



# **2025 WILDFIRE MITIGATION PLAN**

**FERGUS ELECTRIC  
COOPERATIVE, INC.**

**DATE: DECEMBER, 2025**

**REVISION: 002**

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# 1 Introduction/Executive Summary

For Fergus Electric Cooperative, Inc. (Fergus Electric), which aims to protect public safety and preserve the reliable delivery of electricity, wildfire mitigation is without question a top priority. While an electric utility can never fully eliminate the risk of fire, Fergus Electric is committed to taking all practical actions available to it to prevent the devastation wildfire could bring to the members and communities we serve. This wildfire mitigation plan (WMP) lays out the steps we are taking to do so.

## 1.1 Purpose of the Plan

The Plan describes Fergus Electric's strategies, programs, and procedures to mitigate the threat of electrical equipment ignited wildfires, and addresses the unique features of its service territory, such as topography, weather, infrastructure, grid configuration, and areas most prone to wildfire risks. This includes the maintenance of its transmission and distribution (T&D) assets as well as the management of vegetation in the ROWs that contain these assets.

Fergus Electric's Board of Directors reviews and approves the Plan as needed, while the General Manager is responsible for its implementation. The WMP is a living document that will receive regular reassessment as projects and initiatives are completed. Primary accountability for plan implementation resides with the Line Superintendent.

## 1.2 Objectives of the WMP

The main objective is to implement an actionable plan to create increased reliability and safety while minimizing the likelihood that Fergus Electric assets may be the origin or contributing factor in the ignition of a wildfire. This plan was developed to be consistent with current industry best management practices and will comply with current Montana State law, and the National Electric Safety Code (NESC) regulations and guidelines. To help develop the Plan, Fergus Electric compared emerging technologies that not only reduce the likelihood of service interruption but also minimize the risk of ignition from the fault causing the outage.

The secondary objective is to measure, through the annual evaluation of certain performance metrics, the effectiveness of the specific wildfire mitigation strategies. Where a particular action, program component or protocol proves unnecessary or ineffective, Fergus Electric will assess whether modification or replacement is suitable.

## 1.3 Participation with Local Planning Efforts

At the request of federal, state, county or local entities, Fergus Electric will provide information and assist in the development of wildland fire protection plans and response efforts.

## 1.4 Utility Profile and History

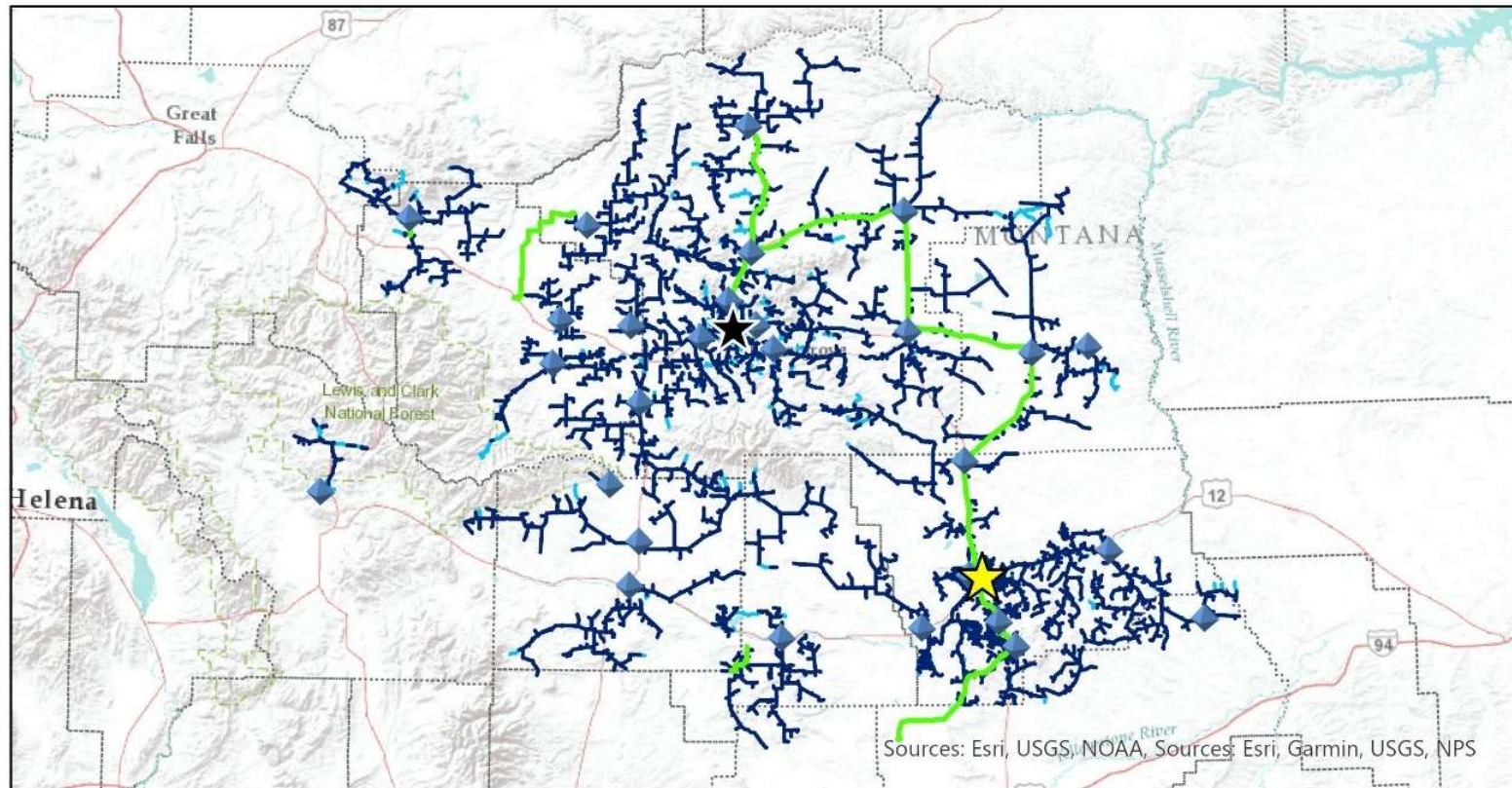
Fergus Electric Cooperative, Inc. is a member owned electric cooperative established in 1938. As of 2025, Fergus Electric employs 29 individuals and is governed by a Board of Directors with 7 member elected positions.

## 1.5 The Service Area

Fergus Electric's headquarters office is in Lewistown, MT with a remote office located in Roundup, MT. Fergus Electric serves 4,205 members, 7,102 meters, and 4,280 miles of electric lines. Fergus Electric provides electric service across 14 central Montana counties: Blaine, Cascade, Choteau, Fergus, Golden Valley, Judith Basin, Meagher, Musselshell, Petroleum, Stillwater, Sweet Grass, Treasure, Wheatland, and Yellowstone. See Figure 1 for a map of the service area. Our service area includes a variety of terrains including densely forested mountains, river/creek drainages with deciduous trees, rolling grass lands, and farmland.



**Figure 1. Service Area Map**



Service Area Map

- |             |                 |           |
|-------------|-----------------|-----------|
| Counties    | Transmission    | Lewistown |
| Substations | OH Distribution | Roundup   |
|             | UG Distribution |           |



## 1.6 Utility Asset Overview

- Main office location: Lewistown Montana
- Satellite office location: Roundup, Montana
- G&T Provider: Members 1<sup>st</sup>
- Power Supplier: Basin Electric Power Cooperative
- Transmission lines: 233 miles
- Overhead distribution: 3,748 miles
- Underground distribution: 299 miles
- Substations: 20
- Distribution Metering Points: 11
- Operating voltages: 100kV, 69kV, 50kV, 12.47kV, 4.16kV

