

[EXTERNAL] 22-00154-UT-2024-05-01-PNM Wildfire Mitigation Plan 2024 and Public Safety Power Shutoff Plan

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Good afternoon,

Attached for filing today in the above-referenced case is PNM's *Wildfire Mitigation Plan 2024 and Public Safety Power Shutoff Plan*.

Thanks,

Phillip Metzger

Sr. Project Manager

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everyone goes home safe

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May 1, 2024

Ms. Melanie Sandoval
Records Bureau Chief
prc.records@prc.nm.gov

Subject: Public Service Company of New Mexico's Wildfire Mitigation Plan 2024
and Public Safety Power Shutoff Plan (Case No. 22-00154-UT)

Dear Ms. Sandoval:

Public Service Company of New Mexico's ("PNM") hereby submits its revised Wildfire Mitigation Plan 2024, as an update to PNM's Response to November 8, 2022 Bench Request filed in this docket on November 17, 2022. PNM also includes for informational purposes a copy of its Public Safety Power Shutoff Plan ("PSPS Plan"), which is referenced in the Wildfire Mitigation Plan. The PSPS Plan is also being separately filed with the Commission in compliance with Rule 17.9.560.15.F NMAC **Curtailment of Service Plan** ("Rule 560"), and Paragraph 11 of the Final Order issued in NMPRC Case No. 12-00089-UT ("Final Order"). Rule 560 requires utilities to periodically review and update curtailment plans and to file public summary versions of those plans with the Commission for informational purposes.

If you have questions or need further information in this regard, I can be reached by phone at (505) 241-2845.

Sincerely,

/s/ Phillip Metzger

Phillip Metzger, Senior Project Manager
PNM Regulatory Policy & Case Management
Public Service Company of New Mexico

Attachments:

PNM Wildfire Mitigation Plan 2024
Public Safety Power Shut-Off Plan

Cc: COS for Case No. 22-00154-UT

Commissioner James Ellison – NMPRC
Judith Amer – NMPRC
Commissioner Gabriel Aguilera – NMPRC
Jennifer Baca – NMPRC
Cynthia Enriquez – NMPRC
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GCG#532435

Attachment 1

PNM Wildfire Mitigation Plan 2024



Wildfire Mitigation Plan (WMP) 2024



Talk to us.



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Appendix A – Hazardous Fire Areas – Detailed Maps

ABBREVIATIONS AND ACRONYMS

APP	Avian Protection Plan
BLM	Bureau of Land Management
CMR	Crisis Management and Resilience Team
CorpComms	Corporate Communications
CSP	Completely Self Protected
CWA	County Warning Area
DGIS	Drafting and Geographic Information System Department
DOC	Distribution Operations Center
DSC	Distribution Standards Committee
EEI	Edison Electric Institute
EPRI	Electric Power Research Institute
FFWW	Fire Weather Watch
FWZ	Fire Weather Zone
Fire Hx	Fire History
GIS	Geographic Information System
HFA	Hazardous Fire Area
ICS	Incident Command System
IFD	Internal Fault Device
kV	kilovolt
LiDAR	Light Detection and Ranging Remote Sensing Method
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NWS	National Weather Service
OMS	Outage Management System
PNM	Public Service Company of New Mexico
PNMR	PNM Resources
PSA	Predictive Service Area
PSPS	Public Safety Power Shutoff
PWOPS	Power Operations Department
RAWS	Remote Automated Weather Station
REA	Rural Electric Association
RFW	Red Flag Warnings
ROW	Right-of-Way
SA	Situational Awareness
SCADA	Supervisory Control and Data Acquisition
T&D	Transmission and Distribution
TNMP	Texas-New Mexico Power Co.
USFS	United States Forest Service
VM	Vegetation Management
WECC	Western Electricity Coordinating Council
WHP	Wildfire Hazard Potential
WMP	Wildfire Mitigation Plan

Executive Summary

PNM strongly believes in the safety of our customers, their communities, and our employees. Additionally, we are dedicated to delivering reliable, affordable energy. To achieve this, PNM developed this Wildfire Mitigation Plan (WMP) and has placed an emphasis on:

- Enhancement of on-the-ground situational awareness (SA).
- Prioritization of vegetation management work.
- Hardening of our electric system.
- Collaborating with stakeholders to seek input on how we can best communicate and alert customers and communities about wildfire and wildfire risk.

This plan will be reviewed annually prior to wildfire season and revised as needed. This WMP provides information on PNM's progress and work to date along with advancement toward our mitigation objectives. The document is available on PNM.com/wildfire-safety.

Some of the changes and advancements to PNM's wildfire risk strategies and program over the past year include the following:

- Change of structure within Vegetation Management (VM) and the Wildfire Group - the positions of Wildfire Manager and Wildfire Program Manager have been filled to help shepherd wildfire strategies and planning forward.
- PSPS Engagement with government and industry entities, the public, and electric utility peers.
- PNM has conducted remotely sensed data collection throughout its HFAs, including the collection of high-resolution imagery and Light Detection and Ranging (LiDAR), which is being used to implement multiple WMP recommendations.
- PNM has created specific and targeted operations and maintenance practices, system hardening programs, VM, and field personnel practices to mitigate wildfire risk.
- PNM has increased SA of escalating fire weather conditions and augmented existing plans to reduce ignition likelihood from system operations and from field work.
- PNM has added a fire classification scheme that will govern response, internal reporting, and external communications during wildfire events.
- PNM continues to capture and analyze outage data to use in developing effective risk reduction strategies.
- PNM has developed a Public Safety Power Shutoff (PSPS) Plan as part of operational mitigation practice. The PSPS will, if initiated, de-energize electrical facilities in extreme wildfire risk areas to reduce the potential of those facilities becoming a wildfire ignition source. The PSPS Plan is available at www.pnm.com/wildfire-safety.
- Engineering testing of various types of equipment.
- Wildfire Prevention and Preparedness Training is required of all field personnel and support (managers and peers).

1.0 Introduction

In recent years, the western United States has seen an increase in damaging wildfire activity. A contributing factor to this increase is climate change. Both climatologists and fire scientists anticipate longer fire seasons and more extreme fire behavior in future years. This new normal will require new coping stratagems. Other important risk factors include human encroachment, historical land management practices, and the health of wildlands and forests.

To address these changing climatic conditions and the associated elevated risks of wildfires, the Public Service Company of New Mexico (PNM) prepared this Wildfire Mitigation Plan (the Plan or WMP). The Plan covers wildfire risk drivers, and programs and strategies to mitigate them.

PNM recognizes that an effective wildfire strategy includes a culture that ranks safety over reliability. PNM has prepared this WMP as part of an organizational philosophy. The key topics include grid design and system hardening, asset management and inspection, Daily Situational Awareness (SA) and forecasting, operational response, vegetation management (VM), and risk-spend efficiency.

WMPs are now required by regulation in several western states, including Utah, Oregon, and California. A Western Energy Coordinating Council (WECC) letter dated May 2019 addressing reliability preparedness outlines higher risk across the Western Interconnection and provides maintenance, planning, operations, and training recommendations in preparation for fire season. The Edison Electric Institute (EEI) and Electric Power Research Institute (EPRI) have both increased their activity regarding wildfire ignition prevention.

This WMP provides details on PNM's current wildfire prevention efforts. It is not intended to be aspirational, nor to address yet-to-be initiated projects or activities. Any forward-looking statements are not a guarantee of future performance or project initiation. Statements and details on PNM wildfire prevention activities are current as of its writing in May of 2024.

1.1 Purpose and Objectives

The WMP summarizes the wildfire risk awareness and mitigation strategies that are part of PNM's fire-safe culture.

The WMP is a living document, changing as plan milestones are met and risk mitigation capabilities grow and change. The WMP serves as a blueprint to help reduce the risk of PNM transmission and distribution (T&D) infrastructure or operations from being the cause of unwanted wildland fire ignitions. The Plan also addresses strategies, technologies, and operating guidelines to enhance grid resiliency and public safety. PNM continues to collect ignition data and review it for trends that could point to new mitigation tactics.

1.2 Overview of PNM

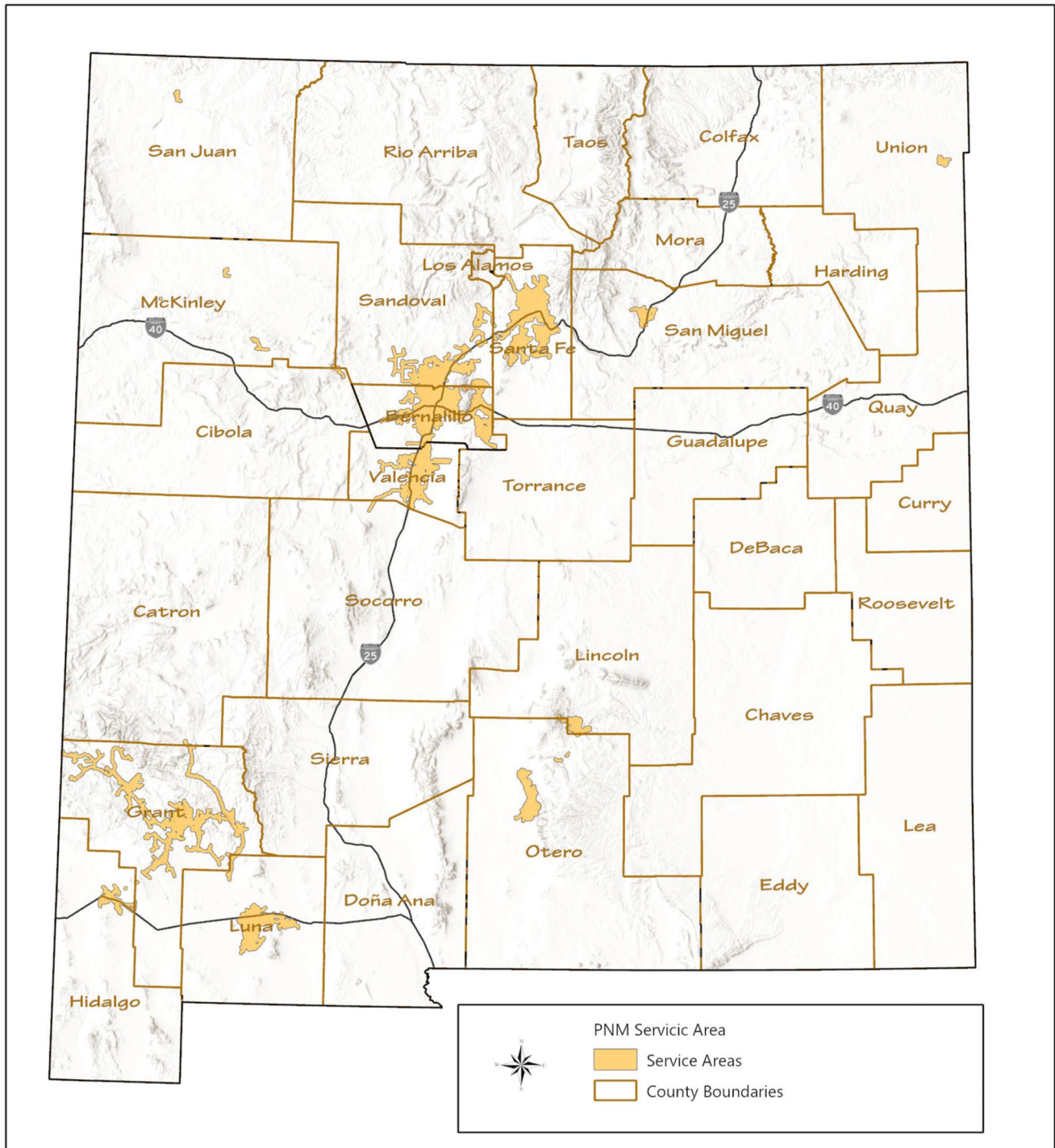
PNM, in operation since 1917, is a subsidiary of PNM Resources Inc., which is an investor-owned holding company headquartered in Albuquerque, New Mexico, engaged in the generation, transmission, and distribution of electricity. PNM is regulated by the Federal Energy Regulatory Commission (FERC) and the Public Regulation Commission (PRC) in New Mexico and the Public Utility Commission (PUC) in Texas. PNM serves 739,000 electric customers via 4,143 miles of powerlines and approximately 75,000 acres

of right-of-way (ROW) easements. Of this, approximately 25,000 acres of ROWs require active VM. This WMP addresses the portion of PNMR's facilities in New Mexico (**Figure 1**).

1.2.1 New Mexico Flora and Geography

New Mexico has mostly hot, semiarid, or semiarid-continental climate regimes. New Mexico contains semiarid shrub- and grass-covered plains, forested mountains, glaciated peaks, woodland- and shrubland-covered hills, lava fields and volcanic plateaus, river floodplains, and arid deserts. Many species of grasses grow in sparsely distributed bunches. Grama grass is typical. Groundcover generally is sparse with broad areas of exposed soils. In eastern New Mexico, the grasslands grade into savanna woodlands or semi-deserts composed of shrubs and trees adapted to survive in areas with little water. Cacti are present in some places. These areas support limited grazing but are generally not moist enough for crop cultivation without irrigation. Riparian areas support cottonwood and willow. Mountains support a complex of conifers, ranging from pinyon-juniper on the lower slopes, ponderosa pine on mid-slopes, and mixed conifers (e.g., white fir, Douglas fir, Engelmann spruce and sub alpine fir) at high elevations.

Figure 1. PNM Service Area



2.0 Risk Analysis and Identification of Hazardous Fire Areas

2.1 Service Territory Risk Assessment

PNM continues to assess its wildfire risks and mitigation efforts and apply best industry practices and strategies to further reduce wildfire risks. These assessments and recommendations comprise this WMP.

PNM's risk assessment methodology is consistent with conventional definitions of risk, which usually include an event's probability, and its potential negative consequences or impacts. Data inputs used to determine fire probability include:

- Historical weather (temperature, wind speed/direction, relative humidity)
- Topography
- Types of fuel present
- Fuel moisture content (both dead and live fuels)

Using this information, the consequences of a fire may relate to the number of structures (i.e., homes, businesses, other manufactured structures) or the risk to natural resources that may be impacted by a wildfire.

A landscape level assessment of wildfire potential is essential to understanding wildfire risk. Using GIS, PNM completed an assessment of wildfire risk across its service area to identify locations of highest risk, which are called Hazardous Fire Areas (HFAs) (see **Figure 2**). The HFAs overlap a significant portion of National Forest Lands where PNM has active Special Use Permits and special operating conditions apply. The United States Forest Service (USFS) boundaries are also shown in **Figure 2**. Fire Weather Zones (FWZ) are areas with similar climate, weather, and terrain characteristics. There are 21 FWZs in New Mexico of which PNM's HFAs straddle thirteen. The National Weather Service (NWS) issues Red Flag Warnings (RFW) per FWZ. Detailed maps of each HFA are in Appendix A.

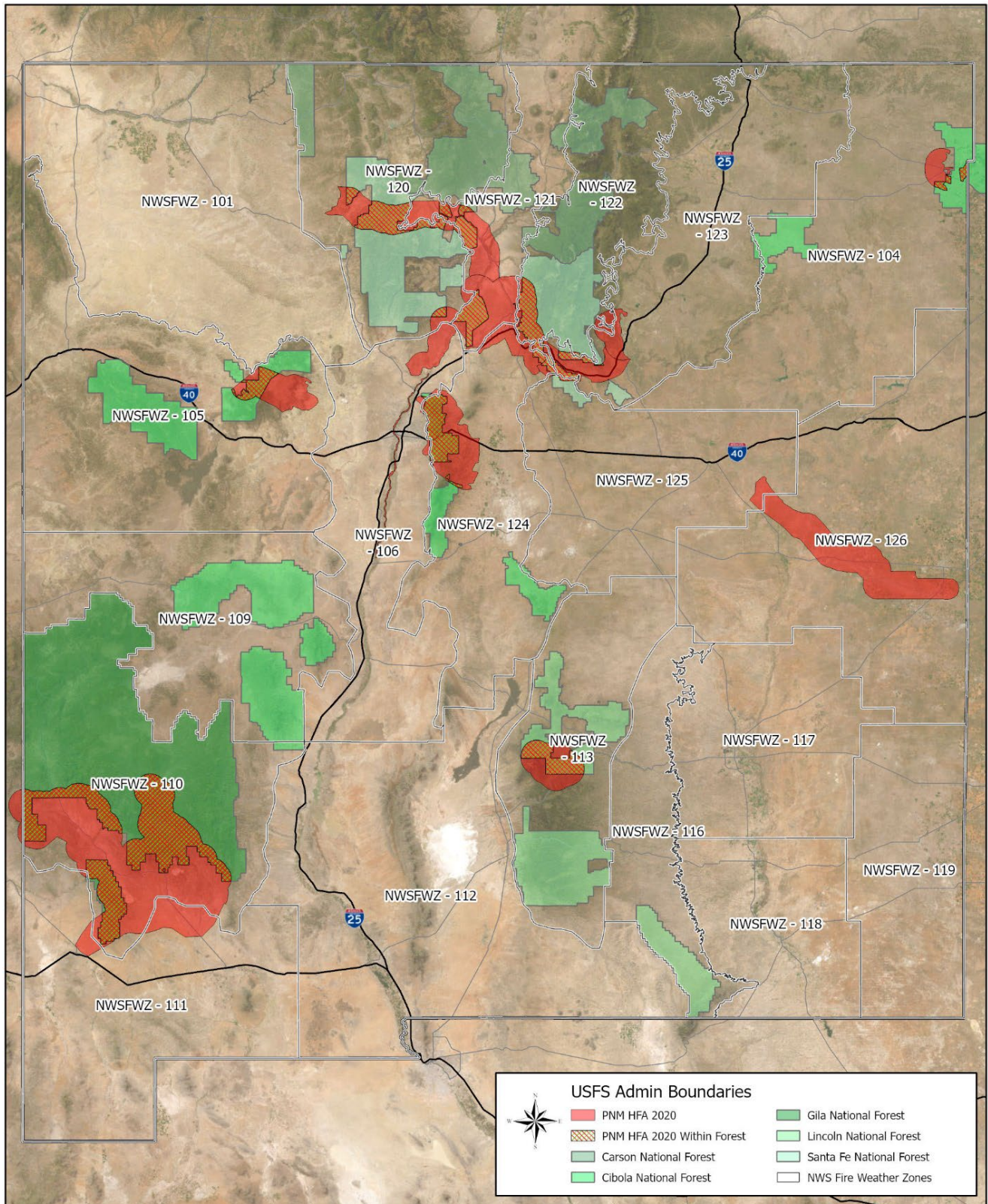
The HFAs are used for various purposes including prioritizing fire hardening activities, enhanced inspection and maintenance activities, fieldwork restrictions during critical fire weather, and making system operation decisions. The PNM HFAs are useful when educating and collaborating with external partners and stakeholders such as abutting electric utilities, and local, state, and federal firefighting agencies.

The HFAs are also used to help guide PNM when siting new facilities such as substations, and communication and relay facilities. These kinds of facilities will not be constructed within an HFA unless the necessity of doing so overrides the ability to choose other non-HFA options. When this is the case, additional mitigation measures will be employed to make them as fire safe as possible.

PNM used a simple process to develop its HFA's based on the publicly available USFS Wildfire Hazard Potential (WHP) dataset, which ranks hazard potential in five classes ranging from Very Low to Very High. Here are the steps that were taken to create PNM's HFA layer:

1. PNM T&D assets were buffered by five miles in GIS creating "Rough HFAs."
2. The Rough HFA was superimposed over the WHP data. Areas of dense Moderate, High, or Very High WHP that fell into the Rough HFA polygon were aggregated or captured into discrete polygons that became HFA areas.

Figure 2. PNM HFAs, USFS Boundaries and Fire Weather Zones



3. In their final format, HFAs were refined so they did not unnecessarily intersect, bisect, or divide feeders. When it was necessary to bisect a feeder, a logical point such as a switch location was chosen.
4. Additionally, historic fire perimeter data from New Mexico state¹ sources were used to inform HFA boundaries.

Table 1 lists the twelve identified PNM HFAs and some of their characteristics. PNM will periodically review HFA boundaries, as necessary. Separate maps of each HFA are found in Appendix A.

Table 1. HFA Names and Characteristics

<i>HFA Name</i>	<i>Type of facility</i>	<i>Area (Sq. mi.)</i>	<i>FWZ²</i>	<i>Predictive service area (PSA) (primary)</i>	<i>PNM Division</i>
Bosque ³	T&D	29	NM 106	SW09 South/Central NM Lowlands	Sandoval Albuquerque Valencia
Clayton East	T&D	13	NM 104	SW13 Northeast NM/NW TX	Clayton
Clayton West	T&D	97	NM 104	SW13 Northeast NM/NW TX	Clayton
Fort Sumner 3	Transmission	819	NM 125 & 126	SW13 Northeast NM/NW TX	Transmission
Las Vegas	T&D	135	NM 122 & 123	SW10 Sangre de Christo Mtns	Las Vegas
Mt. Taylor	T&D	298	NM 105	SW07 Northwest NM Mtns	Ambrosia Lake Marquez
Ruidoso	T&D	312	NM 113	SW12 South/Central NM Mountains	Ruidoso
Sandia Mtns	T&D	492	NM 106 & 124	SW11 Central NM Mtns & Plains	East Mountain
Santa Fe	T&D	961	NM 105, 106 & 121	SW10 Sangre de Christo Mtns SW07 Northwest NM Mtns	Santa Fe
Santa Fe East	Transmission	251	NM 124 & 126	SW10 Sangre de Christo Mtns	Santa Fe
Santa Fe North	T&D	704	NM 120 & 121	SW07 Northwest NM Mtns	Santa Fe
Silver City	T&D	2867	NM 110	SW08 White Mtns & Gila Region	Silver City

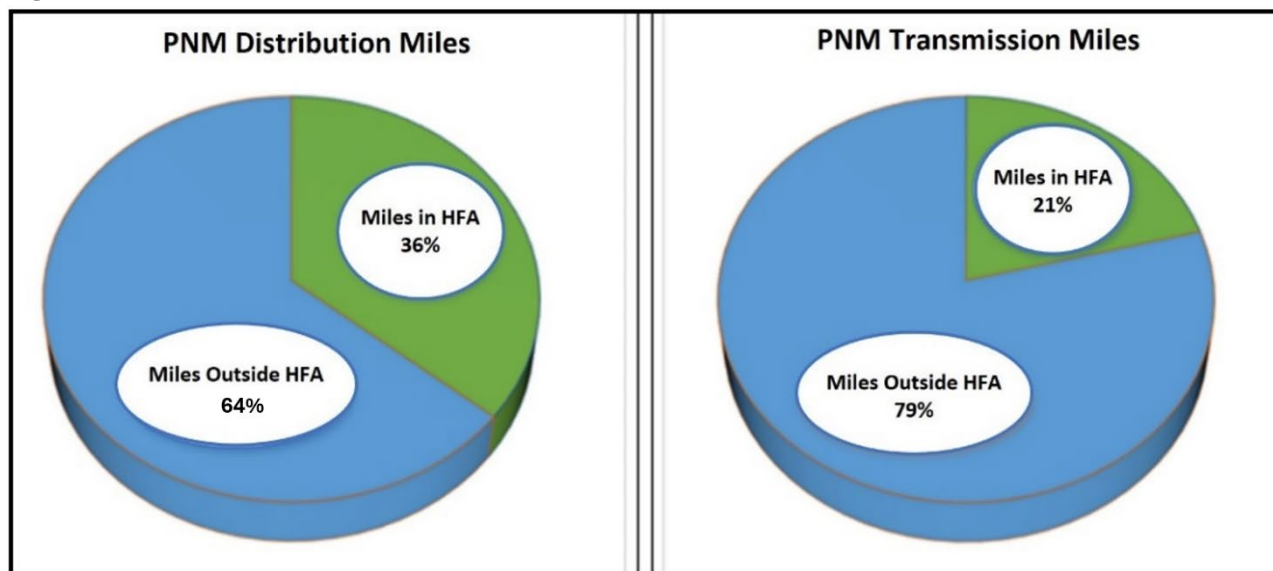
PNM has begun incorporating its HFAs into its business decision-making process. For example, work restrictions, system operations, fire hardening, engineering, and construction considerations, as discussed in other sections of this WMP, are now being informed by HFA boundaries. PNM has broken out its T&D miles inside and outside of HFAs. **Figure 3** shows the percentages of transmission lines to distribution lines inside and outside of the HFAs. Similar projects may be prioritized by whether they are inside or outside an HFA.

¹ Browse rgis.unm.edu data New Mexico Wildland Fire Perimeters 1911-2014

² From the NWS: *This data set is used to delineate the Fire Weather Zones that are used by NWS in the fire weather forecast program.* These are areas of generally homogenous fire weather. Fire Weather Watches, Red Flag Fire Weather Warnings (RFW) and their attendant alerts are issued by NWS Fire Zone. Knowing which Fire Weather Zone, a particular HFA is coincident with is critical when making operational decisions.

³ The Bosque was included as an HFA due to the proximity of abundant fuel load and human development to PNM facilities. This riparian area is dense with cottonwood trees and adjacent to residential developments.

Figure 3. T&D Miles Inside/Outside HFAs



Given that the HFAs represent areas of highest risk driven largely by hazardous fuel conditions within them, it is reasonable to conclude that the HFA also represents areas where PNM facilities are at highest threat from fires of outside origin (non-powerline ignitions).

