with fire-resistant materials. Additionally, BVEA has focused on vegetation management, optimizing right-of-way management programs.

#### 1.5 Company Structure

Implementation of the Plan will be performed by Bobby Larsen, Operations Manager (OM) at BVEA. Mr. Larsen will be responsible for operational practices, system hardening, enhanced inspections, situational awareness, reclosing and re-energization, public safety and notification, vegetation management, and wildfire response and recovery. Mr. Hewitt will serve as the lead personnel, and Mr. Larsen will serve as the key technical personnel.

#### 1.6 Organization of the Wildland Fire Protection Plan

The Plan is organized into the following sections:

Section 1: Introduction Section 2: Existing Wildfire Planning Section 3: Coordination with Outside Entities Section 4: Wildfire Risk Analysis Section 5: Wildfire Prevention Strategies and Protocols Section 6: Community Outreach and Education Section 7: Integration with Applicable Plans Appendix A: Acronyms Appendix B: Definitions Appendix C: Literature Cited Appendix D: Detail Maps

HB-0192	Public utilities-wildfire mitigation and liability limits	Plan Section Number
37-3-403		
(a)	Each electric utility shall prepare a wildfire mitigation plan that shall include, at a minimum:	
(a)(i)	A description of the electric utility's service territory and the areas within the service territory or rights-of-way that may be subject to a heightened risk of wildfire;	4.1, 4.4, 4.6.1
(a)(ii)	A description of the procedures, standards and schedules that the electric utility will use to inspect and operate its transmission and distribution infrastructure, if any;	5.1
(a)(iii)	A description of the procedures and standards that the electric utility will use to perform vegetation management;	5.2
(a)(iv)	A description of proposed modifications, replacements and upgrades to facilities and preventative programs that the electric utility will implement to reduce the risk of its electric facilities initiating a wildfire;	5.3
(a)(v)	A description of how the electric utility's wildfire mitigation strategies and policies have changed in the immediately preceding five (5) years;	1.4
(a)(vi)	A description of how the electric utility will coordinate with other electric utilities regarding any shared facilities;	3.4
(a)(vii)	description of procedures and considerations for de- energizing power lines and disabling reclosers to mitigate potential fires, including:	5.5
(a)(vii)(A)	The ability of the electric utility to reasonably access the proposed power line to be de-energized;	5.4
(a)(vii)(B)	Balancing the risk of wildfire with the need for the continued supply of electricity to a community;	5.4.1
(a)(vii)(C)	Any potential impact that de-energizing lines may have on the resilience of the remainder of the electric utility's transmission and distribution facilities, if any;	5.4, 5.4.1

#### Table 3. Plan Compliance with HB 0192 Requirements

(a)(vii)(D)	The need to provide notice to customers and the public	5.4.2
(/(/(-)	before or as soon as practicable after de-energization;	
(a)(vii)(E)	Any need to communicate and coordinate with any other electric utilities that may be impacted by a de- energization and any plans to accomplish communications, including communications with transmission operators, reliability coordinators and cooperative member systems;	5.4.2, 6.1
(a)(vii)(F)	Anticipated potential impacts to public safety.	5.4.1
(a)(viii)	A description of the procedures the electric utility intends to use to restore its electrical system in the event of a wildfire;	5.6
(a)(ix)	For electric utilities whose rates are regulated by the commission, a description of the estimated incremental costs and potential associated rate impacts for the implementation of the wildfire mitigation plan, including system improvements and upgrades;	N/A
(a)(x)	A description of community outreach and public awareness efforts before and during the wildfire season, particularly in areas impacted by wildfires or de- energizations;	6.2
(a)(xi)	A description of potential participation with emergency coordinators, if applicable;	3, 7
(a)(xii)	Input from the Wyoming State Forestry Division of the office of state lands and investments, an association representing Wyoming rural firefighters and any other appropriate federal, state or local fire entity.	7.1
37-3-404		
(d)	Not later than June 1 in the year following any year in which the commission approves a wildfire mitigation plan under this section, an electric utility shall file an annual report with the commission detailing the electric utility's compliance with the approved wildfire mitigation plan and shall request an order of the commission finding that the electric utility has substantially complied with the plan during the preceding year.	7.4.1

## 2 Existing Wildfire Planning Efforts

## 2.1 Coordination With State Or Local Wildland Fire Protection Plans

The Plan is designed to align with wildfire mitigation goals identified in other existing land management plans already in place in the service area. The service area incorporates portions of Daggett County and Summit County in Utah, and Sweetwater, Uinta, and Lincoln Counties in Wyoming.

In Wyoming, wildfire response is a cooperative effort involving several federal, state, and local entities. The US Forest Service manages wildfires on National Forest System lands. The Bureau of Land Management (BLM) participates in the Rural Fire Readiness program, providing equipment and funding to local cooperators. The Wyoming State Forestry Division manages fire on State Trust Lands and aids local authorities and the Wasatch-Cache National Forest also operates a fire suppression program. The Rocky Mountain Area Coordination Center (RMACC) coordinates wildfire response across the region, including Wyoming. Cumulatively, resources include wildland fire resources, structural fire resources, aviation resources and support logistical resources. These agencies operate though a multi-agency Wildland Fire Management Annual Operating Plan.

## 2.2 Uinta County

As of 2024, Uinta County is home to approximately 20,700 people (United States Census Bureau 2020). It occupies approximately 2,088 square miles (1,336,320 acres) of land in the northwestern portion of the state and borders Utah. The county owes its name to the high Uinta Mountains in nearby Utah.

In 2006, Uinta County developed a Community Wildfire Protection Plan (CWPP) to empower citizens and local governments to increase community safety and resilience to wildfire. The plan identifies areas at high risk to fire, creates risk reduction strategies, and calls for increased community collaboration, outreach, and education. While there are no specific actions related to utilities in this plan, proposed mitigations include improved street signage, rural numbering, and individual fuel reduction plans for homeowners. Future goals for Uinta County include public outreach and education, response personnel training, and the creation of more defensible space

In 2022, Uinta County the Wyoming Region 4 Hazard Mitigation Plan (WR4HMP) to mitigate disasters and improve disaster response and recovery. According to the WR4HMP, all municipalities in the county, except Mountain View, and some unincorporated communities have properties in areas with high risk of wildfire and over 92% of the buildings at high risk of wildfire in the county are residential.

#### 2.3 Lincoln County

In 2015 Lincoln County published its update to its 2006 Community Wildfire Protection Plan. The county is 4,000 square miles in size. Approximately three-fourths of the land area is publicly managed. The population is approximately 18,800 residents. The southern two thirds of the county consist of ranchland areas with hay meadows, high desert sagebrush areas, and timbered foothills. Most of the population is located in the towns of LaBarge, Opal, Kemmerer, Diamondville, and Cokeville. Some existing rural subdivisions continue to develop in the foothill areas. The northern third of the county consists of the Star Valley area on the Salt River drainage and the Greys River areas that are primarily in the Bridger-Teton National Forest. The population of Star Valley is predominantly rural with rather high growth rates in areas that interface wildlands. Only 37% of the Star Valley population is located within the towns of Afton, Thayne, Star Valley Ranch, and Alpine.

In the plan, 17 areas of concern are identified and prioritized based upon fuel hazards, risk from wildfire, infrastructure, and other values such as view-sheds and watersheds. Land management considerations include USFS, BLM, county and municipal governments. The Fossil Butte National Monument has also developed and implemented a fire management plan that includes prescribed fire to reduce fuel loads within the National Monument. (Fossil Butte Plan approved 12/17/04).

#### 2.4 Sweetwater County

As of 2023, Sweetwater County has approximately 41,000 residents. While the county does not currently have a CWPP, it has a County Emergency Operations Plan 2024 (EOP). The EOP clarifies the actions taken for an effective response and describes the integration of the processes and procedures detailed in the National Response Framework (NRF), National Disaster Recovery Framework, as well as serving as a guide for all municipal Emergency Operations Plans.

The EOP provides the framework for interaction with other county and municipal governments, the private sector, and non-governmental organizations (NGOs) in the context of incident prevention, preparedness, response, and recovery activities. It describes capabilities and resources and establishes responsibilities, operational processes, and protocols to help protect from natural and manmade hazards, save lives, protect public health, safety, property, and the environment. The EOP also identifies "Wildland Fire" as a top potential hazard and describes how "damaged or destroyed electric lines and facilities" have cascading effects on the health and safety of the population and infrastructure.

