2025

Greater Eldorado Area Community Wildfire Protection Plan

Santa Fe County, New Mexico

Prepared for:

Eldorado Community Improvement Association (ECIA)

1 Hacienda Loop

Santa Fe, NM 87508

And

Santa Fe-Pojoaque Soil & Water Conservation District

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With Funding from:

New Mexico Counties - Wildfire Risk Reduction Program

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Cover photo: Eldorado at Santa Fe Community Center. Photo taken by: ECIA

Signatures

We, the undersigned, approve the 2025 Greater Eldorado Area CWPP:

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District Forester	**New Mexico Forestry Division**	
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Signatures

We, the undersigned, approve the 2025 Greater Eldorado Area CWPP:

Print Name	Signature	Date
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Title: Chair, Conservation Committee	Organization: ECIA	
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List of Abbreviations

Above-Ground Carbon	AGC
British Thermal Units	Btu
Bureau of Land Management	BLM
Community at Risk	CAR
Community Emergency Response Team	CERT
Community Wildfire Defense Grant	CWDG
Community Wildfire Protection Plan	CWPP
Core Team	CT
Eldorado Area Water and Sanitation District	EAWSD
Earth Data Analysis Center	EDAC
Ecotone Landscape Planning, LLC.	ELP
Eldorado Community Improvement Association	ECIA
Eldorado Community Improvement Association Conservation Committee	ECIA CC
El Dorado Fire Rescue Service	EFR
Federal Emergency Management Agency	FEMA
Fire Adapted Communities	FAC
Fire Adapted Communities Learning Network	FAC Net
Fire Adapted New Mexico Learning Network	FAC NM
Forest Stewards Guild	“The Guild”
Geographic Information System(s)	GIS
Greater Santa Fe Fireshed Coalition	GSFFC
Hazard Mitigation Plan	HMP
Healthy Forest Restoration Act	HFRA
High Efficiency Particulate Air	HEPA
Highly Valued Resources or Assets	HVRA
Homeowners’ Association	HOA
Insurance Services Organization	ISO
International Association of Fire Chiefs	IAFC
National Cohesive Wildland Fire Management Strategy	NCWFMS
National Environmental Policy Act	NEPA
National Fire Protection Association	NFPA
National Historic Trail	NHT
National Park Service	NPS
Natural Resources Conservation Service	NRCS
National Weather Service	NWS
New Mexico Department of Transportation	NM DOT
New Mexico Energy, Minerals and Natural Resources Department	EMNRD

New Mexico Forestry Division	NMFD
New Mexico Historic Preservation Division	NMHPD
New Mexico Forest Action Plan	NMFAP
New Mexico Legislative Finance Committee	NMLFC
New Mexico State Land Office	NMSLO
New Mexico Wildfire Risk Portal	NMWRAP
Non-Federal Lands	NFL
Piñon-Juniper	PJ
Project Management Team	PMT
Ready, Set, Go!	RSG
Red Flag Warnings	RFW
Relative Humidity	RH
Right of Way	ROW
Santa Fe County	SFC
Santa Fe County Fire Department	SFC FD
Santa Fe County Public Works	SFC PW
Santa Fe County Geospatial Intelligence Systems	SFC GIS
Santa Fe-Pojoaque Soil and Water Conservation District	SF-P SWCD
Special Flood Hazard Area	SFHA
State Trust Land	STL
Team Rubicon	TR
US Forest Service	USFS
Wetlands Action Plan	WAP
Wildfire Hazard Potential	WHP
Wildland-Urban Interface	WUI

1. Introduction

CWPP Area

The greater Eldorado area comprises 27,053 acres in Santa Fe County, stretching from I-25 in the north to the heights of Lamy Hill to the south (Figure 1). The greater Eldorado area comprises the large subdivision of Eldorado at Santa Fe and several smaller subdivisions and historical communities. These smaller subdivisions include (approximately from the north clockwise around in the area) the Nine Mile Road area, Alteza, Dos Griegos, Old Las Vegas Highway, Lower Cañoncito, Los Vaqueros, La Paz, East Ranch, Los Caballos, Tierra Colinas, Mejor Lado, The Ridges, Cielo Azul, Old Road Ranch, the Art Barns, Spur Ranch Road area, Ranchos de Santa Fe, and Belicia Estates (Figure 2).

A clarification of terminology. The Eldorado at Santa Fe subdivision, locally known as Eldorado, is an unincorporated residential area in Santa Fe County. The Covenants of the Eldorado at Santa Fe subdivision created the Eldorado Community Improvement Association (ECIA) and regulate the built environment in the ECIA-controlled area. HOAMCO is the company that administers the homeowners' association (HOA). The greater Eldorado area, however, includes Eldorado at Santa Fe plus several other HOAs and communities as presented in Figure 2.

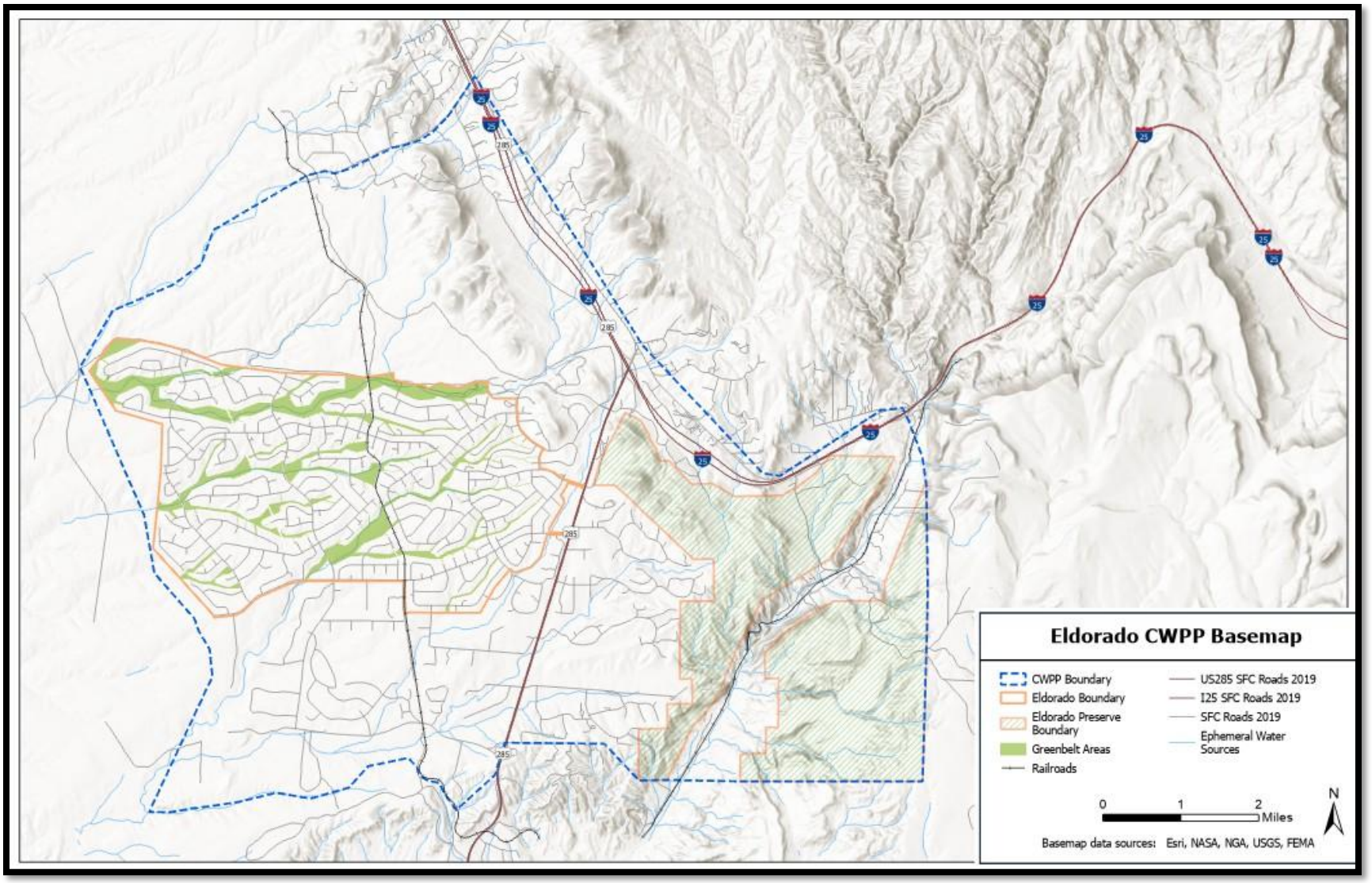

Figure 1. Map of the CWPP planning area.