In 2022 and 2023, PNM collected remotely sensed data (e.g., LiDAR, high-resolution imagery, etc.) along its T&D lines in most of its HFA areas. This data is being used for multiple purposes, including the prioritization of VM work, detailed inspections, and inventories of PNM assets, etc. Remotely sensed data was not collected across some Pueblo Lands. However, these lines have been patrolled as part of other routine PNM patrols.

2.1.1 Use of Artificial Intelligence

In the Spring of 2024 PNM acquired data from Athena Intelligence™ (Athena) to further inform its Landscape Hazard assessment. Athena™ uses artificial intelligence and machine learning to combine diverse publicly available and validated datasets to create “synthetic data.” Some examples of the data Athena™ combines are Wildfire Hazard Potential, Census Block data, USFS fuel data, terrain data, and so forth. **Table 2** lists attributes and descriptions for use with Athena™-derived GIS data.

Table 2. Athena-Derived Attributes and Descriptions

Attribute	Description
County	County where the profile polygon exists.
BLK	Census Block identification.
WUI Class	Designation of housing density and its proximity to wildland fuels.
BLK_ID	Combination of the three above.
Conditional Risk	A ranking of Very Low to Very High that describes an areas' potential to host a wildfire.
Conditional Risk Score	Ranges from 1-16.
Locational Risk Score	Ranges from 2-34.
Combined Risk	Six class ranking from Very Low to Very High that combines Conditional and Probability scores.
Burn Probability	Ranges from VL to VH and describes the probability of a wildfire's occurrence at a Block.
Risk Score	Range from 2-10. Combination of Conditional Risk and Probability Risk.
Risk Units	Ranges from 1-48.

2.1.2 HFA Planning and Maintenance

Short-term

1. HFA boundaries are being used to prioritize immediate work.
2. HFAs are being used to prioritize enhanced inspection and maintenance cycles.
3. Planning and budgeting continue to be sought to forecast future work in HFA areas.
4. \$5.5 million has been set aside for VM within the Gila NF. This work started in 2023.
5. HFAs are being used to help focus situational awareness (SA) of fire weather in upcoming fire seasons.

Mid-term

The WMP is a living document and is reviewed annually to incorporate changes and updates. HFA layers are updated as needed.

Long-term

PNM is researching various mountaintop camera options, costs to operate and locations to place them. PNM is considering fully funding or partnering with agencies for meteorological stations and fire cameras in its HFAs.

2.2 PNM's Geographic Information System HFA Layer

PNM's Drafting and Geographic Information System Department (DGIS) manages the GIS HFA layer. **Table 3** provides a data dictionary for the shapefile. Each HFA is attributed with the information contained in these cells. **Table 1**, above, provides a quick reference look at each HFA polygon and how it interacts with other spatial data of interest.

Table 3. HFA GIS Shapefile Attributes and Descriptions

Attribute	Description
HFA Name	Each HFA has a unique name. In most cases the name corresponds to the general geographic area or a prominent landmark nearby.
Utility Discipline	Utility Discipline describes the general voltage class(es) found in the HFA. The values available are Transmission, Distribution, or T&D.
County (Warning Area)	County Warning Areas (CWA) boundaries are used to delineate the area of responsibility for each Weather Forecast Office. From the NWS: <i>“The group of counties for which an NWS Forecast Office is responsible for issuing warnings.”</i>
NWS Fire Zone	From the NWS: <i>This data set is used to delineate the FWZ that are used by NWS in the fire weather forecast program.</i> These are areas of homogenous fire weather. FWW, RFW and their attendant alerts are issued by NWS Fire Zone. Knowing which FWZ, a particular HFA is coincident with is critical when making operational decisions.
PSA	PSA describes 7-day significant fire potential in pre-defined areas of homogenous fire risk. It is issued by the Southwest Coordination Center about 10:00 MT daily during “fire season.” https://fsapps.nwcg.gov/psp/npsg/download.html
Acres	GIS calculated acres for each HFA polygon.

2.3 Substation Assessment

Although equipment fires in substations are rare, they are typically high consequence events. To determine which substations were at highest risk of an internal equipment fire spreading and causing damage outside its perimeter, an on-site assessment was performed on thirty-eight substations throughout New Mexico.

In general, the assessment looked at the configuration of the substation itself, its siting on the landscape relative to wildland fuels, and the proximity of any residential or other development at risk. GIS was used to determine which PNM substations were within an HFA or within a 500-foot buffer of an HFA. Of the original fifty-six candidate substations, aerial imagery was used to eliminate eighteen substations based on location and proximity to wildland fuels, and assets at risk (development). Site visits were performed on the remaining thirty-eight substations. Each substation visited was assessed and risks mitigated. Evaluation of conditions at all substations will be an ongoing effort.

Response from appropriately trained personnel equipped with suppression resources may be delayed or unavailable. Having a pre-fire response plan that includes appropriately equipped and trained first responders could be important if there is a catastrophic equipment failure resulting in a fire. Proper vegetation maintenance inside and outside its perimeter, and good housekeeping routines within the confines of a substation help to minimize the risk of an equipment fire spreading to surrounding areas.

The most at-risk substations receive regular vegetation maintenance, containment for exposed equipment such as transformers and capacitors, and solid, non-combustible fencing where there is a danger of fire spreading through the fence and outside the perimeter. Security fencing helps prevent vandalism and its potential to cause fires.

Table 4. Description of Select Attributes

Perimeter fencing	Was the fencing solid, chain link, or did it have slats.
Development proximity	How far away from the substation were homes, businesses or other improvements that could be damaged by fire.
Landscape & irrigation	Presence of landscape and irrigation outside the fence.
Fuel reduction	Distance of any fuel reduction from the perimeter fence.
Fuel type in proximity	Type of fuel in general proximity to the substation. An indicator for fire ignition and fire intensity.
Equipment containment	Transformers with / without blast walls, capacitors exposed or contained.
Substation profile	Equipment at ground level or elevated above. Elevated would indicate higher chance of equipment fire escaping.
Fire Water score	Whether or not water for fire suppression was available.
Final Tally	Total score of all attributes.
Exposure/Encroach	Indicates presence of, and urgency of, remediation for any vegetation or timber posing a threat.

Table 5. Substation Assessment Attributes

Substation name	Fuel type in proximity
	Brush - 5
	Grass - 3
	No vegetation - 0
Voltage class	
	Equipment containment
Perimeter dimensions	Transformer without blast wall - 5
	Transformer with blast wall - 0
	Capacitor bank exposed - 5
Access road	Capacitor bank contained - 0
Paved	
Gravel	
Graded dirt	Substation profile
	high profile - 5
	low profile - 0
Suitable for safe refuge	
Yes	Is firefighting water available?
No	No - 5
Limited	Yes, Inside fence - 2
	yes, outside fence - 0
Perimeter fence material	
Open chain link - 5	Exposure/encroachment Issue
Chain link w /slats - 3	5 - Immediate need, <u>URGENT</u>
Concrete block - 0	4 - Delayed
	2 - Before fire season / wind event
Development in proximity regardless of fencing or vegetation	1 - Perform during scheduled maintenance
Within 100' of perimeter - 10	
Beyond 100' of perimeter - 0	
	TOTAL SCORE:
Landscaping / Irrigation outside fence	<input type="text"/>
No - 5	
Yes - 0	

3.0 Overview of Preventive Programs and Strategies

3.1 Remotely Sensed Data Collection

In 2022 and 2023, remotely sensed data, including LiDAR and high-resolution imagery, were collected via helicopter for 98 percent of all overhead T&D lines in the HFAs; the exception being a few line segments in Pueblos over which PNM was not able to get permission to fly. This data is an invaluable component of several of PNM's wildfire risk mitigation efforts, i.e., it is being cost-effectively applied to support multiple use cases. For example, the data is currently being used to support functions including:

- VM analyses and reports
- Assessment of facility conditions, inventorying, and maintenance
- Assessment of facilities susceptible to wildlife-caused outages
- Engineering
- Asset retrofitting, refurbishment, and rebuilding

Some of the activities that are leveraging the remotely sensed data are described more fully in the sections that follow.

PNM has utilized the findings from the initial remotely sensed data collection to inform and schedule additional data collection efforts. Continued inspections, be they cyclical or on an as-needed basis, continue to be evaluated.

3.2 Vegetation Management (VM)

3.2.1 VM Program Overview

PNM's VM program is designed to promote the safe and reliable operation of its lines systemwide, and to comply with the requirements of Section 218 of the National Electrical Safety Code (NESC). The program is headed by an Associate Director of VM & Wildfire. Day-to-day operations are supervised by a Vegetation Program Manager and a team of foresters who oversee the work of tree crews responsible for pruning and clearing vegetation near PNM's T&D facilities; PNM currently relies on contracted tree crews for field operations.

The VM Department is responsible for inspecting, patrolling, and managing vegetation. PNM follows industry-standard utility VM practices and techniques as set forth in the American National Standard Institute's A-300 standard, including natural directional pruning to promote regrowth of the tree away from powerlines. PNM has species-dependent clearance specifications that are common in the industry, including a three-year new growth allowance between maintenance cycles. PNM uses vegetation-related outage data, patrol results, and customer requests to inform its workflow. Specific components and attributes of the VM program are described more fully below.

Transmission

Lines that fall under the North American Electric Reliability Corporation's (NERC) Reliability Standard FAC-003-4 (200 kV and greater) are patrolled annually with no longer than 18 months in between patrols. The remainder of the transmission system is patrolled on an as-needed basis with a focus on areas known to have rapid vegetation growth due to species, site conditions, and proximity to water as in riparian areas. Tree crews perform VM work along lines that fall under NERC jurisdiction on a five-year

cycle to maintain clearances and control undesirable vegetation. VM work on lines outside of NERC jurisdiction occurs on an as-needed basis as determined by patrol information, tree-related outages, work requests and/or field observations.

From 2014 through 2018, PNM completed a project to clear incompatible tree species along the entire legal width of the ROW of all NERC lines. The project encompassed nearly 1,100 miles of transmission lines or approximately one-third of PNM's transmission system. Most of these lines were in the northern portion of New Mexico and traverse multiple HFAs.

These lines are now being maintained on a five-year cycle leveraging Integrated Vegetation Management (IVM) techniques to control re-establishment of incompatible species. This is a long-term, sustainable approach that reclaims the ROW and effectively manages the future vegetation workload.

The VM department provides regular updates to PNM's internal compliance department regarding NERC compliance efforts. PNM has participated in multiple NERC Regional Entity, WECC, compliance audits and has been found to be compliant with the specified requirements.

Distribution

Systemwide, VM work is performed according to a schedule determined at the beginning of each year. The schedule is created based upon available vegetation-related outage data, customer requests and observed field conditions, and focuses on the three-phase portions of circuits. Other portions of the circuits, such as secondary lines, are addressed on an as-needed basis or during capital work.

Adjustments to the distribution VM work scope may be made when performing work in the HFAs. For example, all parts of scheduled circuits would be worked rather than just the three-phase portions.

Dedicated patrols are performed on circuits identified for capital work to document capital maintenance items in need of repair and to identify VM work to be completed prior to the capital maintenance work commencing.

VM Metrics for T&D

Currently, the VM Department tracks contractor performance metrics, including the miles of VM preventive maintenance and reactive maintenance work completed for both T&D assets. Costs per mile are tracked and available for analysis. PNM captures data on its annual plan completion and annual inspections for transmission vegetation management, which is used to demonstrate compliance with NERC standard FAC-003-4. Other workload and work management information is collected and analyzed in a GIS-enabled software system.

Enhanced Inspections/Clearing

Enhanced vegetation inspections and clearing may occur within PNM's HFAs in accordance with results derived from remotely sensed data collection efforts including the following: 1) the collection of data in 2014 on all lines under NERC jurisdiction prior to the ROW-clearing project; and 2) the HFA-wide effort that captured remotely sensed data for almost all T&D lines in PNM's HFAs.

Requirements for Contracted Tree Crews

PNM's VM contractors are required to have a well-developed wildfire prevention program that includes annual training for all employees. They are also required to have firefighting tools on all their trucks and to stage their tools at each job site, so they are ready to use at a moment's notice to suppress unwanted ignitions. PNM foresters make regular field visits to monitor work by tree crews for compliance; job safety tailboard sessions are routinely assessed during site visits. PNM's RFW communication protocol includes VM contractors.

3.2.2 VM Plan Advancement for Wildfire Risk Mitigation

As part of PNM's ongoing efforts to enhance its VM activities in support of the goals of the WMP, PNM has:

- Collected remotely sensed data (i.e., LiDAR, high-resolution imagery) for nearly all of PNM's T&D lines within the HFAs and analyzed the data to assess the potential need for VM work.
- Developed a Formal Utility Tree Risk Assessment (UTRA) policy.
- Created SA capabilities for various activities that include escalating weather mitigation matrices/Created SA capabilities for various activities that include escalating weather mitigation matrices.
- Annually performed vegetation inspections in HFAs for VM needs to mitigate wildfire ignition potential.
- Tracked VM metrics to drive and inform work needed.
- Increased data sharing across business units to improve efficiencies and reduce risks through better collaboration.

3.3 Inspection, Inventorying and Maintenance of Overhead Lines

PNM has implemented a multifaceted approach to the inspection and maintenance of overhead T&D facilities in the HFAs consisting of the following key activities:

- Virtual Inspections: Virtual visual inspection of most PNM's overhead T&D facilities within the HFAs is complete. This virtual inspection leveraged the high-resolution imagery captured during the remotely sensed data-collection effort mentioned throughout this section.
- Planning for Ongoing Cyclic Inspections: In parallel with the above-mentioned virtual inspections, PNM has been assessing its ongoing needs for diverse types of cyclic inspections of overhead T&D lines in the HFAs and analyzing budgetary requirements. It is anticipated that some of these cyclic inspections will be initiated for lines in the HFAs and that the overall inspection program will evolve and advance as more types of inspections are integrated into the program over the next couple of years.
- Asset Inventory: PNM also virtually inventoried the assets subject to the above-mentioned virtual visual inspections. This inventory data will be integrated into PNM's GIS and will be invaluable as PNM moves forward with other wildfire ignition mitigation efforts (e.g., responding to equipment failures, mitigation of wildlife caused issues, retrofitting and/or replacing expulsive equipment, and more). This information is providing PNM with the ability to efficiently perform many of its other planned wildfire ignition risk mitigation activities such as identifying equipment poles and other pole and span configurations that might need some form of mitigation for

ignition risks, retrofitting existing lines, prioritizing lines approaching end-of-life for rebuilding and/or refurbishment, etc.

- Aerial Patrols of NERC Transmission Lines: All transmission lines within the HFAs that are under NERC jurisdiction are aerially patrolled annually to identify conditions warranting mitigation.
- Asset Inspections During VM Patrols: VM inspectors record asset damage and report it to the local business unit when damage is identified.
- Inspection Data Collection System: PNM has developed an enhanced system for T&D inspection and maintenance data collection and management. It has been implemented for transmission and will also be implemented for distribution. This GIS-based platform enables the collection, viewing and reporting of both virtual and boots-on-the-ground inspection data and incorporates attributes that will aid PNM's wildfire risk mitigation efforts. The data from the system also integrates with the dashboards mentioned earlier in this section.
- Corrective Maintenance: PNM performs corrective maintenance based on the findings of inspections of overhead line facilities in its HFAs within two broad categories of response times: Priority 1) inspection findings that represent imminent safety, wildfire ignition, or reliability threats are dispatched to the relevant service centers for immediate mitigation, and these items are typically addressed within 24 hours, and Priority 2) depending on their severity, all other findings are addressed during scheduled maintenance or may be monitored during subsequent inspections.

3.4 Overhead Power Delivery Infrastructure Advancements

PNM designs, constructs, and retrofits its facilities to meet customer and utility needs in a safe and reliable manner, and in alignment with the requirements of the NESC provisions for Grade B construction and other applicable standards. For existing and new facilities within its HFAs, PNM has implemented and/or is in the process of implementing several enhancements that will aid its efforts to mitigate wildfire ignition risks associated with its overhead lines. In addition, PNM actively monitors research and development (R&D) activities, innovative technologies, and relevant literature. PNM also participates in industry working groups and associations to keep abreast of best practices. Summaries of these efforts are provided below.

3.4.1 Line Design, Construction, Retrofitting and Operating Enhancements for HFAs

Summaries of line design, construction, retrofitting and operating enhancements PNM has completed, is implementing, and/or is investigating are provided below.

Communications Infrastructure and Electrical Devices

- Communications Infrastructure: PNM is upgrading, expanding, and hardening communications infrastructure in its HFAs. This infrastructure will give PNM the ability to replace manually operated equipment with SCADA connected and remotely operable equipment; utilize more advanced and sensitive devices; and integrate sensors for monitoring line and/or environmental conditions thereby improving SA, etc.
- Capacitor Banks: New installations and replacements of capacitor banks are being equipped with SCADA communications to enable the sending of real-time data back to PNM's Distribution Operations Center (DOC). A feature included in the bank is neutral current sensing which can detect imbalances that can be caused by a blown fuse, a bad capacitor can or a stuck switch. These problems can cause a fire hazard if left untreated, and a neutral sensor can indicate a

problem where the capacitor bank needs to be inspected. These issues otherwise go undetected until an employee inspects the capacitor for another reason.

- Reclosers, Relays and Fault Locating Sensors: PNM is evaluating a variety of advanced SCADA-connected reclosers, relays and fault sensor technologies for possible implementation in HFAs both for new construction and as replacements for existing equipment that is not remotely operable/adjustable (e.g., older reclosers).
- Switches: PNM's current standards for new switches include interrupters that are appropriate for use in its HFAs. PNM is considering replacing older switches with air gaps in the HFAs. PNM is also increasing its use of SCADA connected switches which will assist with troubleshooting, and provide more flexibility for sectionalizing, etc.
- Fuses and Lightning Arresters: PNM is replacing expulsive fuses and lightning arresters in its HFAs with non-expulsive alternatives where prescribed; replacement activities will be ongoing for several years. In addition, a pilot project has been initiated to evaluate the use of devices that are akin to mini-reclosers that can be installed in cutouts as a replacement for conventional fuses.
- Enhanced Protection Schemes and Protection Coordination: PNM is actively working on efforts to enhance the coordination of system protection devices and to establish guidelines for settings to be applied in HFAs during fire season and under Red Flag conditions.
- Transformers with Internal Fault Detectors: PNM has developed an approved specification for transformers with Internal Fault Detectors (IFD). IFDs help to quickly identify problems with transformers and thereby lessen the chances of closing in on a faulted transformer and potentially causing an arc, fire, or other issue. Implementation has been slow due to supply chain issues beyond PNM's control. New transformer designs include IFDs, and all transformers are expected to have new designs before the implementation date of DOE's new efficiency standards (which is currently set at 2027).
- Fault Protection for Transformers: PNM is implementing the use of completely self-protected transformers (CSPs) for single phase applications in certain portions of its HFAs. CSPs eliminate the use of cutout fuses which, in turn, reduces the likelihood of sparks being generated during operations. In other areas, fuses used on conventional transformers are being replaced with non-expulsive fuses as stated above.
- Covering for Wire Jumpers: PNM has installed covered wires for all equipment jumpers for some time. PNM is researching if wire to wire jumpers should also be covered and if replacing or upgrading bare wire jumpers to covered wires makes sense in HFAs.

Wildlife Protection

Industry data shows that wildlife contacts with energized power delivery facilities are potential sources of ignitions. PNM's Avian Protection Plan (APP) addresses all ten of the Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service (APLIC and USFWS 2005) recommended APP components. PNM regularly updates the APP and actively implements its provisions. The APP includes elements that reduce existing and future electrocution (and ignition) risks through mitigation and wildlife-friendly construction practices. These strategies revolve around the principle of providing adequate spacing for energized and grounded components.

PNM has avian friendly construction design standards to mitigate risk of future wildlife electrocution. These standards provide wildlife-friendly clearances that protect wildlife that might encounter energized

conductors on a pole. Power equipment on avian friendly poles is installed with wildlife protection. PNM's preventive wildlife protection program applies to new construction in habitat areas.

In addition, PNM actively mitigates wildlife electrocution risk on existing infrastructure by installing protective insulation on high-risk poles. Products used to mitigate ("retrofit") in-service facilities include conductor covers, insulated jumper wires, arrester caps, cut out covers, bushing covers, etc. Mitigation products protect not only birds, but climbing mammals and reptiles (e.g., squirrels, raccoons, snakes) that are susceptible to electrocution. PNM prefers to retrofit susceptible equipment when other work is being performed on a line or structure; this practice increases the scale of mitigation that can be funded by available budgets.

When wildlife electrocution risk is mitigated, wildlife-caused ignition risk is concurrently reduced. Although much of PNM's retrofitting is opportunistic (i.e., completed along with other maintenance activities), PNM actively mitigates areas where wildlife electrocutions have negatively impacted reliability. PNM is currently planning an aggressive approach toward wildfire mitigation within HFAs with the goal of reducing the wildlife-caused ignition risk. Through a study completed in 2023, PNM is prioritizing specific lines and structures within HFAs for mitigation. The study results will be used to develop a granular wildfire mitigation plan that will reduce wildlife electrocution risk and wildlife-caused ignition risk within HFAs.

Poles, Conductors, Crossarms and Hardware

- **Poles**: PNM is evaluating the potential for using taller poles to lower the risk of wire contacts with vegetation, using higher class poles with larger diameters to increase resiliency and offset potential loss of strength caused by charring, integrating alternatives to wood poles (e.g., steel, fiberglass, etc.) into its standards for HFAs, and whether application of fire retardants to its wood poles could be advantageous in certain areas. PNM's Distribution Engineering Department is developing a design document with pole material, pole height, pole class, and fire-retardant recommendations.
- **Covered Wire/Tree Wire**: There are advantages and disadvantages to using covered wire/tree wire. PNM is exploring the possibility of using these wire types in forested areas or tight ROWs to mitigate the risk of faults and the associated ignition risks.
- **Span Lengths**: PNM is revising its ruling spans for construction in its HFAs. Reducing the maximum pole to pole span distance in HFAs to reduce wire sag, wire blow-out, and wire movement will help to mitigate the potential for unintentional contact between conductors, vegetation, or other obstructions thereby reducing ignition risks.
- **Crossarms**: PNM standards have shifted to using fiberglass crossarms for all new installations and replacements. This shift will help to eliminate the risks of leakage current igniting crossarm fires. Further, fiberglass crossarms are not subject to decay which can contribute to deterioration of the upper surfaces of wood crossarms that cannot be detected from ground-based inspections. **Primary Connectors**: PNM's current standards for connectors are appropriate for HFAs. However, some substandard connectors (e.g., hotline clamps) that can cause arcing/sparking if they loosen or degrade are still in service. When legacy, substandard connectors are identified through inspections they are being replaced.

Additional Fire Prevention Measures

PNM is upgrading lines in its HFAs that were built to Rural Electric Association (REA) standards to be consistent with PNM's current standards.

3.4.2 Industry R&D, Best Practices, and Continuous Improvement

As part of its commitment to continuous improvement, PNM monitors industry research and related literature, as well as information from the industry on state-of-the-art fire-safe materials and equipment, best practices for construction and design processes, and engineering and tech solutions. For example, PNM attends in-person seminars and webinars hosted by WECC, EEI, and EPRI. These industry-specific organizations are composed of technical working groups, and impart some of the latest information, testing programs, and lessons learned to their participants. PNM also references the Cal Fire Powerline Fire Prevention Field Guide for guidance on best practices.⁴

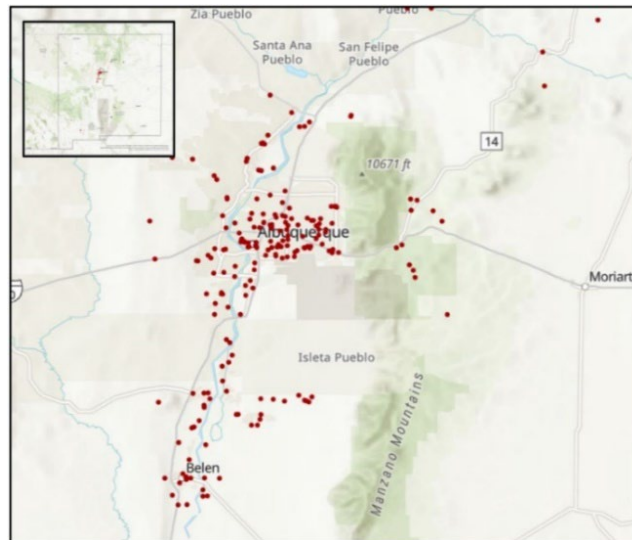
3.5 Leveraging Outage Data for Ignition Management

PNM's existing outage data was used to map the locations of outages and to help validate the Service Territory Risk Assessment section of the WMP and refine the demarcation of HFAs. As an example, the Bosque was known locally to be an area of wildfire concern though it was not specifically highlighted in the USFS WHP data. Mapping outage data (see **Figure 5**) substantiated local knowledge and caused the Bosque to be included as an HFA.

In 2023, PNM added a new data collection field to its OMS to allow more specific ignition data attributes which included evidence of heat, type of equipment involved, and root cause of failure. These enhancements will enable better filtering and analysis of outage records and development of refined reports in support of fire-prevention efforts. Knowing when and where ignitions or near misses are occurring will help PNM enhance its understanding of potential causes of ignitions. The OMS data also includes information such as outage ID, outage start/restore times, duration, customers affected, interrupting device, latitude, longitude, feeder, division, and operator comments.