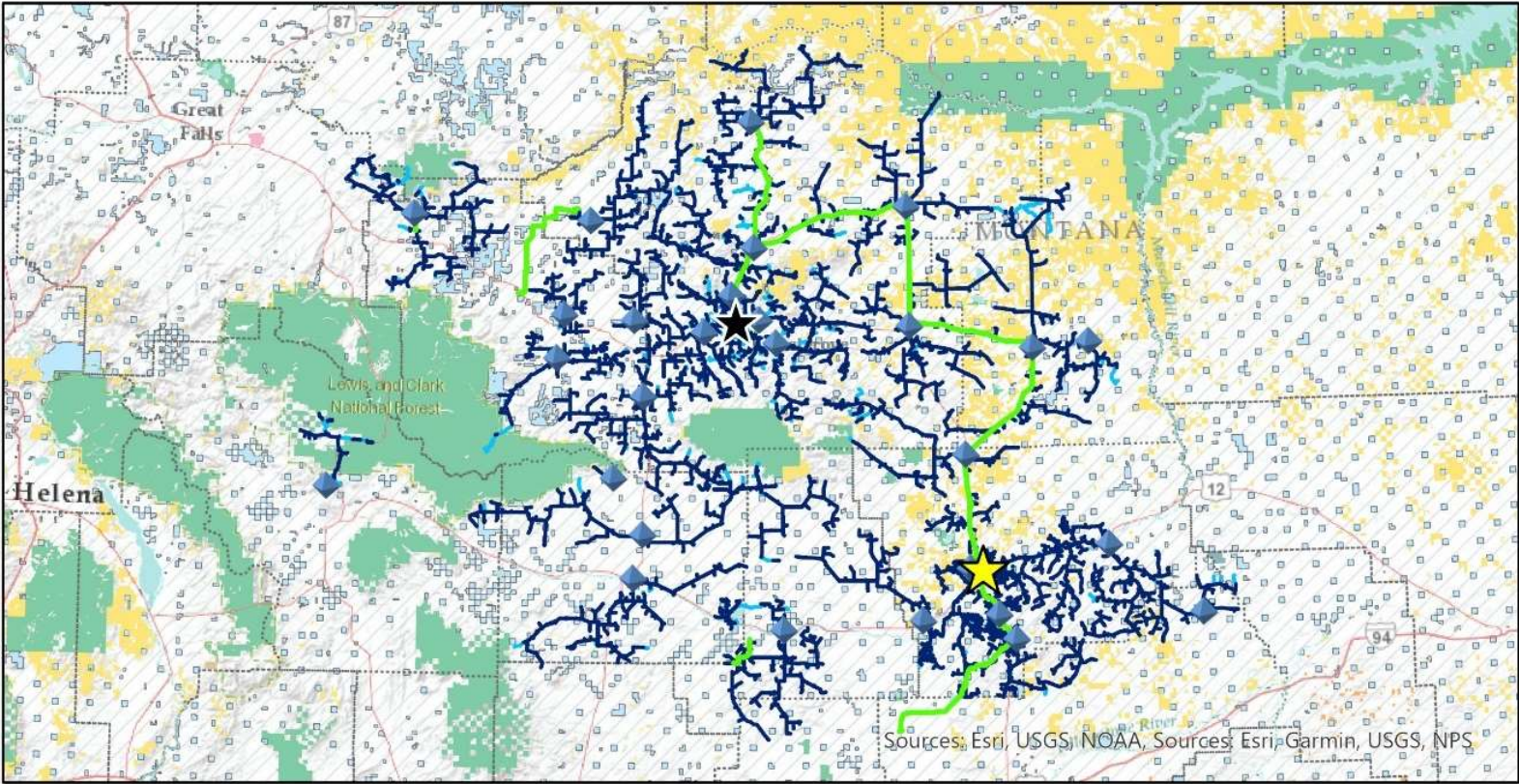
Figure 2 provides a high-level description of Fergus Electric's T&D assets.

**Table 1. Asset Overview**

| ASSET CLASSIFICATION            | ASSET DESCRIPTION  |
|---------------------------------|--|
| <b>Transmission Line Assets</b> | Approximately 233 miles of conductor, transmission structures and switches at 100, 69, & 50 kilovolt (kV).   |
| <b>Distribution Line Assets</b> | Approximately 3,748 miles of overhead (OH) and 299 miles of underground (UG) conductor, cabling, transformers, voltage regulators, capacitors, switches, lined protective devices operating at or below 12.47kV. |
| <b>Substation Assets</b>        | Major equipment such as power transformers, voltage regulators, capacitors, reactors, protective devices, relays, open-air structures, switchgear, and control houses in 20 substation/switchyard facilities.    |



Figure 2. General Land Ownership Map



General Land Ownership Map



## 1.7 Overview of Utilities Fire Prevention Strategies

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

Table 2 summarizes Fergus Electric's five mitigation components with associated programs and activities that support Fergus Electric's ongoing commitment to wildfire prevention and mitigation.

**Table 2. Mitigation Strategies/Activities**

| <b>DESIGN AND CONSTRUCTION</b>  |
|---|
| Decreasing legacy T&D span lengths  |
| Circuit coordination and field recloser replacement program                     |
| Covered jumpers and animal guards   |
| Avian protection construction standards   |
| Strategic undergrounding of distribution lines                                  |
| <b>INSPECTION AND MAINTENANCE</b>   |
| Infrared inspections of substation equipment                                    |
| Unmanned Aerial Vehicle (UAV) T&D line inspections                              |
| T&D maintenance from aerial line inspections                                    |
| T&D vegetation right-of-way maintenance   |
| Wood pole intrusive inspection and testing                                      |
| <b>OPERATIONAL PRACTICES</b>  |
| Fire suppression equipment on worksite during fire season                       |
| Alternate recloser practices during fire weather                                |
| Provide liaison to county offices of emergency services (OES) during fire event |
| <b>SITUATIONAL AWARENESS</b>  |
| Weather Monitoring in the service area  |
| Monitoring active fires   |

## RESPONSE AND RECOVERY

Coordination with local Department of Emergency Management

Customer assistance for post-disaster recovery

Line patrols before re-energization

## 2 Risk Analysis and Risk Drivers

### 2.1 Fire Risk Drivers Related to Construction and Operations

Fergus Electric staff applied its own field experience to determine the critical potential risk drivers. The categories listed below were identified as having the potential for causing power line sparks and ignitions:

- Equipment/facility failure
- Lightning
- Vehicle/Equipment impact
- Standard expulsion fuses
- Conductor Cross-phasing
- Animal contacts
- Vandalism

### 2.2 Fire Risk Drivers Related to the Service Area

- Topography
- Accessibility
- Relative Humidity
- Vegetation Types / fuels
- Fire history
- Tree mortality / tree failure
- Lightning
- Fire Weather

### 2.3 Key Risk Impacts

Ignitions caused by the aforementioned risk drivers have many possible outcomes. The list below outlines some of the worst-case scenarios, the prevention of which is the impetus for the development of this WMP:

- Personal injuries or fatalities to the public and employees
- Damage to public and/or private property
- Damage and loss of Fergus Electric owned infrastructures and assets
- Impacts to reliability and operations
- Damage claims and litigation costs

- Damage to Fergus Electric's reputation and loss of member confidence

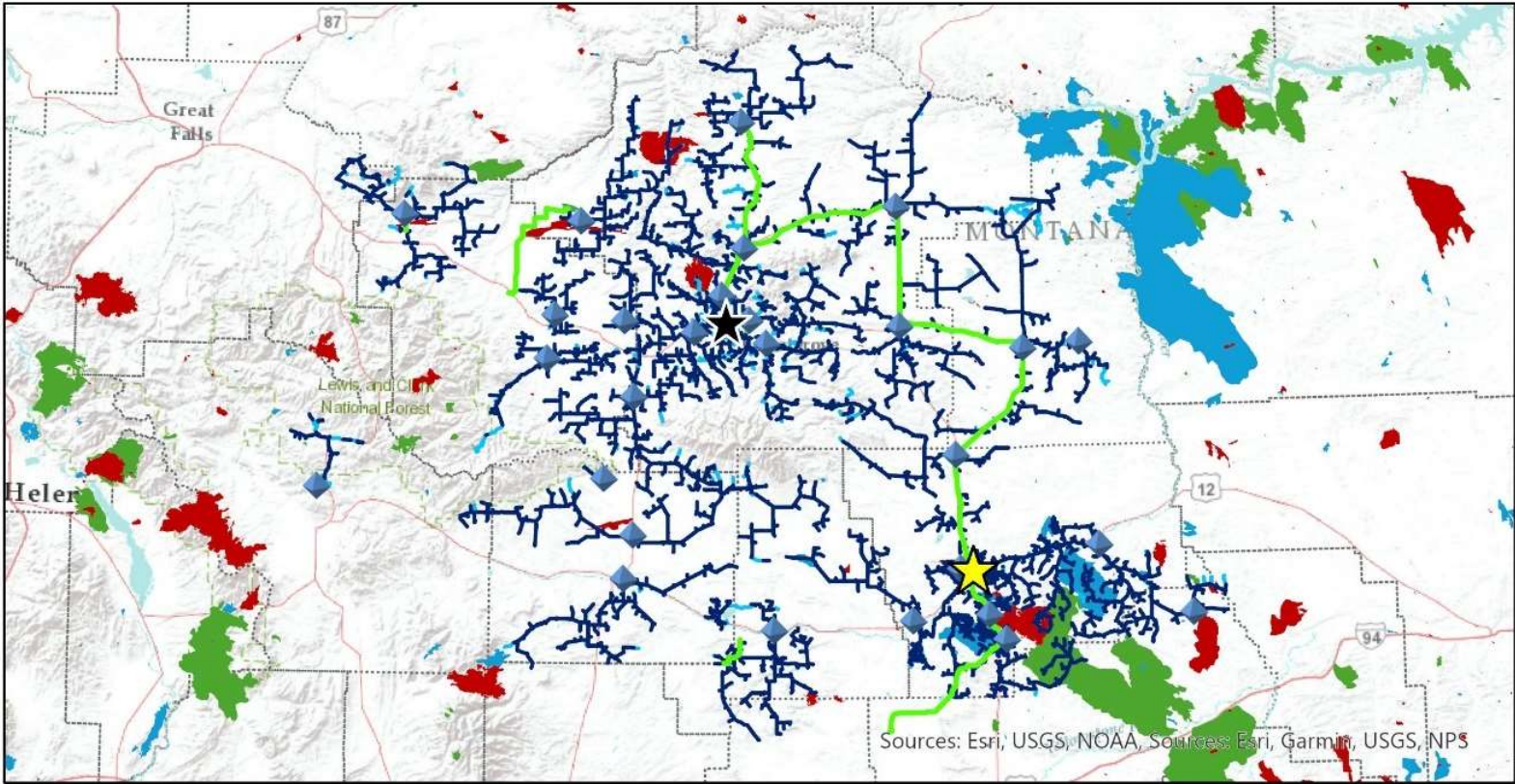
## 2.4 Wildfire History and Outlook

The service area of Fergus Electric includes several mountain ranges, rolling hills, and developed land for agricultural use. Historic wildfires have occurred in each of these different topographies. The last few fires include:

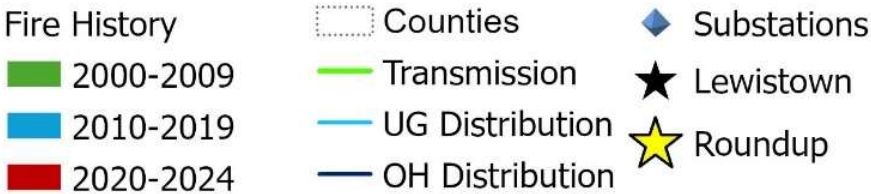
- Taylor Fire: 08/01/2021
  - Cause: Undetermined
  - Calculated size: 22,936 acres
- South Moccasin Mountain Fire: 10/04/2021
  - Cause: Human
  - Calculated size: 12,743 acres
- West Wind Fire: 12/01/2021
  - Cause: Investor Owned Utility - High Wind/Conductor Cross Phasing
  - Calculated size: 11,609 acres



**Figure 3. Historic Wildfire Perimeters 2000-2024**



Historic Wildfire Perimeter Map



## 2.5 Wildland Urban Interface

The USFS defines the wildland urban interface (WUI) as a place where humans and their development meet or intermix with wildland fuel and is composed of both interface and intermix communities. The distinction between the two is based on the characteristics and distribution of houses and wildland vegetation across the landscape.

### **Interface WUI**

Interface is defined as those areas where human development meets areas that are covered with more than 50% wildlands. To be considered an "interface" land area, development or structures must be bordered by wildlands on at least one side.

### **Intermix WUI**

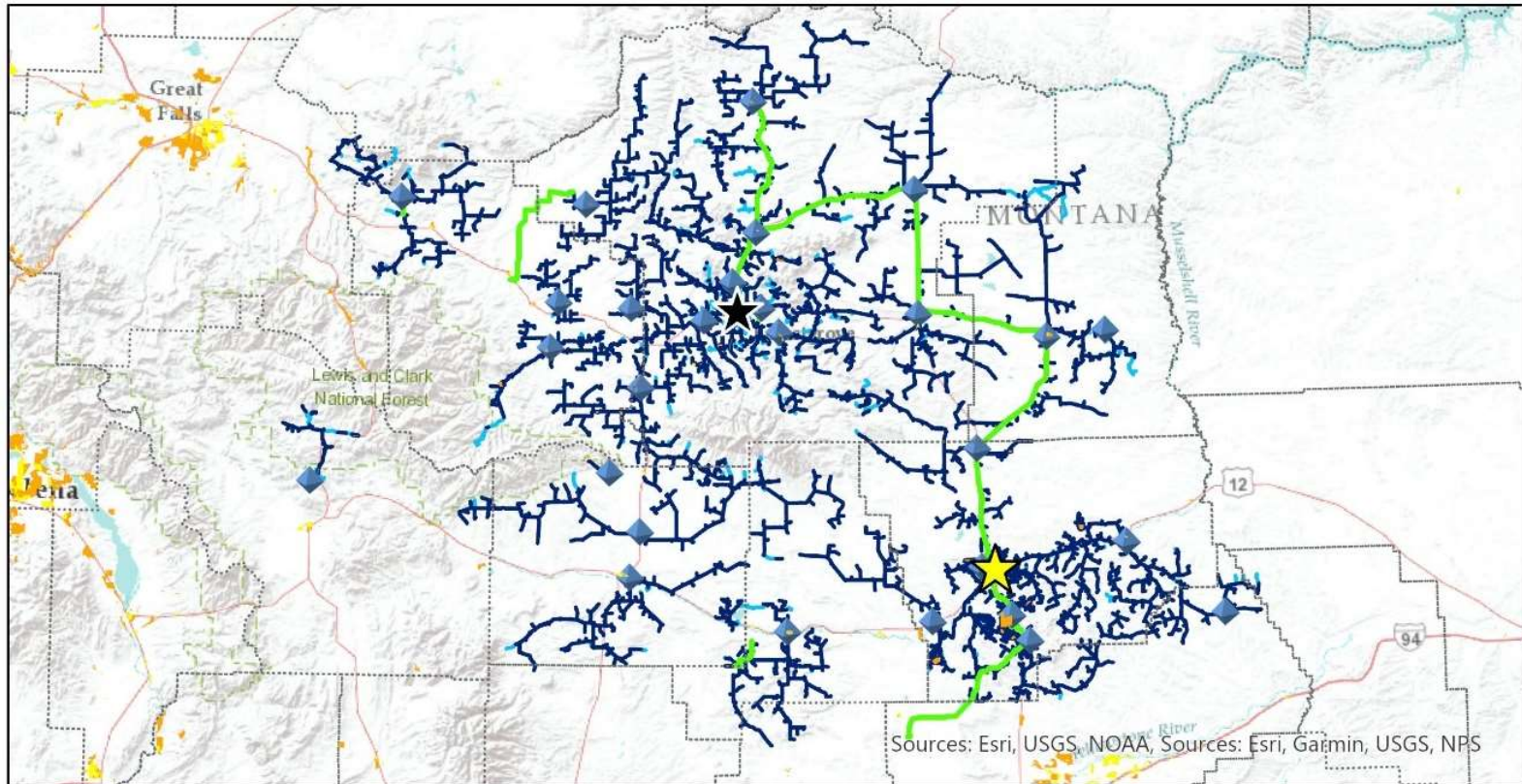
Intermix refers to areas where housing and wildland vegetation intermingle. To be considered intermix, a development or structure must be surrounded on two (2) or more sides by wildlands. Intermix is often found between the Interface and the wildlands.

### **Wildlands**

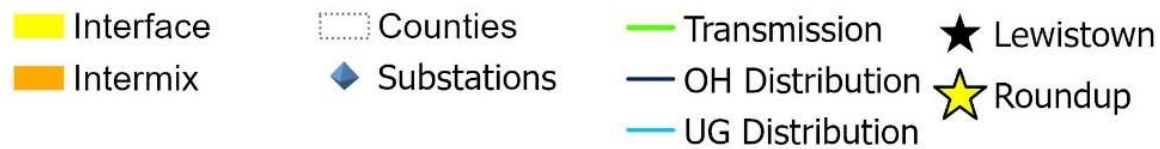
For the purposes of this map, "wildlands" are defined as any area without any structures or human development that also have more than 50% burnable vegetated cover including grasslands and sagebrush-steppe. However, most wildlands could eventually become intermix, interface, or even urban areas. For example, a new single-family home in the woods could make wildlands into intermix, while a new housing development, strip mall, or other series of structures could turn a section of wildlands into interface.