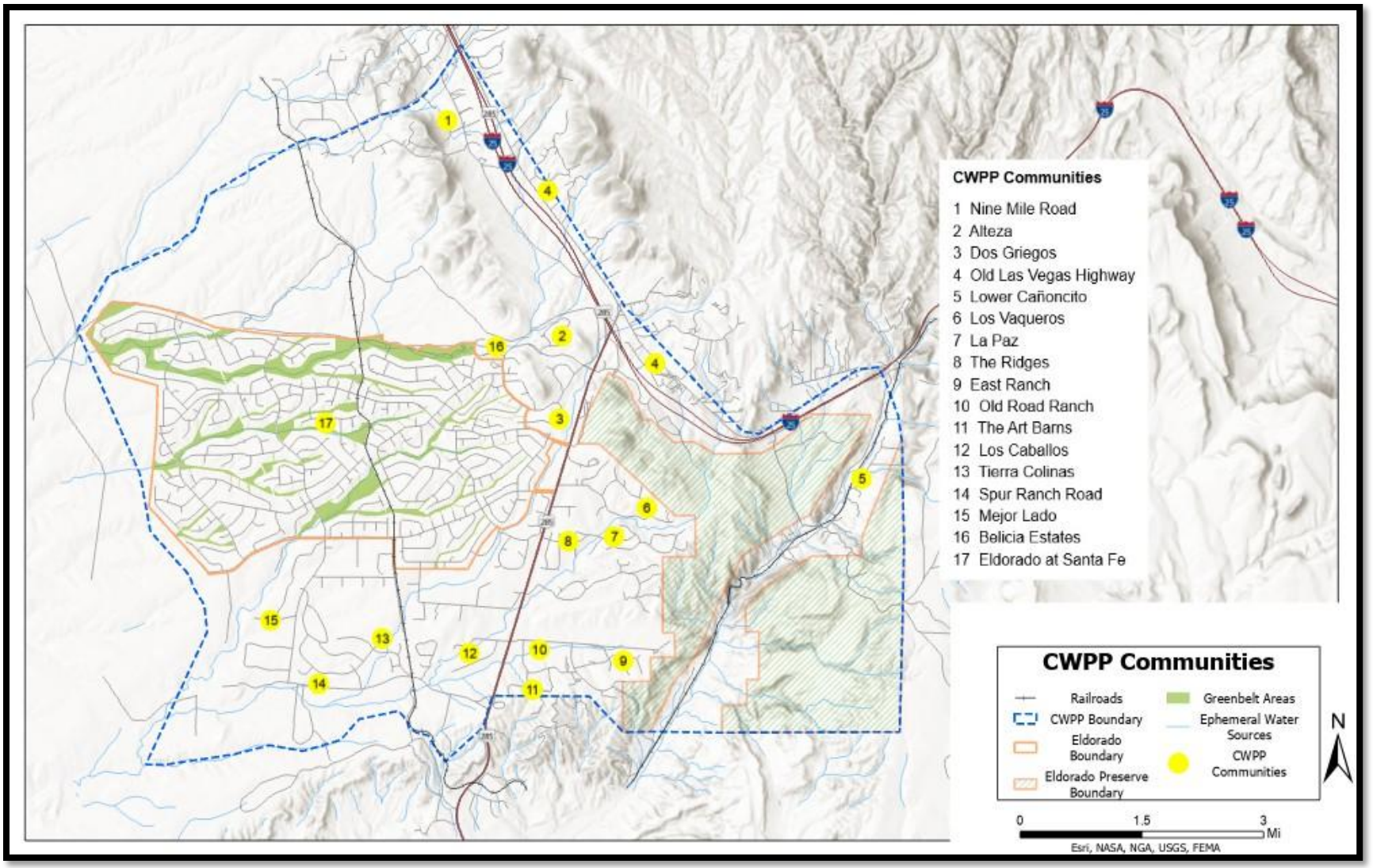

Figure 2. Map of the CWPP planning area communities.

What Is a CWPP?

A Community Wildfire Protection Plan (CWPP) sets a community on the right path towards being prepared for wildfire. A CWPP gives local communities the ability to submit priorities and influence the implementation of wildland-urban interface management, flood prevention, erosion control, hazardous fuel reduction projects, and more, all while reflecting the needs and values of the residents. This document has highlighted the priority actions that the greater Eldorado community should consider implementing to prepare fire fighters, residents and their homes, essential infrastructure, and land and water resources for the event of wildfire and post-fire impacts.

When the federal government passed the Healthy Forest Restoration Act (HFRA) (Public Law 108-148 2003), it recognized that many communities in the United States live in or near fire-prone ecosystems that often bring inherent risks of wildfire. The HFRA acknowledges these wildfire risks and that the federal government cannot provide funds to reduce hazardous wildland fuels for all at-risk communities. The HFRA therefore established a mechanism to prioritize communities and ensure that federal funds go to the highest risk communities. This mechanism is the CWPP (Public Law 108-148 2003).

Since the HFRA and during the development of this CWPP, the State of New Mexico also passed legislation in support of CWPP development and implementation. With a completed CWPP, a community or group of communities can apply for federal and state funds to reduce hazardous fuels or other community-identified priority actions. By implementing a CWPP, communities and the surrounding ecosystems will be able to more safely coexist with wildfire while providing different fire management agencies the ability to respond more efficiently and effectively.

The minimum requirements for a CWPP as described in the Healthy Forests Restoration Act are:

> (1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
>
> (2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
>
> (3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

The HFRA requires that three entities must mutually agree to the final contents of a CWPP:

- The applicable city or county government: Santa Fe County Fire Department (SFC FD)
- The local fire department(s): El Dorado Fire Rescue Service (EFR)
- The state entity responsible for forest management: New Mexico Forestry Division (NMFD), Bernalillo District Office

The authors of this CWPP want to emphasize that a CWPP does not prescribe, authorize, or require the ECIA or other HOAs, individual homeowners, or other entities to take any proposed action. Rather, a CWPP makes recommendations to help interested parties develop future detailed action plans and supports grant and other funding proposals that address fire and flood risk mitigation. A CWPP provides baseline information, recommendations, and action priorities. The recommendations for fuels reduction projects are general in nature. Site-specific planning through specific ecological stewardship assessments and plans (e.g., a Forest Stewardship Plan for the Eldorado Community Preserve) would need to be created before any implementation takes place. The New Mexico Forestry Division and the Natural Resources Conservation Service (NRCS) can assist with planning and the funding for planning and implementation. Homeowners can use this CWPP document to learn about fire risk in the community and what voluntary actions to take to reduce risk to their properties and the surrounding landscape. It is important to note that the recommendations are specific to wildland-urban interface (WUI) areas and are intended to reduce the loss of life and property.

A CWPP is a community-based plan by and for a community. Besides the non-binding, voluntary nature of CWPP recommendations, a CWPP can only be implemented as a result of allocated funding at the initiative of area residents, volunteers, and locally affiliated NGOs.

The 2004 *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities* and the 2008 *Community Guide to Preparing and Implementing a Community Wildfire Protection Plan* provide basic outlines and guidance for the CWPP preparation. Both documents can be accessed at https://www.forestsandrangelands.gov/resources/communities/index.shtml.

Purpose

In the past, the greater Eldorado community has referenced the general assessments and actions outlined in the 2020 Santa Fe County CWPP, which has little specificity for Eldorado. Yet, Eldorado is one of the largest communities among Santa Fe County's 27 high-risk communities (EMNRD 2023) and is located within a wildland-urban interface area, which is an area recognized for potentially high-risk of fire for valuable resources. A lack of detailed information, the complexities of the surrounding landscape, a lack of clarity on fire risk in the area, and the population density together create an urgency for the community to formulate its own CWPP.