### 2.5 United States Forest Service

BVEA lines cross areas of the Wasatch-Cache and Ashley National Forests (see Figure 1). Fire management planning for both national forests is now in a spatial format contained in the Wildland Fire Decision Support System. Fire management plans (FMPs) are informed by the forest management plan and the Utah Fire Amendment, which applies to all forests in the state

of Utah. The FMP allows for a wide range of management responses, from management for resource benefit to full suppression. It also allows for various hazardous fuels management tools including prescribed fire and mechanical management. The Ashley National Forest Plan is currently under review and will include similar allowances for management responses and hazardous fuels management tools.

Fuel management projects are developed and prioritized by evaluating hazards at risk and condition class. When evaluating critical areas, protection of highly valued resource areas (HVRAs), including natural and human-made features, will be accounted for. Each forest will collaborate on these efforts with state, county, federal, and utility partners. Currently, the Ashley National Forest identifies priority areas using a process through Shared Stewardship with the State of Utah. The forest is seeking to increase the number of acres treated per year.

BVEA will continue to work with both National Forests to ensure all BVEA actions align with existing Forest Service policies, plans, directives, and special use authorizations regarding activities within the utility rights-of-way (ROWs) (USFS 2020).

## 2.6 Bureau of Land Management

In 2020, the BLM issued an instruction memorandum to establish policies regarding routine operation and maintenance activities on electric utilities' ROW to reduce wildfire risk. This memorandum establishes that the ROW holders have the authority to conduct operation and maintenance activities and that they must do everything reasonable to reduce wildfire risk within or in the immediate vicinity of their ROW. Furthermore, ROW holders must comply with any requirements to control or prevent property damage and protect public health and safety. Unless in direct conflict with applicable laws and regulations, the BLM requests to be notified within 30 days of maintenance completion (BLM 2020). Federal agencies routinely develop fuel treatment planning to address hazardous fuels within their jurisdiction. BVEA could work with the BLM and USFS to look for opportunities to treat fuels in and around the BVEA ROW to help mitigate wildfire risk in areas projected to have high or extreme fire behavior.

In 2018, the BLM Vernal Field Office in the Green River District developed an FMP to describe fire management strategies created to protect BLM values against wildfire and to describe tools used to meet natural resource objectives. The Vernal Field Office covers potions of Daggett, Duchesne, and Uintah Counties, and only a very small section of the BVEA service area. Fire management objectives outlined in the plan include management of noxious weeds and insect infestations with fire or mechanically, biologically, or chemically. The plan does not make any direct mention of utilities, however, BVEA could work with the BLM to develop vegetation management protocols.

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## 3 Coordination with Outside Agencies

Figure 1 outlines the surface ownership and jurisdictions within the BVEA service area. Contact information for land management entities within the service area is provided in Tables 7 and 8 in Chapter 7. In response to active emergencies, BVEA coordinates and collaborates with the local Department of Emergency Management (DEM) and relevant state or federal agencies as a peer partner. During such emergencies, BVEA provide a utility representative to the county DEM to ensure effective communication and coordination. BVEA's OM contact the local DEM and establish themselves as the duty officer for coordination. The GM or OM acts as the communications officer during an emergency.

#### 3.1 County

The Sweetwater County Emergency Operations Plan describes firefighting operations under emergency support function (ESF) 4. ESF 4 actions are those taken by local fire departments; mutual aid assistance from neighboring jurisdictions; and, in some cases, state, federal, and private industry resources and technical expertise to control and suppress fires that threaten to become major emergencies.

The Sweetwater County EOC serves as the focal point for emergency management and coordination with and between governmental departments, Emergency Support Function (EFS) agencies, and incident response personnel. The EOC is located in Rock Springs and is the physical or virtual location from where Sweetwater County will coordinate information and resources to support incident management activities. The EOC houses the staff, equipment, and communications technology that local leadership needs during emergency response.

The Sweetwater County Emergency Manager delegates responses to the appropriate personnel in the event of an emergency. Further detail on the Summit County incident command system is available in the Sweetwater County EOP.

Mutual aid compact agreements between local governments will be followed through established and recognized firefighting standards and methods. Coordination with local, state, federal, and private companies is accomplished under the Incident Command System element of the National Incident Management System (NIMS) Command and Management component of the National Response Framework. A representative from each agency will report to the Incident Command Post or emergency operations center where information can be gathered and disseminated. Each representative will be part of a Unified Command system.

#### 3.2 State

**The Wyoming State Forestry Division (WSFD)** is responsible for the management of approximately 263,000 acres of forested trust land across the state including fire management on 3.6 million surface acres of state trust land and cooperative fire management on private and federal lands. The Division is headquartered in Cheyenne, and

has field offices in Newcastle, Casper, Laramie, Riverton, Cody, Buffalo, Pinedale, and Lyman.

Wildfires that occur on state and private land outside of city limits are managed by the WSFD with fire suppression efforts coordinated through county fire wardens who work with federal agencies and local fire departments.

The Division is responsible for promotion of good forest management and protection throughout the state on all lands. This includes input, advice, and assistance to private landowners, communities, counties, fire districts, elected state leaders, and federal land management agencies. Much of the assistance forestry program is delivered through the partnership and financial support of the USDA Forest Service and their State & Private Forestry Programs.

**Casper Interagency Dispatch Center (CPC)**, is responsible for coordinating and dispatching wildfire response in southern Wyoming. The CPC operates within the larger framework of the **National Interagency Fire Center (NIFC)**. They manage resources, including local and out-of-area crews and equipment, for incidents within their designated area, including dispatching and managing resources for initial attack and incident support. In essence, the NIFC provides the overall coordination, while the CPC handles the specific dispatching in the Southern Wyoming region.

#### 3.3 Federal

**Bureau of Land Management (BLM)** and the **U.S. Forest Service (USFS**) play a key role in wildfire response; they are heavily involved in responding to wildfires on their respective federal lands. The BLM, for example, manages wildfire response on over 400 million acres of national parks, wildlife refuges, and other public lands, while the FS manages wildfire response on the 193 million acres of the National Forest System.

The BLM Fire program is headquartered at the NIFC in Boise, Idaho, where the BLM works with seven other federal agencies to manage wildland fire in the United States.

The BLM Fire program has three organizational levels:

1) The national office provides leadership and oversight and develops policy, procedures and budgets for the BLM Fire program;

2) BLM state offices are responsible for coordinating policies and interagency activities within their state; and

3) District and field offices are responsible for on-the-ground fire management and aviation activities, often partnering with other agencies to conduct efficient wildland fire suppression operations.

#### 3.4 Shared Facilities

BVEA will coordinate with neighbor utilities through formal agreements or informal collaborations to manage shared facilities like poles, transmission lines, and other infrastructure. This coordination aims to ensure reliability, efficiency, and cost-effectiveness, while adhering to regulatory requirements. By coordinating through these mechanisms, BVEA ensures that shared facilities are maintained efficiently and reliably, while minimizing costs and potential disruptions.



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## 4 Wildfire Risk Analysis and Risk Drivers

This chapter will provide an overview of the service area properties and associated risks, locations of assets in relation to climatic, topographic which are factored into the wildfire mitigation strategy. The wildfire risk analysis process will utilize the Wyoming Wildfire Risk Assessment Portal (WWRAP) as well as the USFS Wildfire Hazard Potential risk mapping datasets (2023 update). The purpose of the wildfire risk analysis is to identify areas within the BVEA service area in Uinta, Lincoln and Sweetwater Counties that are particularly susceptible to high-intensity, severe wildfire behavior, so as to develop mitigation measures for preventing utility related ignitions, and to improve system resilience to outside wildfire threat.

#### 4.1 Fire History

While firefighters suppress 95% of wildfires on initial attack, adverse weather and topography, heavy fuel loads, and urban development can create catastrophic wildfire conditions. Based on National Park Service WWRAP and Interagency Wildland Fire Perimeter History data, there have been very few large wildfires in BVEA's Wyoming service area. Large wildfire is more common in the more vegetated national forests to the south in Utah.

Figure 2 illustrates the history of fire occurrence within BVEA's service area. Many of these fires were located in close proximity to BVEA infrastructure. The greatest concentration of fires has occurred in and around Monviso, Two Bear, and Dutch John and on federal land adjacent to Flaming Gorge National Recreation Area. Many of these fires are likely a result of human ignitions, highlighting a need for greater public education and outreach for reducing fire ignitions. Because the greatest fire density is associated with recreational areas, targeted education to those users would be advisable. As a utility provider throughout this area, BVEA could be a partner to other agencies in these public education efforts.

Figure 2 also illustrates the recorded ignition points since 2000<sup>2</sup>, with lightning being the most common ignition source. The top ignition causes in the "Other" category (excluding "default, and Unknown Cause) are, in order of occurrence, railroad, miscellaneous, firearms/weapons, other human causes.