⁴ https://www.osfm.fire.ca.gov/media/11015/2020-power-line-fire-prevention-field-guide_20200818.pdf

Figure 4. Using Outage Data with Mention of Fire for HFA Identification



3.6 Public Safety Power Shutoff (PSPS)

This WMP focuses on SA, field personnel safety practices and operational wildfire mitigation strategies to prevent the accidental ignition of wildfires. As part of PNM's operational mitigation practices, a Public Safety Power Shutoff (PSPS) Plan has been developed to proactively de-energize electrical facilities in identified areas of extreme wildfire risk to reduce the potential of those electrical facilities becoming a wildfire ignition source or contributing to the spread of wildfires. The PSPS Plan identifies the relevant considerations, process flow and implementation protocol before, during and after a PSPS event. The PSPS Plan will be reviewed annually and updated as needed before the next wildfire season starts, which can vary throughout New Mexico, and is generally considered to extend from April 1 through September 30 of each year. While fire risk is heightened during certain times of the year, fire potential and its monitoring continues year-round.

The Key Objectives of the PSPS Plan include:

- **Safety:** Ensure the safety of the public and PNM employees, contractors, and Mutual Assistance employees.
- **Restoration Time:** Minimize the duration of an outage, with safety as the primary focus.
- **Mitigate consequences:** Provide customer support to mitigate the impact of an outage.
- **Information:** Provide accurate, timely, meaningful information to our customers, our employees, and other stakeholders.
- **Resources:** Effectively manage our human, equipment, material, and information resources to minimize restoration time and maximize productivity and performance.

4.0 Escalating Fire Weather and Operational Strategies

4.1 Annual Fire Prevention and Fire Safety Training

PNM has developed a training program geared toward fire prevention and safety, its Wildfire Mitigation Program, and the HFAs. Included in the training are how the HFAs were developed, what they are used for, how they inform ignition mitigations, and basic training on fire weather conditions, including RFWs. The training also covers basic fire behavior and safety when responding to a wildfire.

4.2 Daily Situational Awareness

PNM receives a Daily SA forecast report prepared by an external contractor and is emailed to a distribution list of targeted PNM personnel. The “Daily SA” as it is called, assigns an Operating Condition of Normal, Elevated, or Extreme to each PNM HFA each day using publicly available data.

PNM has refined how the raw data is interpolated to meet its risk avoidance objectives. Also contained in the Daily SA is information associating PNM HFAs to RAWs and NWS FWZs (see **Figure 6**).

The Operating Conditions inform mitigation efforts for field work such as cutting, grinding, welding and other similar activities. As burning conditions become more critical, mitigations are increased (see **Table 6**).

Figure 5. Sample Daily SA Report

<i>HFA</i>	<i>Operating Condition</i>	<i>RAWS Station</i>	<i>NWS FWZ</i>	Link to WMP Operating Condition section; scroll to appropriate HFA for appropriate work restrictions
Santa Fe North	Normal	Coyote-290202	NM102	
Bosque	Normal	Sandia Lakes-290706	NM106	
Santa Fe	Normal	Santa Fe Watershed-290901	NM102	
Clayton East/West	Extreme	Mills Canyon 291101	NM104	
Santa Fe East	Elevated	Pecos-291202	NM103	
Las Vegas	Elevated	Pecos-291202	NM103	
Mt. Taylor	Normal	Grants-291302	NM105	
Sandia Mts	Normal	Sandia Lab-291408	NM107	
Ft. Sumner	Normal	Melrose Range 291901	NM108	
Silver City	Normal	Gila Center-292011	NM110	
Ruidoso	Normal	Smokey Bear-292203	NM113	

4.3 Escalating Work Restriction Matrices

PNM requires that mitigation measures from the following matrices be used for all at-risk activities in HFAs or in other areas covered in flammable vegetation. Each PNM Division has its own matrix and has

made mitigation recommendations based upon its own field tasks. **Table 6** below identifies the Mitigation Levels used in Matrices 1 through 12, and it provides details on the mitigation levels required for each operating condition in each HFA.

When working on federal lands [USFS, Bureau of Land Management (BLM)⁵, etc.] additional mitigations may be required by the agency including:

- Water buffalos
- Larger (20 lb.) fire extinguishers
- Other mitigation measures as stipulated by the agency.

Table 6. Mitigation Level Table

Mitigation Level A	Mitigation Level B	Mitigation Level C	Special Circumstances
<ol style="list-style-type: none"> 1. Documented Safety Tailboard. 2. At minimum one fire suppression hand tool within one hundred feet of job site or immediately available when the work is mobile. 3. Documented person to call 9-1-1 and provide location and access route for emergency crews. 4. Strict adherence to PNM Smoking Policy. 	<ol style="list-style-type: none"> 1. Work will stop and a new Safety Tailboard will be completed any time fire risk increases, i.e., location or work activity changes, RFW is issued, significant increase in wind at the work site, etc. 2. At minimum two fire suppression hand tool within twenty-five feet of job site for a crew with multiple persons. 3. At a minimum, one PNM approved fire extinguisher or one filled 5 -gallon backpack water pump within twenty-five feet of job site or immediately available when work is not stationary. 4. Documented working Fire Watch person(s) as appropriate on Safety Tailboard. 5. Documented person to call 911 and provide location and access route for emergency crews. 6. Strict adherence to PNM Smoking Policy. 	<ol style="list-style-type: none"> 1. Work will stop and a new Safety Tailboard will be completed any time fire risk increases, i.e., location or work activity changes, RFW is issued, significant increase in wind at the work site, etc. 2. At a minimum, one fire suppression hand-tool per crew member at job site. 3. At a minimum, two PNM approved fire extinguishers and two filled five-gallon backpack water pumps at the job site or readily accessible on work that is not stationary, i.e., access road maintenance. 4. Designate a working Fire Watch person(s), and document on Safety Tailboard. 5. Check all work sites for hot spots or smoldering embers for 45 minutes after At-Risk activities have ceased. 6. Documented person to call 911 and provide location and access route for emergency crews. 7. Strict adherence to PNM Smoking Policy. 	<ol style="list-style-type: none"> 1. Essential Work that requires a documented Supervisors' approval for work approval and mitigation determination. Typically, this work would be deferred to days with less critical fire risk. 2. Mitigations will be determined case by case. 3. Mitigations may not be possible for some activities, and their continuance should be restricted.

⁵ BLM Instruction Memorandum IM 2022-036, Standard Fire Prevention and Control Stipulations for BLM Electric Transmission and Distribution Right-of-Way Grants.

Metro Line Mitigation Matrix

Metro		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Santa Fe, Las Vegas, Clayton Line Matrix

Santa Fe, Las Vegas, Clayton		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Alamogordo Line Matrix

Alamogordo		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Ruidoso Line Matrix

Ruidoso		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Silver City Line Matrix

Silver City		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo (specify)
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/ replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	B
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	A	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	A	B

Deming Line Matrix

Deming		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/ replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Fleet Matrix

Fleet		Operating condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo (specify)
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/ replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	B
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	C	C	SC
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	A	B

Substation Matrix

Substation		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo (specify)
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/ replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Relay / Comms Matrix

Relay / Comms		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C Water Buffalo (specify)
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/ replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	B	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Meter Matrix

Meter Dept		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/ vegetation contact.	A	A No parking on dry grass	Special Circumstances
Construction/ maintenance of electric facilities	Equipment maintenance or replacement. (Meter maint / replacement, etc.)	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	A	C

Transmission Matrix

Transmission		Operating Condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances
Heavy Equipment Use / Ground Disturbing Work	Dozers, graders, skid steers, trenchers, etc. All road maintenance, water bars, pole hole drilling, etc. Includes all blasting.	A	B	C
Construction and maintenance of electric facilities	Equipment maintenance or replacement. (Cross arms, pole replacement, reconductor, substation, transformers, relays, meter maint/replacement, etc.)	A	B	C
Vegetation Management	ROW vegetation clearing	A	B	C
Cutting, Grinding, Welding	All types of spark-producing cutting, grinding, or welding work.	A	A	C
Internal Combustion Engine Use	Use of equipment with combustion engines not covered elsewhere. Includes ATV, chainsaw, generator, compressor, etc.	A	B	B

Generic Driving Matrix

Generic Driving (traversing HFAs without any field work)		Operating condition		
General Activity	Specific Description	Normal	Elevated	Extreme / Red Flag
Vehicle Operations	Vehicle travel on & off road. With no vehicle / vegetation contact	A	A	A
	Travel off-road or on unmaintained road with vehicle/vegetation contact.	A	A No parking on dry grass	Special Circumstances

4.3.1 Fire Season at PNM

In general, fire season begins in the spring when the landscape becomes receptive to ignitions. As fire season draws on through the summer, burning conditions become more critical. The wildland fire agencies (USFS, BLM, etc.) use fire season dates to determine staffing and operational levels. For PNM's operating purposes, the typical fire season dates are April 1 through September 30, though they may be adjusted, as necessary.

4.3.2 Red Flag Warning Protocol

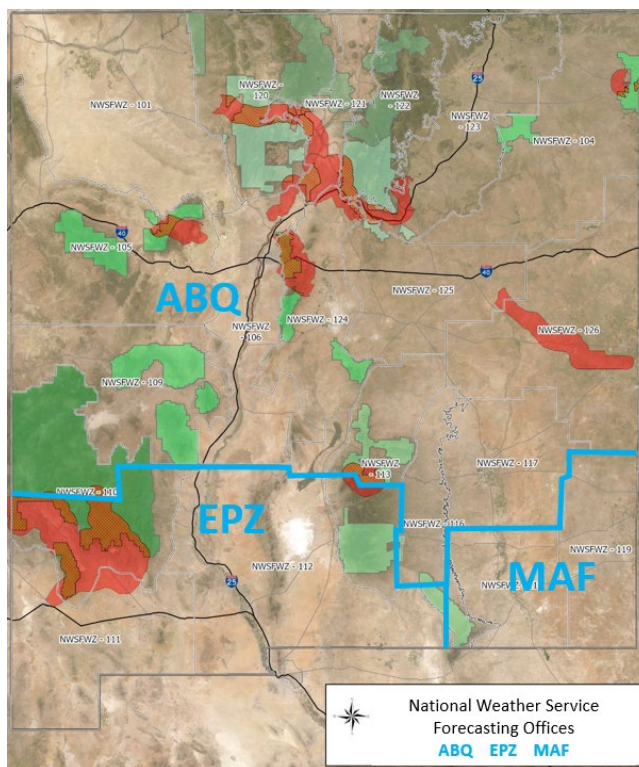
RFW is issued by the NWS when wildland fuel and weather combine to produce critical burning conditions. RFWs are issued for FWZs for a given time. RFWs provide PNM critical SA useful for making operational decisions. Typically, only essential field work will continue during an RFW. Some system settings are adjusted during an RFW; these procedures are documented by PNM's Transmission and Distribution Departments.

Criteria for RFW issuance is left to the discretion of each NWS Forecasting Office; in general, when the following conditions are expected, a RFW is issued:

- Wind speeds above 25 mph
- Relative humidity below 15 percent
- 10-hour fuel moistures at or below 8 percent

PNM serves areas covered by two NWS Forecasting Offices (see **Figure 7**); one in Albuquerque and one in El Paso, Texas. The southeastern corner of New Mexico is covered by Midland; however, there is no PNM service area in the Midland Forecasting Office area of influence.

Figure 6. NWS Forecasting Offices



As mentioned above, RFWs affect both system settings and field operations. To ensure that all affected PNM personnel are aware that an RFW has been issued, an email alerting process has been created that uses the RFW alerts from Indji Watch and functionality from Microsoft to “push” RFW alerts to customized Distribution Lists. In this way, receipt by affected personnel is ensured. An example of the alert is shown below.

US NWS Red Flag Warning

Indji has detected a **Red Flag Warning** affecting Las Vegas, Santa Fe, Valencia, East Mountain, Albuquerque, Sandoval, PNM Transmission.

Summary: Red Flag Warning issued April 20 at 3:04PM MDT until April 20 at 8:00PM MDT by NWS Albuquerque NM

Description: The National Weather Service in Albuquerque has issued a Fire Weather Watch...which is in effect from Friday afternoon through Friday evening. * AREA AND TIMING...Northeast Highlands (Zone 123), Sandia and Manzano Mountains (Zone 124), Central Highlands (Zone 125) through 8 pm MDT this evening and Fire Weather Watch for Friday afternoon and early evening. * 20 FOOT WINDS...For today, northwest at 20 to 35 mph with gusts to 50 mph, and for Friday from the west and northwest at 20 to 25 mph with occasional gusts to 35 to 40 mph. * RELATIVE HUMIDITY...6 to 12 percent each afternoon. * IMPACTS...Any fires that develop will likely spread rapidly. Outdoor burning is not recommended.

Sent: Thu Apr-20 3:04 PM

Go to <https://www.indji.net/watch> to view further details in the Indji Watch client.



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You are receiving this email because you are subscribed to email alerts for the Indji Watch business rule

'PNMDistributionUSNWSWeatherWarningInServiceTerritoryZone'. Please notify your corporate Indji Watch contact if you would like to unsubscribe from these alerts.

RFW induced Field Operation Changes

The Escalating Work Restriction Matrices in this section include mitigations that are required when an RFW has been issued for work being done in an HFA.

4.3.3 Indji Watch

PNM subscribes to Indji Watch (IW), a natural hazard alerting company. IW divides PNM T&D assets each into its own “project.” As described below, IW provides PNM with SA and alerts when weather and wildfires may impact PNM assets or operations. It also includes additional information as described here:

- **Wildfire alerting**
Anytime IW discovers a new fire within three miles of PNM assets, an alert is sent to PNM. The new fire location is displayed in the IW Threat Window and is available for viewing by all credentialed PNM personnel.
- **RFW**
IW pushes RFW alerts as both emails and text messages to PNM personnel according to their preferences in the IW Administrative Window. These emailed alerts are the basis for PNM’s RFW alerting system described above in Section 4.2.1 Red Flag Warning Protocol.
- **Lightning detection**
IW displays recent lightning strikes in its Threat Window.
- **Wind alerts**
When wind speeds are expected to exceed PNM-defined thresholds, alerts are texted or emailed to PNM personnel according to their administrative preferences.
- **Real time radar**
PNM can track the path and intensity of storms across its landscape.
- **Earthquakes**
Information is displayed in the Threat Window. Specific information on each event is available via pop-up displays.
- **Extreme Weather Alerts from the NWS**
The IW Threat Window constantly displays NWS alerts and warnings such as for High Wind, Extreme Heat, FWW, Ice Accumulations, etc. These same alerts are pushed to users via text or email according to their administrative preferences.

5.0 Emergency Preparedness

5.1 Wildfire Response and Recovery

Whenever wildfire or suppression activities are currently or expected to impact PNM infrastructure, PNM encourages agencies and landowners to notify the company. Upon learning about a wildfire, PNM's Crisis Management and Resilience team (CMR) is notified. According to the 2023 PNM Resources Crisis Management Plan (CMP Section V, Subsection D), when the Company is affected by an emergency or disaster, the Chief Executive Officer or their delegate implements a graduated approach to responding and managing the event. As the potential severity of the emergency or the demand on local resources grows, the PNM Incident Commander (IC) increases response and coordination activities. In following the Federal Emergency Management Agency Guidelines there are three Emergency Action Levels identified to assist with mobilizing efforts. The purpose of these levels is to provide a short-hand method for mobilizing forces. On-scene personnel estimate the level of response and then notify the CMR.

- Level Three – Normal Operations/Steady-State
 - Monitor only as there are no direct or expected impacts to the Company and updates are made to Leadership as needed or as determined necessary for continued or enhanced monitoring.
- Level Two – Enhanced Steady-State/Partial Activation
 - More in-depth monitoring takes place with regular updates provided to Leadership. The Emergency Operations Center may be partially activated to assist, either physically or virtually, as determined by the size, scope, and complexity of the credible threat, emergency, or disaster.
- Level One – Full Activation
 - Full monitoring of the credible threat, emergency, or disaster. The EOC is fully activated, physically or virtually, to assist as determined by the size, scope, and complexity of current incident. External partners are notified, and aid requested as needed.

Depending on the level of activation, based on the size, scope, and severity of the incident, regular briefings to Senior Leadership will be scheduled to share status, incident objectives, impacts to departments, and coordination with Corporate Communications (Corp Comms) for all internal/external communication activities.

5.2 Cooperation and Collaboration

To further bolster the capabilities of PNM, continual relationship building occurs between PNM and its external stakeholders, including First Responders. During an incident, all county emergency management agencies have pertinent contact information to include, but not limited to:

- Corporate Communications (CorpComms)
- Corporate Security (Physical)
 - Including contract security companies that PNM works with
- Distribution Operations Center (DOC)
- Line personnel that are assigned to the incident

To ensure that PNM and its external partners are fully engaged during an incident, there are many activities that take place between emergency incidents to familiarize PNM's partners with its operations and expectations during actual incidents. These activities include, but are not limited to:

- Evacuation Drills
- Table-Top Exercises
 - i.e., Law Enforcement participates in the annual PNM Cyber and Physical Security Incident Response Plan exercise
- Familiarization tours for those most likely to respond to a PNM facility during an incident
- Various Community-driven business meetings and/or activities
 - i.e., local Chamber of Commerce events
- Functional Exercise activities
 - Annual PNM Safety Day where local Fire/Rescue offers fire extinguisher training, and First Responders participate in electrical hazard and safety demonstrations
 - Annual Balloon Rescue Training for First Responders to familiarize them with techniques when encountering balloons entangled with PNM infrastructure
- Full-Scale Exercises
 - External partners are invited to participate in the multi-national bi-annual Grid Exercise hosted by the NERC.

5.3 In-Place PNM Wildfire Incident Processes

Most wildfires within the PNM Service Area will come and go without any impact on PNM infrastructure or employees. Others will require considerable coordination with all stakeholders. The following is a typical life cycle of a wildfire incident:

Fire Discovery – In addition to landowners and County RECC's providing information, PNM has a subscription with Indji Watch. This natural hazard alerting system emails alerts to users when a wildfire is detected within three miles of PNM infrastructure. Both Indji Watch and the PNM Fire Risk Dashboard display maps showing fire perimeter, wind, weather, and PNM Infrastructure. Other means of discovery notification comes from websites, field personnel, local news reports, the public, and social media platforms.

Classification and Monitoring – PNM has a four-level system for classification of fires to ensure consistency. These levels are as follows:

Level 1 - No impact to PNM Infrastructure is expected.

Level 2 - PNM continues monitoring of fire(s) to maintain quality SA and help to determine the proper level of classification, but no PNM response is expected.

Level 3 -

- a. Any fire previously classified as Level 2 and has now become more complex, or any fire upon initial discovery where local First Responders are requesting assistance or guidance from PNM personnel.
- b. Any fire that has caused any damage to PNM infrastructure.

- c. Any wildfire starting in an HFA or where the potential to affect PNM infrastructure is high due to weather conditions.

Level 4 -

- a. Any fire allegedly caused by PNM personnel and/or infrastructure
- b. Any fire that requires corporate support such as from HR, Legal, Planning, Insurance, etc.
- c. Any fire that results in trips, alarms, and/or recloser activities within the fire area

During fires of any classification level, all PNM participants shall establish a routine monitoring frequency in coordination with on-scene personnel and the CMR for the purpose of gathering relevant incident information for use in briefings and Situational Reports for Senior and Executive Leadership.

Communications – All fire incident information will require the involvement of the CorpComms Team. Any public facing information MUST be approved by and processed through them. All information will be disseminated to the *Wildfire Notification Distribution List*, which is reviewed and updated every 60 days by Communications. The notification list will include, but is not limited to:

- Corporate Communications (CorpComms Team)
- Wildfire Management
- Crisis Management and Resilience (CMR)
- DOC personnel
- Power Operations (PWOPS) personnel
- Any others as determined by leadership

The primary method of communication will be email, but a WebEx or Microsoft Team Chat can be established to foster continued communications.

Response –PNM employee safety is paramount and responding employees, if any, should have training in basic fire behavior, fire safety, and the Incident Command System (ICS).

Any response by PNM will depend on safety considerations and incident complexity such as the size, scope, and severity of the fire. Response personnel will receive regular training. A Personnel Accountability Report will be required to ensure employees are accounted for during response activities. Some factors that may require a PNM response include, but are not limited to:

- PNM infrastructure has been or is expected to be impacted by the fire and/or the suppression efforts.
- Fire activities require a spokesperson from PNM to provide information regarding any safety concerns.
- Coordination is needed for any de-energization and/or re-energization of conductors for the safety of firefighters and/or the public.

In addition to PNM Line Department personnel, the following PNM departments may be required to respond and interact with the external ICS organization:

- CorpComms
 - Responsible for all internal communications and external interactions with public and/or media outlets regarding emergency- or disaster-related information. Ensures all information released is current and acts as the single voice for the Company.

- Responsibilities and assignments are maintained, revised, and updated by CorpComms, as needed.
 - Will fill the Public Information Officer role within the established external ICS structure, as needed.
 - Provide inputs and summaries in support of EOC activities and decision-making processes
- Wildfire Management
 - Responsible for monitoring weather data and disseminating information to CMR and other PNM departments
 - Provide ongoing SA updates and information
- CMR
 - Responsible for the overall management of the emergency or disaster, all EOC activities, and coordination with emergency responders, as needed.
 - Responsible for the collection, analysis, and dissemination of incident information to be utilized by executive leadership and stakeholders in the decision-making process.
- DOC
 - Responsible for emergency outage restoration and the switching/transferring of loads within the distribution system
 - Communicate needs, scheduled work, planned outages, and maintenance appropriate to fire activities to other lines of business that may be impacted
 - Provide inputs and summaries in support of EOC activities and decision-making processes
- PWOPS
 - Responsible for maintaining system reliability and balancing transmission system and generation operations during an emergency or disaster
 - Communicate needs, scheduled work, planned outages, and maintenance appropriate to fire activities to neighboring utilities that may be impacted
 - Provide inputs and summaries in support of EOC activities and decision-making processes

5.4 Recovery and Restoration Activities

All recovery activities will be coordinated as appropriate both internally and externally to ensure that PNM infrastructure within the fire area is safe. Any work that needs to be completed within the fire area will require coordination with responders to ensure the safety of PNM personnel, First Responders, and the public during the restoration process.

To assist with recovery and restoration, PNM personnel will stage the necessary supplies and equipment, while coordinating with the on-scene Fire Agency Incident Commander and Safety Officer to ensure all restoration activities can be completed in a safe manner. PNM will strive to restore service as quickly as possible but may be limited by the ongoing incident activities.

6.0 Support During Wildfire Incidents

6.1 Corporate Communications

During a wildfire incident, CorpComms' primary role is to ensure that media, customers, and employees are informed and have the tools and information they need to stay safe. CorpComms works with a variety of media outlets during wildfire events. Incident-related communications pass to and from media outlets through CorpComms. Additionally, CorpComms provides real-time updates on social media for customers and external media. As appropriate, CorpComms will provide information to employees on platforms such as company memos or on the company's intranet. During an incident, CorpComms provides messaging for company department's use with external stakeholders who may be requesting updates. Designated CorpComms' staff will work with the media and local agencies for the coordination of news conferences and official company updates.

PNM recognizes that fire prevention, safety tips, and reminders are important public services it provides to its customers. Before the wildfire season starts, CorpComms works to prepare fire prevention and safety messaging for customers. A news release with wildfire safety information is sent statewide to media. Safety and prevention tips are posted on social media platforms such as X, Facebook, and Instagram during fire season. The Energy Works newsletter may also be used as an additional resource to deliver valuable information to customers during wildfire season. PNM also has a safety section on the [PNM.com/wildfire-safety](https://www.pnm.com/wildfire-safety) website that contains wildfire safety topics as well as other sections with valuable safety tips regarding electrical safety, storm safety, kid safety, hot air balloon safety, and more.

CorpComms initiates and facilitates communications with other utility partners such as adjoining electric utility, water, and telecommunication services.

6.2 Customer Support

Wildfires can have a devastating impact on any community. Power may be out for an extended period. PNM's customers will benefit from available communication and information access, particularly those customers that require power for medical devices.

PNM may initiate communications to customers who have signed up for text service and are potentially affected by fire-caused power outages. Other messaging is sent via PNM website, television, radio, social media, text messages, live phone calls, and pre-recorded phone calls as appropriate and as PNM resources are available.

Increased communication and access to information can help ease the financial burden experienced by its customers at an especially traumatic time.

6.3 Low-income Customer Support

PNM has numerous programs in place to help low-income customers during and after wildfires. The Public Affairs and Community Outreach Team supports organizations such as the American Red Cross or Salvation Army to provide low-income customer support and may do so during and after wildfire events, resources permitting. PNM's post-fire assistance may include:

- Electric bill assistance from the PNM Good Neighbor Fund.
- Providing payment plans for electric bills.
- Suspending disconnect for non-payment for fire affected homes/accounts.
- Assisting with deposit waivers or offering other deposit billing solutions.
- Partnering with various community organizations, to secure more assistance for families.