In 2024, the Santa Fe-Pojoaque Soil and Water Conservation District (SF-P SWCD) received a New Mexico Counties Wildfire Risk Reduction grant for creating the 2025 Greater Eldorado Area CWPP document. The purpose of the CWPP document is to clarify the 2020 Santa Fe County CWPP by providing more precise details and coordination with the Santa Fe-Pojoaque Soil and Water Conservation District; surrounding communities; and county, state, and federal agencies. The 2025 Greater Eldorado Area CWPP provides detailed information that will likely support and supplement the future Santa Fe County CWPP update. The SF-P SWCD serves as the fiscal agent for the Eldorado Community Improvement Association and its partners to help produce the CWPP.

This CWPP looks at past fires and treatment accomplishments as well as ongoing initiatives while using the knowledge and expertise of the professional fire managers, residents, local organizations, HOAs,

ECIA, and the company that manages it (HOAMCO), as well as contracted planning and mapping specialists. The CWPP process identifies the current local wildfire risks and needs that occur in the project boundaries and supports this information with relevant science, literature, and background information.

The goals of the 2025 Greater Eldorado Area CWPP are:

1. Improving community awareness and preparedness.
2. Strengthening collaboration and safety among all interested parties, service providers, and emergency services.
3. Identifying strategies for fire risk reduction around homes.
4. Identifying priority areas for fuel reduction in Greenbelt areas and in the larger landscape of rangeland, woodlands, and forests.
5. Identifying strategies for the reduction of flooding and erosion risks and damage.
6. Educating community members and service providers about specific risks of pre- and post-fire flooding and erosion.

How to Use This CWPP

The 2025 Greater Eldorado Area CWPP provides background information, a risk assessment, and recommendations to reduce or mitigate wildfire and post-fire flooding and erosion risks to communities. CWPPs have been determined to be the best process for organizing wildfire risk reduction projects across jurisdictional boundaries at the county or, in this case, local level. The wildfire risk map and the flood risk map, along with the priority action items, can be used to build rationale for a proposed treatment within funding proposals. For example, a wildfire risk reduction project that is documented as a priority action in the CWPP and is located within or adjacent to a high-risk community will receive stronger consideration for funding from NMFD, New Mexico Counties, the U.S. Forest Service (USFS), and other potential funders.

The 2025 Greater Eldorado Area CWPP is best used in tandem with other planning efforts that relate to the greater community of Eldorado and the State of New Mexico broadly. Alignment of the 2025 CWPP priority actions with priorities identified in previous documents, such as the 2022 Wetlands Action Plan for Santa Fe County, the 2020 New Mexico Forest Action Plan, the 2023-2028 NM State Hazard Mitigation Plan, the Shared Stewardship priorities between NM State Forestry and the U.S. Forest Service, and the Greater Santa Fe Fireshed Coalition (GSFFC) Community Wildfire Defense Grant (CWDG) plan, will bolster the likeliness of future greater Eldorado CWPP project funding.

The CWPP is designed to be used by the project area residents as well as stakeholders tasked with forest, fire, flooding, and emergency management. Some information is therefore highly technical so as to provide sufficient detail for aiding project design and implementation. The plan has been supplemented

with an online PowerPoint presentation, located on the ECIA website. This presentation serves as a synopsis of the larger plan and is designed to make the information more digestible by allowing the public to interface with the various map products. It can be accessed via https://eldoradosf.org/community-wildfire-protection-plan/

The 2025 Greater Eldorado Area CWPP is organized into several chapters with more detailed information compiled into appendices. Chapter 1 is the introduction and overview of the CWPP. Chapter 2 provides an insight into public involvement and collaboration; Chapter 3 gives an overview of previous community wildfire protection initiatives. Chapter 4 describes the geography of the greater Eldorado area. Chapter 5 provides the fire environment in the wildland-urban interface, and Chapter 6 provides tangible mitigation strategies. Additional information that supports the CWPP document can be found in Appendices A-F.

2. Public Involvement and Collaboration

CWPP documents are collaborative in nature, involving all parties with a stake in wildfire and flooding risks in the greater Eldorado community. This stakeholder approach ensures that all viewpoints are represented, and the setting of priorities is balanced among all groups (Fleeger 2008). The organization structure was broken into three strata –the Project Management Team, the Core Team, and stakeholders– where players were able to contribute their input and priorities.

The Project Management Team

The Project Management Team (PMT) was the centralized force behind creating the 2025 Greater Eldorado Area CWPP. The operating group was composed of primary project participants. The duties of the PMT were to make day-to-day decisions, conduct outreach, create schedules, handle conflict, oversee Core Team (CT) and stakeholder meetings, work with the budgets and contracts, oversee deliverables and tasks to completion, assist in outreach and education, and sign off on the final CWPP document. The PMT met seven times during the grant cycle. Appendix A provides the PMT names, titles, and affiliations.

The Core Team

The Greater Eldorado Area CWPP Core Team made up the heart of the CWPP. This invitation-only group included experts in the fields of wildfire, disaster relief, conservation, and erosion and flooding control who participated in the CWPP planning process as representatives of their affiliated entity, e.g., local, state, or federal agency; organization; company; or HOA and select committees, including the ECIA Conservation Committee. CT members provided information conversation and surveys. ELP conducted in-depth interviews with key experts to extract deeper levels of information. The CT also guided public input approaches, outreach and education, and provided CWPP feedback and edits. Four meetings were held during the grant cycle.

For a CWPP to succeed in lowering the wildfire risk in the greater Eldorado community, it is crucial that an Action Team is established with some representation by former Core Team partners to function well after the CWPP is completed. After the CWPP is published, ECIA will establish an Action Team that meets at least once a year and completes tasks such as coordinating efforts to match the CWPP priorities, implementing projects, and updating the CWPP in the future, as needed.

Stakeholders

Community Wildfire Protection Plans must include the wider public, especially project stakeholders. Stakeholders included those who have an invested interest in the greater Eldorado area, such as community members, tribes and pueblos with ancestral lands in the planning area, experts, business holders, and the public at large. Stakeholders' roles included contributing background information, choosing priority action items, and reviewing the final CWPP draft. Ecotone Landscape Planning (ELP), in coordination with the PMT and the CT, provided stakeholders with educational materials and several

opportunities to contribute their perspectives through two stakeholder meetings, a “Community Risk Rating” survey, and written feedback on the 2025 CWPP draft.

At the outset of the project, pueblos and tribes were invited to participate as CT members. Again in 2025, pueblos and tribes listed in the New Mexico Historic Preservation Division’s (NMHPD) “Tribal Contacts for Tribes with New Mexico Land Ownership or Ancestral Ties to New Mexico” and the “Native American Consultations" for Santa Fe County were contacted and asked to review and contribute to the CWPP document.

3. Previous Community Wildfire Protection

Update to the 2020 Santa Fe County CWPP

The 2025 Greater Eldorado Area CWPP constitutes a partial update of the 2020 Santa Fe County CWPP to the extent that it pertains to the greater Eldorado area within Santa Fe County. This 2025 CWPP provides updated information and maps, area-specific details, and area-specific wildfire prevention priority actions and recommendations which may inform a future update of the 2020 Santa Fe County CWPP. Chapter 6 on mitigation strategies was crafted in conformance with the 2020 CWPP section on mitigation strategies for ease of reference and integration into the future Santa Fe County updated CWPP.

As an update to the 2020 Santa Fe County CWPP, the New Mexico Forestry Division requires the 2025 Greater Eldorado Area CWPP takes the actions of:

1. Reviewing the existing 2020 Santa Fe County CWPP;
2. Engaging stakeholders that have a vested interest in the plan, including federal and state agencies; political subdivisions; tribes, pueblos, and nations; various stakeholders from local communities and HOAs in the area; and NGOs;
3. Collaborating by hosting project management team, core team, and public stakeholder meetings;
4. Gathering plans and information developed since the 2020 Santa Fe County CWPP;
5. Updating maps;
6. Reflecting changes in risk ratings due to improvements in risk rating methodologies;
7. Developing updated community wildfire risk reduction priorities (e.g., fuel treatments, restoration projects, outreach and education);
8. Distributing CWPP update drafts to key stakeholders (including local, state, tribal and federal partners) for review and input before the final approval;
9. Submitting the final document to the Santa Fe-Pojoaque Soil and Water Conservation District and the ECIA Board, the area's local government bodies, as well as to the Santa Fe County Fire Department, and New Mexico Forestry Division District Forester for required signatures and endorsement;
10. Submitting all documentation to the New Mexico Forestry Division for final approval by the New Mexico Fire Planning Task Force.