<sup>&</sup>lt;sup>2</sup> https://data-usfs.hub.arcgis.com/datasets/usfs::national-usfs-fire-occurrence-point-feature-layer/about





### 4.2 Vegetation Communities and Ecoregions

BVEA's Wyoming service area falls mainly within the Sagebrush Shrubland, Salt Desert Shrub Basins, Sub-Irrigated High Valleys, and Mid-elevation Uinta Mountain, Foothill Shrublands and Low Mountains Level IV ecoregions. These ecoregions fall within the Wyoming Basin ecoregion (Level III), which is characterized by arid grasslands and shrublands, surrounded by mountains without the extensive pinyon-juniper forests found in the Colorado Plateau ecoregion to the south (Omernik, 1987).

Vegetation consists of grasses interspersed among big sagebrush (Artemisia tridentata). Higher elevations harbor some quaking aspen (Populus tremuloides) and patches of coniferous forest. Open water is rare in this ecoregion, consisting mainly of reservoirs on the North Platte and Green Rivers, as well as on smaller rivers that traverse the area. Many minor waterways have been dammed to provide water for livestock. Stream beds are often dry in these riparian areas. Wetlands are especially rare and typically are riparian Latitude and physiography are influential factors that distinguish this ecoregion from others (World Wildlife Fund [WWF] 2001). The dominant vegetation in the ecoregion is varied species of sagebrush-steppe interspersed with desert shrublands, dunes, and barren areas in more arid regions (WWF, 2001). Fire, wind, and variations in precipitation and temperature are the major disturbances in the ecoregion. Cheatgrass out-competes native bunchgrasses and has also altered the ecoregion's fire regime. Fire suppression has also altered the structure and composition of some areas of the ecoregion by resulting in buildup of fuels (WWF 2001).



Figure 3. Vegetation Classification

#### 4.3 Vegetation Classification

BVEA's infrastructure is located primarily in areas of sagebrush shrubland (38%) as shown in Table 4 below. Fire frequency in this vegetation community varies, depending on sagebrush species and subspecies, but is considered to be between 10 and 110 years depending on precipitation, elevation, species, and associated vegetation (SWCA 2007a). Fire behavior in sage shrub/steppe depends upon the condition of the stand. In areas where there is continuous vegetation with thick interlocking tree-shrub crowns, there is greater potential for high-intensity fire, with rapid rates of spread. If shrub fuel is interspersed with dry, fine grass fuels, rates of spread are also high, as grass transmits flames between woody shrubby vegetation that burns with high intensity. In areas where drought, habitat fragmentation, and vegetation treatments, like prescribed fire and mechanical thinning have occurred, wildfire is more likely to be patchy as the fine fuel matrix is removed and canopies are more separated (Bukowski and Baker 2013). In these areas, rates of spread are lower and fire fighters are able to suppress and contain a fire more easily.

Value	Classification	Acres	Percent of Total Area
1	Sagebrush Shrubland	83,134	38.52
2	Agriculture	51,867	24.03
3	Riparian	23,856	11.05
4	Steppe	13,376	6.20
5	Exotic Herb	10,090	4.68
6	Developed	8,329	3.86
7	Other	7,959	3.69
8	Shrubland	6,429	2.98
9	Conifer Forest	5,950	2.76
10	Deciduous Forest	1,778	0.82
11	Grassland	1,168	0.54
12	Barren	1,013	0.47
13	Water	719	0.33
14	Deciduous Shrubland	94	0.04
15	Conifer Savanna	28	0.01
16	Mixed Forest	19	0.01
17	Sparse Vegetation	1	0.00
18	Disturbed	0	0.00

#### **Table 4. Vegetation Community Classification along BVEA Power Lines**

#### 4.4 Topography

Sweetwater County's Topography consists of plains and plateaus with isolated small mountain ranges. Vegetation is herbaceous and dwarf-shrubland on plains, which changes to shrubland and woodland on higher slopes. The county is characterized by a variety of topographic features, including buttes, mesas, canyons, and wide expanses of basin brush. It is known for its dramatic landscape, with landmarks like Table Rock, Pilot Butte, and the Boars Tusk. The Green River Canyon, in particular, is a prominent feature, symbolizing the vastness of the Western landscape. The county also includes parts of the Great Divide Basin, a major topographic feature in the region.

Uinta County, located in the southwest corner of the state, is characterized by a landscape dominated by mountains and high plains, particularly the Uinta Mountains along its southern border. The county also includes the Bridger Valley, which is a relatively flat area located on the eastern side. The county's topography is significantly influenced by the western North American Fold and Thrust Belt, which has created various fault lines and structural traps, including the Painter Reservoir Field

Topography is essential in determining fire behavior. The steepness of the slope, aspect (the direction the slope faces), elevation, and landscape features can all affect fuels, local weather (by channeling winds and affecting local temperatures), and the rate of spread of wildfire. There are many steep slopes throughout the BVEA service area that would influence fire behavior and spread. In the western portion of the service area, the Uintah Mountains cover the southern edge. These high alpine environments are topographically complex. North of the Uintah Mountains, the land becomes relatively flat, filled with vast areas of croplands. In the mountains, both aspect and slope are extremely varied, whereas in the valley, there are few slope, or aspect changes. Northwest of the Uintah Mountains are smaller hills shaped by water features, creating a landscape that is more moderate in its topography. Northeast of the Uintah Mountains, smaller hills and flat, low-lying areas comprise most of the landscape. Closer to Flaming Gorge, water features cut the landscape into steep cliffs, terraces, and benches.

#### 4.5 Weather

Of the three fire behavior components, weather is the most likely to fluctuate. Accurately predicting fire weather remains a challenge for forecasters. As winds and rising temperatures dry fuels in the spring and summer, conditions can deteriorate rapidly, creating an environment susceptible to wildland fire. Fine fuels (grass and leaf litter) can cure rapidly, making them highly flammable in as little as one hour following light precipitation. Low, live-fuel moisture levels of shrubs and trees can significantly contribute to fire behavior in the form of crowning and torching. With a high wind, grass fires can spread rapidly, engulfing infrastructure and communities, often with limited warning for evacuation.

The region's driest temperatures occur from May through September, with temperatures reaching into the high 70s and 80s in June, July, and August near Mountain View (Figures 4

and 5<sup>3</sup>). Temperatures in the high 80s and 90s can be expected in July in the Flaming Gorge area (Figures 4 and 5). These dry conditions can elevate fire behavior during this period as vegetation dries and becomes more susceptible to combustion. The average monthly precipitation is low during July and increases slowly in August through September and October due to monsoon rain patterns. Vegetation management and other wildfire mitigation measures should be completed before peak fire season (May—October). BVEA endeavors to comply with this whenever possible.



Figure 4. Temperature and Precipitation – Mountain View, WY

Figure 5. Temperature and Precipitation – Farson, WY



<sup>&</sup>lt;sup>3</sup> National Weather Regional Climate Center (2024)

#### 4.6 Analysis Approach

This Plan utilizes map products from the USFS Wildfire Hazard Potential mapping datasets to support analysis of fire behavior and risk within the BVEA service area. This analysis assists BVEA in identifying areas that are most prone to wildfire in order to create a plan to prioritize vegetation management actions to mitigate potential fire effects. In areas predicted to have the highest fire behavior, BVEA can also consider prioritizing infrastructure improvements that ensure resilience of the grid. Furthermore, in areas where fire behavior is expected to be high, as a result of fuels, topography, weather, and past fire occurrence, BVEA will work with the community to identify actions that communities can take to mitigate against potential ignitions and to alert the community in the event of a wildfire.

#### 4.6.1 Wildfire Hazard Potential

The Wildfire Hazard Potential (WHP) map (Figure 8) used in this plan is a raster geospatial dataset produced by the USDA Forest Service, Fire Modeling Institute (FMI). It is intended to inform evaluations of wildfire risk or prioritization of fuels management needs across large landscapes. The specific objective of the WHP map is to depict the relative potential for wildfire that would be difficult for suppression resources to contain.

The WHP-2023 dataset was built upon:

- Spatial vegetation and wildland fuels data from *LANDFIRE 2020* (version 1.4.0). The *LANDFIRE* Fire Behavior Fuel Models layer is a primary input to the FSim Burn Probability (BP) and Fire Intensity Level (FIL) datasets and forms the foundation for WHP.
- Spatial datasets of wildfire likelihood and intensity were generated for the conterminous U.S. with the *Large Fire Simulator* (FSim). FSim simulates the growth and behavior of hundreds of thousands of fire events for risk analysis across large land areas using geospatial data on historical fire occurrence, weather, terrain, and fuel conditions. Effects of large-fire suppression on fire duration and size are also simulated. This research aims to develop a practical method of quantifying geospatial wildfire impacts, including annual probabilities of burning and fireline intensity distributions at any point on the landscape.
- Point locations of past fire occurrence from 1992 through 2020

Areas mapped with higher WHP values represent fuels with a higher probability of experiencing torching, crowning, and other extreme fire behavior under conducive weather conditions. This helps to inform where forest fuel reduction treatments and mitigations might be most needed. An essential aspect of the WHP method is the use of "resistance to control weights" at the end of the mapping process. This serves to reduce the WHP index in areas with light fuels, such as grass and shrubs. A smoothing process was also applied to the raw data to eliminate the pixilation of the 270-meter raster.