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APPENDIX A

PNM HAZARDOUS FIRE AREAS – DETAILED MAPS

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New Mexico Hazardous Fire Areas (HFAs)

Clayton West

Map Legend



Transmission within HFA

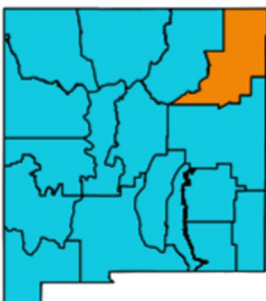
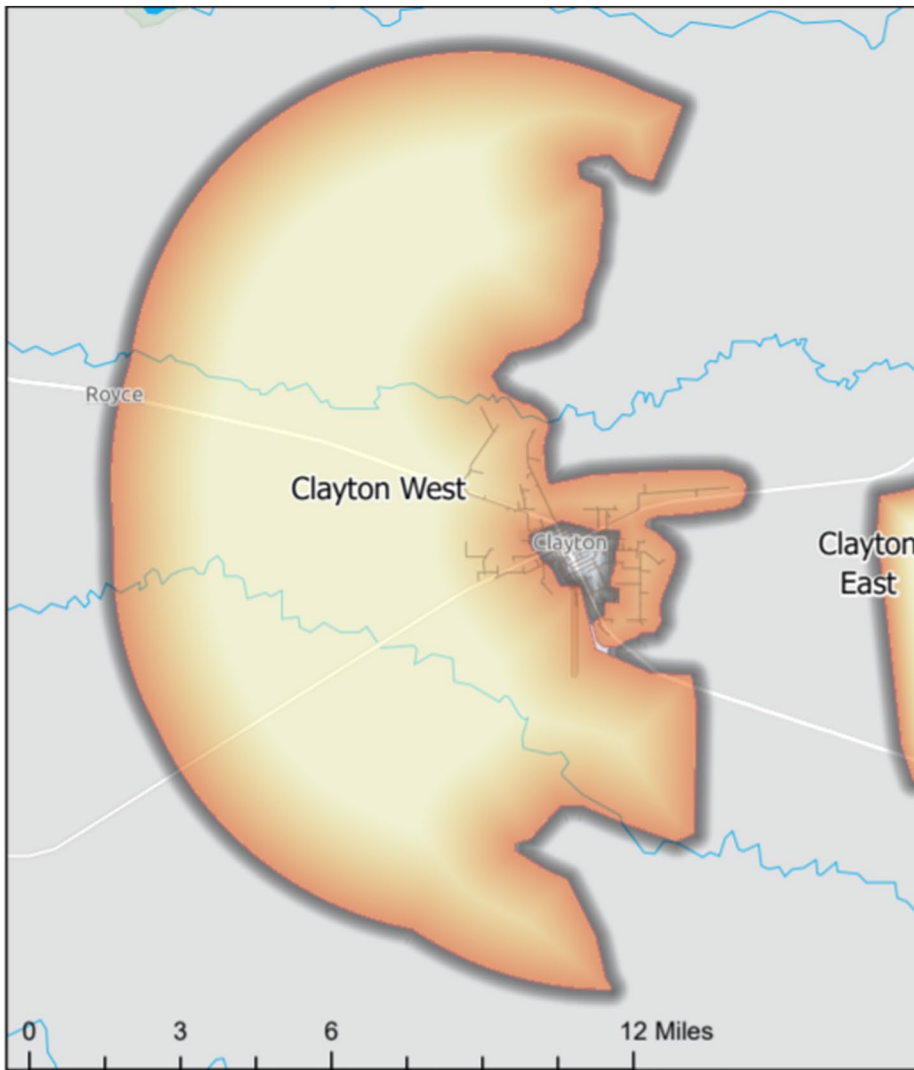
1.38 Miles

0.04% of System

Distribution within HFA

19.63 Miles

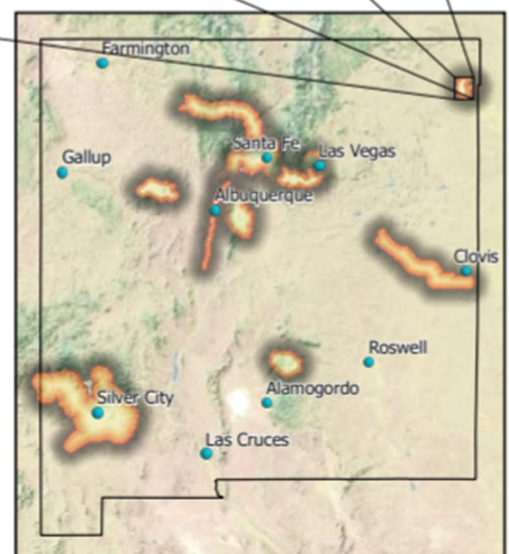
0.34% of System



NWS Fire Weather Zone

104

Northeast Plains



New Mexico Hazardous Fire Areas (HFAs)

Bosque

Map Legend



Transmission within HFA

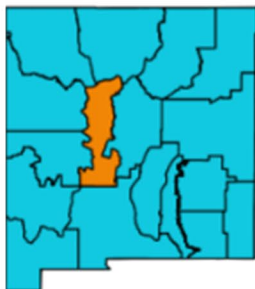
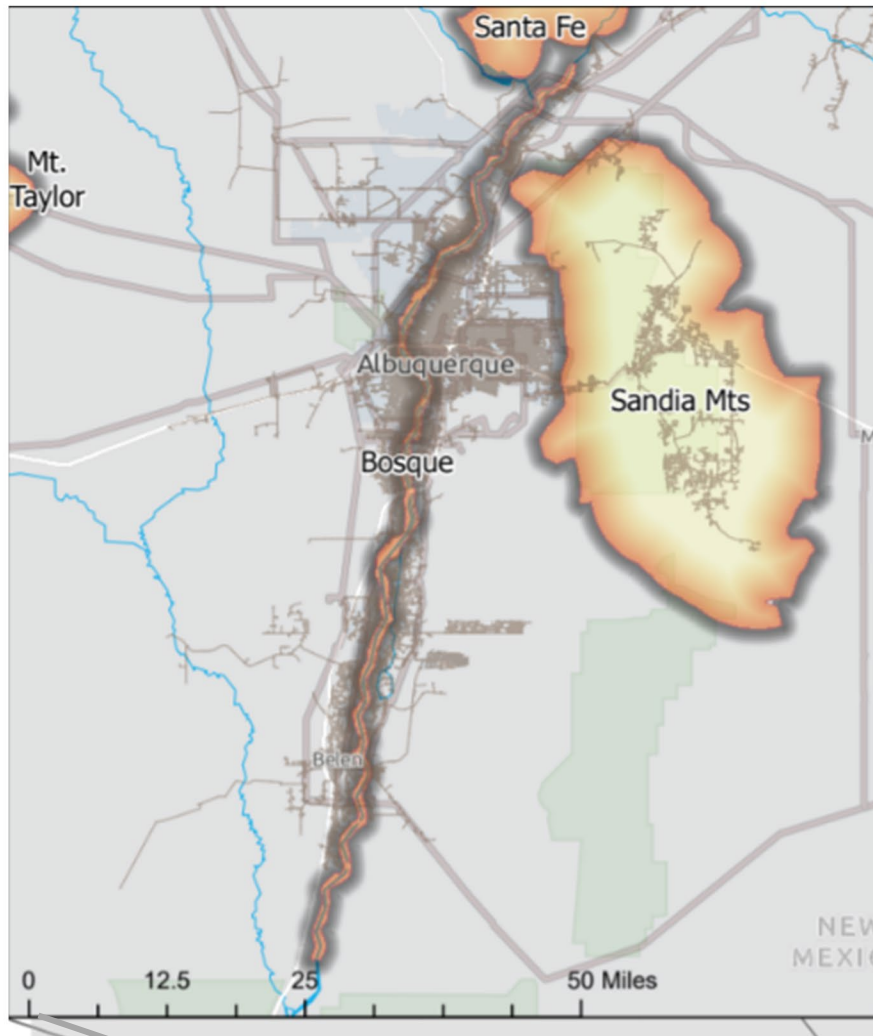
4 Miles

0.12% of System

Distribution within HFA

5.41 Miles

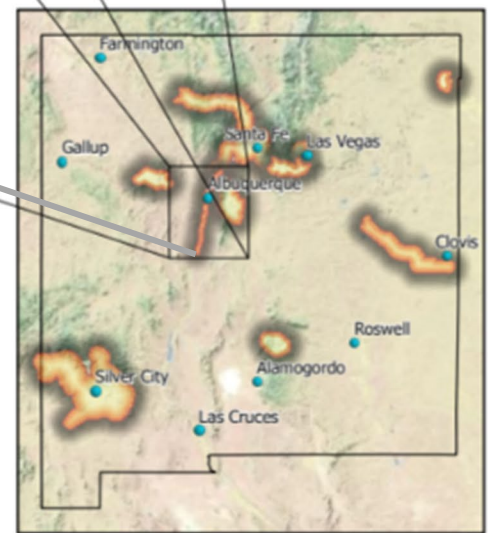
0.09% of System



NWS Fire Weather Zone

106

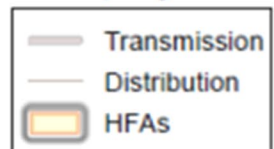
Middle Rio Grande Valley



New Mexico Hazardous Fire Areas (HFAs)

Sandia Mts

Map Legend



Transmission within HFA

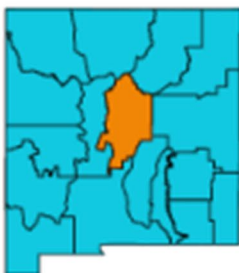
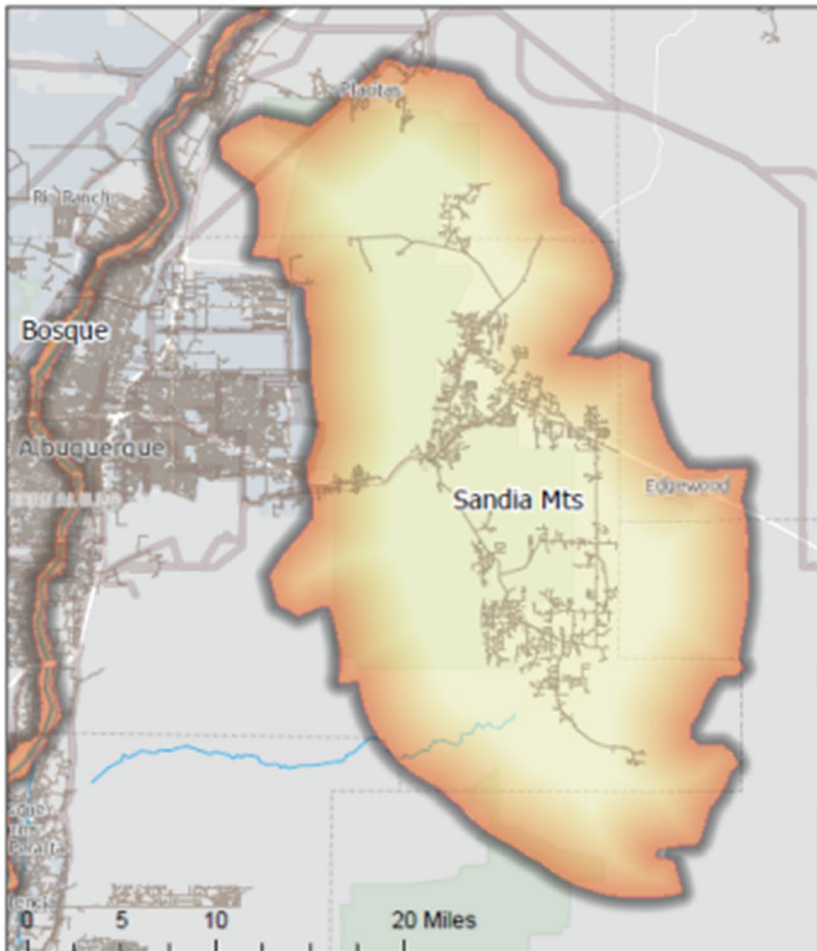
27.42 Miles

0.85% of System

Distribution within HFA

406.59 Miles

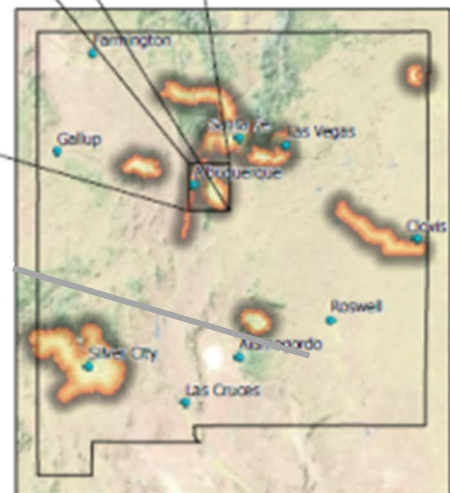
6.96% of System



NWS Fire Weather Zone

107

Sandia, Manzano and Gallinas Mts



New Mexico Hazardous Fire Areas (HFAs)

Fort Sumner

Map Legend

- Transmission
- Distribution
- HFAs

Transmission within HFA

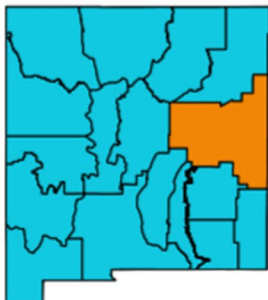
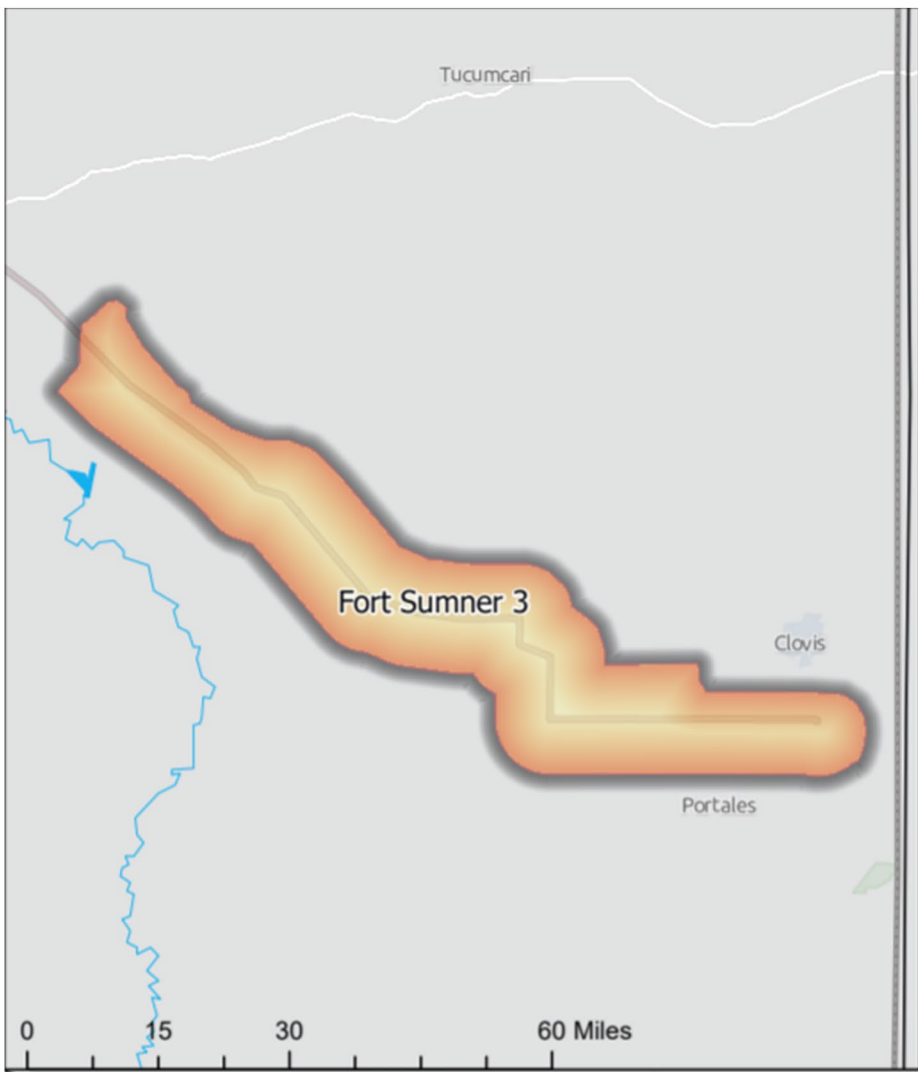
88.34 Miles

2.75% of System

Distribution within HFA

0 Miles

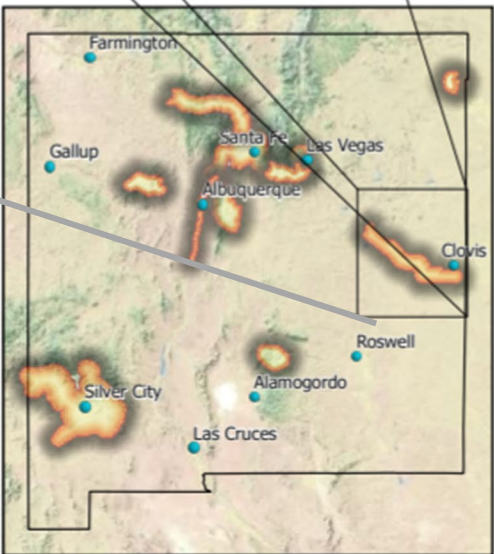
0% of System



NWS Fire Weather Zone

108

East Central Plains



New Mexico Hazardous Fire Areas (HFAs)

Mt. Taylor

Map Legend



Transmission within HFA

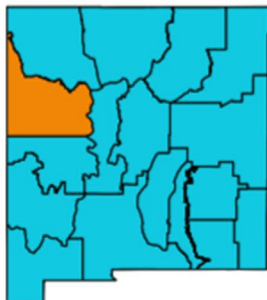
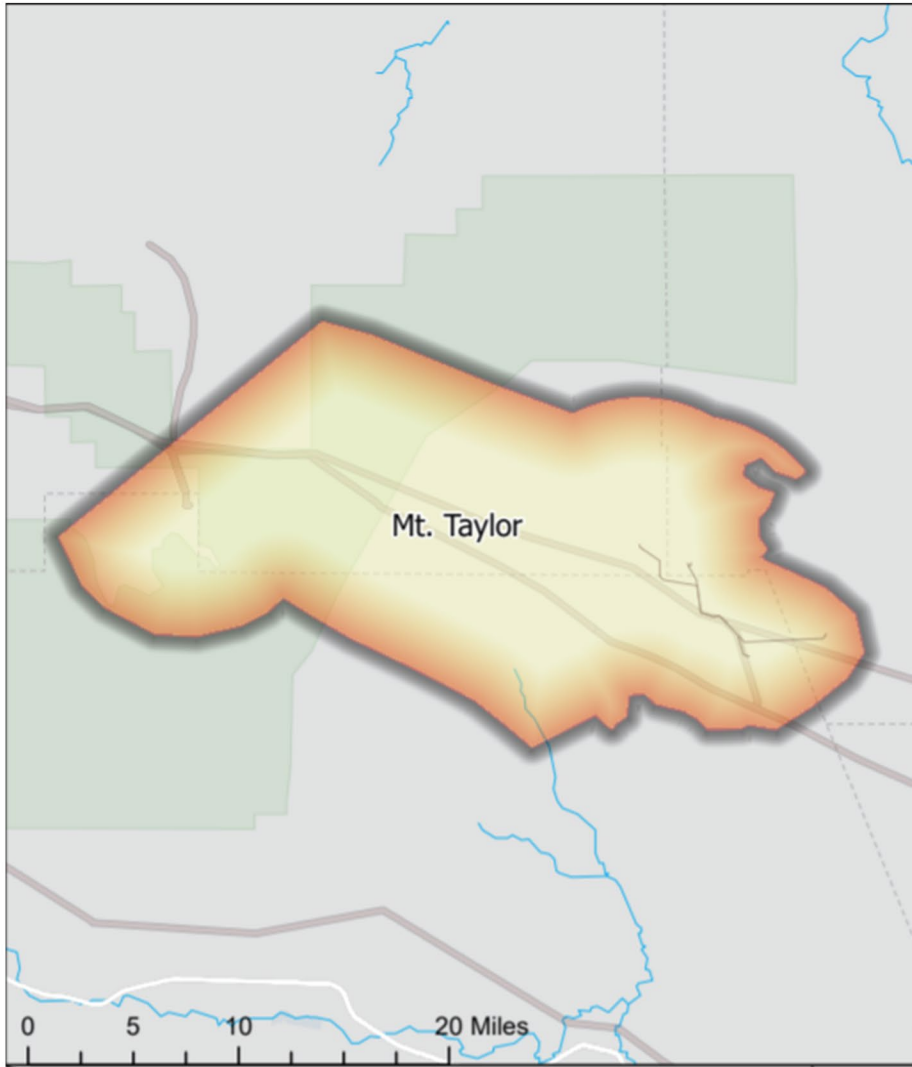
63.04 Miles

1.96% of System

Distribution within HFA

13.82 Miles

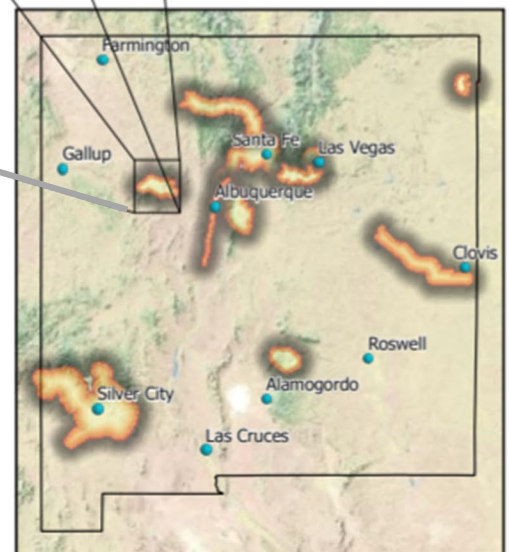
0.24% of System



NWS Fire Weather Zone

105

Northwest Highlands



New Mexico Hazardous Fire Areas (HFAs)

Ruidoso

Map Legend



Transmission within HFA

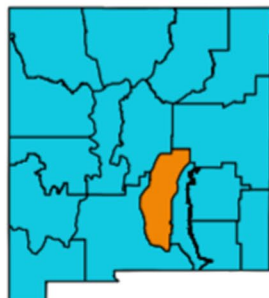
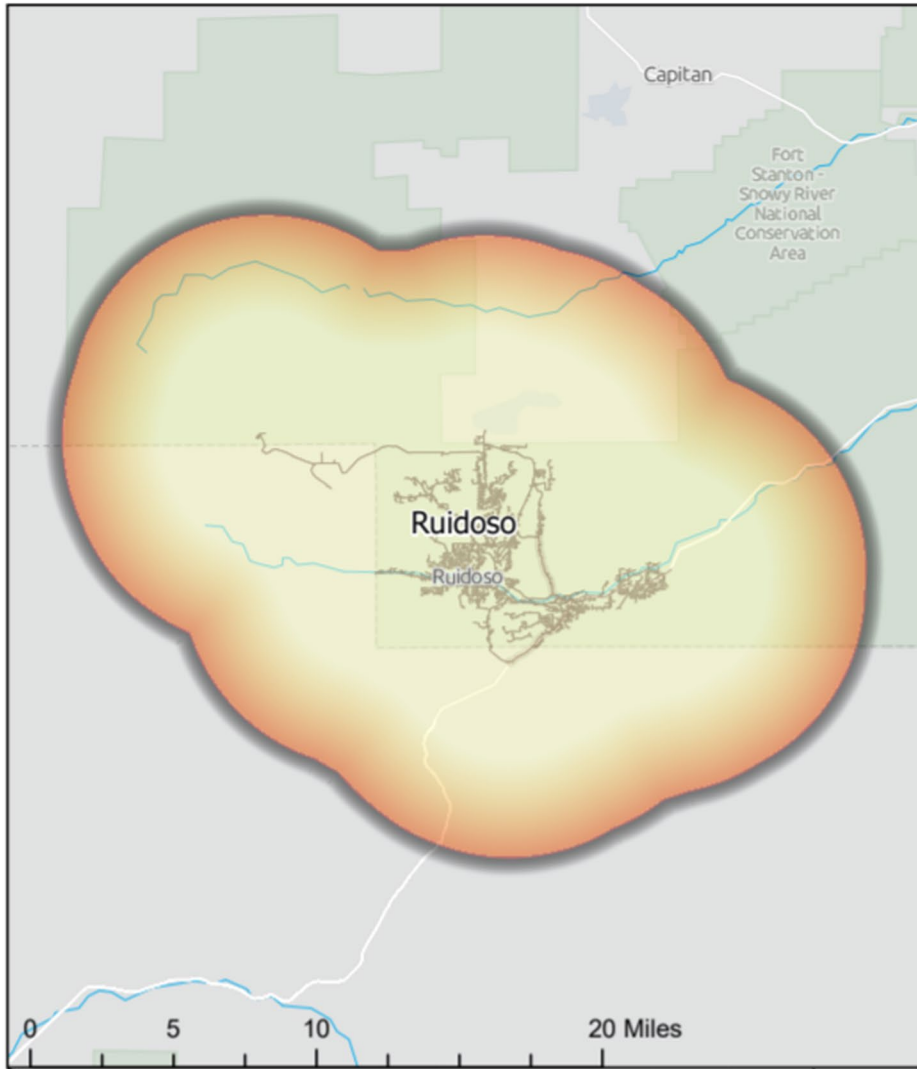
5.4 Miles