The 2025 Greater Eldorado Area CWPP adheres to the requirements for updating CWPPs in New Mexico. The following key requirements are addressed in the indicated sections:

1. Signatures (Pages 3-4)
2. Collaboration (Chapter 2, pages 21-22)
3. Prioritized fuel reduction (Chapter 6, pages 71-73, 82)
4. Reduced structural ignitibility (Chapter 6, page 81)

Alignment with National Cohesive Wildland Fire Management Strategy

Based on the update to the 2020 Santa Fe County CWPP, the 2025 Greater Eldorado Area CWPP is aligned with the National Cohesive Wildland Fire Management Strategy ("Cohesive Strategy") framework and its Phase III Western Regional Action Plan by adhering to the nation-wide goal "[t]o safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire." (National Strategy 2014).

The primary, national goals identified as necessary to achieving the vision are:

- **Restore and maintain landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.
- **Fire adapted communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property.
- **Wildfire response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

Alignment with these Cohesive Strategy goals is described in more detail in Chapter 6, mitigation strategies. In addition to aligning with the Cohesive Strategy, the 2025 Greater Eldorado Area CWPP also incorporates information on post-fire recovery, the significant hazards of a post-fire environment, and the risk that post-fire effects pose to communities. The 2025 CWPP alignments with other plans are listed in Appendix B.

For more information on the National Cohesive Strategy, please visit https://www.forestsandrangelands.gov/strategy/thestrategy.shtml

Previous Community Wildfire Protection Accomplishments

In the years after the 2020 Santa Fe County CWPP, limited progress has been made toward fire preparedness in the greater Eldorado area. The 2025 Greater Eldorado Area CWPP responds to the need for ramped up wildfire preparedness in the planning area. Table 1 lists known accomplishments for the greater Eldorado area. A few additional accomplishments outside the planning area, but within 5 miles, include a small thinning project north of Lamy and several thinning projects on private land at Glorieta Camps and on national forest land on Glorieta Mesa to the east of the planning area. No landscape-level changes occurred in or around the greater Eldorado CWPP area. More extensive fuel treatments took place more than 5 miles north and northeast of the CWPP planning area (Figure 3).

Table 1. Accomplishments Toward Fire Preparedness in the Greater Eldorado CWPP Area

Accomplishments	**Year**	**Responsible Parties**
"PECO-Cañoncito Defensible Space"- Thinning and biomass removal: 0.375 acres at Glorieta Battlefield, Lower Cañoncito	2024	National Park Service

Accomplishments	Year	Responsible Parties
Fire suppression capabilities increased by the Santa Fe County Fire Department	2020 - 2024	Santa Fe County Fire Department
Maps of fire hydrants in Eldorado produced	2014	Eldorado Area Water and Sanitation District
Educational outreach to area residents	2020 - 2024	Santa Fe County Fire Department
Numerous, undocumented mowing and biomass removal initiatives on small, residential private properties	2020 - 2025	Unidentified individual homeowners

Several institutions and organizations have engaged in wildfire preparedness activities in the planning area and its adjacent areas. Appendix C includes descriptions of the ongoing wildfire preparedness initiatives that are relevant to the greater Eldorado area.

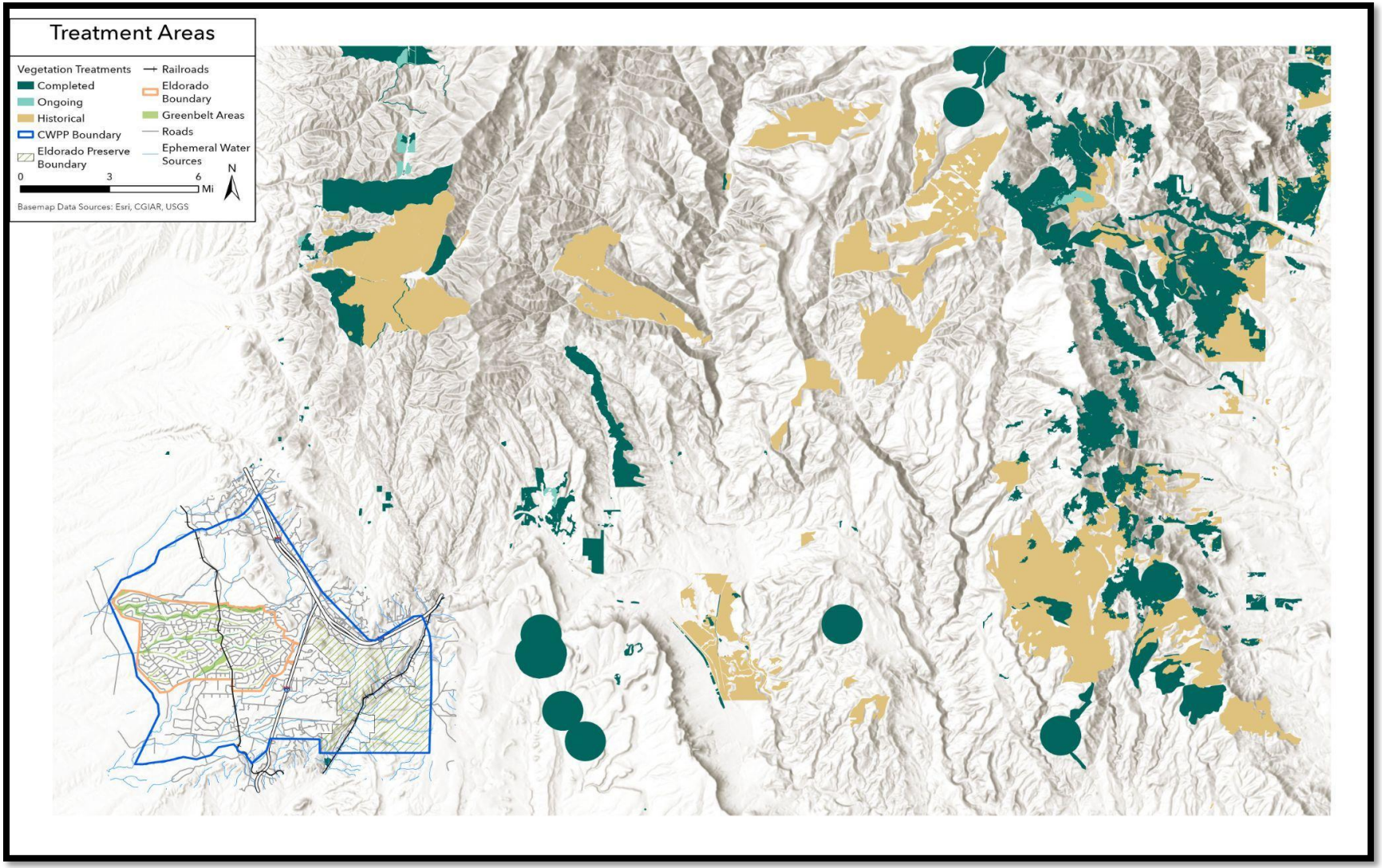

Figure 3. Map of documented historical fuel treatments in the vicinity of the CWPP planning area.

4. Geographical Description of the Greater Eldorado Area

Land Ownership

Landownership in the greater Eldorado CWPP area is mostly private and includes several residential subdivisions, of which the Eldorado at Santa Fe is the largest and most populous, with nearly 6,000 residents. The total planning area encompasses approximately 4,000 homes and more than 9,000 residents as well as thousands of acres of rangeland and the 4,000-acre Eldorado Community Preserve, an undeveloped, private, de facto wilderness area to the east of the residential development. It should be noted that the large drainage areas ("arroyos") in the Eldorado Greenbelts and the Eldorado Community Preserve are all under management of the ECIA. However, many drainage areas in the other subdivisions are owned and managed by individual landowners. Other private lands include residential and ex-urban lots, parcels owned by businesses and institutions, utility easements, and parcels of Rancho Viejo Partners, a large private ranch to the northwest of Eldorado at Santa Fe. Many of the smaller residential and ex-urban lots are associated with HOAs, but some private lots are unassociated.