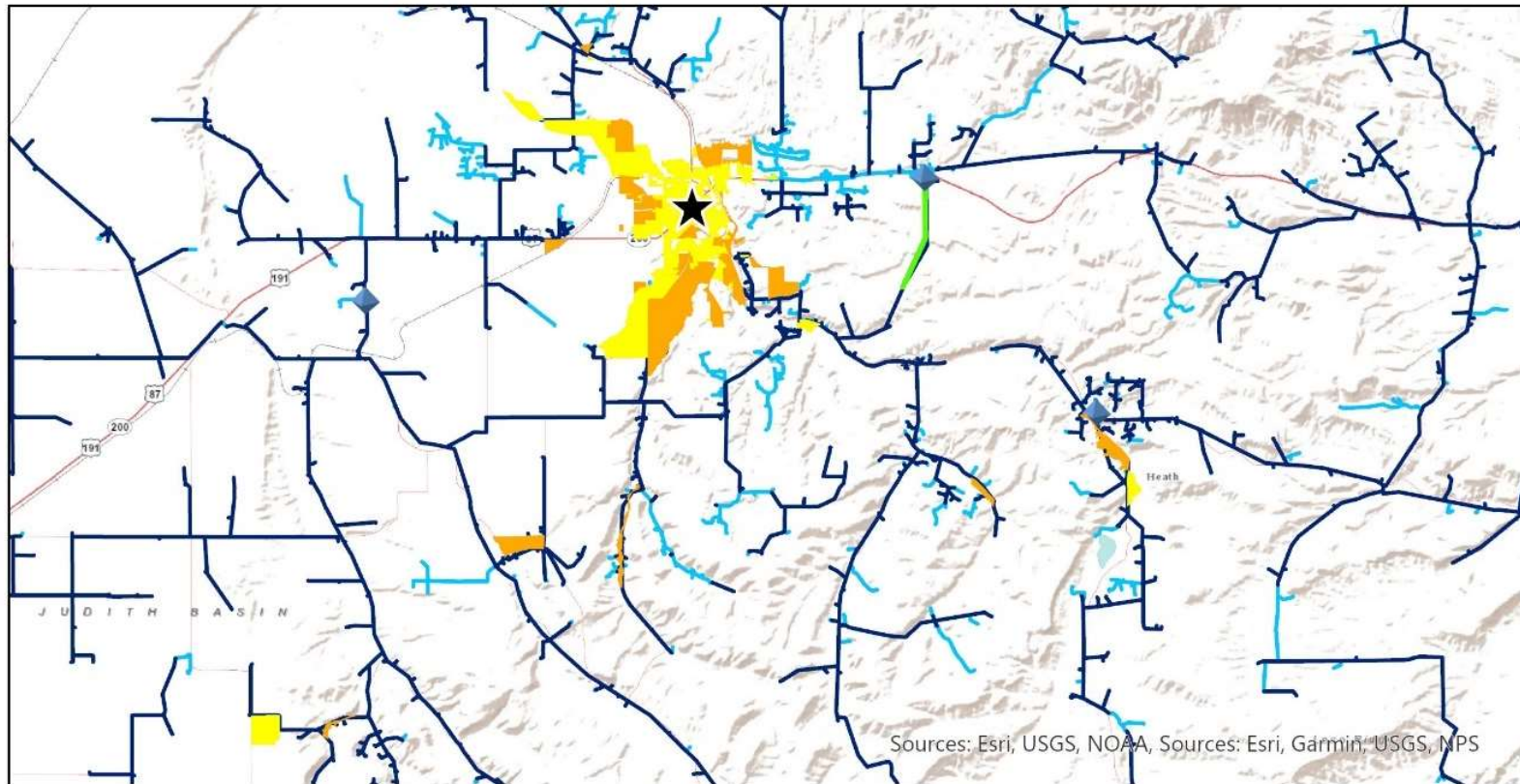
**Figure 4. Wildland Urban Interface**



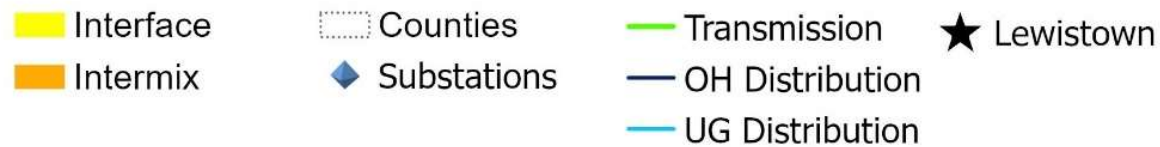
Wildland Urban Interface Map



**Figure 5. Wildland Urban Interface – Lewistown Area**

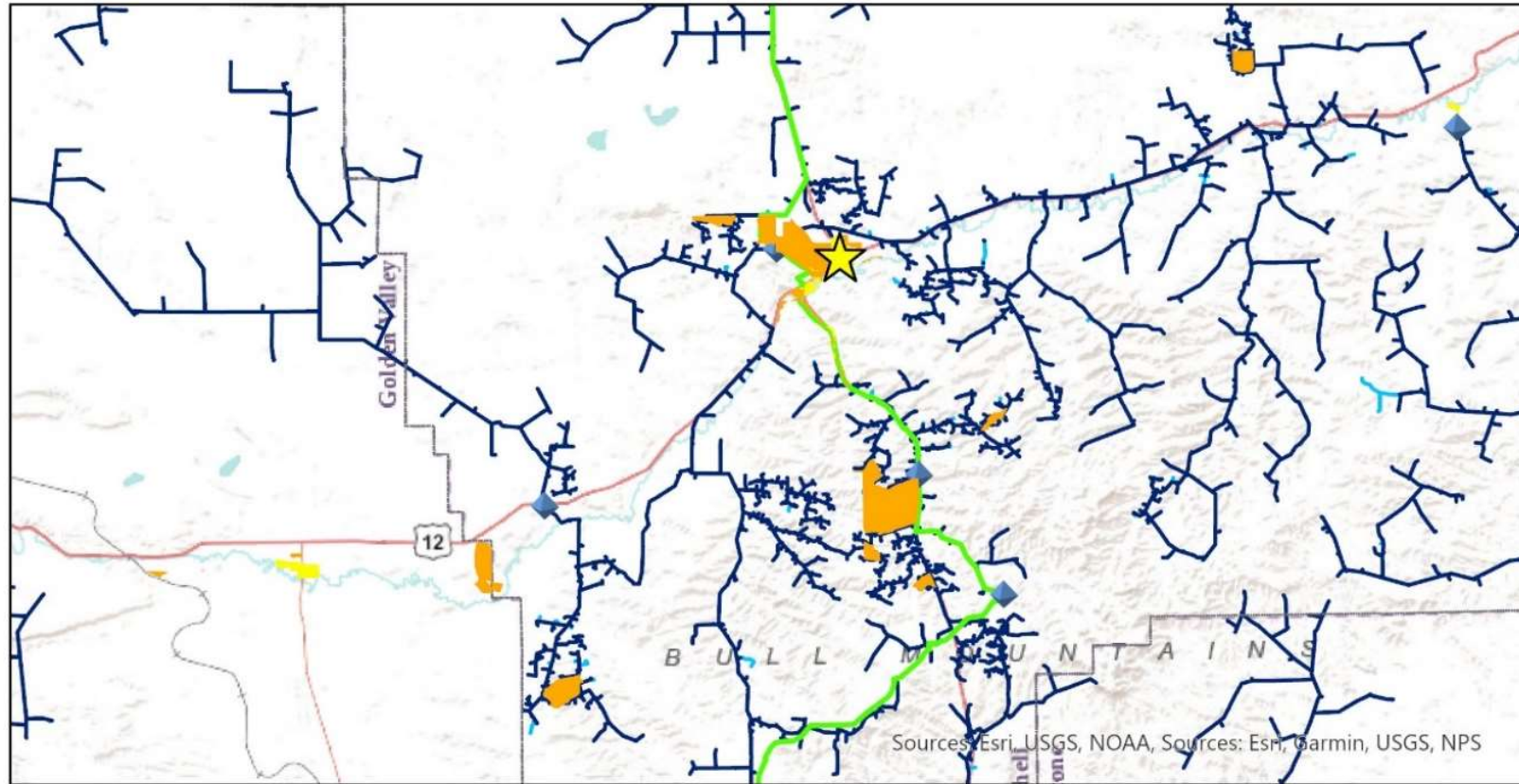


Wildland Urban Interface Map

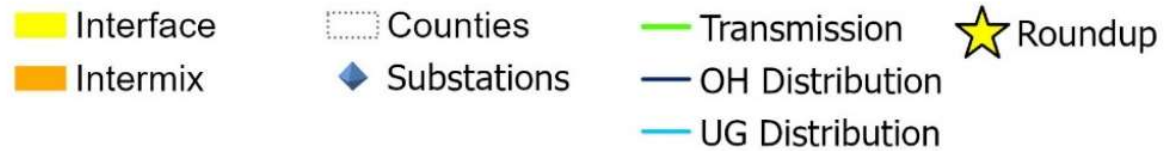




**Figure 6. Wildland Urban Interface - Roundup Area**



Wildland Urban Interface Map



## 2.6 Fire Threat Assessment Mapping

The Wildfire Hazard Potential (WHP) map used in this plan is a raster geospatial dataset produced by the USDA Forest Service, Fire Modeling Institute (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:

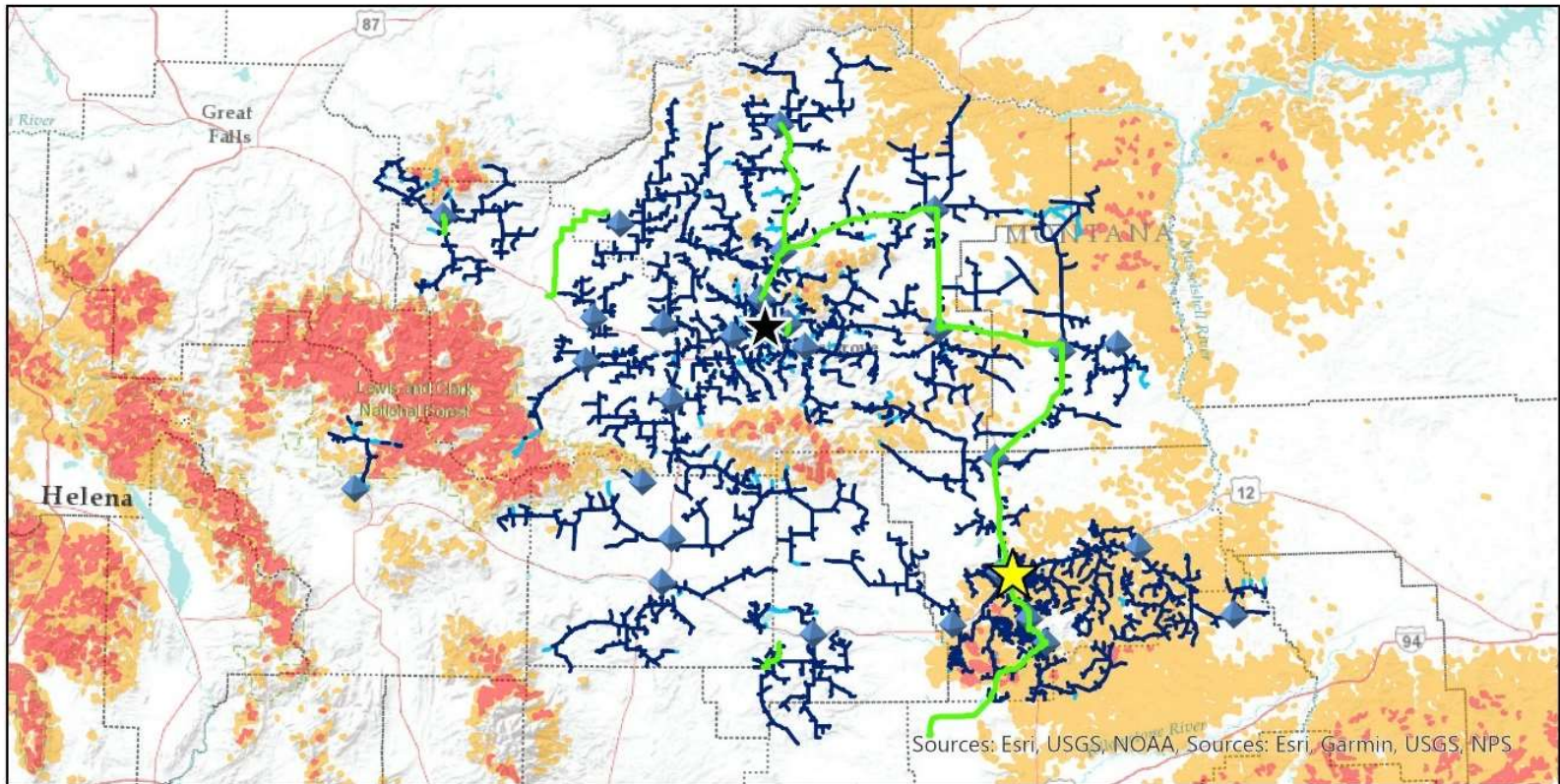
- Spatial vegetation and wildland fuels data from *LANDFIRE 2020* (version 1.4.0). The *LANDFIRE* Fire Behavior Fuel Models layer is a primary input to the Large Fire Simulator (FSim) Burn Probability (BP) and Fire Intensity Level (FIL) datasets and forms the foundation for WHP.
- Spatial datasets of wildfire likelihood and intensity were generated for the conterminous U.S. with the 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. 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 applied to the raw data and the Very Low and Low tiers removed from the map. The High and Very High tiers were also combined to form the High-risk tier. This helps to inform where forest fuel reduction treatments and mitigations might be most needed.

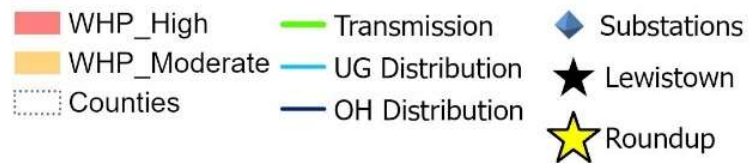
On its own, WHP is not an explicit map of wildfire threat or risk, but when paired with spatial data depicting highly valued resources and assets such as communities, structures, or powerlines, it can approximate relative wildfire risk to those resources and assets. WHP is not a forecast or wildfire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