0.17% of System

Distribution within HFA

176.16 Miles

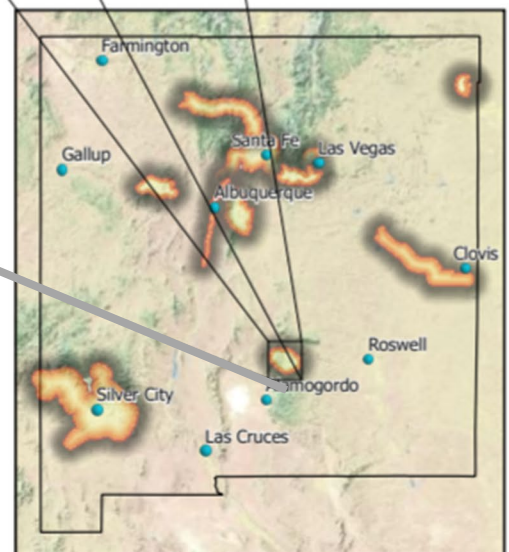
3.01% of System



NWS Fire Weather Zone

113

Capitan and Sacramento Mts



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe

Map Legend



Transmission within HFA

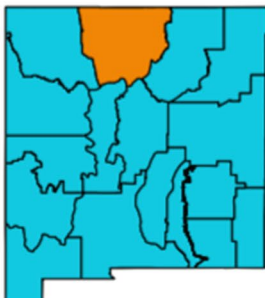
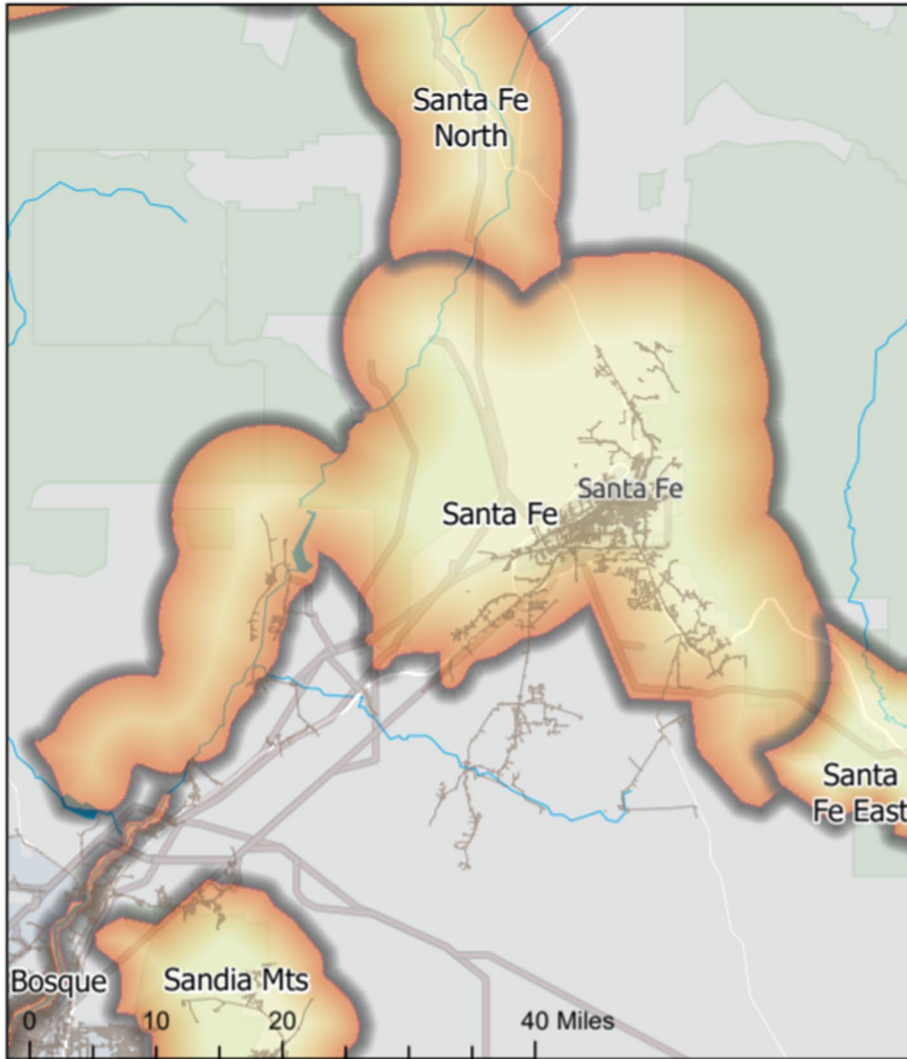
184.1 Miles

5.73% of System

Distribution within HFA

497.68 Miles

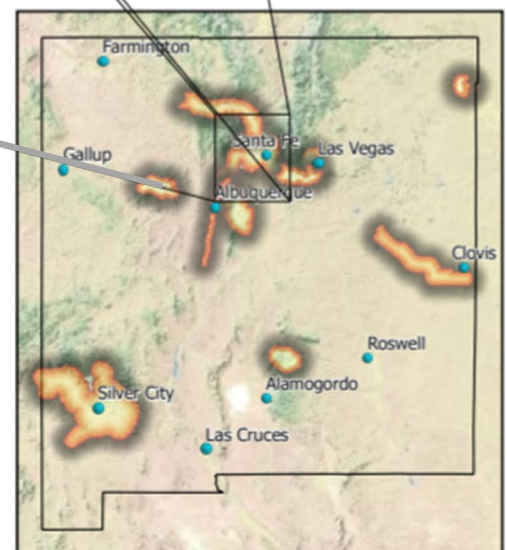
8.52% of System



NWS Fire Weather Zone

102

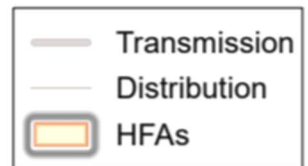
North Central Mts



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe East

Map Legend



Transmission within HFA

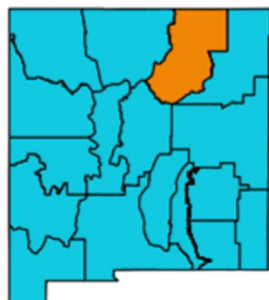
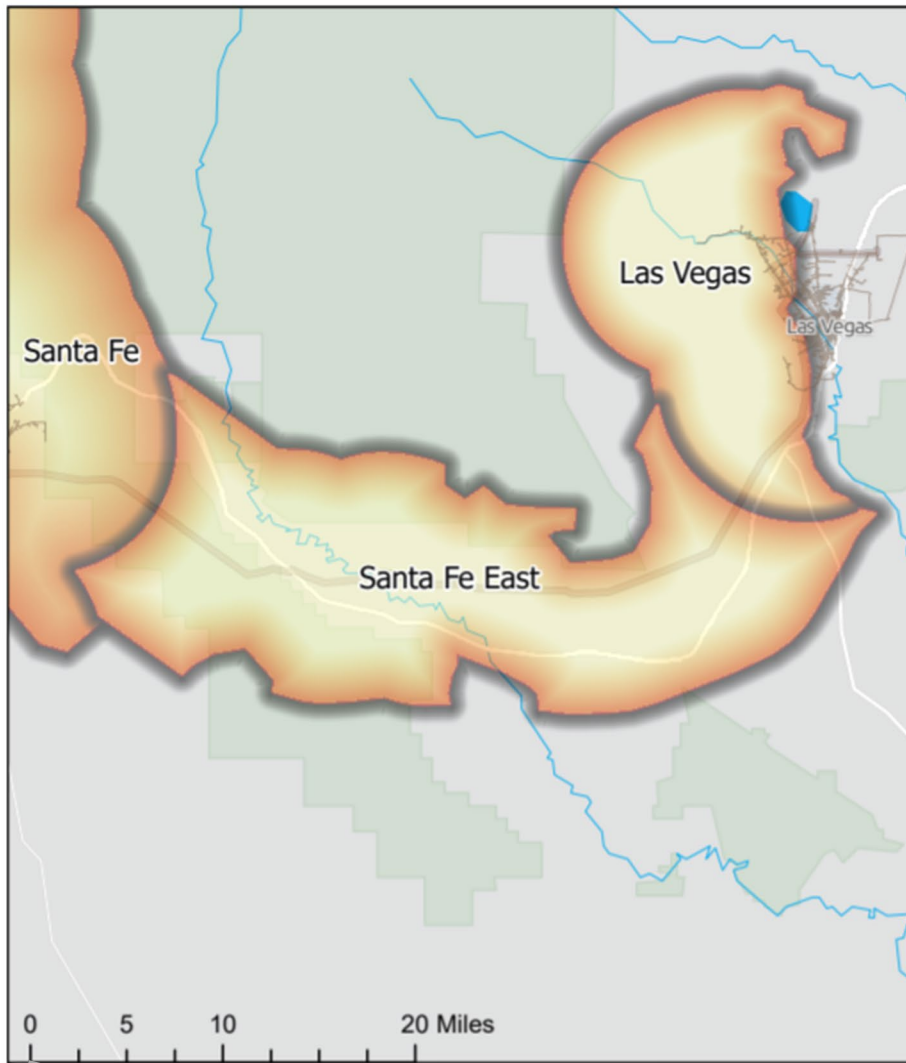
27.17 Miles

0.85% of System

Distribution within HFA

0 Miles

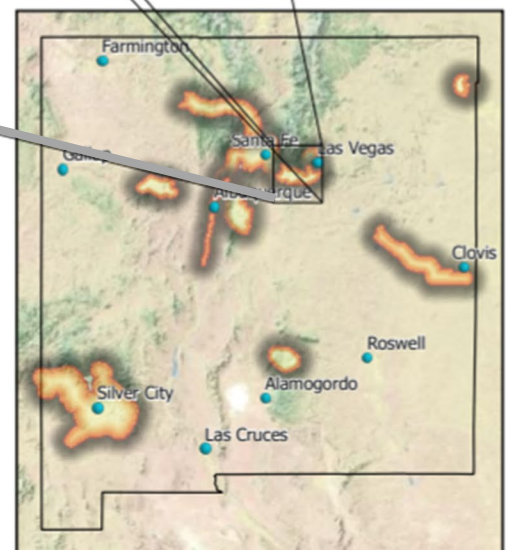
0% of System



NWS Fire Weather Zone

103

Northeast Highlands



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe North

Map Legend



Transmission within HFA

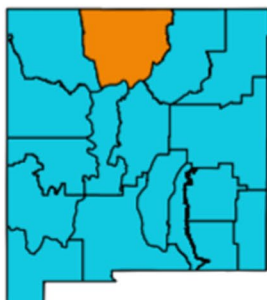
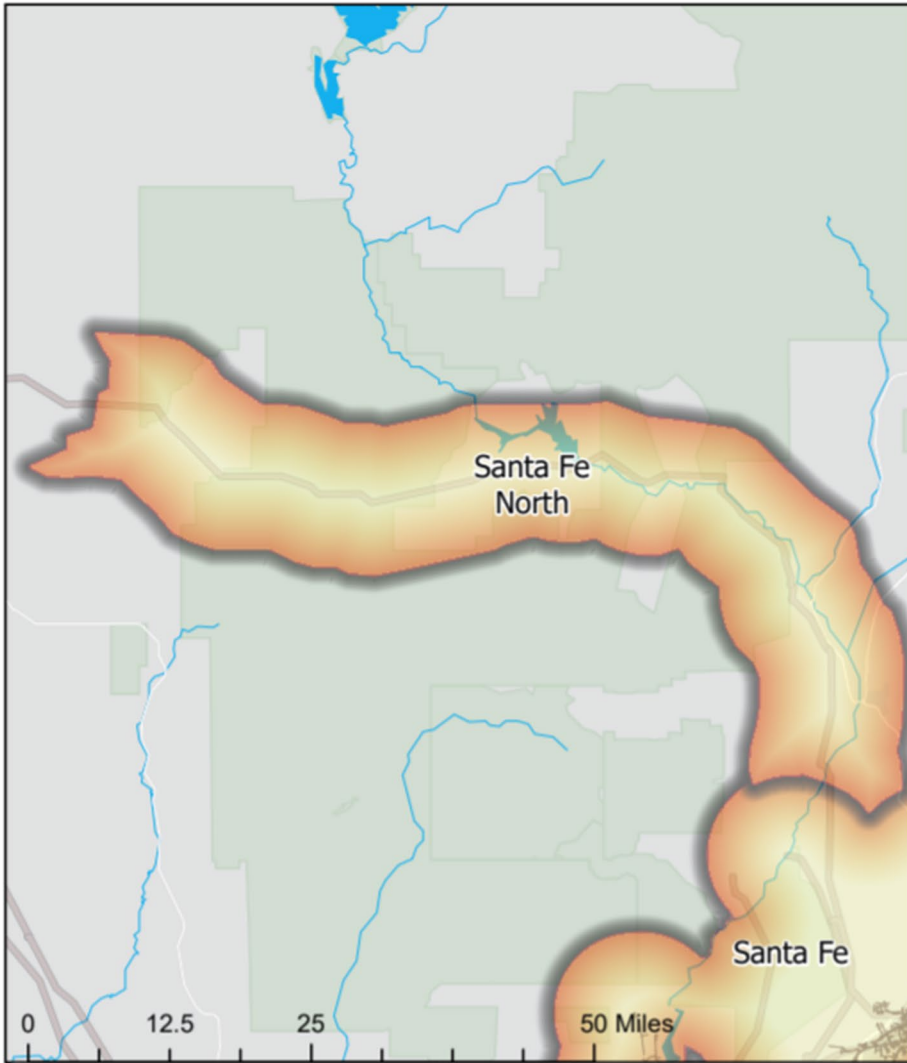
74.21 Miles

2.31% of System

Distribution within HFA

0 Miles

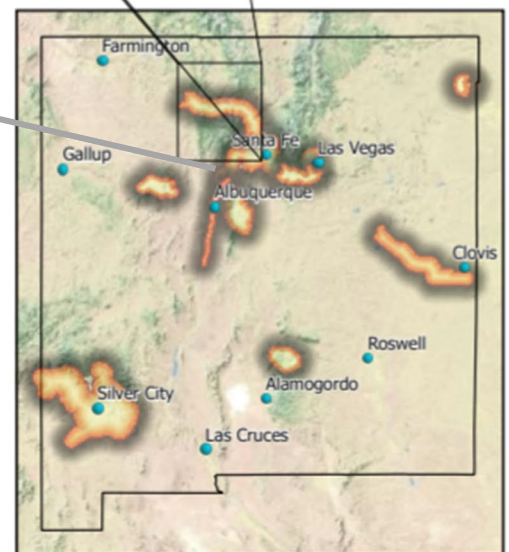
0% of System



NWS Fire Weather Zone

102

North Central Mts



New Mexico Hazardous Fire Areas (HFAs)

Silver City

Map Legend



Transmission within HFA

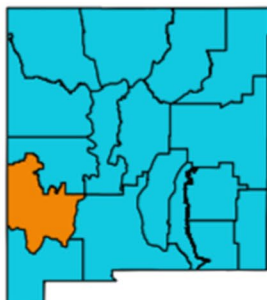
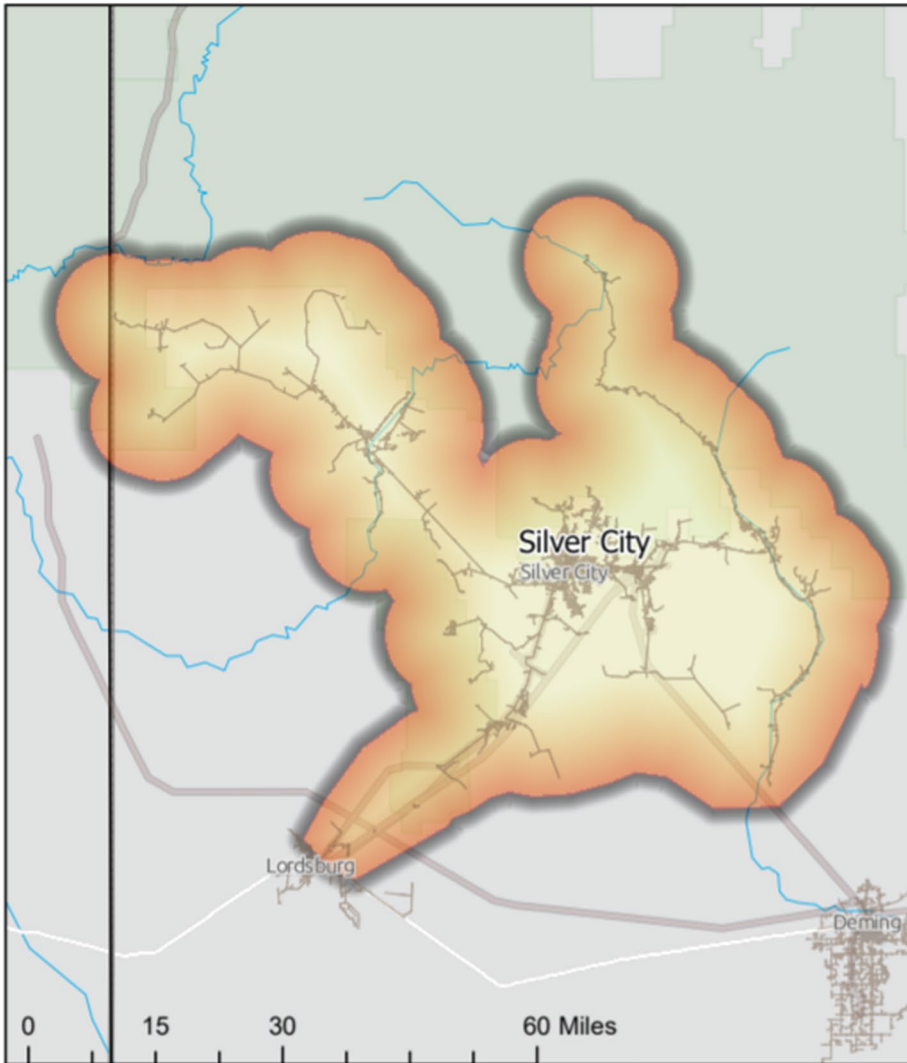
194.5 Miles

6.05% of System

Distribution within HFA

976.76 Miles

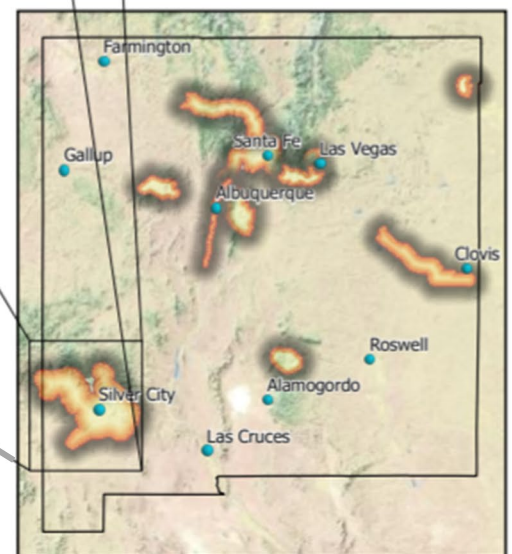
16.71% of System



NWS Fire Weather Zone

110

Southwest Mts



Attachment 2

PNM Public Safety Power Shutoff Plan



PNM Public Safety Power Shutoff Plan



Talk to us.



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Appendix A – Hazardous Fire Areas – Detailed Maps

ABBREVIATIONS AND ACRONYMS

AAR	After Action Report
ABQ	Albuquerque
API	Application Programming Interface
CRI	Combined Risk Index
CMR	Crisis Management and Resiliency Team
DOC	Distribution Operations Center
EOC	Emergency Operations Center
ERC	Energy Release Component
FAA	Federal Aviation Administration
FWW	Fire Weather Watch
FWZ	Fire Weather Zones
GACC	Geographic Area Coordination Center
GIS	Geographic Information System
HFAs	Hazardous Fire Areas
IC	Incident Commander
IPAWS	Integrated Public Alert & Warning System
IW	Indji Watch
HFAs	Hazardous Fire Areas
LMI	Low or Moderate Income
NFDRS	National Fire Danger Rating System
NMAC	New Mexico Administrative Code
NMPRC	New Mexico Public Regulatory Commission
NWS	National Weather Service
PNM	Public Service Company of New Mexico
PSPS	Public Safety Power Shutoff
PWOP	Power Operations
RAWS	Remote Automated Weather Station
RFW	Red Flag Warnings
SA	Situational Awareness
SCADA	Supervisory Control and Data Acquisition
SFDI	Severe Fire Danger Index
SWS	Special Weather Statements
T&D	Transmission and Distribution
U.S.	United States
USFS	United States Forest Service
VM	Vegetation Management
SVPNMO	Senior Vice President of New Mexico Operations
VSAT	Very Small Aperture Terminal
WHP	Wildfire Hazard Potential
WMP	Wildfire Mitigation Plan
WUI	Wildland-Urban Interface

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1.0 Introduction

In recent years, the western United States has seen an increase in damaging wildfire activity. Both climatologists and fire scientists anticipate longer fire seasons and more extreme fire behavior in future years. This new risk will require new coping strategies. Other important risk factors include human encroachment, historical land management practices, and the health of wildlands and forests.

Fundamentally, at Public Service Company of New Mexico (PNM), we are concerned with safety, the safety of everyone in our communities. Safety is at the heart of everything we do at PNM, and it is a core value that also extends to ensuring the safety of our customers. Wildfires pose a significant risk to the safety of our communities, and if we hope to have any effect on reducing both the risks and the potential impacts of wildfires, it will take the collective efforts of everyone in our communities working together. For these reasons, PNM has developed this plan to reduce wildfire risk, which will focus on how we think about a comprehensive wildfire mitigation strategy, along with a particular emphasis on the concept of a Public Safety Power Shutoff (PSPS) and how it is another tool to help ensure the safety of our communities.

To address the increasing severity and frequency of extreme weather events and increasing wildfire risk, PNM has a Wildfire Mitigation Plan (WMP) focused on situational awareness, field personnel safety practices and operational wildfire mitigation strategies to prevent the accidental ignition of wildfires. PNM's PSPS Plan (the Plan) is designed to proactively de-energize electrical facilities in identified areas of extreme wildfire risk to reduce the potential of those electrical facilities becoming a wildfire ignition source or contributing to the spread of wildfires. The Plan is part of PNM's operational mitigation practices and supports customer and community safety. The Plan identifies the relevant considerations, process flow and implementation protocol before, during and after a PSPS event. The Plan is reviewed annually and updated as needed before the next wildfire season starts. Wildfire season varies throughout New Mexico but is generally considered to occur from April 1 through September 30. PSPS may be contemplated and initiated at any time of the year based on conditions described later in the Plan. While fire risk is heightened during certain times of the year, fire potential and its monitoring continues, year-round. Each of the five national forests in which PNM has infrastructure may restrict access at different times during the overall fire season or when fire conditions develop. PNM has reviewed industry best practices to inform this Plan and has also incorporated local community input.

The Key Objectives of this Plan include:

- **Safety:** Ensure the safety of the public and PNM employees, contractors, and Mutual Assistance employees.
- **Restoration Time:** Minimize the duration of an outage. Safety is the primary focus with an emphasis on Customer Service.
- **Mitigate Consequences:** Provide customer support to mitigate the impact of an outage, including coordination with Emergency Management Agencies to assure community resources are identified and available.
- **Information:** Provide accurate, timely, meaningful information to our customers, our employees, and other stakeholders.
- **Resources:** Effectively manage our human, equipment, material, and information resources to minimize restoration time and maximize productivity and performance.

This Plan is not intended to be aspirational, nor to address yet-to-be initiated projects or activities. Any forward-looking statements are not a guarantee of future performance or project initiation. Statements and details on PNM's PSPS are current as of its writing in May of 2024.

1.1 Scope

This PSPS Plan identifies the relevant considerations, process flow and implementation protocol before, during and after a PSPS event. The Plan describes those planning steps, internal and external communications, and personnel readiness needed for the successful implementation of a proactive PSPS event. The Plan does not remove or replace existing field and operations authority or responsibility to de-energize systems or circuits consistent with evolving events or safety concerns.

A vital component in developing this PSPS Plan has been ongoing community input. PNM held several meetings in communities located within the Hazardous Fire Areas (HFAs) defined in **Section 3** and **Appendix A** to obtain input from first responders, emergency management personnel, local government and tribal officials, and others who provided comments and suggestions to improve the Plan. The community outreach sessions provided an opportunity for open and constructive dialogue about PNM's wildfire mitigation efforts. The community's perspectives and suggestions are crucial as PNM balances public safety with minimizing disruptions to our neighbors and communities. As discussed at each public meeting, these conversations were just the starting point, and we expect to continue to collaborate with potentially affected communities.