The area also includes several public land parcels, such as the large rangeland parcel which Santa Fe County acquired in 2025 which is located south of I-25 and north of Eldorado at Santa Fe, highway right-of-way corridors of Interstate-25 and U.S. Highway 285, the railroad corridor of the Santa Fe Southern Railway (owned by the State of New Mexico), a parcel of land managed by the National Park Service along the Galisteo Creek south of I-25, the eastern boundary areas of state trust land (STL) parcels to the west of Eldorado, and county roads and small county parcels with public services throughout the CWPP area (Figure 4).

Critical infrastructure and services are concentrated along U.S. Highway 285, Avenida Vista Grande, Avenida Torreon, and off Avenida de Amistad. Several overhead electricity transmission lines traverse the CWPP planning area. One transmission line is bundled with highways and runs from north to south along I-25 and U.S. Highway285, while a second one runs independently from the east to northwest with a small spur line across the northwestern part of Eldorado at Santa Fe. This independent line crosses the woodlands of the Eldorado Community Preserve and the woodland savannah landscape from the southern and western part of the CWPP planning area. Other infrastructure and utilities include the Burlington Northern Santa Fe Railway along the Galisteo Creek and a gas line easement on the west side of Eldorado at Santa Fe. Private utilities include many domestic wells for individual homes and for Eldorado at Santa Fe.

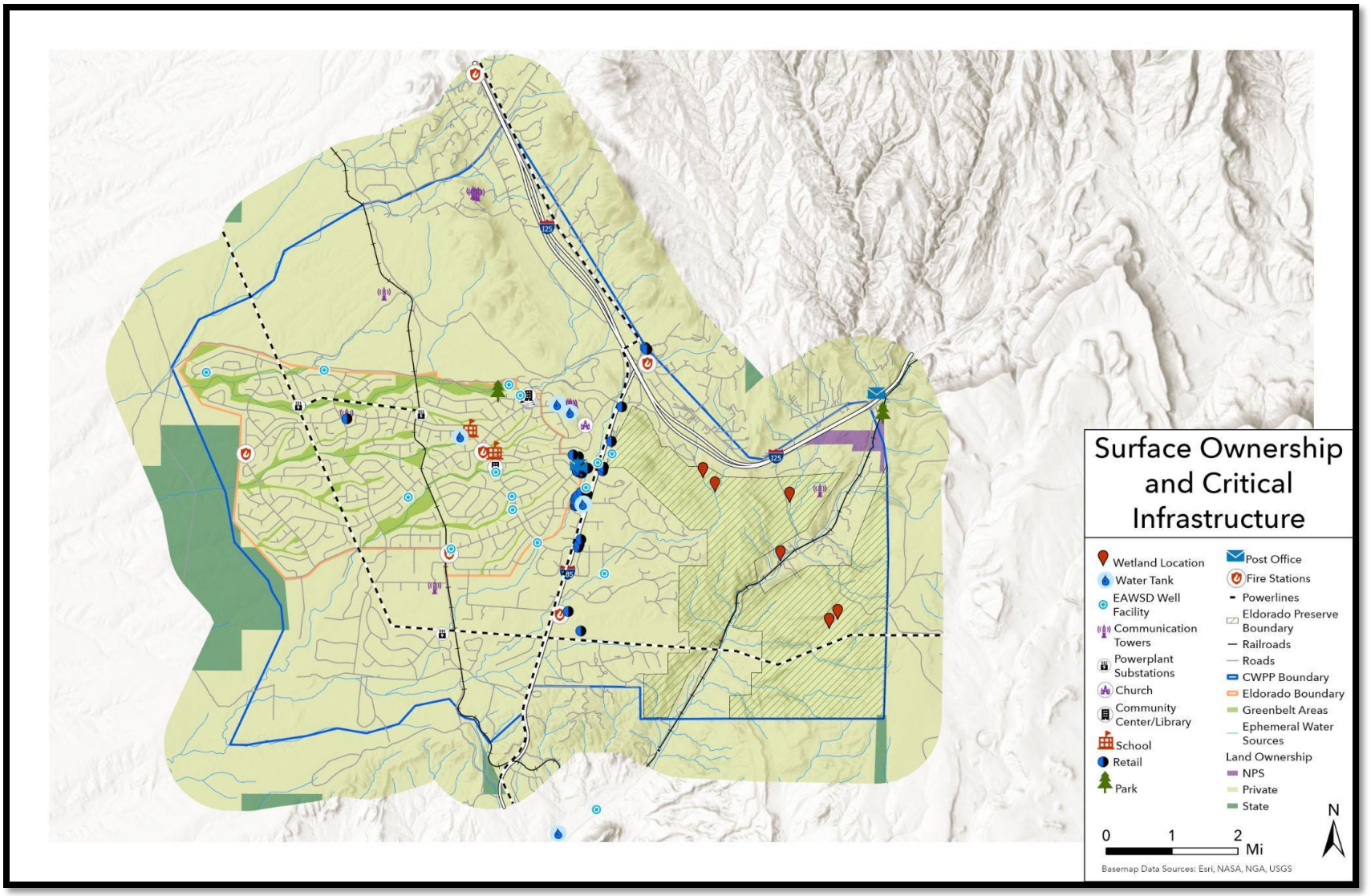

Figure 4. Map of surface ownership and critical infrastructure in the CWPP area.

The multitude and various forms of private and public ownerships both underscores the need for and complicates the realization of collaboration in wildfire preparedness processes and in any potential post-fire mitigation work in this unincorporated part of Santa Fe County. Therefore, local organization and leadership are of great importance in this CWPP area.

Eldorado at Santa Fe

Recorded in 1972, Eldorado at Santa Fe is an unincorporated residential subdivision within Santa Fe County located approximately 12 miles south of the City of Santa Fe. It occupies approximately 6,076 acres (9.49 square miles) for its residential portion, housing approximately 6,000 residents. Common areas include a swimming pool, athletic fields and courts, a community center, parks, a playground, Community Stables, a community preserve (4,266 acres or 6.67 square miles), and hike/bike paths. The subdivision also boasts several Greenbelts that total over 987 acres and are owned and managed by ECIA.

The Covenants of the Eldorado at Santa Fe subdivision created the Eldorado Community Improvement Association and continue to regulate the built environment in the ECIA-controlled area. The ECIA was established to enforce the Covenants, serve as the owner of the common areas, and maintain these areas.

The Covenants do not give the ECIA the authority to regulate landscaping, gardening, or maintenance of private lots, although the Nuisance Clause of the Covenants gives ECIA some limited authority to regulate non-built structures. However, this Nuisance Clause does not explicitly give the ECIA authority to require or enforce any kind of construction or maintenance related to home hardening or defensible space for fire risk reduction purposes. HOAMCO is the property management firm that currently provides management services to ECIA.

Jurisdictions

Tribal Ancestral Lands

Although no longer under native occupation, within Santa Fe County are unceded Native American aboriginal lands, land grants, and reservations of several Native American communities. According to the NMHPD, the greater Eldorado area encompasses the ancestral lands of many Peoples including the Comanche Nation, Hopi Tribe, Isleta Pueblo, Jicarilla Apache Nation, Kiowa Tribe, Nambe Pueblo, Navajo Nation, Ohkay Owingeh (San Juan) Pueblo, Pojoaque Pueblo, Pueblo de Cochiti, San Ildefonso Pueblo, Sandia Pueblo, Santa Ana Pueblo, Santa Clara Pueblo, Santo Domingo Pueblo, and Tesuque Pueblo. In fact, remnants of a historic Towa pueblo exist at the U.S. Highway 285 and Interstate-25 intersection. The greater Eldorado CWPP area is of vital importance to the culture of these communities because these lands define their historical, present, and future identity, life, survival, and spirituality.