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

The WHP map can be used to prioritize vegetation management activities, determining the location for focused recloser operational protocols, and future sectionalizing studies and associated remedial actions.

A 0.25 mile buffer was created around the transmission and distribution lines and overlaid on the WHP map for analysis. Table 5 illustrates the breakdown of this 0.5 mile wide corridor within the 7 layers of the WHP risk map (Wyoming only). Approximately 86% of the Wyoming distribution system is located in Very Low to Moderate, with ~0.3% located in High and Very High. Approximately 13% is classified as "non-burnable".

Approximately 86% of the Wyoming transmission system is located in Very Low to Moderate, with none of the transmission corridor located within High or Very High. Nonburnable and Water areas account for  $\sim$ 14% combined for both distribution and transmission corridors.

The wildfire risk assessment presented in Figure 6 aims to identify sections of the BVEA service area that are at elevated risk for wildfire. Appendix D shows this same data set spatially zoomed to show more detail of the WHP risk tiers in relation to BVEA's T&D corridors.

#### Table 5. Wildfire Hazard Potential within .5 Mile T&D Corridors

Asset	Risk Class	Acres	Percent
	Very Low	151,781	74.71
	Low	21,248	10.46
	Moderate	2,451	1.21
Distribution	High	613	0.3
	Very High	0	0
	Non-Burnable	25,213	12.41
	Water	1,856	0.91
	Very Low	38,621	78.99
	Low	3,370	6.89
	Moderate	126	0.26
Transmission	High	0	0
	Very High	0	0
	Non-Burnable	6272	12.83
	Water	505	1.03

Figure 6. Wildfire Hazard Potential



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## 5 Wildfire Prevention Strategies and Protocols

This Plan details a number of wildfire prevention strategies and protocols that are designed to prevent and/or mitigate the threat of wildfire to system infrastructure and to communities who depend on BVEA service.

- **Vegetation Management**-Measures to control vegetation near overhead (OH) transmission lines, detailing clearance specifications as well as hazardous furls information to reduce potential wildfire spread.
- **Enhanced Inspections**-Assessment and diagnostic activities and mitigating actions. Inspections would focus on ensuring all infrastructure is in working condition and that vegetation clearance specifications are maintained.
- **Situational Awareness**-methods to improve system awareness and environmental conditions.
- **Operational Practices**-Mitigating actions that are taken on a day-today basis to reduce wildfire risks. These actions prepare BVEA for high-risk periods associated with heavy winds and dry conditions.
- **System Hardening** Technical and system upgrades aimed at reducing potential contact between infrastructure and fuel sources and making the system more resilient to wildfire and other natural disasters.
- **Procedures for De-energizing and Reclosing**-Conditions under which lines may be de-energized to reduce wildfire risk or protect people and/or equipment during a wildfire incident, and the protocols for restoring service after the risk has abated.
- **Wildfire Response and Recovery**-Procedures for wildfire response in order to formalize protocols in the event of an ignition.
- **Public Safety and Notification**-Measures for engaging the community in identifying and reducing wildfire risk, including public warnings and notifications in the interest of public safety.

### 5.1 Inspection Procedures

Line inspections provide a continuous picture of system repair needs, crew scheduling, and evaluations of human power needs. BVEA follows all Rural Utilities Service (RUS), National Rural Electric Cooperative Association (NRECA), and Rural Electric Safety Achievement Program (RESAP) standards for operation, maintenance, and vegetation management.

BVEA inspects, at least annually, every 15kV and 25kV distribution overhead feeder and tap.

- 1. BVEA inspects at least annually every distribution overhead primary voltage feeder and taps 15kV and 25kV.
  - a. Maintenance and safety issues noted and dated.
    - i. Service order generated and tracked to completion.
    - ii. Service order attended to in a timely manner.
  - b. Vegetation issues within ROW noted and dated.

- i. Service order generated and tracked to completion.
- ii. Service order attended to in a timely manner.
- c. Vegetation issues outside of ROW that may create potential issues by falling into ROW.
  - i. Service order generated and tracked to completion.
  - ii. Landowner contacted about out-of-ROW issues with potential remedies. Removal of the tree if at all possible.
  - iii. Landowner contact documented, signed, and dated.
- 2. BVEA inspects all 69kV transmission lines at least annually
  - a. Maintenance and safety issues noted and dated.
    - i. Service order generated and tracked to completion.
    - ii. Service order attended to in a timely manner.
  - b. Vegetation issues within ROW noted and dated.
    - i. Service order generated and tracked to completion.
    - ii. Service order attended to in a timely manner.
  - c. Vegetation issues outside the ROW that may create potential issues by falling into the ROW.
    - i. Service order generated and tracked to completion.
    - ii. Landowner contacted about out-of-ROW issues with potential remedies. Removal of the tree if at all possible.
    - iii. Landowner contact documented, signed, and dated.
- 3. BVEA inspects any distribution overhead primary voltage feeder and taps 15kV and 25kV, or transmission overhead line 69kV, that has any issues reported by the members, public, or employees.
  - a. Service order generated and tracked to completion.
  - b. Service order attended to in a timely manner.
- 4. BVEA inspects any distribution overhead primary voltage feeder and taps 15 kV and 25 kV, or transmission overhead line 69 kV, that has five or more consecutive operations in a 24-hour period, on a relay, recloser, or S&C trip saver.
  - a. Service order generated and tracked to completion.
  - b. Service order attended to in a timely manner.

#### 5.1.1 Inspection Schedule

Bridger Valley inspects every distribution overhead primary voltage feeder and taps 15 kV and 25 kV at least annually. All 69-kV transmission lines are also inspected at least annually.

Inspections may also be performed in a separate operation or while performing other duties, as desired.
#### 5.1.2 Documentation

All service orders are tracked to completion

#### 5.1.3 On-site Repair

Whenever possible, operations personnel will complete repairs during the inspection process. If repairs require scheduling at a later date, a maintenance order will be generated and tracked.

#### 5.1.4 Responsibility

The Line Superintendent is responsible for providing oversight for inspections.

#### 5.1.5 Wood Pole Testing and Treatment

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

The pole testing is performed by BVEA staff on a cycle meeting the interval recommended in RUS Bulletin 1730B-121. Circuits are identified, mapped, and scheduled for inspection and testing using latest industry standards and practices. Poles suspected of deficiencies are subjected to intrusive inspection to determine and identify problems such as rot, decay, or insect damage. Based on the results of the intrusive test, wood treatments are then administered.

### 5.2 Vegetation Management Protocols

When vegetation falls into the lines within the ROW, a service order is generated and attended to promptly. When vegetation issues are noted outside of the ROW with potential to fall into the ROW, a service order is generated and tracked to completion.

#### 5.2.1 Vegetation Management Procedures

- The ROW is prepared following Rural Utilities Service (RUS) standards by removing trees, clearing underbrush, and trimming trees so that the ROW is cleared close to the ground and to the width specified (Figure 11).
- BVEA will seek required government permits or applicable authorization for vegetation and tree removal or trimming, including but not limited to, federal, state, municipal, and tribal laws, ordinances, rules, and regulations. BVEA shall seek to trim/remove vegetation and/or trees that in BVEA's opinion present an immediate hazard, danger, or substantial risk to BVEA's system, employees, or public safety. BVEA will ensure that all federal approval processes are followed for actions within the ROW.