2.0 Public Safety Power Shutoff Overview

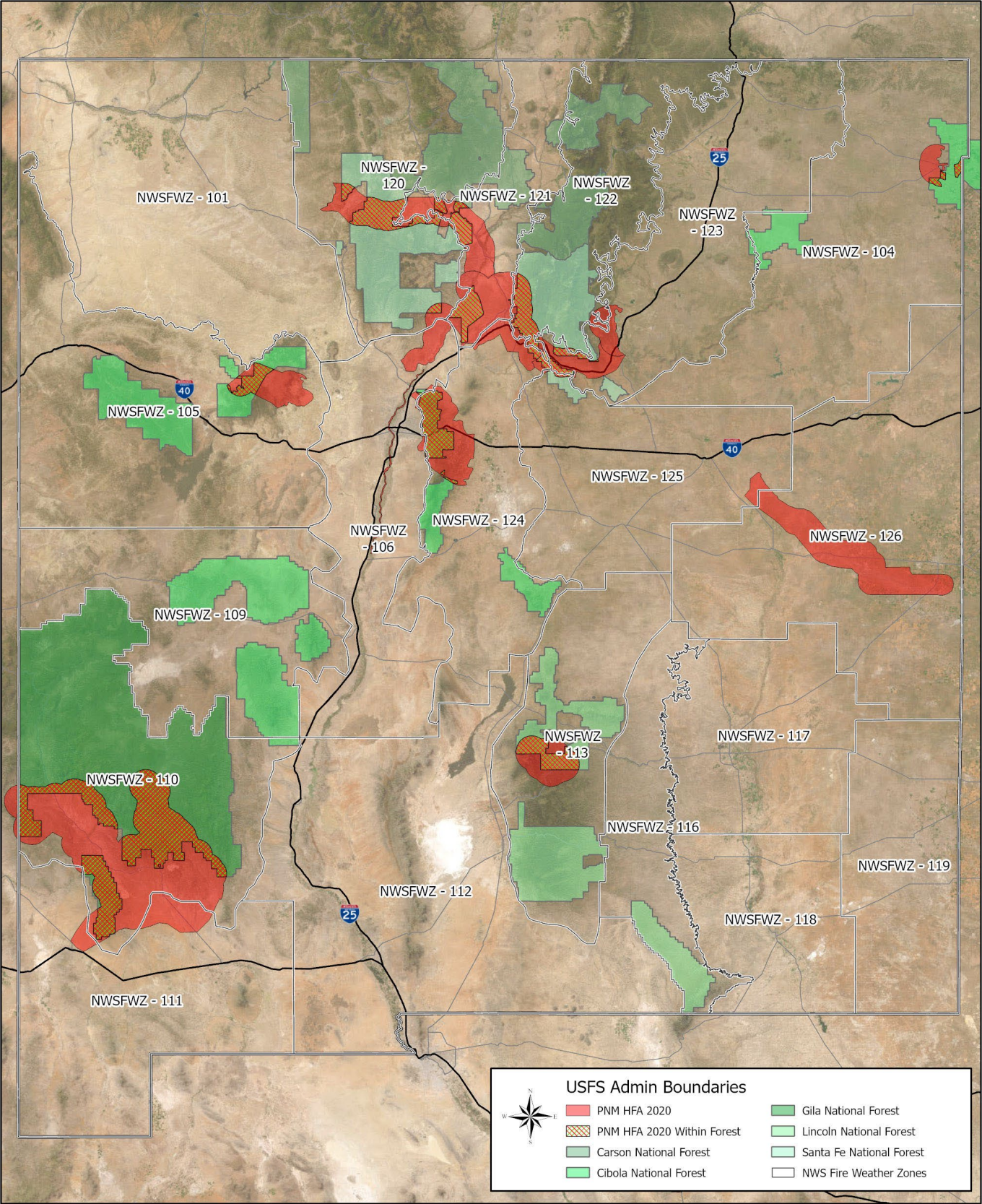
The PNM Public Safety Power Shutoff Plan is designed to proactively de-energize electrical facilities in identified areas of extreme wildfire risk to reduce the potential of those electrical facilities becoming a wildfire ignition source or contributing to the spread of wildfires. Based on the inherently disruptive nature of power outages, PSPS events must be carefully coordinated to balance wildfire risk with potential PSPS impacts on PNM customers and the communities it serves.

The unpredictable nature of wildfire and weather patterns create significant challenges with forecasting PSPS events. Real-time evaluations and decision-making are therefore critical in making PSPS determinations and, depending on the associated wildfire risk, those determinations may result in proactive de-energization in areas not originally anticipated.

PNM identifies operational practices specific to its Hazardous Fire Areas (HFAs) (see **Figure 1**). This PSPS Plan describes the coordination and processes, including operational and communication protocols, for implementation in these HFAs. The PSPS Plan will only affect PNM infrastructure located within PNM's HFAs, which are described in Section 5.0. They are also described in detail in the WMP. Detailed maps of PNM's HFAs can be found in **Appendix A** of this document.

A Public Safety Power Shutoff is considered only when weather and other risk factors combine, and fire potential exceeds thresholds that could indicate an extreme safety risk to customers and communities within designated HFAs. Environmental conditions could include wind, temperature, humidity, and fuel moisture content, which could increase the risk of utility-caused ignitions and wildfires. Other factors would also be considered in determining whether a risk of utility-caused ignitions and potential wildfires exist. This Plan also covers how PNM will communicate internally and externally as the plan is put into place.

Figure 1. PNM HFAs and Fire Weather Zones



3.0 Hazardous Fire Areas

PNM's Wildfire Mitigation Plan identifies HFAs where heightened wildfire risk and consequences exist within its service territory. These are areas where vegetation, terrain, meteorology, population density and the wildland-urban interface (WUI) increase the risks associated with utility-caused wildfire ignition. Detailed maps of each HFA are in **Appendix A**.

The HFAs were identified using the U.S. Forest Service (USFS) wildfire hazard potential (WHP) data, fire history, and PNM T&D assets. Most of the HFAs are in or adjacent to five of the National Forests in New Mexico. One exception is the Bosque HFA, running along the Rio Grande from south of Santa Fe to south of Belen, which covers the dense cottonwood forest along the river. The wildfire risk for all HFAs is reduced through methodologies described in PNM's Wildfire Mitigation Plan.

PNM will only initiate PSPS in these designated areas.

4.0 PSPS Decision-Making Process

PNM will initiate the PSPS decision-making process if PNM determines a combination of critical conditions indicate the PNM system at certain locations is at an extreme risk of being an ignition source, and forecasted conditions are severe enough for the rapid growth and spread of wildfire. **Figure 2** shows how PNM integrates all aspects of the decision-making process and summarizes the phased approach to making the decision to initiate a PSPS.

As wildfire potential becomes more extreme, PNM will receive emailed alerts from CloudFire, its external vendor providing supplemental situational awareness capabilities. This process is described in detail in **Section 4**. These alerts will initiate the staffing of an incident organization, “Event Organization” as described in **Section 4.1** below.

While we shut off power to protect public safety, we also recognize how losing power can disrupt lives and create its own safety risks. During the decision-making process, consideration of other impact(s) that PSPS could have on customers and Critical Facilities is weighed against the risk of wildfire during an extreme weather event.

Figure 2. Integrated Decision Components



To help us better assess the potential impact of a PSPS outage, we analyze the potential safety risk of turning the power off with the potential risk of wildfires that could occur on the circuits being considered for PSPS. The analysis uses safety as its primary driver. Customer reliability and other impacts are also considered when contemplating PSPS.

The Crisis Management & Resilience Team (CMR) will hold regular briefings during which PNM groups involved will discuss planning assumptions, forecasts, their actions, and preparations for possible de-energization and beginning plans for restoration.

As forecasted conditions approach the point that de-energization may be necessary, a recommendation to de-energize will be made in the formal Emergency Operations Center (EOC) setting and communicated to the Senior Vice President (SVP) of New Mexico Operations (NM Ops) who will issue the final order to de-energize service in the PSPS area. If the SVP of NM Ops is not available, the President and/or CEO of PNM will issue the final order.

4.1 PNM PSPS Event Organization

Initially during the lead-up to a PSPS event, a select group of PNM personnel will be involved as indicated in **Figure 3**. As time progresses and if the forecasted fire risks remain, more PNM personnel will become involved in the event's planning and eventual execution. An EOC will be opened, either physically or virtually, and an incident command structure will be set up for the event under the direction of the PNM CMR. The following PNM groups are typically involved during a PSPS event:

- Executive Leadership
- Wildfire Mitigation
- Crisis Management
- Operations
- Government Affairs
- Tribal Government Relations
- Corporate Communications
- Customer Service
- Regulatory/NERC Reliability Governance
- Risk
- Legal
- Line Department
- Drafting & Geographic Information Systems (DGIS)
- Safety
- Environment

4.2 Awareness & Monitoring

PNM uses meteorological consulting firms to perform weather monitoring services to provide forecast reports on HFAs and potential PSPS areas. These reports will guide PNM personnel as they monitor conditions and prepare for a PSPS event. Each consulting firm provides unique information useful in making PSPS decisions and is described in detail below. In addition to weather information, PNM monitors operational conditions of our systems and other events within our service areas, such as nearby fires or other emergencies.

Figure 3. Potential PSPS Event and PNM Situational Awareness and Actions

Decision Phase	Awareness and Monitoring		Notification and Coordination		Decision and Execution	Restoration and Feedback
Timing	7-10 Days Ahead First Signs	3-6 Days Ahead Monitoring	2 Days Ahead Communicating	1 Day Ahead Continue Monitoring and Communicating	Day of PSPS Power May Be Turned Off – Begin Restoration Plans	Restoration Patrol, Repair, Re-energize, Document
Situational Awareness	<p>Strong winds appear in the long-range forecast and wind damage to the PNM electric system is possible.</p> <p>Monitor Cloudfire and Indji Watch</p>	<p>Forecast still indicates winds may approach or exceed critical thresholds in the PNM Service Area.</p> <p>Fire Weather Watches, Red Flag Warnings and High Wind Warnings are likely issued during this period.</p> <p>This is often when this information makes its first public presence.</p> <p>Note: These conditions can arise quickly and catch forecasters by surprise.</p>	<p>Forecast confidence increasing.</p> <p>Red Flag Warning(s) for specific Fire Weather Zones are often issued by this time and important location and weather severity details are being refined.</p>	<p>Forecast confidence high.</p> <p>Red Flag Warning details including affected Fire Weather Zones and Red Flag start/stop times should be issued by now.</p> <p>NWS and GACC predictions should be in good alignment now.</p>	<p>Red Flag declared.</p> <p>Predictive Service Area should indicate High Risk for Large Fire Potential.</p> <p>Wind caused outages are likely. System health is closely monitored.</p> <p>Field Observers report swaying lines, blowing debris and vegetation failure.</p>	<p>Red Flag expires.</p> <p>Winds begin to decrease and are expected to remain below critical thresholds.</p> <p>7-day Significant Fire Potential may remain “High Risk” even after expiration of Red Flag.</p>
PNM Staff	<ul style="list-style-type: none"> ➤ Wildfire Manager ➤ Distr. Ops Center (DOC) ➤ Power Ops ➤ CloudFire 	<ul style="list-style-type: none"> ➤ SVP NM Operations ➤ Crisis Mgt. & Resilience Team (CMR) ➤ Corporate Communications ➤ Physical or Virtual EOC ➤ Safety ➤ Vegetation Management 	<ul style="list-style-type: none"> ➤ External Affairs ➤ Regulatory ➤ Customer Service 	<ul style="list-style-type: none"> ➤ Field Ops/Line Dept (Field Observations, etc.) ➤ Substations 	<ul style="list-style-type: none"> ➤ Risk 	<ul style="list-style-type: none"> ➤ Claims
PNM Actions	<p>Closely monitor changing conditions in forecast.</p> <p>Cloudfire and Indji Watch.</p> <p>Other:</p> <p>NWS Fire Weather forecasts:</p> <p><u>Fire Weather ABQ</u></p> <p><u>El Paso Fire Weather Page</u></p> <p>Predictive Service Area 7-Day Outlooks: National 7-Day Significant Fire Potential <u>https://nwcg.gov</u></p>	<p>Specific areas where ‘critical threshold wind speed exceedance’ are expected - do continuous monitoring.</p> <p>Consult Cloudfire and Indji Watch for granular wind and weather forecasts.</p> <p>PSPS event planning process should begin.</p> <p>Begin monitoring PNM Service Territory here: <u>https://inciweb.nwcg.gov</u> for increased wildland activity from any cause.</p> <p>Multiple uncontrolled fires burning simultaneously are one indicator that a PSPS decision may be imminent.</p>	<p>Service territory area expected to experience critical wind speeds refined & used in planning process.</p> <p><u>Preliminary notifications</u> begin for potentially affected customers and public officials.</p> <p>Continue monitoring service area for uncontrolled wildland fires.</p> <p>Pre-planning begins for the Restoration Team.</p>	<p>Additional messaging to affected customers and public officials.</p> <p>Coordination with first responders.</p> <p>Ready re-energization patrol plans.</p> <p>Continue monitoring service area for uncontrolled wildland fires.</p>	<p>PSPS</p> <p>Winds are monitored by all available means.</p> <p>Outages are monitored and used to inform PSPS decision.</p> <p>Decision is made to initiate PSPS.</p> <p>Notification to customers and public officials that power has been shut off.</p> <p>PSPS information is distributed through various media outlets.</p> <p>Conditions are monitored for improvement. Close contact is maintained with NWS and GACC.</p>	<p>Patrols are completed and necessary repairs made.</p> <p>When safe to do so, power is restored.</p> <p>Damage and repairs are documented.</p>
PNM Staff is an additive process. Second column staff are added to the first column staff, and so on, as the days go by. As long as needed, staff increases each day or every few days.						

4.2.1 Cloudfire – Thresholds and Burning Conditions

CloudFire provides situational awareness and threshold alerting for PSPS consideration.

PNM has contracted with CloudFire to collect climatology data, review historic fire occurrences, and calculate thresholds for PNM PSPS use.

CloudFire gathered 10 to 20 years of climatological data including information on wind, temperature, and relative humidity.

Along with meteorological data, CloudFire collected and analyzed 10 to 20 years of burn environment data from National Fire Danger Rating System (NFDRS) indices such as Ignition Component, Spread Component, Energy Release Component, and Burning Index.

CloudFire used historic fire perimeter data in conjunction with the climatological and burn environment data to determine where and when fires of consequence have occurred in the past. PNM is using the results of this data and these thresholds to inform PSPS event considerations.

This research and analysis culminated in a “Composite Risk Index” (CRI).

The CRI has been incorporated into an online dashboard that will display a 6-day forecast for each PNM HFA. Also included in the dashboard are 6-day forecasts for the Energy Release Component¹ (ERC) percentile and Severe Fire Danger Index² (SFDI). Each of the three indices (CRI, ERC, SFDI) are color-coded for each forecast day for each HFA.

Alerts are emailed to a PNM distribution list when conditions requiring PSPS contemplation appear in the forecast.

Also included in the online dashboard are live, real-time meteorological and burn environment graphs:

- Fosberg Fire Weather Index
- Wind Gust Speed
- ERC Percentile
- Head Fire Flame Length
- Composite De-energization Index
- Firebrand Ignition Probability

PNM is working to make the dashboard available to local communities for their own monitoring of weather conditions.

4.2.2 Indji Watch

Indji Watch (IW) is a tool that provides natural hazard alerting services to PNM. It is a situational awareness tool that combines a Threat Window which lists NWS Special Weather Statements (SWS) and a dashboard with map-based visualizations of the same SWS.

¹ https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5339121.pdf

² [Severe Fire Danger Index: A forecastable metric to inform firefighter and community wildfire risk management | US Forest Service Research and Development \(usda.gov\)](#)

IW ingests PNM asset data and uses a Geographic Information System (GIS) as a basis for its service. When SWS affecting PNM assets or operating areas are issued by the NWS, IW populates the Threat Window and map dashboard.

Specific to PSPS situational awareness, PNM employees can log into the IW Client and view Red Flag Warnings (RFW) (and any other selected SWS alerts such as high winds).

PNM receives RFW alerts from IW and has created tools to forward them to affected field and system operations personnel. These may come via phone, emails, and texts.

PNM is also able to view customized 14-day forecasts at specified locations and can also view customized alerts up to 14-days in advance in Forecast Dashboards when wind speeds or other weather values reach PNM selected pre-set thresholds (see **Figure 4**). This is useful for providing long-range forecasts that might start the PSPS decision making process. Emails or SMS alerts will be generated up to 48-hours in advance for forecasted sustained winds or gusts that exceed thresholds and require broader awareness and urgency.

Figure 4. A 14-day Indji Watch Forecast - Bosque MET Station



4.2.3 Red Flag Warning

Though described here in detail, RFW does not necessarily mean a PSPS is imminent, nor is RFW a requirement for a PSPS decision-making process to be initiated. That said, an RFW is likely to be issued and in effect at the time the PSPS decision making process is started. A RFW is a forecast warning issued by the NWS to inform the public, firefighters, and land management agencies that conditions are ideal for wildland fire ignition and dangerous fire spread. RFWs are often preceded by a Fire Weather Watch (FWW), which indicates critical fire-weather conditions could occur in the next 12 to 72-hours.

The NWS has identified discreet Fire Weather Zones (FWZ) across the nation for providing weather alerts such as RFWs. These zones are shown on this NWS webpage: [Fire Weather](#).

There are 3 NWS forecasting offices that cover the PNM Service Area; Albuquerque, NM and El Paso and Midland, TX. These forecasting offices issue RFW only when dry fuels and low relative humidity combine with gusty winds to create the potential for extreme wildfire conditions. RFW thresholds are used by most NWS offices and can be found here: [Fire Weather Criteria](#)

4.2.4 Daily Situational Awareness

PNM receives a Daily Situational Awareness (SA) report prepared by a consulting firm with decades of experience derived from wildland fire control and utility SA development. The report is emailed to a distribution list of PNM personnel. The “Daily SA,” as it is called, assigns an Operating Condition of Normal, Elevated, or Extreme to each PNM HFA each day based on indices derived from the National Fire Danger Rating System. This publicly available data is the same data that is used by federal and other wildland firefighting agencies to make such fire business decisions as setting dispatch levels, staffing levels and determining area closures. PNM uses the data to inform field operations and system settings.

Information associating PNM HFAs to Remote Automated Weather Station (RAWS) and NWS FWZs is also included in the Daily SA report.

4.2.5 Real Time Observations

Real Time Observations can be from both public and privately- owned automated weather stations.

Public weather stations can be high quality and well maintained such as Federal Aviation Administration (FAA) certified airport weather stations while others may have less consistent data, communication, and maintenance such as those at schools or public buildings. The IW user interface provides immediate access to both high quality public and PNM-owned weather station data which is essential for real-time observations and verification of PSPS potential wind conditions.

Location is the key. PNM leverages data collected from weather stations co-located with PNM assets to understand the conditions experienced by assets in HFAs, and especially assets in heavy terrain areas.

Quality instrumentation, which should include the minimum parameters of wind speed, wind direction, temperature and relative humidity is ideal. Not all instruments are equal and verifiable, and data streams should be considered to balance accuracy of the data versus budget. Power and frequency of communication are also significant factors. While weather station observations could be delivered in averages and peak values per minute, or even sub-minute, the communication of the observed data, (i.e., wind gusts) may only be delivered every 5 or 10 minutes if the weather station is remote and relies solely on solar/battery power, or must communicate via radio repeater, Very Small Aperture Terminal (VSAT), or cellular. IW will provide visibility to PNM-owned weather stations through two additional interactive map layers which allow high level visibility to current wind speeds and temperatures at all weather stations. Each site can then be queried on the map to view all the current observations in direct relation to PNM assets. These observations in IW are made possible by integrating the weather station data through an Application Programming Interface (API) provided by EDM. EDM provided the original eleven weather stations to PNM. If a future weather station provider or utility provides a stable API for the weather station access, IW can integrate the data. Below is a list of the original EDM locations providing data.

4.2.6 Other Non-Weather Factors

PNM routinely monitors a variety of factors including operational conditions of our systems, and other events within our service areas, such as nearby fires or other emergencies. PNM is also collaborating with communities to identify Critical Facilities in the HFAs to understand other community issues identified by: local communities, emergency responders, and other local, state, and federal government entities, which may factor into PSPS determination. Additional considerations may include but are not limited to: wildfire mitigation measures that have been deployed in an area, Critical Facilities within HFAs, availability of back-up generation supporting Critical Facilities, and customers with medical considerations, such as those with medical certification status on file with PNM.

4.3 Notification & Coordination

PNM moves into the Notification and Coordination Phase when the anticipation of extreme wind and existing mitigation in the forecasted area indicate that a PSPS should be considered for wildfire prevention.

The first, and defining action, of the Notification and Coordination phase to provide estimates on the start time, location, who could be impacted, and expected duration of the power shutoff. Restoring power is not always as simple as just turning power back on. Inspections and repairs of damage must be conducted before safely restoring power. PNM assesses each situation to determine the resources needed to expedite restoration, continually updating estimated times for power to be restored.

Restoration is covered in more detail in Section 4.6, but restoration planning starts in this phase and is a part of the communication that our customers and stakeholders can expect.

4.3.1 PSPS Communications

The size of PNM's service area, geographic and environmental diversity, and unpredictable nature of New Mexico weather create challenging conditions for rapid communications. The PNM PSPS Plan identifies critical stakeholders, actions, messaging, and communication channels to maximize PNM's reach to customers and communities in the event of a PSPS and integrates the following communications planning.

When possible, PNM will notify customers and local communities before, during and after a PSPS event, recognizing however, that some emergent situations may not allow for extensive or even any advance communications. PNM will utilize multiple tools to broadcast messaging on public safety while following operation protocols and required regulatory notifications. Some of these tools include:

- Text messages with expected timing and duration of the PSPS event (used for customers who opt-in to text communication)
- 24-hour call center
- Up-to-date information on a dedicated PNM PSPS webpage
- Media engagement with local TV, print and radio journalists
- PNM social media
- Post-action briefings to modify communication practices, as necessary

4.3.2 Corporate Communications

The PSPS Communication Plan provides guidelines for managing and supporting internal and external communication necessary before, during and after a PSPS event. All employees will be aware of the plan and their roles in implementation.

The communication plan specifically focuses on 1) safety, 2) wildfire impacts on PNM customers and or their electricity, and 3) calls to action for impacted and non-impacted customers.

During Non-PSPS Conditions

PNM will provide a proactive wildfire education and awareness campaign for PNM customers and HFA communities focused on wildfire prevention and mitigation, PSPS awareness and outage preparedness. PNM will utilize multiple tools and message points to support public safety and awareness.

Tools to include:

- PNM social media
- Wildfire safety customer website
- Mass media outreach via TV, radio, and print
- Customer newsletters and general communications
- Proactive engagement within PNM employees
- Local community outreach with first responders, customers and community members, regulators, elected officials, tribal leaders, public safety partners, critical facility operators and utility service providers

Key Messages:

- Preparedness is key:
 - create or update an emergency supply kit
 - identify three tiers of support
 - be familiar with community resources and emergency services
- PSPS Process
- Availability of outage information and updates

During Potential PSPS Conditions

If the PSPS is likely, PNM will implement its integrated PSPS communication plan using the tools referenced above as well as direct customer email, text and or phone call as available based on customer notification selections and capabilities leveraged through community partners.

PNM will communicate to our customers ahead of a potential PSPS to support their preparation and safety. Messages may include but are not limited to:

- Secure outdoor items: Safeguard your outdoor spaces by securing loose items such as patio furniture and garden tools. This prevents outdoor from becoming hazards or blowing into power lines. Move items indoors, if appropriate and possible.
- If applicable, unlock access gates to support PNM crews' ability to restore power.
- Allow PNM personnel access necessary infrastructure on/near customers' property.
- Avoid letting pets outside for extended periods of time and when they are outdoors, please keep them secure and safe.

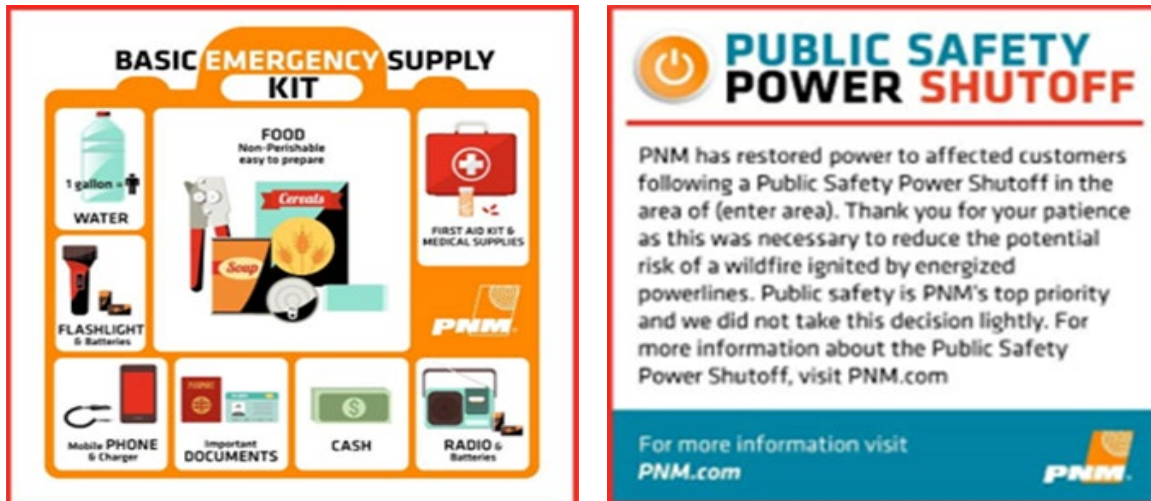
- Stay clear of downed power lines: Even if a downed line is not actively sparking, always assume it is carrying electricity and immediately call PNM at 888-DIAL-PNM.
- Use caution around power lines: avoid flying kites or drones or other aerial devices around power poles, overhead power lines, and substations.
- Report power outages: Wind and storms can blow branches, tarps, and trampolines into power lines, causing power outages. Never attempt to remove anything from the lines. Stay away and immediately report the outage by calling 888-DIAL-PNM.



Example of PNM PSPS Website upon notice of potential PSPS

48-Hours and 24 Hours Ahead of Potential PSPS

- The safety of our customers and local communities is paramount.
- Purpose of PSPS.
- Work with local entities to identify locations of Community Resource Centers.
- Communication with First Responders, Public Officials and Tribal Officials.
- Power outage preparedness to reduce potential impacts of a PSPS.
- Stay informed and check on your neighbors, friends and family who may be impacted.
- Frequent updates made available to customers via local media, PNM website, PNM social media and other tools to communicate extensively with potentially impacted customers and communities.
- Utilization of FEMA's Integrated Public Alert Warning System and Reverse 9-1-1 notifications, if available.



4.3.3 Customer Service

Although customers will be provided information through other outlets, PNM's Customer Service Call Center is a single point contact for PNM's customers. Customers contact the Call Center for a variety of reasons. In an emergency, Customer Service will take customer calls and enter them into operator logs, with additional input from voice recordings, electronic communications, and transcripts.