All entities and individuals with responsibilities to take actions that may affect land and cultural resources are encouraged—if not required by law—to enter into consultation with the appropriate pueblo or tribal governments to ensure the protection of tribal relations to land. Many of the pueblos have their own Tribal Historic Preservation Offices or Cultural and Historical Departments that can provide information

and guidance. The New Mexico Historic Preservation Division also provides information about tribal communities with an interest in land and water in Santa Fe County and about the consultation process.

Fire Districts

The area is under the jurisdiction of the Santa Fe County Fire Department. The decentralized El Dorado Fire Rescue Service stations provide emergency services in local communities throughout the county. The northern half of the Eldorado Fire District covers most of the 2025 CWPP area. However, the northeastern part of the CWPP area is serviced by the Hondo Fire District, the far western part by the Turquoise Trail Fire District, and the northwestern corner by the La Cienega Fire District (Figure 5).

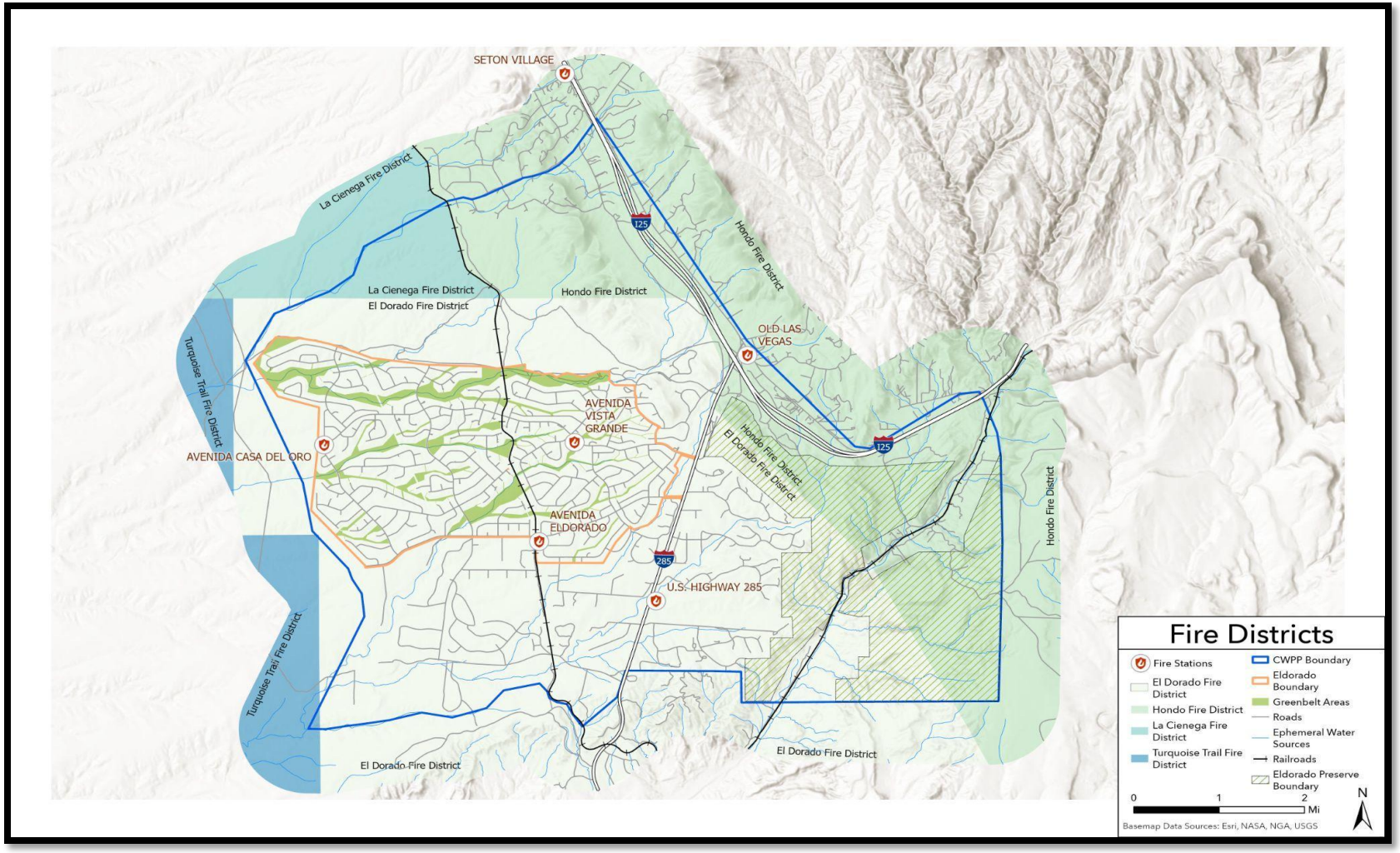

Figure 5. Map of the service areas of the four Santa Fe County Fire Rescue Districts in the CWPP area.

National Park Service Trails

The National Park Service (NPS) has a stewardship interest in two national historic trails (NHTs), the Santa Fe NHT and El Camino Real de Tierra Adentro NHT, that cross within or near the greater Eldorado area perimeter. The geospatial data for the NHT congressionally designated alignments are maintained by the NPS, although these designated routes are approximations for the trails and do not replace the need for inventory of trails resources on the ground. It is important for any project implementation with a federal nexus to comply with federal environmental compliance laws such as the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and other applicable laws such as the National Trails System Act. The NPS National Trails Office which administers these two NHTs is able to provide guidance or technical assistance regarding this process, although the necessary review of existing inventory and site data or inventory must be completed by qualified specialists who are trained to locate historic trails resources.

Santa Fe-Pojoaque Soil and Water Conservation District

The Santa Fe-Pojoaque Soil and Water Conservation District is a governmental subdivision of the State of New Mexico, serving portions of Santa Fe, Rio Arriba, and Los Alamos Counties (Figure 6). The volunteer, elected five to seven member Board of Supervisors of the Santa Fe-Pojoaque SWCD assists farmers, ranchers, other landowners, federal, state, and local government agencies, and local organizations in implementing conservation projects. Note that the SF-P SWCD boundary does not always match the ground boundary for funds being spent. Non-Federal Lands (NFL) funds and other national grants require SF-P SWCD to use a polygon within the area where the grant will be concentrated.

The SF-P SWCD was a founding partner of the Greater Santa Fe Fireshed Coalition in 2015. Since then, the district has dispersed approximately $850K in cost-share funding to private landowners within the Greater Santa Fe Fireshed and adjacent areas for wildfire defensible space treatments and fuel reduction forest thinnings. These treatments help to mitigate wildfire risks to residences and businesses in the Santa Fe wildland-urban interface. The greater Eldorado CWPP area lies nearly in the center of the boundaries of the SF-P SWCD.