- Low-growing shrubs, which will not interfere with the operation or maintenance of the line, shall be left undisturbed as directed by the owner.
- Slash may be chipped and blown on the ROW.
- The landowner's written permission must be received prior to cutting trees outside the ROW.
- Trees fronting the width of the ROW shall be trimmed symmetrically unless otherwise specified.
- Dead trees beyond the ROW that could strike the line if they fall must be removed.
- Leaning trees beyond the ROW that could strike the line in falling and would require topping if not removed must be removed or topped.
- Shade, fruit, or ornamental trees must be trimmed and not removed unless otherwise authorized.
- Vegetation trimming should be employed to avoid contact, as well as proximity, and to ensure that the tree will not grow to within a hazardous distance before the next inspection (arc distance), resulting in an arc fault. Vegetation clearance will be based on inspection frequency, for example, removing all vegetation that is close enough to cause a fault or could cause a fault in the next 2 years. In drought-prone areas where tree growth is stunted, growth can rebound when drought conditions abate. BVEA will consider the fact that growth rates can be nonlinear when establishing inspections frequency.
- BVEA continually reduces fire risk by using motorized equipment in highly vegetated areas by walking or always having a fire extinguisher or other method of fire suppression available.
- BVEA shall encourage members to report trees that are potential hazards, in and outside the ROW, that may become a threat to public safety and/or the system's reliability.
- BVEA will annually budget an amount sufficient to secure the services of an independent tree contractor to assist the cooperative with its vegetation management program, including tree removal when authorized, tree trimming, and application of herbicide within the ROW.

The activities of the vegetation management program will be documented and maintained annually by the Operations Manager.

BVEA may consider working with stakeholders to utilize overhead ROWs as fire breaks, which impacts the type of vegetation allowed on the ROW and may impact the width of the ROW.

### 5.2.2 Inspection Standards

BVEA will perform periodic inspections of its distribution and transmission lines to monitor the growth of vegetation. BVEA inspects every distribution overhead primary voltage feeder and 15kV and 25kV taps at least annually. All 69kV transmission lines are also inspected at least once per year. Inspections will include both drone and visual line patrols, as well as vehicle patrols, and will fulfill the requirement of a vegetation inspection as well as a general maintenance inspection.

#### 5.2.3 Vegetation Trimming Standards

BVEA's contractors follow American National Standards Institute (ANSI) A300 concepts and utility directional pruning, which supports proper pruning/tree health while achieving and maximizing the pruning cycle. The VM program was developed with RUS, ANSI A300, ANSI C2, and National Electrical Safety Code (NESC).

Work performed to the above guidelines provides reasonable service continuity, public safety, and guards against wildfire damage caused by supply conductors. Consideration is given to the impact of pruning on power line reliability, individual tree condition, and tree aesthetics.

#### 5.2.4 Clearance Standards

In order to adhere to RUS standards, there must be a minimum of 10 feet of clearance on either side of infrastructure. In total, the cleared width for infrastructure will be a minimum of 30 feet (Figure 7).



Figure 7. RUS Vegetation Clearing Specifications

### 5.2.5 VM Responsibilities

The Line Superintendent is responsible for the ongoing vegetation management, including recordkeeping of tree trimming to ensure the safety of landowners, employees, and the public.

The Operations Manager is responsible for reviewing records involving vegetation management. From these records, an annual summary is to be provided to the BVEA General Manager/CEO as a key indicator to the Board of Directors.

### 5.2.6 Hazard Trees

A subset of Danger Trees<sup>4</sup>, A Hazard Tree is defined as any tree or portion of a tree that is dead, rotten, decayed, or diseased and which may fall into or onto the overhead lines or trees leaning toward transmission and distribution facilities. These trees are sometimes located beyond the easement or ROW. Any tree that is located outside of the ROW and is deemed a hazard tree will be removed or topped to make safe for conductors.

A hazard tree will have one or more of the following characteristics:

- Dead or dying all dead or dying trees along, or outside the BVEA right-of-way may be removed depending on the height of tree and the direction of the lean.
- Leaning trees trees that have such a lean toward the right-of-way that they cannot be trimmed without removing the tops and slanting the tree back. Removal depends on height and species of the tree and direction of the lean.

## 5.3 Modifications and Upgrades to Infrastructure

## 5.3.1 System Improvements

BVEA infrastructure is designed, constructed, and maintained to meet or exceed relevant federal, state, or industry standards. In addition, BVEA monitors and follows as appropriate the National Electric Safety Code. In addition to adhering to all standards, BVEA will consider some or all of the following system hardening solutions:

- Provide additional access roads along power line ROW and maintain standards.
- Ensure vegetation clearances around poles, with a minimum radius of 10 feet.
- Adopt alternative technologies as they become available (for example, live-feed camera technology, wire-break sensing, and arc detection technology).

<sup>&</sup>lt;sup>4</sup> As defined by ANSI 300 Part 7 standards

### 5.3.2 Avian Protection

All new power lines are built for raptor protection. This is accomplished by having wider phaseto-phase and phase-to-ground spacing. Line hoses, plastic bird caps, and bird guards are used in specific potential problem areas. In cases for which nesting continues to be a problem, nests are moved, and additional structures may be constructed away from the powerline to prevent contact. An example of the installation of perching deterrents on a crossarm are shown in the image below.



#### **Figure 8. Avian Protection Equipment**

# 5.4 De-energization Protocols and Reclosing

As the power within this rural area is predominately a radial feed, shutting down the entire feed is not an option for BVEA. The distribution of electrical power to pumps that provide water for livestock, crops, and fire suppression is of the utmost importance. BVEA also has members who are dependent on electricity to power their oxygen machines and other types of devices that offer life support. Through a thorough analysis, BVEA has balanced the risk of fire with these provisions and has determined that maintaining electric supply to members outweighs the potential wildfire risk of maintaining an energized line.

During extremely high-risk fire conditions (heavy winds and prolonged periods of low humidity) in very sensitive areas (those depicted in Appendix D), the automatic line recloser could be placed in non-reclose mode to further reduce wildfire risk. While this is not a procedure that BVEA prefers to employ, it is an option under extreme conditions. Access to the protection equipment is not a factor, although setting adjustments would need to be made manually onsite.

In the event of wildfire, BVEA provides personnel to work directly with incident command and attends all incident meetings to provide input and coordination between fire operations and BVEA system operation. If, during a fire, a distribution or transmission line is requested to be removed from service for the safety of firefighting personnel, BVEA will work closely with incident command using industry clearance and safety procedures for any line outages to ensure the safety of fire crews and for safe operation of equipment.

BVEA use various types and models of protection devices in operating its overhead distribution power lines and are discussed further in section 5.5.

## 5.4.1 Potential Risks of De-energization

Balancing wildfire risk with the need for a reliable electricity supply requires a multifaceted approach. It involves proactive measures to reduce wildfire ignition, strategic grid management, and community preparedness. Public Safety Power Shutoffs (PSPS) are sometimes necessary, but their impact on vulnerable populations and critical infrastructure must be considered. BVEA considers these external risks and potential consequences of de-energization while striving to meet its main priority of protecting the communities and members we serve. They include:

- Potential loss of water supply to fight wildfires due to loss of production wells and pumping facilities.
- Negative impacts to emergency response and public safety due to disruptions to the internet and mobile phone service during periods of extended power outages.
- Loss of key community infrastructure and operational efficiency that occurs during power outages.
- Medical emergencies for members of the community requiring powered medical equipment or refrigerated medication. Additionally, the lack of air conditioning can negatively impact medically vulnerable populations.

- Negative impacts on medical facilities.
- Traffic congestion resulting from the public evacuation in de-energized areas can lengthen response times for emergency responders.
- Negative economic impacts from local businesses forced to close during an outage.
- The inability to open garage doors or motorized gates during a wildfire event can lead to injuries and fatalities.

The risks and potential consequences of initiating a PSPS are significant and extremely complex. Based on the above considerations, BVEA reserves the option of implementing a PSPS when conditions dictate. While BVEA believes the risks of implementing a PSPS far outweigh the chances of its electric overhead distribution system igniting a catastrophic wildfire, the PSPS provides a last resort tool and another mitigation option in a potential crisis.

On a case-by-case basis, BVEA will continue to consider de-energizing a portion of its system in response to a known public safety issue or response to a request from an outside emergency management/response agency. Any de-energizing of the lines is performed in coordination with key local partner agencies, however the final determination is made by BVEA.

## 5.4.2 PSPS Communications

While communication is vital for coordinating efforts between utilities, first responders, public safety agencies, and other organizations to ensure a smooth and efficient response during and after a PSPS, it is also essential to relay important PSPS information to the public. By prioritizing communication and messaging, BVEA can help ensure public safety and minimize the disruption caused by a PSPS event.

Clear and consistent communication will reduce the impact of PSPS on daily life by explaining the reasons for the outage, anticipated duration, and what to expect. BVEA will provide information through various means, such as email, phone, text, social media. Advanced notification allows individuals and communities to prepare for a potential power outage, including gathering essential supplies, arranging for alternative energy sources (if applicable), and ensuring they have access to information and resources.

# 5.5 Recloser Operational Protocols

**Normal Conditions:** During normal line operation when the power flow is interrupted, the line recloser will attempt to re-energize. If the fault is temporary and can be cleared, power will be restored. If the fault does not clear, the line will remain de-energized until the circuit can be patrolled.