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

**Figure 7. Wildfire Hazard Potential**

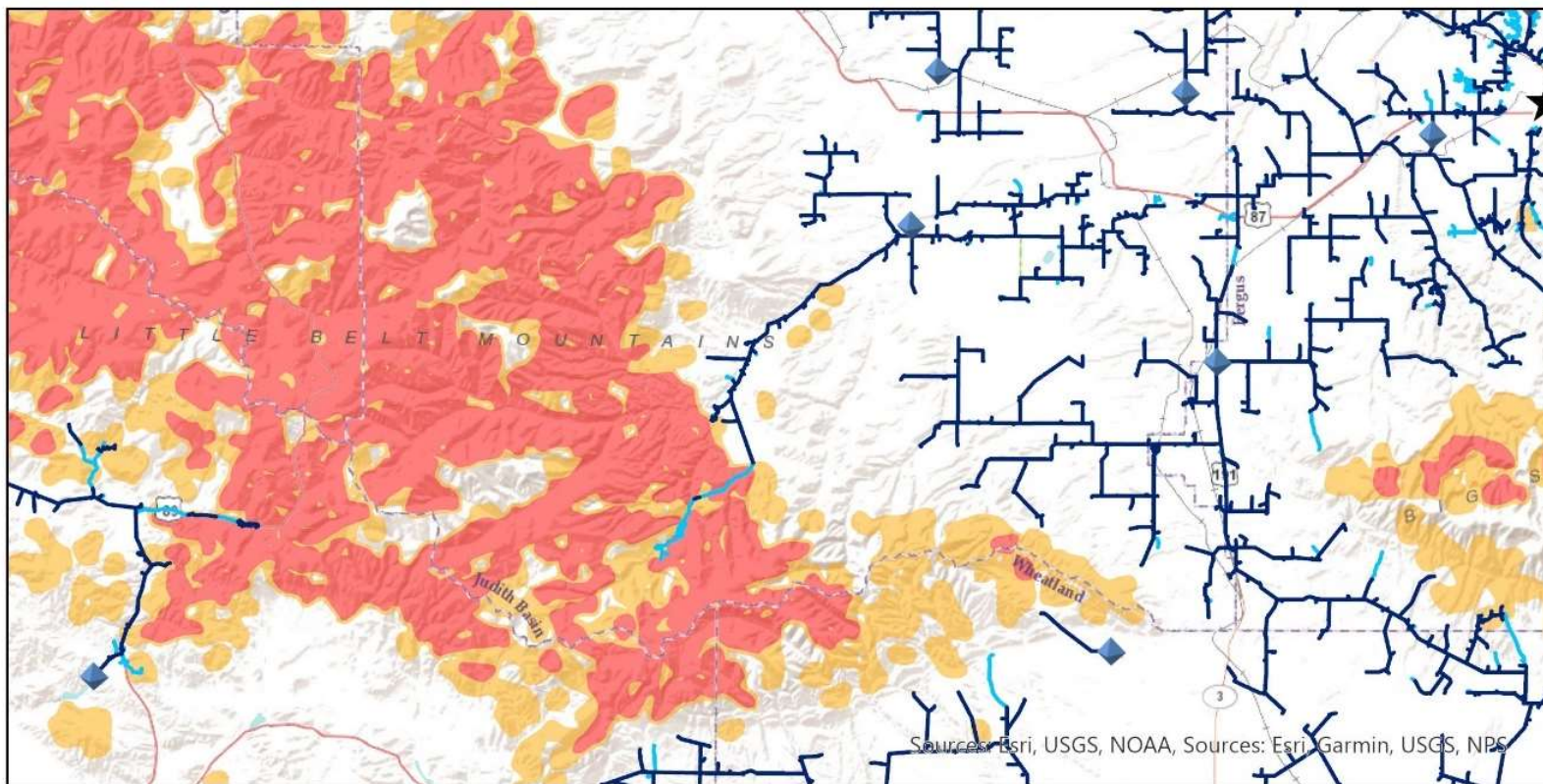


Wildfire Hazard Potential Map





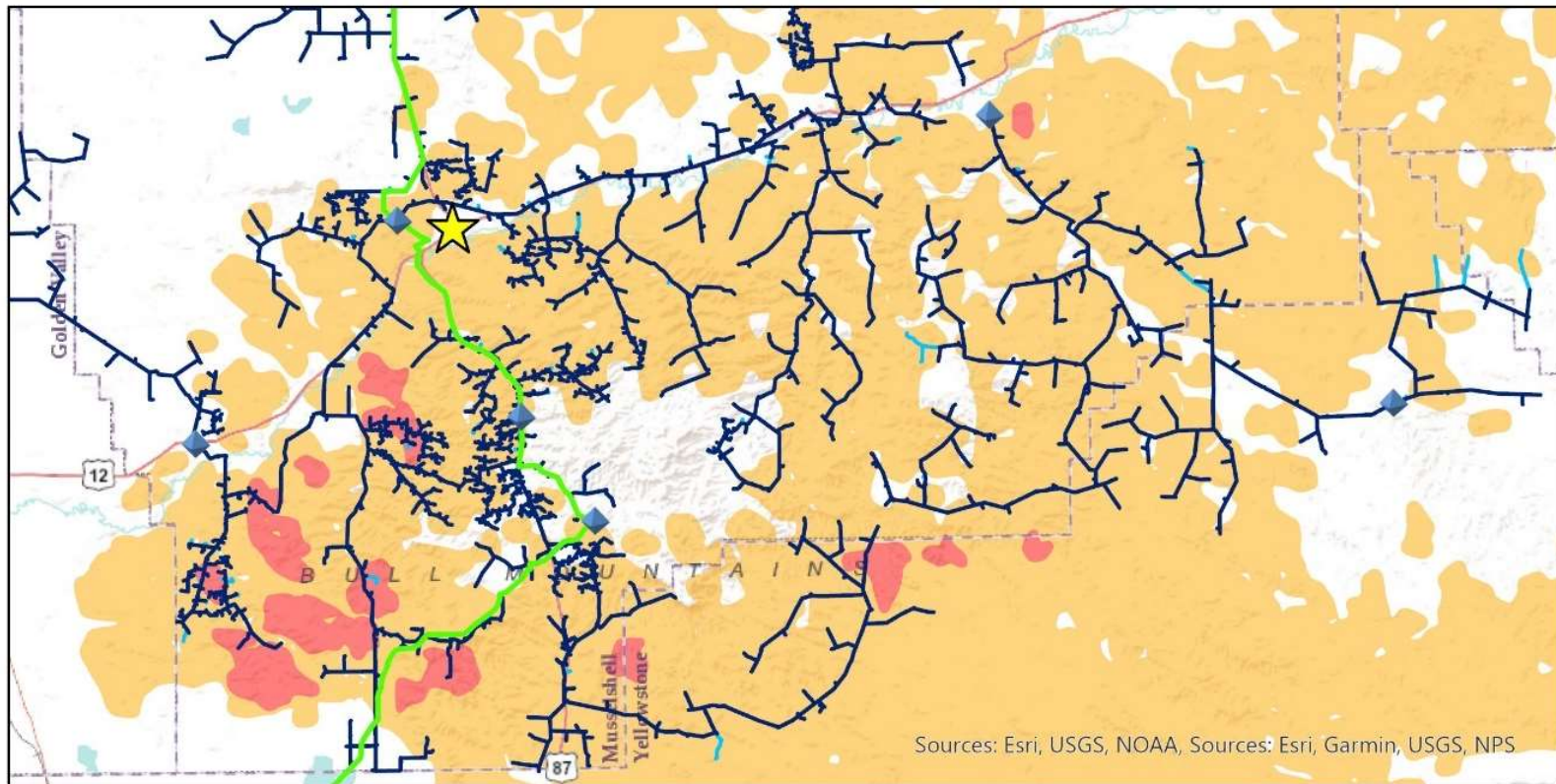
**Figure 8. Wildfire Hazard Potential – Lewistown Area**



Wildfire Hazard Potential Map



**Figure 9. Wildfire Hazard Potential - Roundup Area**



Wildfire Hazard Potential Map



### 2.6.1 Assets Within Wildfire Threat Index Tiers

Table 3 provides a high-level overview of Fergus Electrics various T&D assets relative to the Wildfire Hazard Potential tiers shown in the WHP maps above.

**Table 3. Overview of T&D Assets within WHP Tiers**

|                              |             | Low        |    | Moderate   |       | High       |      |
|------------------------------|-------------|------------|----|------------|-------|------------|------|
| Voltage                      | Total Miles | Line Miles | %  | Line Miles | %     | Line Miles | %    |
| 7.2 Distribution OH          | 3,748       | 3,060      | 82 | 659.1      | 17.59 | 28.5       | 0.76 |
| 7.2 Distribution UG          | 299         | 263        | 88 | 26.2       | 8.74  | 10.0       | 3.34 |
| 50kV OH Transmission         | 203         | 180        | 89 | 23.0       | 11.31 | 0.0        | 0.00 |
| 100kV OH Transmission        | 30          | 20         | 66 | 10.0       | 33.63 | 0.0        | 0.00 |
|                              |             |            |    |            |       |            |      |
| Total OH Distribution        | 3,748       | 3,060      | 82 | 659.1      | 17.59 | 28.5       | 0.76 |
| Total UG Distribution        | 299         | 263        | 88 | 26.2       | 8.74  | 10.0       | 3.34 |
| Total Distribution           | 4,047       | 3,324      | 82 | 685.3      | 16.93 | 38.5       | 0.95 |
| Total OH Transmission        | 233         | 200        | 86 | 33.0       | 14.17 | 0.0        | 0.00 |
| Substations/ Metering Points | 31          | 28         | 90 | 3.0        | 9.68  | 0.0        | 0.00 |
|                              |             |            |    |            |       |            |      |
| Totals                       | 4,280       | 3,523      | 82 | 718.3      | 16.78 | 38.5       | 0.90 |

**Table 4. Overview of T&D Assets with High Risk Areas**

| High Risk Areas                |                  |       |
|--------------------------------|------------------|-------|
| Location                       | Substation       | Miles |
| Dean Creek                     | Lavina           | 6.60  |
| Shoe String Rd                 | Lavina & Roundup | 2.87  |
| South of Majerus Rd            | Roundup          | 1.43  |
| Hay Basin                      | Roundup          | 1.70  |
| Goulding Creek                 | Roundup          | 2.93  |
| Hay Coulee                     | Roundup          | 8.04  |
| Northern Dovetail Road         | Roy              | 0.04  |
| Marsh Rd                       | South Roundup    | 1.36  |
| Little Belt and Highwood Baldy | Spion Kop        | 1.13  |
| Forest Green                   | White Sulphur    | 11.12 |



## 3 Operational Practices

Fergus Electric utilizes several operational programs to mitigate the risk of our assets causing wildfires. Our multi facet approach helps to maintain the reliability of our vast rural electric infrastructure. Our operational strategies include:

- Infrastructure inspection and maintenance
- Vegetation Management
- Pole Testing and Replacement
- RUS recommended fire mitigation construction

### 3.1 De-energization – Public Safety Power Shutoff

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

Fergus Electric considers the 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, Fergus Electric reserves the option of implementing a PSPS when conditions dictate. While Fergus Electric 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, Fergus Electric has historically and will continue to consider de-energizing a portion of its system in response to a known public safety issue or response to a request from an outside emergency management/response agency. Any de-energizing of the lines is performed in coordination with key local partner agencies; however, the final determination is made by Fergus Electric.

If the transmission balancing authority, NorthWestern Energy, issues a PSPS that impacts Fergus Electric infrastructure, we will communicate the anticipated impacts to members and entities that we serve. Depending on several factors including weather and operational circumstances, Fergus Electric may have the opportunity to serve entity and member load from a separate source if we know in advance that our traditional source will be impacted by a NorthWestern Energy PSPS.

Upon the conclusion of an implemented PSPS that impacts Fergus Electric infrastructure, and dependent on visibility and various weather conditions, Fergus Electric may complete a patrol of accessible line prior to re-energization.

### 3.2 Recloser Practices

In 2024, Fergus Electric implemented a six-year circuit coordination project. The goal of the project is to complete an engineering analysis for all distribution circuits and to install new electronic substation breakers, electronic distribution reclosers, single phase cutout mounted reclosers, and sectionalizing fuses throughout a six-year period. The system upgrade will provide greater grid visibility and awareness for our staff while also improving overall reliability for our members.

In addition to implementing an overall system upgrade, we are also identifying sections of line in heavily treed areas. Throughout the project we may install additional recloser devices on sections of line that could benefit from alternate settings when the risk of wildfire is higher. Device settings can be manually adjusted to preemptively block reclosing in the event of a fault. This setting reduces the potential for ignition if a temporary or permanent fault occurs downstream of the device. In most cases, employees complete a visual patrol of the line prior to reenergizing the line to prevent closing in on a fault.

Our situational awareness tools described above help employees determine when operational settings on devices should be adjusted. During seasons of extended wildfire potential, device settings may be left in non-reclose for several months.

### 3.3 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.

Fergus Electric employees 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. (<https://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32/fire-danger-subsets-fire-potential--danger-55>)
- **The National Weather Service (NWS):** The NWS provides on-line predictive fire weather forecasting tools in the form of a current fire-weather outlook, 2-day, and a 3-8 day outlook. ([https://www.spc.noaa.gov/products/fire\\_wx/](https://www.spc.noaa.gov/products/fire_wx/))
- **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>)

## 4 Fire Mitigation Construction

### 4.1 Avian Protection Program

For many years, Fergus Electric has participated in the Montana Electric Cooperative Association avian protection plan. The plan has helped to reduce avian mortalities association with electric cooperative power lines.

### 4.2 Modifications and Upgrades

Fergus Electric has standardized the use of 10' fiberglass crossarms on overhead distribution construction to increase conductor spacing on three phase lines. Legacy spans lengths are also being reduced when engineers identify long span lengths in areas where pole replacement projects are occurring. Circuit coordination studies are conducted on distribution lines to improve relay settings of circuit protection devices and right size fuses.

## 5 Infrastructure Inspections and Maintenance

Recognizing the hazards of equipment that operate high voltage lines, Fergus Electric maintains a formal inspection and maintenance program for distribution, transmission, and substation equipment which plays an essential role in wildfire prevention. Fergus Electric currently patrols its system regularly and may increase the frequency of inspections in high-risk areas. Table 5 summarizes the inspection schedule for all assets, while the following sections outline inspection practices for the utility.