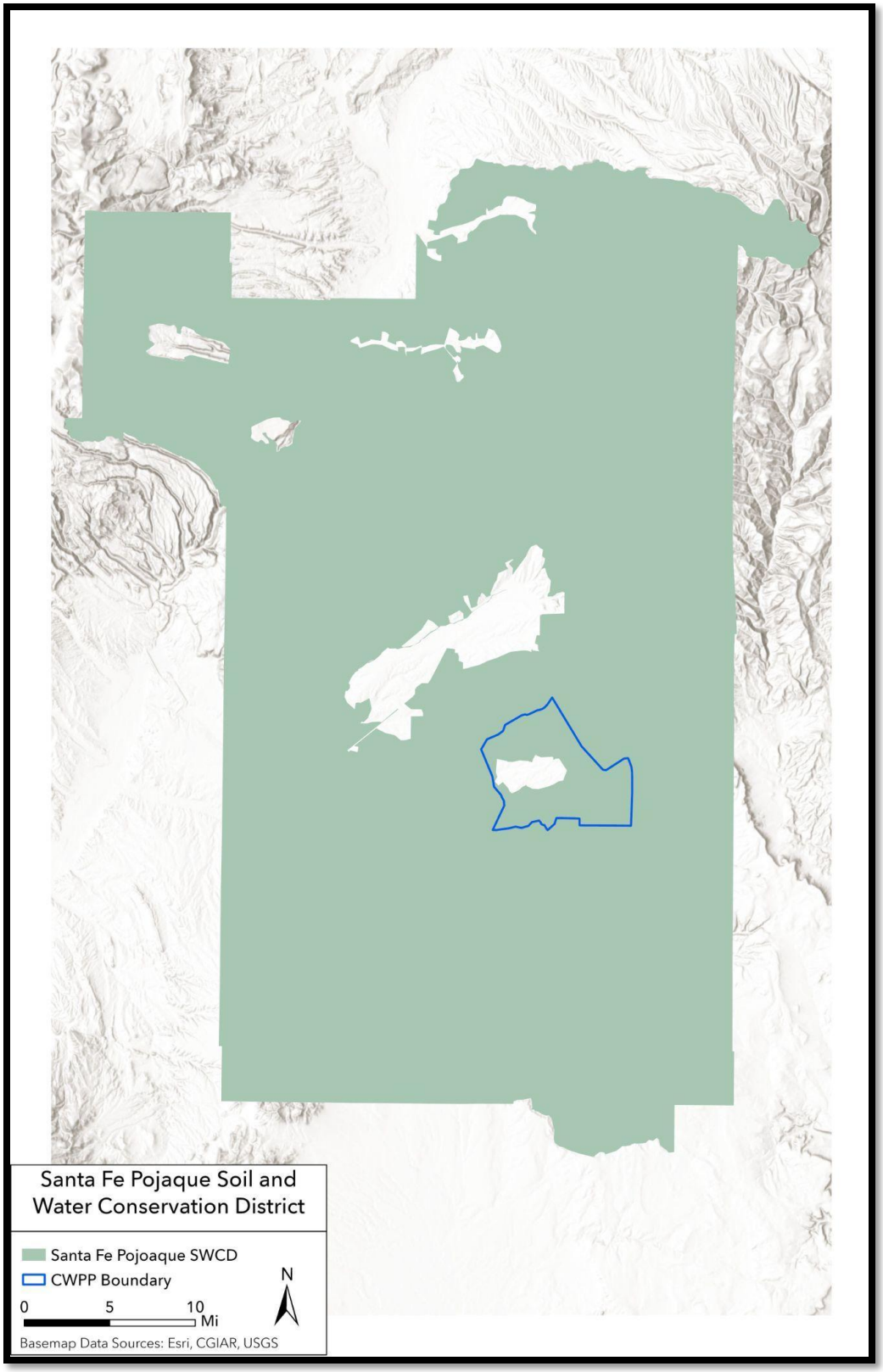

Figure 6. Map of the Santa Fe-Pojoaque Soil and Water Conservation District service area and its inclusion of the CWPP area.

Landforms

The east side of the greater Eldorado area is located on a granitic and sandstone tableland. On the west side, the greater Eldorado area is located on a complex of alluvial fans deposited by a confluence of mountain streams. The mountain streams originate on the south-facing flanks of the Sangre de Cristo Mountains to the north and the west-facing slopes of a granitic escarpment in the Eldorado Community Preserve. Originating also on the south-facing flanks of the Sangre de Cristo Mountains, the Galisteo Creek traverses a fault line running from northeast to southwest across the Eldorado Community Preserve between the granitic uplift and the sandstone plateau to the east.

Soils, Erosion, and Flooding

The complex of alluvial fans consists mostly of loamy soils that slope west and south-west. This gently sloping area is dissected by numerous large and small drainage systems that gradually merge into wide valleys that flow westward down the Galisteo Basin. Over centuries and possibly millennia, the drainage systems and wind have deposited layers of sediment that form the alluvial fan. Presently, the topsoil consists mostly of fine sandy, loamy, and locally clayey material. Arroyo bottoms have a slightly coarser texture of sand and gravel. The soil is highly erodible by wind and water when exposed. The steep and rocky east side of the greater Eldorado area is less erodible, but the steep slopes have a low infiltration rate and lead to rapid runoff of stormwater that causes periodic flash flooding downstream.

Vegetation and Fuels

The sedimentary area of alluvial fans is relatively flat and has provided the optimal location for residential development. In contrast, the rugged tablelands to the east are nearly undeveloped and are used as an area for low-impact recreational uses and for wildlife as habitat and a corridor zone. The sedimentary landscape consists of a piñon-juniper (PJ) savannah with grass dominating in the broad ephemeral drainage systems and shrub and tree cover dominating the more gravelly hillsides. On the granitic and sandstone landscape to the east, an open PJ woodland dominates with patches of dense, persistent woodland on north-facing slopes, narrow, actively eroding canyons with dense shrub communities, and slightly wider, grassy valley bottoms between the ridges and rolling hills. Small wetland drainages with occasional seeps are found in the valley bottoms. The far eastern and southeastern canyons of the tablelands include some small patches of dense ponderosa pine (Figure 7).

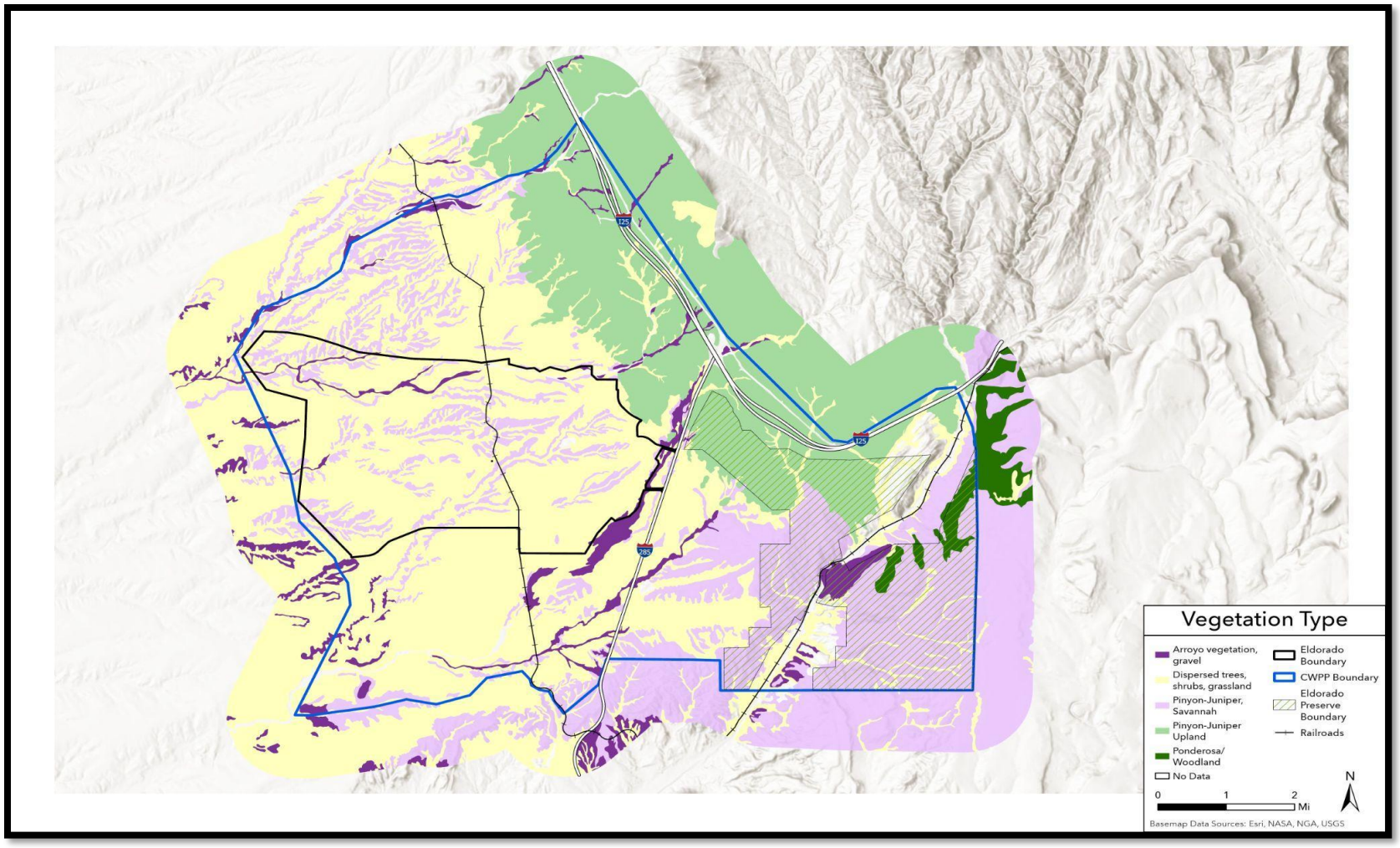

Figure 7. Map of vegetation types in the CWPP area.