**High Risk Conditions:** When the power flow is interrupted under high-risk fire conditions, crews respond and will not attempt to manually reclose any line protection devices without first inspecting the section of line to be re-energized. Once the problem is identified and resolved, the crews will re-energize the line manually in order to reduce the risk of starting a fire.

**Hold Orders:** BVEA will work closely with the incident commander in the event that a hold order is placed on the line. BVEA will coordinate as needed with an emphasis on stressing the importance of always treating lines as energized. BVEA's transmission systems should always be considered energized.

The protection settings for BVEA's various types of line protection equipment are described in Table 6 below.

Asset Category	Protection Equipment	Operation Settings
Substation Feeders	Schweitzer 651R Relay	Two slow fast, and two slow operations, then lockout
		Capable of non-reclose or one-shot operation to lockout
Taps Off Feeders	Schweitzer 651R Relay	Two fast and two slow operations, then lock- out.
		Capable of non-reclose or one-shot operation to lockout
	S&C Tripsaver	Two slow fast, and two slow operations, then lockout
		Capable of non-reclose or one-shot operation to lockout
	Hydraulic Oil- filled Recloser	Two slow fast, and two slow operations, then lockout
		Capable of non-reclose or one-shot operation to lockout
	Fuses, T speed or K speed	Manufactured Specification
69kV Overhead Transmission	SEL 311C	Two operations to lockout

**Table 6. Protection Device Settings** 

### 5.6 Restoration of Service

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

**Ongoing Wildfire:** In the event of a wildfire impacting the BVEA service area, BVEA will staff up its operations department to coordinate activities to restore service. Restoration of power will be coordinated with county, municipal fire, and public works departments, in coordination with the incident commander in charge of the wildfire response operations. In the event additional resources are needed, BVEA may also engage contractors on an as-needed basis.

BVEA adhere to the following steps during the restoration of electrical service: **Emergency Declaration:** Fire declaration would be made by the County or municipality with jurisdiction.

**Inspection and Assessment:** BVEA staff will patrol and record any damage to lines resulting from wildfire. The inspection will include assessing infrastructure repairs, removing debris, and assessing safety hazards. BVEA will work with the local agency in charge of the fire before accessing the burn area.

**Planning:** Following initial assessment, BVEA engineers and managers will meet to discuss the extent of any damage and develop a plan of work to restore service. Line segments and infrastructure that support the most critical infrastructure needs will be prioritized.

**Mobilize:** BVEA will coordinate the crews and materials needed to rebuild infrastructure and restore service. Contractors may be employed as needed.

**Rebuild:** Any repairs and rebuilding will be undertaken by BVEA as soon as the area is safe to access. Initial effort will be focused on replacing lines and restoring any damaged circuits.

**Restore:** BVEA or contract crews will restore electric services to homes and businesses as soon as possible after a wildfire. Restoration of service actions will vary depending on the criticality of assets affected, and available resources. BVEA's restoration process prioritize the following:

- Public and worker safety.
- Life support and other critical members.
- Critical infrastructure, including county and municipal facilities, Sheriff's department, police and fire departments, other critical infrastructure (water, sewage, gas, communications), and incident command sites.
- Major commercial activities/accounts.
- Reduce the total number of members affected.
- Reduce the length of time members have been without power.

## 5.7 Situational Awareness

Situational assessment is the process by which current operating conditions are determined. Situational Awareness is the understanding of the working environment, which creates a foundation for successful decision making and the ability to predict how it might change due to various factors.

Situational awareness regarding wildfire risk and hazard is a critical component of wildfire preparedness. Some weather conditions contribute to elevated wildfire hazard, and monitoring of those conditions is important throughout the wildfire season. BVEA should gather data throughout the season and access short, and long-range forecasts so as to be prepared to mobilize crews in the event of a potential ignition and/or occurrence of wildfire in the service area. Good situational awareness would include:

- Analyzing historical weather data to determine patterns and identify vulnerable periods.
- Monitoring incoming weather data in real time.
- Providing a detailed daily weather forecast to operations staff during fire season.
- Considering installation of weather stations in areas identified to be at high risk of wildfire and providing all weather data to operations staff to improve situational awareness.
- Communicating with the County Emergency Managers and other agency contacts (Tables 7 and 8) to ensure BVEA is added to any emergency alert systems for hazardous weather events.
- Utilizing existing dynamic web services to inform operations and maintenance (O&M) staff regarding wildfire potential and wildfire activity within the service territory and incorporating this information into morning safety briefings.
- Considering installation of camera networks for fire detection in high-risk areas.
- Monitoring evolution of technology related to situational awareness and incorporating into the BVEA O&M as appropriate.

BVEA System Operators rely on various resources to monitor evolving fire weather and climatological conditions that may lead to fire events. Sources for weather information include, but are not limited to the following:

 USFS-Wildland Fire Assessment System (WFAS): For immediate and short-term situational awareness, mapping tools from the USFS-WFAS help determine daily and short-term forecasted risk, with daily or weekly fire weather status maps produced as needed to assess PNW wildfire conditions. (<u>https://www.wfas.net/index.php/firedanger-rating-fire-potential--danger-32/fire-danger-subsets-fire-potential--danger-55</u>)

- **The National Weather Service (NWS):** The NWS provide on-line predictive fire weather forecasting tools in the form of a current fire-weather outlook, 2-day, and a 3-8 day outlook. (<u>https://www.spc.noaa.gov/products/fire\_wx/</u>)
- NOAA Weather and Hazards Data Viewer: This on-line map provides historic or real-time surface observations including wind speed and direction, wind gust, dew point, relative humidity, and sea level pressure collected from remote automated weather stations (RAWS). Extreme-weather alerts such as fire weather watch, high wind watch, and red flag warning are provided from this resource. (https://www.wrh.noaa.gov/map/?wfo=psr)



# 6 Community Outreach and Education

## 6.1 Coordination with Outside Entities

The following are actions that BVEA currently employs and/or would consider adopting in order to improve public safety and notifications:

- Coordination prior to fire season with county emergency managers and fire staff to determine fire season outlook and potential red-flag periods.
- Coordination during emergencies or large-scale outages with county emergency managers and fire staff in conjunction with agency dispatch.
- Coordination with neighboring utilities that could potentially be affected by deenergization of BVEA facilities.

# 6.2 Public Safety and Notification

The following are actions that BVEA currently employs and/or would consider adopting in order to improve public safety and notifications:

- Development of communication protocols with county health departments for emergency notifications to vulnerable members (i.e., medical facilities, schools, etc.).
- Expansion of social media reach across the service area highlighting high-fire risk periods.
- Development of a web-based map for the public to see current outages and estimated restoration.

Additional public outreach options that could be employed in conjunction with county or local emergency managers include:

- Utilizing local radio and television media to broadcast public service messages.
- Compiling and disseminating information to members regarding community wildfire preparedness, evacuation, and vigilance before and during fire season (UDFFSL Wildfire Preparedness Literature<sup>5</sup>, Ready, Set Go, Firewise<sup>6</sup>, Fire Adapted Communities). Working with state and federal agencies to provide consistent public messaging to members regarding wildfire risk and preparedness.
- Specific outreach for people visiting the area for recreation.

<sup>&</sup>lt;sup>5</sup> <u>https://ffsl.utah.gov/fire/wildfire-community-preparedness/</u> (Contains Firewise, Ready, Set, Go!, Fire Adapted communities links)

<sup>&</sup>lt;sup>6</sup> Firewise https://www.nfpa.org/education-and-research/wildfire/firewise-usa/firewise-usa-resources?I=87

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# 7 Coordination with Outside Agencies

Fire response for the Utah service area would be coordinated through the Norther Utah Interagency Fire Center (NUIFC), in cooperation with the Great Basin Coordination Center (GBCC). The NUIFC is a cooperative effort among the BLM, USFS, and UDFFSL. The NUIFC is responsible for dispatch and coordination for approximately 14 million acres of land that average 500 fires per year. Daggett County uses the Uintah Basin Interagency Fire Center (UBIFC). The UBIFC is the dispatch center for the state and federal agencies in the Uintah Basin and is managed by the Great Basin Coordination Center.

BVEA engages closely with the County Emergency Managers. During wildland fire events, BVEA also works in full coordination with the Utah Department of Public Safety or the Wyoming State Department of Forestry as well as Federal incident command for the wildland event.

Chapter 2 outlines existing wildfire planning documents for entities within the service area. The contacts for these entities, in addition to important contact information for agency staff who may need to be contacted in the event of a wildfire, are included in Tables 7 and 8. The contact information presented below will be reviewed and updated on an annual basis.