Although the Call Center's normal hours of operation are 7:30 A.M. to 6:00 P.M. Monday through Friday, in the event of a PSPS, the call center will be staffed 24-hours a day, 7-days a week, beginning the day before expected de-energization and then throughout the PSPS event. The 24-hours additional areas are implemented as necessary per the Call Center Emergency Response Plan.

PNM's Customer Service staff will assist in communication with residential and business customers in the affected area. This department will also assist with the identification of, and communication with, any vulnerable customers, including those customers dependent on medical devices.

iConnect is PNMR's Intranet site and is available to employees 24/7.

During a significant event, the Call Center Manager will work with the CMR and Corporate Communications to ensure that an effective communication strategy is implemented, and Call Center Representatives have information they can provide to customers who call in.

During a significant event, the Call Center Manager will work with the CMR and Corporate Communications to assure that an effective communication strategy is implemented, and Call Center Representatives have information they can provide to customers who call in.

4.3.4 Regulatory and Governmental Coordination

The Public and External Affairs Department will coordinate communications between PNM and Government Agencies during a PSPS event. External Affairs will work closely with PNM Regulatory, System Operations, Distribution Operations Center (DOC), and Corporate Communications to develop the scope and timing of and deliver the necessary communications to the appropriate government agencies to deploy available resources to assist the PNM restoration process.

4.3.5 Tribal Engagement Coordination

PNM acknowledges the sovereignty of tribes and their rights to govern their lands. PNM's service territory includes two tribes in wildfire-prone areas, namely the Mescalero Apache Nation in Otero County and Tesuque Pueblo in Santa Fe County. PNM continues to address vegetation management annually with tribes with lands located in the Rio Grande Bosque.

As part of the PSPS notification strategy, tribal communities affected by the public safety notifications are included in the communication process. PNM's Tribal Government & Customer Engagement Department will engage with Tribal leadership through various means such as direct phone calls, emails, online meetings, and in-person interactions. Furthermore, PNM will collaborate with tribes to explore the option of alert systems notifications. Information sessions will be organized by the PNM Tribal Government & Customer Engagement team for Tribal leaders and key stakeholders. Their principal roles also include fielding customer calls from Tribal leadership and key stakeholders during PSPS events and communicating restoration information to impacted tribal leaders and tribal communities.

4.3.6 Major Accounts

The PNM Account Management Team has the primary function of maintaining a clear line of communication between PNM and major industrial and commercial (I/C) customers. PNM Account Managers are assigned to specific customers or key field locations to communicate information regarding the status of pre-PSPS and restoration efforts.

The principal roles and responsibilities of the Account Management Team during a PSPS event are:

- 1) Field Major I/C customer calls and communicate their questions/concerns/issues through the assigned Account Management Team Manager

4.4 Community Resource Centers

Prior to PSPS events, PNM will work with those local agencies that manage the Community Resource Centers (CRCs), such as those identified within a Hazard Mitigation Plan, located in an area of potential PSPS event. If a PSPS event is imminent, PNM will team up with local Public Safety Partners/community emergency management personnel to identify CRCs and post those locations on PNM's website. PNM will collaborate with local communities to aid emergency managers including:

- Periodic updates on utility service status
- CRC location(s) and coordination to be included in community outreach/outage notifications

Local, state, and federal emergency management identifies the specific CRC location(s), services offered, and hours of operation.

4.5 Command and Control (Coordination & Collaboration, Planning Function)

During an event, for optimum restoration effectiveness to PNM customers, direction and control of all electric delivery restoration-related activities are centralized. The PNM Incident Commander (IC) reports directly to the SVP of NM Ops for all PSPS events. DOC and Power Operations (PWOP) will keep local Operations informed of the status of system equipment that affects the region.

Prior to a PSPS event, PNM will coordinate with emergency management personnel from the local municipality, county, and tribal government, as applicable, to review and coordinate local emergency/hazard mitigation plans. Additionally, PNM will coordinate with and participate in various agency forums, including periodic emergency coordination calls, ongoing situational awareness calls, or any other communication meetings designed to inform the local community of any potential upcoming PSPS. PNM will also communicate in advance with local agencies and will develop an information sharing process with agencies and identify necessary documentation to facilitate information sharing.

4.6 Decision and Execution

The next phase is decision and execution. As the decision to initiate a Public Safety Power Shutoff is considered, the focus will remain on gathering information to prevent potential wildfire ignitions and balancing that with community preparation and power needs to make the best decision possible. Once the decision is made and the power shut off, efforts in awareness, monitoring, communication, and coordination will continue.

Even with the power off, PNM will continue to communicate with customers and emergency responders, through available communication channels, acknowledging that some channels may not be available because of the outages. As outlined above, there are a variety of communication methods that could keep customers informed. PNM will work with local media outlets to provide information to listeners. However, in some cases radio equipment may also be subject to the PSPS and may not be available. Therefore, PNM will seek to identify the best methods of communicating with the local community in the event of a PSPS, including notification to telecommunications providers and identification of the potential for “cellular on wheels” capabilities in the area. Information will also be provided at the CRC, so that customers visiting one of these centers during a PSPS will have access to updated information on the PSPS duration and restoration.

As forecasted conditions approach and near the point that de-energization may be necessary, a recommendation to de-energize will be made in the formal Emergency Operations Center (EOC) setting and communicated to the SVP of NM Ops or designee who will issue the final order to de-energize service in the PSPS area. The process of shutting off power may not occur all at once and notifications will be sent updating customers and community members before their power is shut off, so they know if their outage is related to PSPS or other causes.

4.7 Restoration and Feedback

The power will remain off if high-risk weather prevails. This prevents the potential ignitions that could occur from airborne debris hitting lines, vegetation contact with power lines, or lines clashing. When the weather risk passes, we will enter the Restoration phase. Before power is turned back on, a thorough inspection of potentially impacted lines and equipment must be completed.

The restoration timeline is influenced by the time it takes to inspect for damage and repair any damage found. The commitment to minimizing restoration times began in the Notification and Coordination phase, and inspections will start as soon as the weather risk has passed. Communication with our customers and community leaders will continue throughout this phase, sharing the status of restoration efforts and providing updated estimates of time remaining to complete restoration while integrating your inputs to prioritize efforts.

In this restoration phase, PNM will ask the community to help by:

- Allowing power line crews access to customers' property for inspections and repairs.
- Keeping access roads clear and securing pets.
- Reporting visible damage through our customer service center (888-DIAL-PNM) or online (pnm.com/outage) while ensuring customers stay away from any damaged equipment. Always consider power equipment to be live.
- Allowing drones or helicopters to inspect power lines without interference.
- Avoiding unsafe generator connections that could endanger repair workers or the community. PNM will ask customers to only use their generator **IF** they have a generator cutover switch. If a customer does **not** have one, PNM will ask that customers **DO NOT** wire generators directly into their electrical panel, *as this could be dangerous*.

The CMR Team will coordinate inputs for a decision to begin restoration efforts. The decision will consider wind, weather and fire conditions subsiding to the point where PNM electric assets are not likely to cause a consequential wildfire ignition and conditions are safe to begin inspections. PNM will consider wind observations and forecast trends and consult with fire agency partners and community partners to help guide the decision to begin restoration efforts.

Once the decision has been made to begin restoration efforts, a series of events takes place:

1. Circuits are patrolled and inspected in priority order. The process of prioritizing the restoration effort started in the notification phase and is an ongoing process through restoration to full re-energization. DOC and PWOP are consulted for inputs to the re-energization process.
2. All circuits are patrolled looking for damage or other anomalies that might lead to failure and arcing upon re-energization.
 - a. Damage is documented and analyzed.
 - b. Estimates of repairs to damage are collected, shared, and used to refine restoration prioritization.
 - c. Damage is repaired.
 - d. Completed repair work is documented and communicated to DOC and PWOP

Note: Discovery of damage may impact restoration priorities – for example, a high priority circuit for restoration might not be restored first because downstream damage must be repaired before power can be brought to the priority circuit. Other lower priority circuits might be restored first as power is brought to higher priority circuits.

Circuits are finally re-energized in accordance with PNM standards and existing operating procedures.

4.7.1 After Action Review

An After-Action Review (AAR) is a structured review or de-brief process used to evaluate the effectiveness of the Plan, gather feedback, and identify potential areas for improvement. The goal is to clearly identify and document the factors and decisions that contributed to the outcome. The review may include operational processes, communication structure and responsibility, customer support, emergency response, and restoration. PNM may also request feedback from external stakeholders on coordination efforts, communications, and outreach effectiveness for integration into the AAR report. PNM will conduct AARs after each PSPS event to capture lessons learned.

5.0 Training, Exercises, Tabletops

An effective response to any incident is determined by the ability to implement a controlled incident command structure and to assume responsibility for restoration and recovery activities. It is critical that individuals having responsibility for functions within the incident command system are familiar with their responsibilities and have practice performing those responsibilities. Individuals identified with primary or secondary responsibility within the command center structure complete an annual review of the overall wildfire response and recovery plan. These individuals are required to contribute to post-wildfire and emergency reporting, outlining any issues or concerns regarding their roles and responsibilities. Periodic training exercises will be developed and implemented to ensure that individuals otherwise not involved in incident management regularly, can become practiced in responding.

PNM has a goal of continuous incident management improvement. Results of exercises and actual response incidents will be evaluated by identifying issues raised during the exercise or incident, preparing the AAR, developing corrective action plans, and documenting lessons learned. Lessons learned may be implemented for inclusion in PNM's response and restoration procedures.

PNM also coordinates and participates in tabletop exercises with public safety partners to enhance knowledge of each other's emergency operations for smooth interactions during PSPS events.

PSPS Plan exercises will be implemented at least annually using various scenarios and testing all or any portion(s) of the Plan which may include:

- Testing text and/or phone alerts with a test group of public safety partners
- Testing tactical operational plans such as reporting field observations or positioning employees at manually operated disconnects to evaluate timing
- De-energization and field inspections of T&D assets
- Discussing and/or practicing roles and responsibilities of both strategic and tactical operations, including decision-making handoffs and hypothetical scenarios
- Discussing and/or developing re-energization plans
- Testing capacity limits on incoming and outgoing communications systems

6.0 Next Steps

PNM is committed to continuing collaboration and communication with HFA communities on this PSPS Plan. Several next steps have been identified to continue to inform and improve upon this plan, including:

- Developing a community outreach process with information for residential and commercial customers
- Collaborating with grant-seeking, local communities on identification of funding sources for backup generation, including providing technical assistance
- Having regular communication with emergency response personnel at the state and local level to ensure preparedness in the event of a PSPS
- Providing emergency preparedness information to customers by attending diverse community events and special events
- Explore additional alignment with community emergency response and health management resources in HFAs for those who may rely on power for health and safety beyond those with Medical Certificates on file with PNM
- The PSPS plan and the Wildfire Mitigation Plan will be posted on our website at www.pnm.com/wildfire-safety, including maps of PNM's HFAs and an FAQ addressing key questions asked during outreach efforts. Other informational materials to be developed and updated on the website.

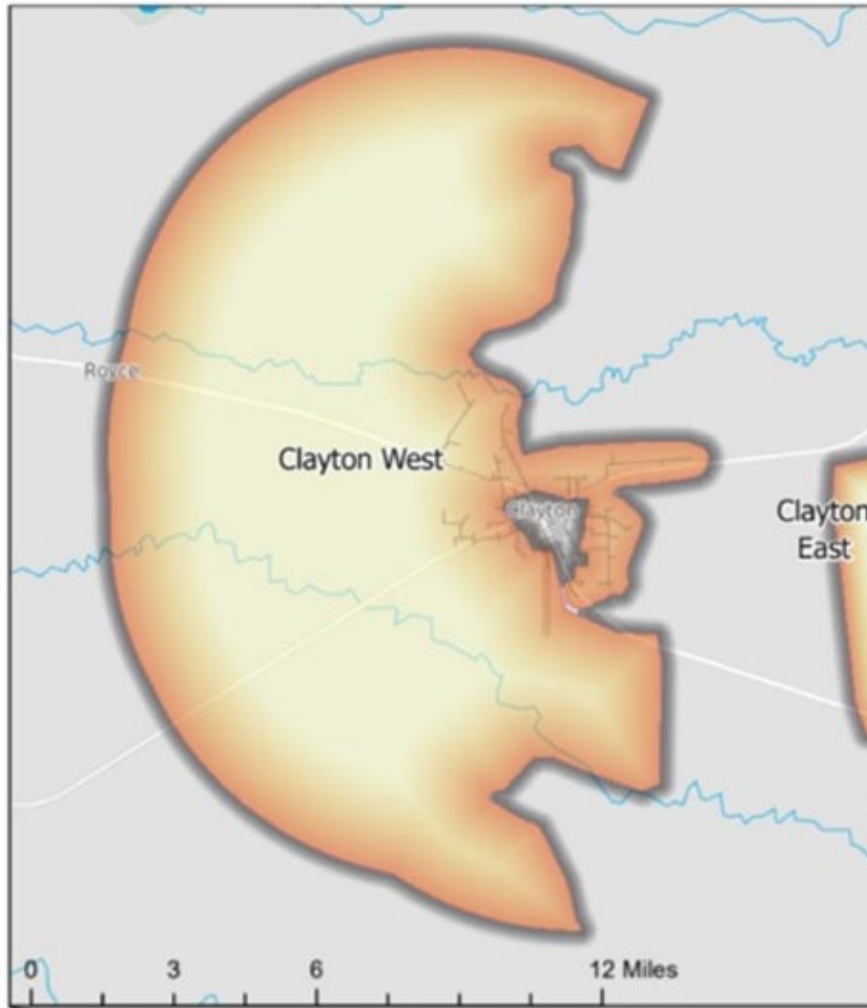
APPENDIX A

HAZARDOUS FIRE AREA MAPS

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New Mexico Hazardous Fire Areas (HFAs)

Clayton West



Map Legend



Transmission within HFA

1.38 Miles

0.04% of System

Distribution within HFA

19.63 Miles

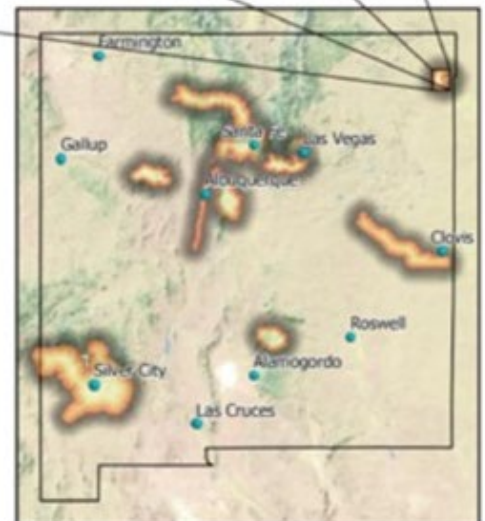
0.34% of System



NWS Fire Weather Zone

104

Northeast Plains



New Mexico Hazardous Fire Areas (HFAs)

Sandia Mts

Map Legend



Transmission within HFA

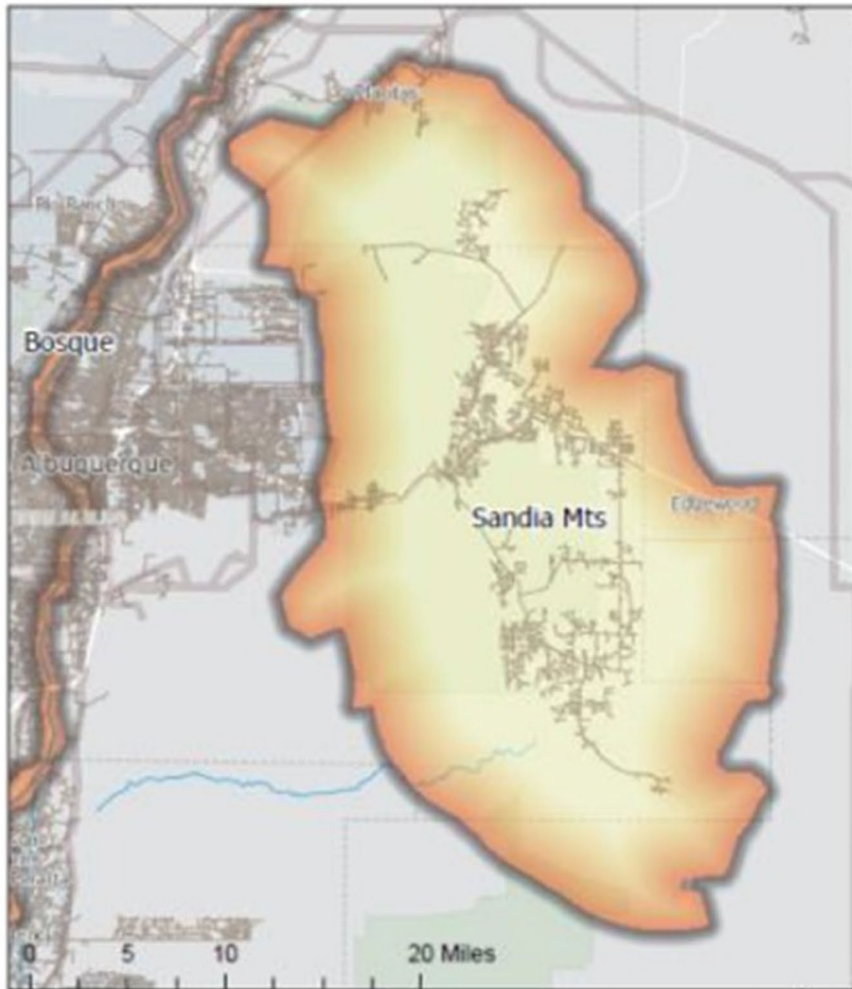
27.42 Miles

0.85% of System

Distribution within HFA

406.59 Miles

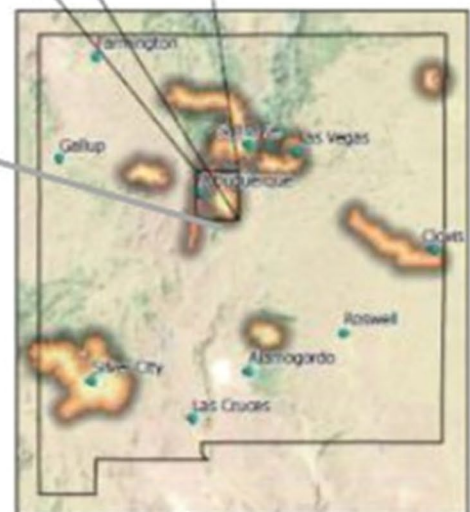
6.96% of System



NWS Fire Weather Zone

107

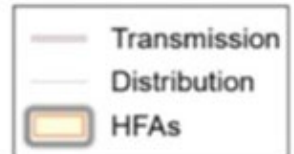
Sandia, Manzano and Gallinas Mts



New Mexico Hazardous Fire Areas (HFAs)

Bosque

Map Legend



Transmission within HFA

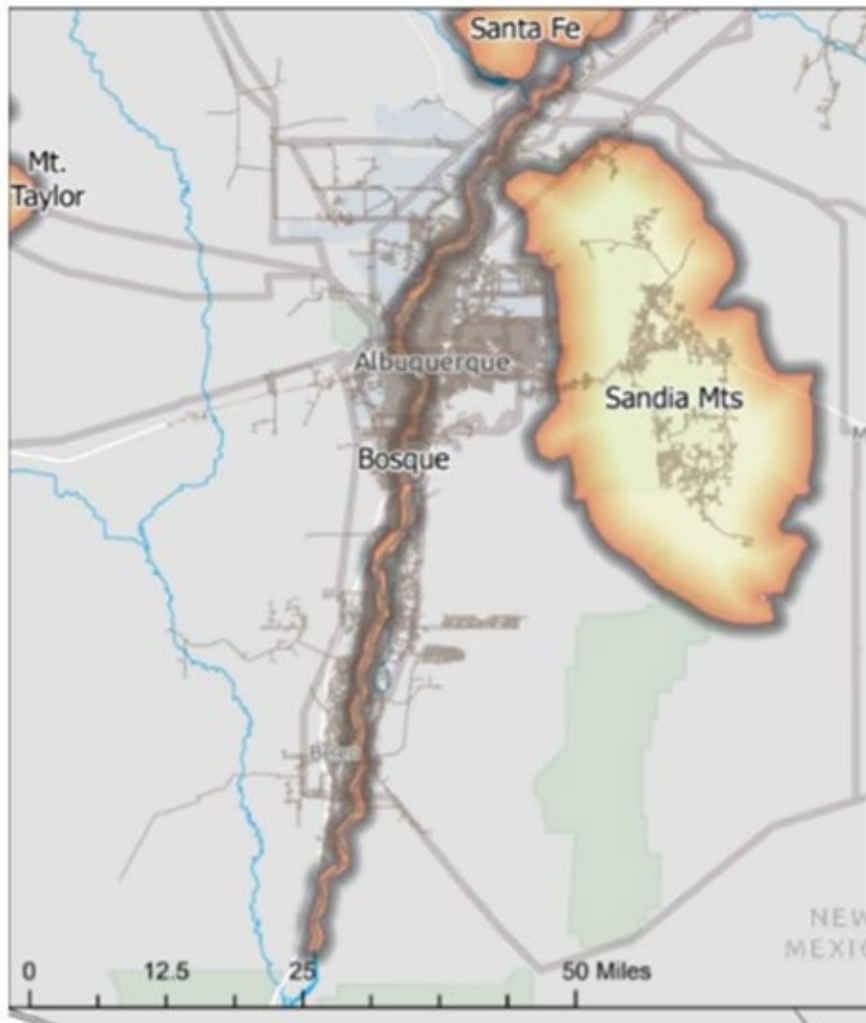
4 Miles

0.12% of System

Distribution within HFA

5.41 Miles

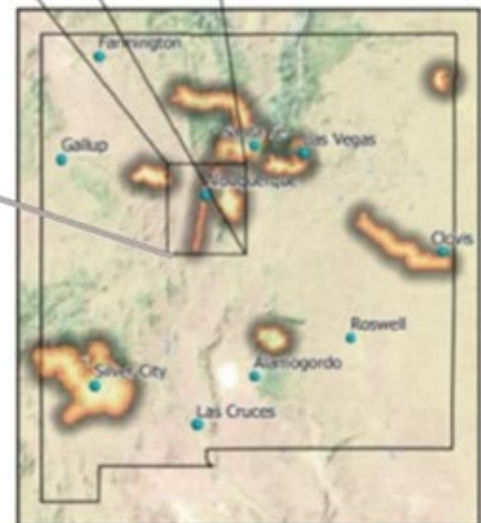
0.09% of System



NWS Fire Weather Zone

106

Middle Rio Grande Valley



New Mexico Hazardous Fire Areas (HFAs)

Fort Sumner

Map Legend



Transmission within HFA

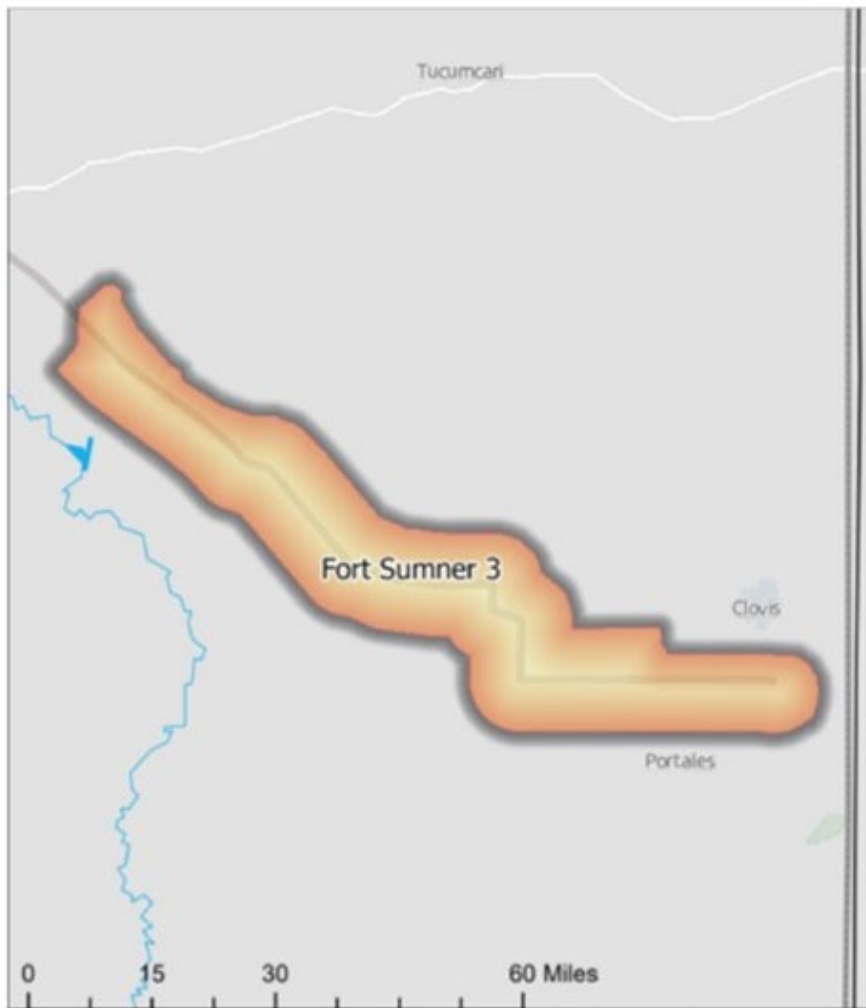
88.34 Miles

2.75% of System

Distribution within HFA

0 Miles

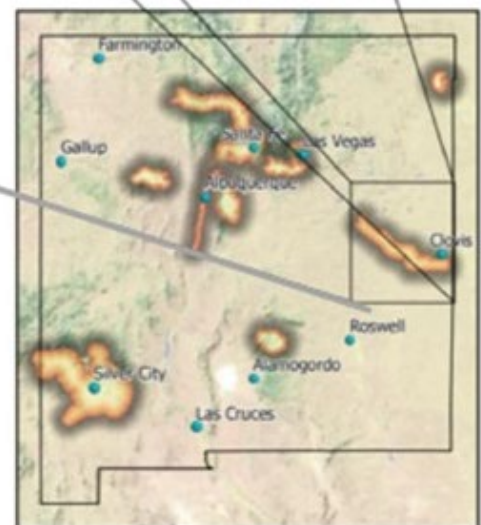
0% of System



NWS Fire Weather Zone

108

East Central Plains



New Mexico Hazardous Fire Areas (HFAs)