**Table 5. Inspection Program Summary**

| <b>ASSET<br/>CLASSIFICATION</b>     | <b>INSPECTION TYPE</b>           | <b>FREQUENCY</b> |
|-------------------------------------|----------------------------------|------------------|
| <b>Transmission</b>                 | Routine Safety Patrol Inspection | As needed        |
|                                     | Detailed Inspection              | Every 4 years    |
|                                     | Wood Pole Test                   | Every 10 years   |
|                                     | UAV Inspections                  | Every 4 years    |
| <b>Overhead<br/>Distribution</b>    | Routine Safety Patrol Inspection | As needed        |
|                                     | Detailed Inspection              | Every 4 years    |
|                                     | Wood Pole Test                   | Every 10 years   |
| <b>Underground<br/>Distribution</b> | Routine Safety Patrol Inspection | As needed        |
| <b>Substation</b>                   | Routine Inspection               | Monthly          |
|                                     | Detailed Inspection              | Every 4 years    |
|                                     | Infrared Inspection              | Every 4 years    |

## 5.1 Definition of Inspection Levels

1. **Routine Safety Patrol Inspection:** A simple visual inspection of applicable utility equipment and structures designed to identify obvious structural problems and hazards. Patrol inspections may be carried out during other company business.
2. **Detailed Inspection:** Individual pieces of equipment and structures are carefully examined visually and through the use of routine diagnostic testing as appropriate. If practical and useful information can be gathered, equipment may be opened and the condition rated and recorded digitally.
3. **Intrusive Pole Inspection:** Inspections involving a fine drilling needle that penetrates the wood in a minimally invasive way and records both the drilling resistance and the feed force in relation to the penetration depth. The device measurement curve can detect a void or decay when a loss of resistance is detected defining a loss in wood structure.

## 5.2 Prioritization of Repairs

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

Inspection data (overhead & underground) will be prioritized and issued as follows:

**Priority # 1 – Outage likely:** Conditions that may affect the integrity of the system or present a hazard to workers or the public. Priority #1 tags should be responded to within 6 months and appropriate action taken until the hazardous condition is remedied.

**Priority # 2 – Potential to cause on outage:** Conditions that require maintenance that can be scheduled to maintain the integrity of the system. Priority #2 tags will be prioritized by urgency and will be scheduled to have appropriate repairs made to correct the condition within one year where practicable. If the Priority Level 2 issue is in a High-Risk zone and poses a potential fire risk, correction of the deficiency should occur within 6 months.

**Priority # 3 – Informational:** Conditions that do not present a situation that could jeopardize the safety of the system, line workers and the public. Priority #3 tags will be submitted by the inspector with the time interval recommended. Items are generally improvements to accuracy of mapping software and equipment information.

### 5.3 Routine Safety Patrol Inspections

Routine Safety Patrol Inspections are conducted by Fergus Electric employees on an as needed basis during an outage and after severe weather events. A short list of items to check for while performing routine safety inspections may include:

- Low clearance of primary conductor, secondary wires, and service drops
- Vegetation or other objects too close to electric lines
- Physical damage or deterioration of facilities

### 5.4 Detailed Inspections of Transmission and Distribution Lines

Fergus annually performs a detailed line inspection program on a four-year rotation with approximately 25% of our overhead system inspected each year with field inspections by qualified employees or with video recordings of UAV footage to identify maintenance issues ranked by priority. Priority 1 are defined as issues likely to cause a power outage and should be repaired/mitigated within 6 months. Priority 2 issues are defined as issues that have potential to cause a power outage and should be repaired/mitigated within 12 months. Review of UAV video footage is conducted within our office and upon identification of a maintenance need, issues are recorded electronically including location and details as a ticket with our software. Electronic tickets are tracked and can be recorded and closed upon completion of the maintenance issue. Qualified employees identify issues that may cause an outage or fire relating to:

- Vegetation
- Conductor(s)
- Framing and Equipment
- Avian Protection
- Pole condition

### 5.5 Wood Pole Testing

To maintain Fergus' wood poles, a plan was initiated in 2023 with the goal to inspect approximately 10% of the system each year, which is approximately ~7,000 poles 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.

- Poles Tested
  - 2023: 7,282
  - 2024: 6,394

Employees inspect and tests all poles on a cycle meeting the interval recommended in RUS Bulletin 1730B-121. Circuits are identified, mapped, and scheduled for inspection and testing using latest industry standards and practices. All poles are subjected to intrusive inspection to determine and identify problems such as rot, decay, or damage.

## 5.6 Substation Inspections

The preventive maintenance plan provides for regular inspections of Fergus substations on a monthly cycle. Qualified personnel will use prudent care while performing inspections following all required safety rules to protect themselves, other workers, the general public, and the system's reliability.

The substation inspection involves a thorough look at the system to confirm that there are no structural or mechanical deficiencies, hazards, or tree trimming requirements. Individual pieces of equipment and or structures receive careful visual examination and routine diagnostic tests as appropriate. Operational counts for breakers and regulators are recorded during the inspection.

## 6 Vegetation Management (VM)

### 6.1 Vegetation to Conductor Clearance

Fergus Electric has an operational and management responsibility and is required by State and Federal Agencies to maintain the right of way, under or around its power lines. Fergus Electric will meet the minimum standards for conductor clearances from vegetation to provide safety for the public and utility workers, reasonable service continuity and fire prevention.

Vegetation management (WM) operations are scheduled to ensure all lines are cleared of vegetation hazards on a 4-year timeline. During tree work, Fergus Electric aims to achieve the clearance specifications described below.

- **OH Distribution:** 10 feet from the conductor
- **Roadside Transmission with distribution underbuild:** 10 feet from the conductor
- **Transmission ROW (defined width):** 15 feet between the conductor and the rooted tree stem. Defined width ROWs are generally found on cross-country corridors.
- **Trees Under Conductors:** Trees that are under conductors should have crowns reduced to a height 5 feet below the primary conductors or be removed.
- **Overhanging Branches:** Removed to a height of 10 feet above all distribution conductors and from conductor to sky on all transmission lines.
- **Secondary Conductor:** Trees near open wire secondary are pruned to provide a minimum of 2 feet of clearance.
- **Service Wire:** Branches that deflect or weigh heavily upon service or other secondary wires beyond the last Fergus Electric pole are removed, but not pruned in their entirety without specific direction by Fergus Electric operations
- **Pole Base:** A 5 foot radius area around the base of all poles is cleared of vegetation that would prevent the pole from being safely accessed and climbed.



## 6.2 Vegetation Trimming Standards

Fergus Electric'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, National Electrical Safety Code (NESC), and FAC 003-4 standards in mind.

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.

## 6.3 VM Trimming and Inspection Schedule

Fergus Electric personnel and contractors perform annual, ground-based inspections of tree conductor clearances and hazard tree identification for Fergus Electric ROWs and easements. Fergus Electric employs a full-time tree trimming crew for year-round vegetation management work. Fergus Electric line crews also address vegetation concerns in response to service calls or field observations. Proactive maintenance during routine operations and prompt action during emergency events maintain system reliability, a safe work environment, and reduces fire danger. Any VM issues that cannot be immediately handled by the line crews are referred to the VM crew for priority trimming. Scheduled patrols ensure all lines are inspected for vegetation hazards and systematically trimmed. On-going, year-round field patrols identify targeted areas for vegetation pruning or removal and ensure compliance with state and federal regulatory requirements.

## 6.4 Hazard Trees

A subset of Danger Trees<sup>1</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 identified 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 Fergus Electric 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.

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<sup>1</sup> As defined by ANSI 300 Part 7 standards



## 6.5 Controlling Incompatible Vegetation

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

# 7 Emergency Response

## 7.1 Preparedness and Response Planning

In response to active emergencies, Fergus Electric coordinates and collaborates with the local Department of Emergency Services (DES) and relevant state agencies as peer partners. During such emergencies, Fergus Electric provides a utility representative to the county and/or city DES to ensure effective communication and coordination.

## 7.2 Public Agency and Customer Communications for Outages

Fergus Electric communicates proactively with members prior to planned outages via an automated phone service that educates members on the time, duration, and work to be completed. During unplanned outage events, Fergus Electric posts regular outage updates on Facebook to help members understand the extent, estimated restoration time, and number of members impacted. Fergus Electric also provides phone service with employees and contracted dispatch staff to help with outage calls 24/7.

## 7.3 Restoration of Service

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

### 7.3.1 Service Restoration Process

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

- **Patrol:** Employees patrol accessible de-energized lines to ensure no hazards have affected the system during the outage. If an outage is due to wildfire or other natural disasters, as soon as it is deemed safe by the appropriate officials, employees inspect lines and equipment for damage, foreign contacts and estimate equipment needed for repair and restoration. Lines located in remote and rugged terrain with limited access may require additional time for inspection. Fergus Electric personnel assist in clearing downed trees and limbs as needed.