Name	Title	Agency	Phone	Email Address
Chris Deets	Green River Dist. Fire Manager	BLM	435-630- 5929	cadeets@b1m.gov
Mike Eriksson	Area Manager	UDFFSL	435-671- 9170	mikeeriksson@utah.gov
Blain Hamp	Fire Program Manager	UDFFSL	435-752- 8701	blainhamp@utah.gov
Jennifer McBride	Assistant Wildfire Reduction Coordinator	UDFFSL	801-560- 1072	jomcbride@utah.gov
Travis Dupaix	Emergency Manager	Daggett County	435-784- 3154	tdupaix@daggettcounty.org
Kathryn McMullin	Director of Emergency Management	Summit County	435-615- 3518	kmcmullin@summitcounty.org
Joe Flores	Fire Management Officer	USFS	435-781- 5109	joseph.flores@usda.gov

#### Table 7. Utah Agency Contact List

#### Table 8. Wyoming Agency Contact List

Name	Title/Office	Agency	Phone	Email Address
Frank Keeler	High Desert District Manager	BLM	307- 352- 0202	fkeeler@blm.gov
Lincoln, Uinta, Sweetwater Counties	Kemmerer Field Office	BLM	307- 828- 4500	<u>Kemmerer_WYMail@bl</u> <u>m.gov</u>
Uinta, Sweetwater Counties	Rock Springs Field Office	BLM	307- 352- 0201	<u>BLM WY Rock Springs</u> <u>WYmail@blm.gov</u>
Shielah Esterholdt	Fire Business Manager	WSDF	307- 777- 7060	<u>shielah.esterholdt@wy</u> <u>o.gov</u>
Cailey Wolf	Asst. District Forester District 4-Lyman	Wyoming State Forestry Div	307- 747- 1020	Cailey.wolf@wyo.gov
Jesse Moreno	County EM Coordinator	Sweetwater Emergency Management	307- 922- 5370	morenoj@sweetwaterc ountywy.gov
Josh Rasnake	County EM Coordinator	Uinta Emergency Management	307- 783- 0327	jorasnake@uintacounty wy.gov

## 7.1 Input from the Forestry Division

BVEA will make the WMP available to the Wyoming State Forestry Division for its review and solicit comments for inclusion in the final draft. Relevant local, state, and federal agencies, as well as cooperative members, are also welcome to provide input. BVEA will also seek input from an association representing Wyoming rural firefighters or local fire entities as required.

## 7.2 Identifying Unnecessary or Ineffective Actions

The WMP will be reviewed annually for the purpose of updating the plan as needed to reflect knowledge gained in the preceding year and modified accordingly. During the annual review process, BVEA should also update mitigation strategies through review of industry best practices. As part of that revision process, BVEA would monitor the effectiveness of the wildfire mitigation strategies within this document to assess the merits of the modifications and to implement adaptive management to improve future results.

## 7.3 Identifying Deficiencies in the WMP

The Operations Manager will be responsible for ensuring that this WMP meets all public agency guidelines to mitigate the risk of its assets becoming the source or contributing factor of a wildfire. Staff responsible for assigned mitigation areas have the role of vetting current procedures and recommending changes or enhancements to build upon the strategies in the WMP. Either due to unforeseen circumstances, regulatory changes, emerging technologies or other rationales, deficiencies within the WMP will be sought out and reported to the Board of Directors in the form of an updated WMP on an annual basis.

The Operations Manager or their designee will be responsible for spearheading discussions on addressing any plan deficiencies and collaborating on solutions when updating the WMP. At any point in time when deficiencies are identified, the Supervisors or their delegates are responsible for making the appropriate policy adjustments. BVEA staff and qualified stakeholders are encouraged to bring any potential deficiencies to the attention of the Operations Manager or the Line Forman. The Operations Manager, along with the appropriate staff, will evaluate each reported deficiency, and if determined to be valid, shall record the deficiency for further action.

## 7.4 Plan Approval Process

Management will file with its governing authority an annual report detailing the electric cooperative's compliance with the wildland fire protection plan. A more formal review will be done every five (5) years in as required by HB-0192. Updated plans will be submitted on or before June 1 of every fifth year after calendar year 2025.

The WMP is presented to the Board of Directors (BOD) by the Engineering and Operations Managers. The BOD along with corporate council has the opportunity to ask questions and address concerns based upon their representation of Membership. Once the plan has been fully reviewed by the BOD, a motion to accept and majority approval will allow the plan to be approved and implemented. This WMP will be submitted to the Wyoming Public Service Commission within 30 days of approval.

## 7.4.1 Submittal to the Wyoming Utility Commission

Not later than June 1 in the year following any year in which the commission approves a wildfire mitigation plan, BVEA shall file an annual report with the commission detailing the electric utility's compliance with the approved wildfire mitigation plan and shall request an order of the commission finding that the electric utility has substantially complied with the plan during the preceding year.

Version No.	Date of Approval	Date of Submittal to Commission
V1	7/08/2025	07/16/2025

#### **Table 9. Commission Submittal Record**

# Appendix A: Acronyms

ANSI	American National Standards Institute
BIA	Bureau of Indian Affairs
BLM	U.S. Bureau of Land Management
BMP	Best Management Practices
BVEA	Bridger Valley Electric Association
CWPP	Community Wildfire Protection Plan
DLI	Detailed Line Inspections
DEM	Department of Emergency Management
DFPC	Division of Fire Prevention and Control
EM	Engineering Manager
EOC	Emergency Operation Center
GBCC	Great Basin Coordination Center
GIS	Geographical Information System
HFTA	High Fire Threat Area
IFPL	Industrial Fire Protection Level
IR	Infrared (imaging)
KV	Kilovolt
KWH	Kilowatt Hours
MW	Mega Watts
MVCD	Minimum Vegetation Clearance Distance
NESC	National Electric Safety Code
NFDRS	National Fire Danger Rating System
NF	National Forest
NIFC	National Interagency Fire Center
NOAA	National Oceanic and Atmospheric Administration
NUIFC	Northern Utah Interagency Fire Center
NWS	National Weather Service
OH	Overhead
OEM	Office of Emergency Management

OSHA	Occupational Safety and Health Administration
OM	Operations Manager
O&M	Operations and Maintenance
RFW	Red Flag Warning
ROW	Right-of-Way
RUS	Rural Utilities Service
SCADA	Supervisory Control and Data Acquisition
T&D	Transmission and Distribution
UDFFSL	Utah Division of Forestry, Fire and State Lands
UBIFC	Uintah Basin Interagency Fire Center
UG	Underground
USDA	United States Department of Agriculture
USFS	United States Forest Service
VM	Vegetation Management
WFAS	Wildland Fire Assessment System
WHP	Wildfire hazard Potential
WMP	Wildland Fire Protection Plan
WMP	Wildfire Mitigation Plan
WSDF	Wyoming State Division of Forestry
WUI	Wildland Urban Interface

# **Appendix B: Definitions**

**ANSI Z—133.1:** Defines an electric hazard to exist anytime a tree worker, tool, tree, or any other conductive object is closer than 10 feet from an energized conductor with a voltage of 50,000 volts or less. From this 10 foot baseline, 0.4 inches of required clearance is added for every 1,000 volts above the 50,000-volt baseline. ANSI Z-133 provides tables that outline minimum approach distances for both qualified and non-qualified tree workers based on voltage and elevation.

**Best Management Practices (BMP):** Innovative environmental protection practices applied to help ensure that projects or regular operations are conducted in an environmentally responsible or effective manner.

**Burnable fuel:** Refers to fuel models that are "ignitable" in the fire modeling. Burnable land cover includes grasses, herbs, shrubs, trees, leaf litter, dead-and-down branchwood, etc.

**Danger Tree:** A danger tree is any tree, on or off the right-of-way, that can contact electric power lines. A danger tree may be completely healthy and intact, or it may be sick or dead. Even a healthy tree could sustain damage in a severe storm and impact nearby power lines, thus the potential for "danger."

**Distribution System:** The final stage in the delivery of electric power carrying electricity from the transmission system to individual consumers. The HCE distribution system includes 14.4Kv lines not tied to generation facilities.

**Defensible Space:** An area around a structure, either natural or manmade, where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildfire and the structure. In practice, it is defined as an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation.

**FSim:** FSim is a high-resolution wildfire simulation model, developed by the Rocky Mountain Research Station, that is used to simulate fire behavior and spread. FSim simulates a typical fire season thousands of times to generate a "library" of plausible fires that could occur on the landscape. FSim and its outputs have been used across the country by various researchers, land managers, and insurance companies to prepare for fire seasons.

*Fire Mode:* Protective relay setting that contain moderately sensitive instantaneous tripping and will perform a single automatic reclose operation.