Mt. Taylor

Map Legend



Transmission within HFA

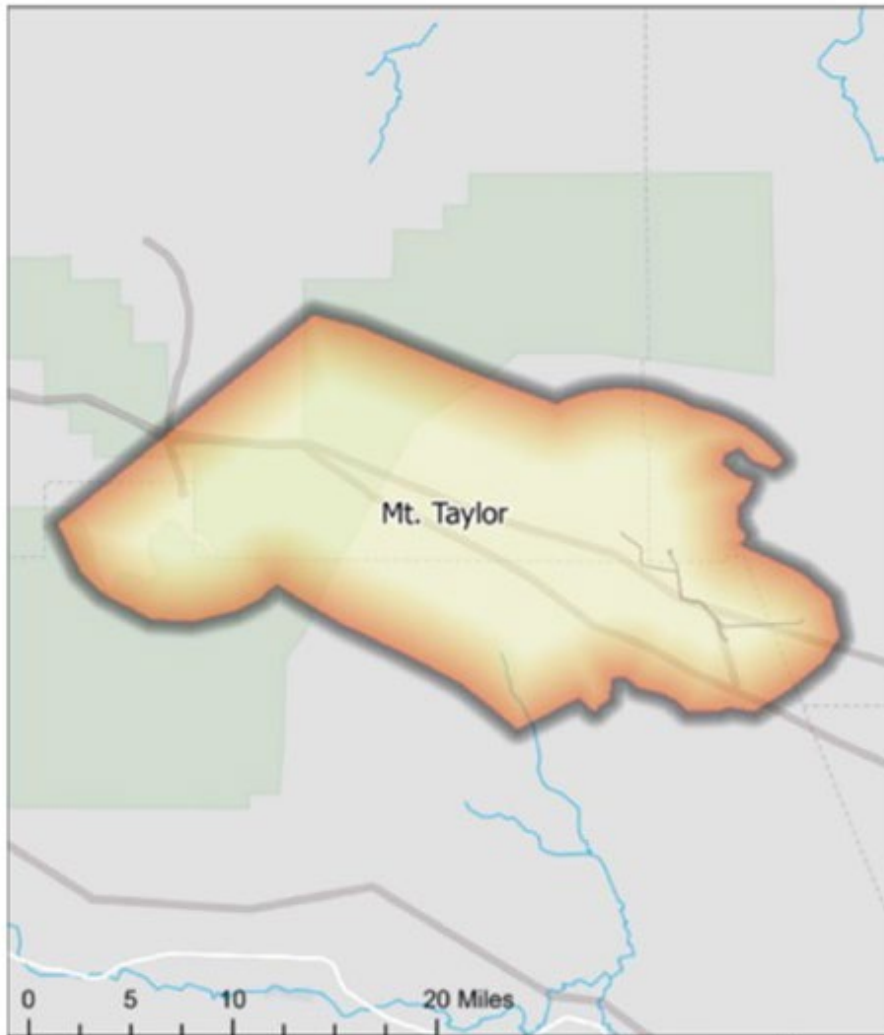
63.04 Miles

1.96% of System

Distribution within HFA

13.82 Miles

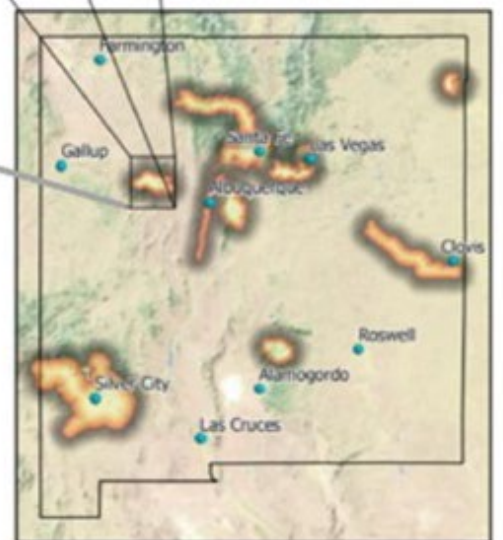
0.24% of System



NWS Fire Weather Zone

105

Northwest Highlands



New Mexico Hazardous Fire Areas (HFAs)

Ruidoso

Map Legend

	Transmission
	Distribution
	HFAs

Transmission within HFA

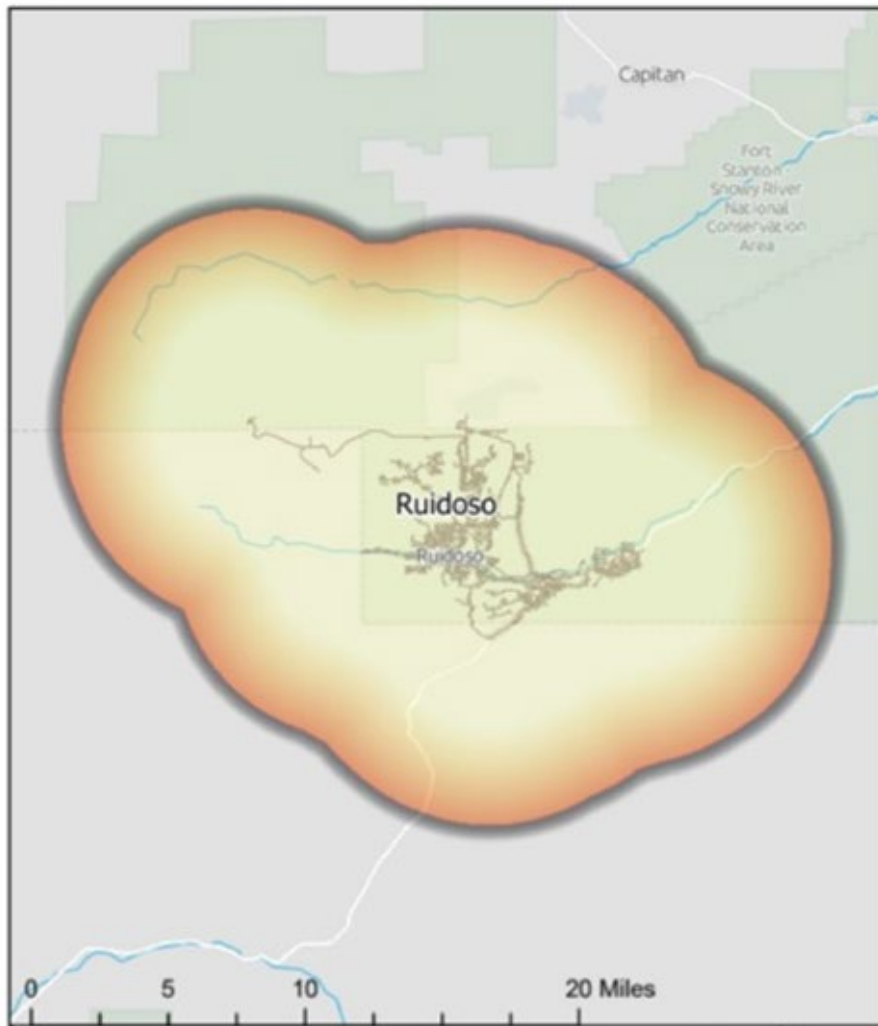
5.4 Miles

0.17% of System

Distribution within HFA

176.16 Miles

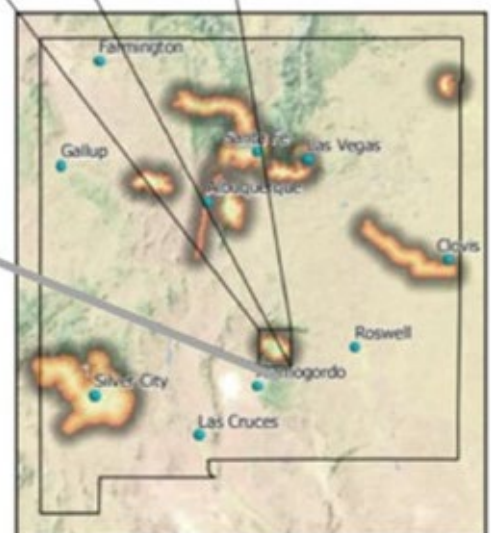
3.01% of System



NWS Fire Weather Zone

113

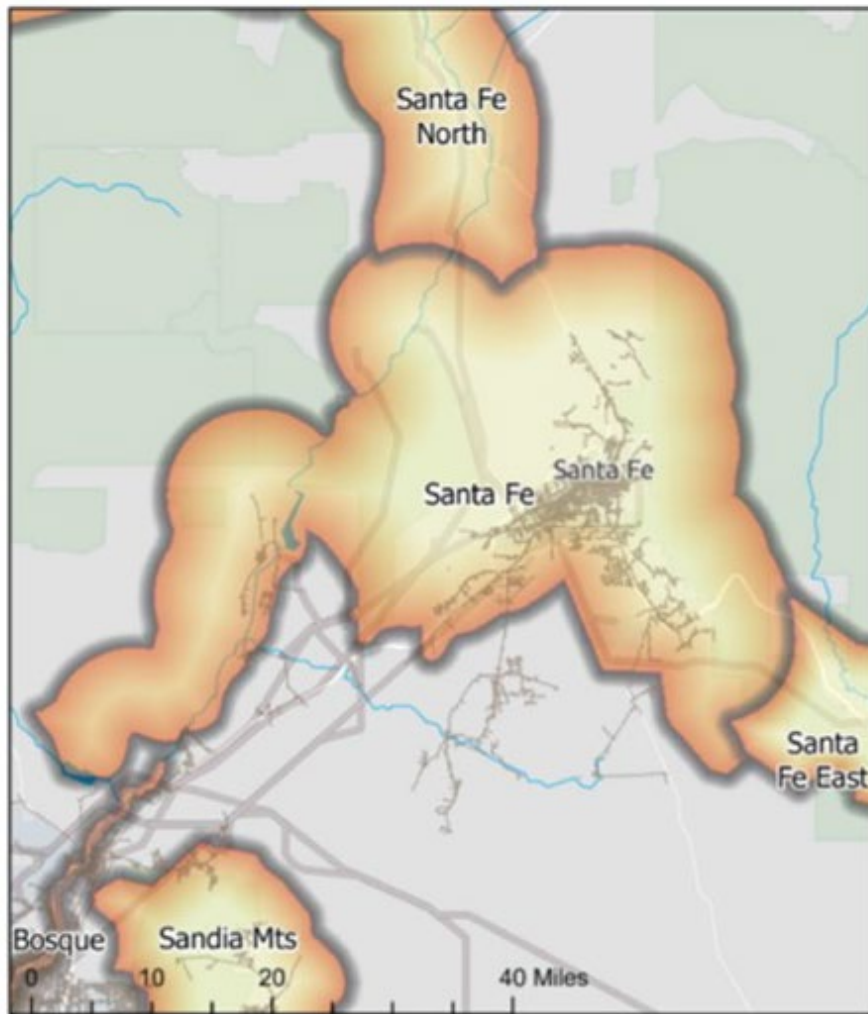
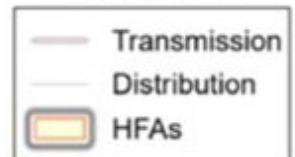
Capitan and Sacramento Mts



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe

Map Legend



Transmission within HFA

184.1 Miles

5.73% of System

Distribution within HFA

497.68 Miles

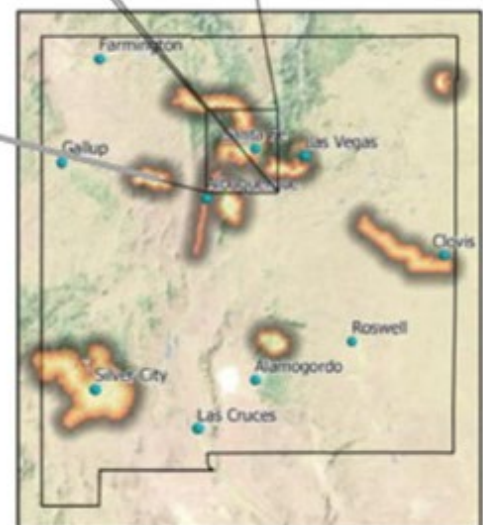
8.52% of System



NWS Fire Weather Zone

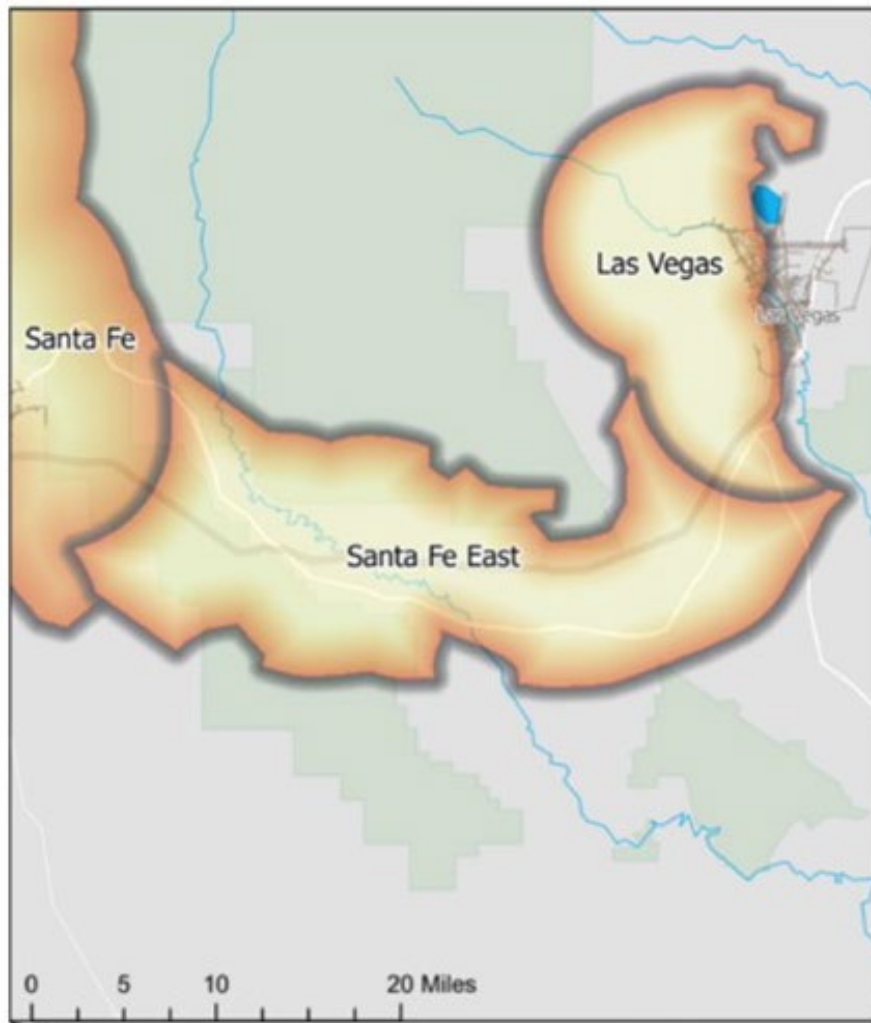
102

North Central Mts



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe East



Map Legend



Transmission within HFA

27.17 Miles

0.85% of System

Distribution within HFA

0 Miles

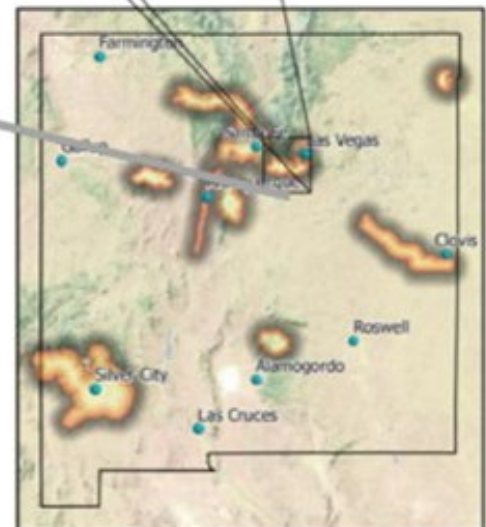
0% of System



NWS Fire Weather Zone

103

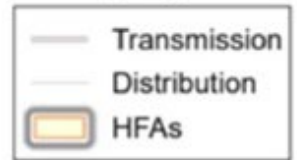
Northeast Highlands



New Mexico Hazardous Fire Areas (HFAs)

Santa Fe North

Map Legend



Transmission within HFA

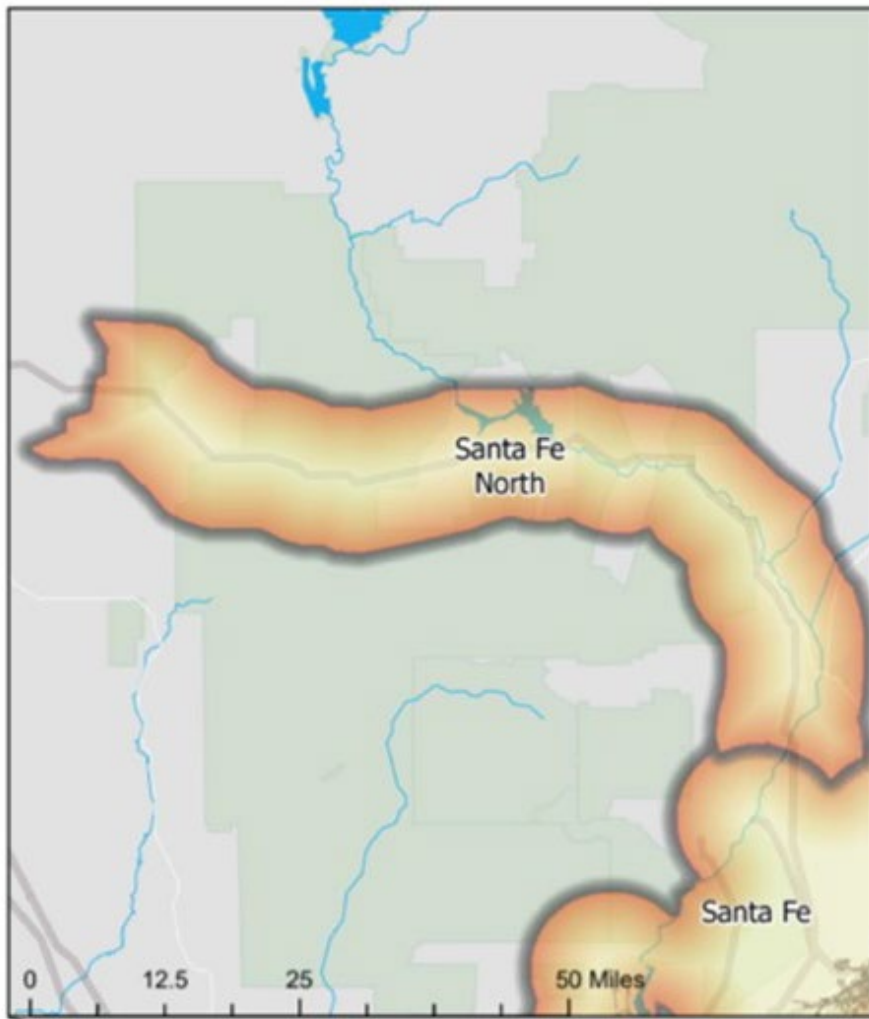
74.21 Miles

2.31% of System

Distribution within HFA

0 Miles

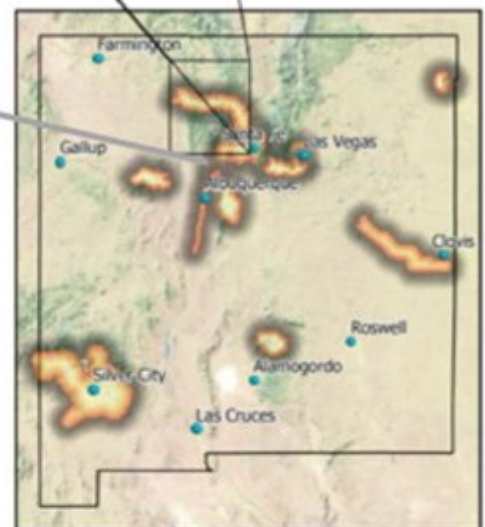
0% of System



NWS Fire Weather Zone

102

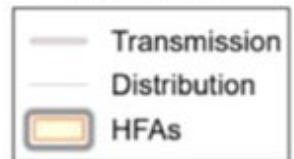
North Central Mts



New Mexico Hazardous Fire Areas (HFAs)

Silver City

Map Legend



Transmission within HFA

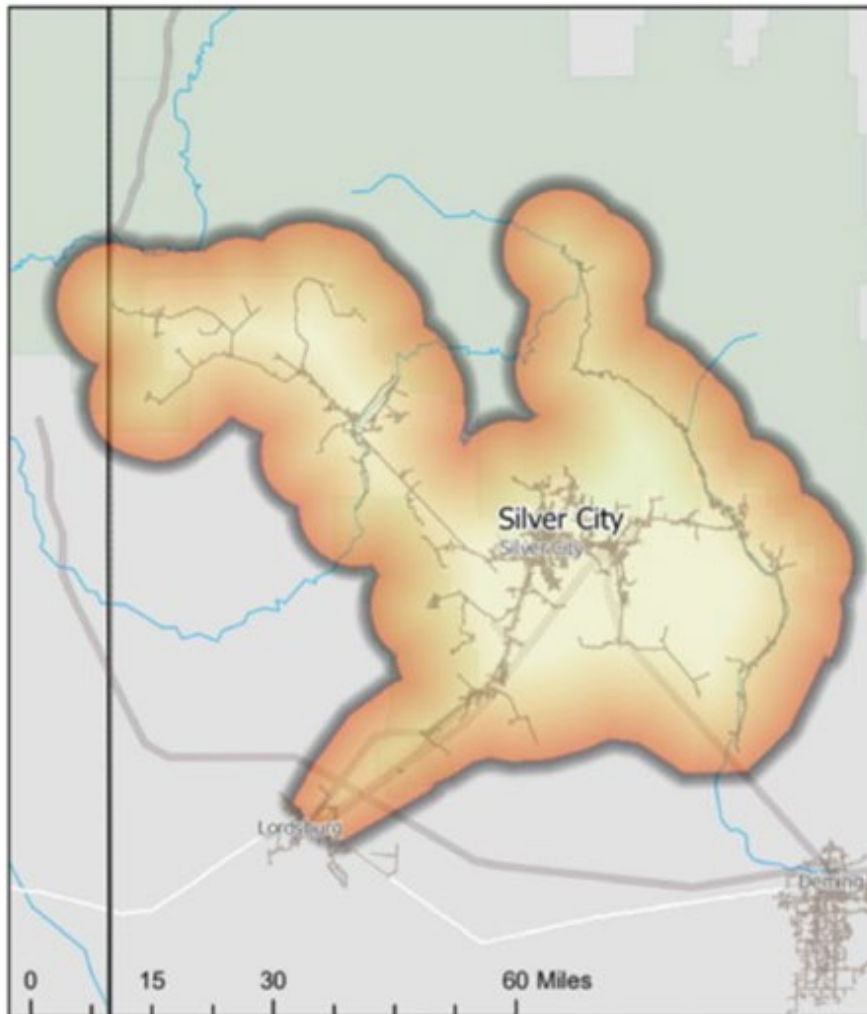
194.5 Miles

6.05% of System

Distribution within HFA

976.76 Miles

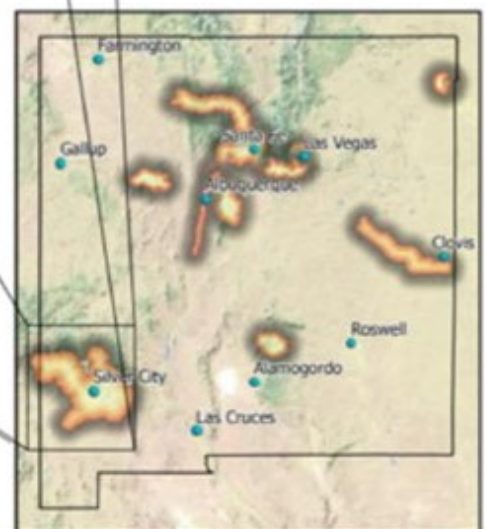
16.71% of System



NWS Fire Weather Zone

110

Southwest Mts



BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF AN INQUIRY INTO ELECTRIC)
PUBLIC UTILITIES' VEGETATION MANAGEMENT) Case No. 22-00154-UT
PLANS AND PROCEDURES)**

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of **Public Service Company of New Mexico's Wildlife Mitigation Plan 2024 and Public Safety Power Shutoff Plan** was emailed to parties at the email addresses below on May 1, 2024:

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