- **Isolate:** Isolate the outage and restore power to areas not affected.
- **Repair:** After the initial assessment, Fergus Electric staff meet to plan the needed work. Rebuilding commences as soon as the affected areas become safe and accessible. Repair plans prioritize substations and transmission facilities, then distribution circuits serving the most critical infrastructure needs. While the goal to reenergize all areas is as soon as possible, emergency services, medical facilities, and utilities receive first consideration when resources are limited. Additional crew and equipment are dispatched as necessary.
- **Restore:** Periodic customer and media updates of restoration status before full restoration are posted on social media platforms and Fergus Electric's website. After repairs are made, power is restored to homes and businesses as quickly as possible. Members, local news, and other agencies receive notification of restored electric service.

## 8 Performance Metrics and Monitoring

### 8.1 Plan Accountability

Staff responsibility for plan implementation and general communications is described below:

- The Board of Directors makes policy decisions relative to the utility – they will be responsible for approving and adopting the Wildfire Mitigation Plan.
- The General Manager directs management staff responsible for operations, customer service and finance.
- The Line Superintendent supervises the Engineers and Operations personnel.
- The Line Superintendent is responsible for the overall execution of the WMP. Staff will be directed as to their roles and responsibilities in support of the plan.
- The Assistant Line Superintendent is responsible for communicating with public safety, media outlets, public agencies, first responders, local Office of Emergency Management, and health agencies during emergency or planned maintenance outages.
- The Line Superintendent determines when and how to notify outside agencies in cases of wildfire emergency events.
- Fergus Electric's General Manager will be responsible for monitoring and auditing the targets specified in the WMP to confirm that the objectives of the WMP are met, as well as the implementation of the plan in general.

### 8.2 Monitoring and Auditing of the WMP

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. A more formal review will be done every few years in coordination with Fergus Electric's business planning. No later than June 1 of each year, Fergus Electric shall submit to the Board of Trustees a report summarizing the wildfire mitigation efforts and compliance with its currently authorized WMP.

### 8.3 Community Outreach and Coordination

Fergus Electric's monthly Rural Montana magazine is provided to all members of the Electric Cooperative monthly. Informational updates, seasonal reminders, and infographics are often provided to educate members of the public on safety and awareness around powerlines, before and during a wildfire season.

As counties and agencies within Fergus Electric's service territory adopt and update Community Wildfire Protection Plans, Fergus Electric will participate in requested coordination and collaborative efforts involving local fire departments, DNRC, DES, and federal agencies. Fergus Electric will continue to support the reduction of potential impacts to property and natural resources identified as key wildfire risks.

### 8.4 Plan Approval Process

Fergus Electric will make all efforts to consider stakeholder input in the preparation of its Wildfire Mitigation Plan. Local fire safe councils, The Montana DES as well as federal, state, tribal, and local agencies are encouraged to review and provide input during the required 45-day comment period. The DES shall review the plan within the comment period and provide comments and recommendations regarding aspects of the plan within each of their jurisdictions.

After a public meeting, and no more than 60 days after the close of the comment period, the Board of Trustees will review and approve the plan or identify and provide in writing any deficiencies in the plan.

Fergus Electric, in accordance with HB0490, will submit to its Board of Trustees an updated plan every three years. Associated incremental costs associated with implementing the WMP will also be presented for consideration when reviewing the plan.

## Appendix A: Plan and Mapping Disclaimers

### **WILDFIRE MITIGATION PLAN DISCLAIMER**

The information provided in this report was developed by Fergus Electric staff and is intended for Fergus Electric's internal planning purposes only. Fergus Electric does not warrant the accuracy, reliability, or timeliness of any information in this report, and assumes no liability for any errors, omissions, or inaccuracies in the information provided. Fergus Electric shall not be held liable for losses caused by using this information. Portions of the data may not reflect current conditions. Any person or entity who relies on any information obtained from this report, does so at their own risk. This report is presented solely for internal use AS-IS by Fergus Electric staff. Fergus Electric make no representations or guarantees expressed or implied regarding the accuracy or completeness of the report.

### **WMP MAPPING DISCLAIMER**

Maps in this report were created from multiple datasets from various, public, and private sector sources and may include utility Geographic Information System (GIS) data. The geographic information contained in the map(s) is not to be used as a "legal description" or for any purpose other than general planning and reference. Every effort has been made to ensure the accuracy of the map(s), but errors in source documents do occur and inherent mapping ambiguities are not shown.

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## Appendix B: HB-0490 Cross Reference Table

| HB-0490            | Guidelines Regarding Wildfire Mitigation Plans   | Plan Section Number |
|--------------------|--|---------------------|
| <b>Sect 2, (1)</b> | an electric facilities provider shall prepare a wildfire mitigation plan in accordance with this section and submit the plan to its approval authority and commence implementation of its wildfire mitigation plan no later than December 31, 2025. an electric facilities provider shall resubmit an updated or subsequent wildfire mitigation plan to its approval authority at least every 3 years.   | 8.5                 |
| <b>Sect 2, (2)</b> | A wildfire Plan must include a description of:   |                     |
| <b>(2)(a)</b>      | Areas in which the electric facilities provider has electric facilities or electric transmission and distribution activities that may be subject to heightened risk of wildfire;   | 2.4, 2.5, 2.6       |
| <b>(2)(b)</b>      | the strategies and programs that the electric facilities provider will use to inspect and operate its electric facilities;   | Ch. 5               |
| <b>(2)(c)</b>      | the strategies and programs that the electric facilities provider will use to perform vegetation management;   | Ch. 6               |
| <b>(2)(d)</b>      | the strategies for modifications or upgrades to electric facilities and preventative programs that the electric facilities provider may employ to reduce the risk of its electric facilities igniting a wildfire;  | 3.3, 4.1, 4.2       |
| <b>(2)(e)</b>      | the strategies and methods for de-energizing power lines and modifying electric facility operations to mitigate potential wildfires taking into consideration the ability of the electric facilities provider to reasonably access the proposed electric facility to be de-energized, the balance of the risk of wildfire with the need for continued supply of electricity to a community, and any potential impact to public safety, first responders, and health and communications infrastructure; | 3.1, 3.2            |



|                    |  |            |
|--------------------|--|------------|
| <b>(2)(f)</b>      | the methods the electric facilities provider intends to use to restore its electrical system in the event systems are de-energized for the prevention of a wildfire;   | 7.3, 7.3.1 |
| <b>(2)(g)</b>      | the estimated incremental costs associated with implementing the plan, including system improvements and upgrades for a regulated utility;   |            |
| <b>(2)(h)</b>      | community outreach and public awareness efforts before and during a wildfire season; and   | 8.3        |
| <b>(2)(i)</b>      | potential participation, if applicable, with state or local wildland fire protection plans or wildfire mitigation plans.   | 1.3, 8.3   |
| <b>(3)</b>         | An electric cooperative must present incremental costs associated with implementing a wildfire mitigation plan to its APPROVAL AUTHORITY for consideration when reviewing the plan; HOWEVER, those costs may not be a part of the wildfire mitigation plan itself          | N/A        |
| <b>(4)</b>         | For the purposes of [sections 1 through 3], APPROVAL AUTHORITY FOR AN electric facilities PROVIDER'S WILDFIRE MITIGATION PLAN SHALL:   |            |
| <b>(4)(a)</b>      | initially review an electric facilities provider's wildfire mitigation plan;   | 8.5        |
| <b>(4)(b)</b>      | consider any input from a federal, tribal, state, or local entity, or other interested persons during a public comment period not to exceed 45 days; AND   | 8.5        |
| <b>(4)(c)</b>      | after a public meeting and no more than 60 days after the close of public comment:   | 8.5        |
| <b>(4)(c) (i)</b>  | approve the wildfire mitigation plan or identify any deficiencies in the plan; and   | 8.5        |
| <b>(4)(c) (ii)</b> | provide required modifications in writing with the opportunity for the electric facilities provider to correct the deficiencies and resubmit the plan for approval.  | 8.5        |
| <b>(5)</b>         | the department and Montana disaster and emergency services shall review a wildfire mitigation plan submitted to the commission and within the public comment period provide comments and recommendations regarding aspects of the plan within each of their jurisdictions. |            |
| <b>(6)</b>         | the approval authority shall approve the wildfire mitigation plan if the approval authority determines the wildfire mitigation plan contains the required components in subsection (2), is in the public interest,   |            |

|            |  |     |
|------------|--|-----|
|            | and reasonably balances the incremental costs of implementing the plan with the risk of a potential wildfire.  |     |
| <b>(7)</b> | no later than June 1 of each year, the electric facilities provider shall submit to its approval authority a report summarizing the electric facilities provider's wildfire mitigation efforts and compliance with its currently authorized wildfire mitigation plan.  | 8.4 |
| <b>(8)</b> | In accordance with the Montana Administrative Procedure Act, the commission may make any necessary rules establishing procedures for the review and comment on a regulated utility's wildfire mitigation plan, including for the appointment of a technical master to determine whether the wildfire mitigation plan contains the required components in subsection (2). |     |

## Appendix C: Mapping Sources

- Bureau of Land Management. (2024). BLM MT SMA Surface Ownership Polygon (November 19, 2024) [Data Set]. Bureau of Land Management. <https://gbp-blm-egis.hub.arcgis.com/datasets/BLM-EGIS::blm-mt-sma-surface-ownership-polygon/about>.
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