*Fire Risk:* "Risk" is the potential damage a fire can do, to the area under existing conditions, including any modifications such as defensible space, irrigation and sprinklers

and ignition resistant building construction which can reduce fire risk. Risk considers the susceptibility of what is being protected.

*Fire Season:* 1) Period(s) of the year during which wildfires are likely to occur, spread, and affect resource values sufficiently to warrant organized fire management activities. 2) A legally enacted time during which burning activities area regulated by state or local authority.

*Great Basin Coordination Center:* The focal point for coordinating the mobilization of resources for wildland fire and other incidents throughout the Geographic Area (AZ, ID, NV, WY). Located in Salt Lake City, UT, the Center also provides Intelligence and Predictive Services related products for use by the wildland fire community for purposes of wildland fire and incident management decision-making.

*Hardening:* Modifications to electric infrastructure to reduce the likelihood of ignition and improve the survivability of electrical assets.

**Hazard Tree:** A specific type of danger tree that poses a greater likelihood of causing damage to electric power lines or equipment. In this case, the tree is structurally unsound and positioned in such a way that it could fall onto conductors.

*Hot Line Tag:* Protective relay settings that contain very sensitive instantaneous tripping and will not allow an automatic reclose.

**Industrial Fire Precaution Level** (**IFPL**): Activated when needed during the summer fire season, IFPL are an activity closure system to reduce wildfire risk. By law (WAC 332-24-301), it applies to woods workers and other industrial forest users on 13 million acres of unimproved private, federal, and state forestlands protected by the BMLM or Forest Service. Levels range from Level-1 to Level-4.

*Landscape:* Refers generally to the area of interest in a project or study and could refer to modeled or on-the-ground conditions.

**National Fire Danger Rating System (NFDRS):** A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels. It combines the effects of existing and expected states of selected fire danger factors into one or more qualitative or numeric indices that reflect an area's fire protection needs.

*Northern Utah Interagency Fire Center (NUIFC):* Northern Utah Interagency Fire Center (NUIFC) is located in Draper, UT. It is a joint dispatch center in cooperation between the Bureau of Land Management, US Forest Service and the State of Utah Forestry Fire and State Lands. NUIFC is responsible for dispatching and coordination of wildfires in the following Counties: Box Elder, Cache, Rich, Tooele, Weber, Morgan, Davis, Duchesne, Juab, Sanpete, Salt Lake, Summit, Wasatch, and Utah.

**OSHA Requirement 1910.269:** Occupational Safety and Health Administration's vertical standard pertaining to the generation, transmission, and distribution of electricity.

A specific section of OHSA 1910.269 requires that everyone performing tree work in proximity to electric hazards must be qualified and their training has to be documented.

**Public Safety Power Shutoff (PSPS):** When severe weather or conditions create a substantial wildfire risk, specific portions of the service area may be de-energized in the interest of public safety.

**Pruning:** Also referred to as "trimming", tree pruning is the selective removal of branches that are not an adequate distance from the primary line, or that will grow too close to the power line before the next maintenance cycle.

**Recloser:** Recloser is a device that is typically used in over-head distribution systems to interrupt the circuit to clear faults. Automatic reclosers have an electronic control and vacuum interrupters that may automatically reclose to restore service if a fault is temporary. There may be several attempts that may be made to clear and reenergize the circuit if the fault still exists the recloser locks out. Reclosers are made in single-phase and three-phase versions and use oil or vacuum interrupters.

**Red Flag Warning (RFW)**<sup>7</sup>: A term used by fire- weather forecasters to call attention to limited weather conditions of importance that may result in extreme burning conditions. A RFW will be issued when there is high confidence that Red Flag criteria will be met within the next 24 to 48 hours, or when those criteria are already being met or exceeded. A warning may be issued for all, or portions of a fire weather zone or region. Zones impacted by the event will be listed within the Red Flag Warning product.

**Remote Automatic Weather Station (RAWS):** an apparatus that automatically acquires, processes, and stores local weather data for later transmission to the GOES Satellite, from which that data is retransmitted to an earth-receiving station for use in the national Fire Danger Rating System.

*Right-of-Way (ROW):* The corridor of land under (and adjacent to) a transmission or distribution line.

*Risk:* A measure of the probability and severity of adverse effects that result from exposure to a hazard.

**SCADA:** SCADA is an acronym for Supervisory Control and Data Acquisition. SCADA generally refers to an industrial computer system that monitors and controls a process. In the case of the transmission and distribution elements of electrical utilities, SCADA will monitor substations, transformers, and other electrical assets. It is possible to control or reset equipment remotely using SCADA.

<sup>&</sup>lt;sup>7</sup> Source: https://www.weather.gov/bou/RFW\_Definitions

*Substation:* Part of the electrical generation, transmission and distribution system, substations transform voltage from high to low, or the reverse, or perform any of several other important functions. Between the generating station and consumer, electric power may flow through several substations at different voltage levels. A substation may include transformers to change voltage levels between high transmission voltages and lower distribution voltages, or at the interconnection of two different transmission voltages.

**Transmission System:** The bulk delivery of electrical energy from a generating site to an electrical substation. At HCE, for line maintenance purposes, the transmission system is comprised of 69kV radial (sub-transmission), 115kV lines, structures, and switches.

**UAV:** An unmanned aerial vehicle is a powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely.

*Utah Division of Forestry, Fire and State Lands:* The Utah Division of Forestry, Fire, and State Lands is responsible for forest health, responding to wildland fires and managing sovereign lands in Utah.

**Utah Interagency Fire Center:** The Uintah Basin Interagency Fire Center coordinates aviation, equipment, and ground resources and provides logistical support for anticipated and ongoing wildfire activity nationwide. Uintah Basin dispatch area includes the following agencies: Uintah and Ouray Agency, Ashley National Forest, Ouray National Wildlife Refuge, Green River District, Utah Division of Forestry Fire and State Lands, and Dinosaur National Monument.

Vegetation: Trees, shrubs, and any other woody plants.

**Vegetation Management:** A broad term that includes tree pruning; brush removal through the use of power saws and mowers; the judicious use of herbicides and tree growth regulators; hazard tree identification and removal; the implementation of strategies to minimize the establishment of incompatible species under and near power lines; and the control of weeds.

*Wildfire:* Also called wildland fire, an unplanned, uncontrolled fire in a forest, grassland, brushland or land sown to crops.

*Wildfire Hazard Potential:* Wildfire hazard potential, often abbreviated as WHP, refers to the likelihood and intensity of wildfires that may be difficult to control, typically used to prioritize areas for fuel treatments. It's an index that assesses the relative potential for high-intensity wildfire events, such as torching and crowning, under conducive weather conditions. This potential is evaluated based on factors like fuel type, topography, and fire history, but doesn't include generalized susceptibility of homes.

**Wildfire Mitigation Plan (WMP):** A comprehensive plan to reduce the threat and severity of wildfire within an electric utility's service area. Plans include the preventive strategies and programs adopted by the utility to minimize the risk of its facilities causing wildfires along with its emergency response and recovery procedures.

*Wildfire Risk:* Combines the likelihood of a fire occurring (Threat), with those of areas of most concern that are adversely impacted by fire (Fire Effects). Wildfire Threat Index is derived from historical fire occurrence, landscape characteristics including surface fuels and canopy fuels, percentile weather derived from historical weather observations and terrain conditions. Fire Effects are comprised of Value Impacts and Suppression Difficulty.

*Wildfire Threat:* A number that is closely related to the likelihood of an acre burning.

**Wildlands**: Forests, shrub lands, grasslands, and other vegetation communities that have not been significantly modified by agriculture or human development\*. A more specific meaning for fire managers, used by the National Wildfire Coordinating Group (which coordinates programs of participating wildfire management agencies nationwide), refers to an area in which development is essentially non-existent (except for roads, railroads, power lines, and similar transportation facilities); structures, if any, are widely scattered.

*Wildland Urban Interface (WUI):* Line, area, or zone where structures and other human development meet or intermingle with vegetative fuels in wildlands.

*Wyoming State Division of Forestry:* State Forestry is part of the Office of State Lands and Investments. The State Forester is mandated to "have direction of all forest interests and all matters pertaining to forestry within the jurisdiction of Wyoming". The three areas of program implementation include State Trust Land Management, Fire Management, and Assistance Forestry.

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# Appendix D: Detail Maps



Figure 9. Wildfire Hazard Potential Detail Map 1 of 10



Figure 10. Wildfire Hazard Potential Detail Map 2 of 10











Figure 13. Wildfire Hazard Potential Detail Map 5 of 10



Figure 14. Wildfire Hazard Potential Detail Map 6 of 10















Figure 18. Wildfire Hazard Potential Detail Map 10 of 10