When vegetation types are translated into the amount of fuel (expressed in carbon mass of live and dead vegetation) that is available on the land, an estimate can be made of the volume of combustible carbon in the landscape. The above-ground carbon (AGC) rating is an expression of the amount of fuel present at each given location which informs the fireline intensity rating map (see Chapter 5), an integral part of the composite fire risk map. Figure 8 represents a map of the CWPP planning area with indications of the mass of the AGC due to live and dead vegetation across the landscape (expressed in tons per hectare, Mg/ha). The map indicates that areas with dense woodland vegetation in the northern and eastern parts of the planning area also have a high carbon mass, and, hence, a high fuel load. In addition, stringers and clumps of dense woody vegetation extend from the hills in the northern and eastern parts westward across the residential areas. It must be noted that the AGC mapping is based on remotely sensed data with some localized ground truthing; and therefore, it only approaches accuracy at a landscape scale. It is likely that localized fuel loads are higher or lower based on recent vegetation removal or piling of dead wood and plant matter from removal activities in the past.

Among the communities in the CWPP area, those with high levels of above ground carbon fuel loads in the form of woody biomass (light green and yellow areas on the map) include the Nine-Mile Road area, Old Las Vegas Highway, Los Vaqueros, and Lower Cañoncito. These communities are located in the "Priority Area of Interest" zone on the Fuel Treatments map of the 2020 CWPP for Santa Fe County (EMNRD 2020).

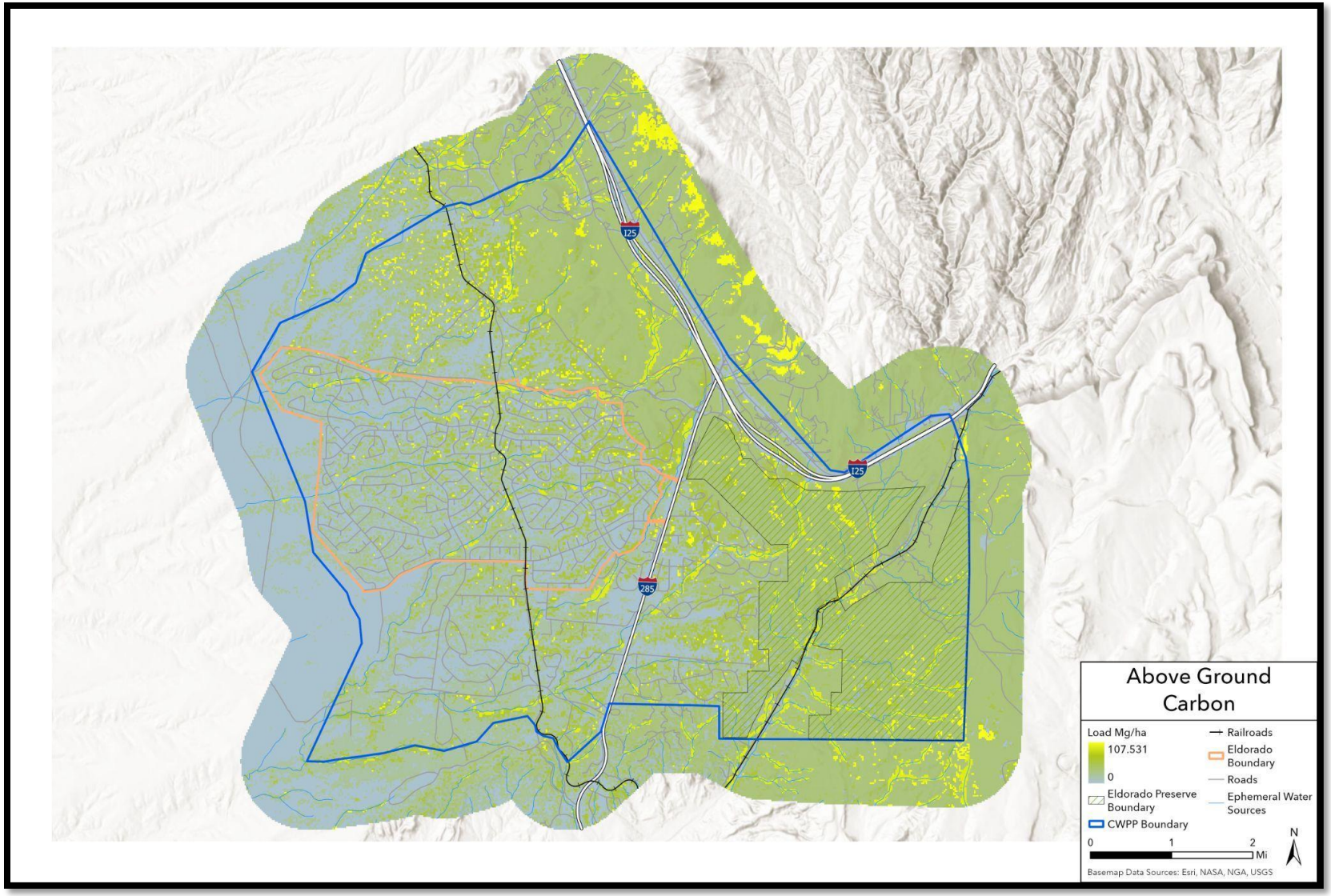

Figure 8. Map of the volume of above-ground carbon fuel loading across the landscape in the CWPP area.

Weather

Precipitation conditions influence soil moisture, atmospheric moisture, and the growth of plant biomass. Annual precipitation ranges in recent history between 12 and 16 inches (PRISM 2022). However, in recent years, annual precipitation in the area appears to have been in the lower ranges of these data. Most precipitation falls in the form of rain and a small percentage falls as snow (Weatherspark 2025). A trend of the past few decades seems to bring more precipitation during severe thunderstorms, while leaving long periods of relative to severe drought in between. While the thunderstorms bear a risk of flash flooding, erosion, and mass sedimentation, drought periods wither the vegetation.

Flooding of residential area drainages can take dramatic and damaging forms. In past years, culverts have caused water to concentrate, and at some locations, flows exiting the culverts have caused serious channel and bank erosion. If road culverts become clogged with sediment and woody debris in the future, more extensive flooding may occur (Figure 9).

Figure 9. Image of a flood event in the Gallina Park area in 2013 (Photo Taken by: Thomas Bredenberg).

Wind is an important factor in relation to the risk of fire spreading and the potential for increased fire intensity. In the spring and fall, strong winds occur from the south, southwest, and west, which further dry out the land and contribute to fine particle displacement. Spring wind speeds are greater than fall winds by an order of magnitude.

Water Sources

The greater Eldorado area has few sources of water. The water sources in the area are included in the Surface Ownership and Critical Infrastructure map (Figure 4). Water source elements include several small springs and wetlands, water storage tanks, wells operated by the Eldorado Area Water & Sanitation District (EAWSD), and ephemeral waterways.

The Eldorado at Santa Fe subdivision includes a large number of fire hydrants, which rely on water from the EAWSD. However, in the northwestern quadrant of the subdivision north of the Pueblo Canyon Park Greenbelt area few hydrants exist. Several other neighborhoods around Eldorado at Santa Fe have fire hydrants.

5. Fire Environment in the Wildland-Urban Interface

The Wildland-Urban Interface

Much of the greater Eldorado area is located in the wildland-urban interface, the transition zone between undeveloped wildland and developed areas with residential, business, and infrastructure assets (Figure 10). A WUI is officially defined as "areas where human habitation and development meet or intermix with wildland fuels" (U.S. Department of the Interior and U.S. Department of Agriculture [USDA] 2001:752–753, in Santa Fe County 2020). The WUI creates an environment in which fire can move readily between structural and vegetative fuels, increasing the potential for wildland fire ignitions and the corresponding potential loss of life and property (Santa Fe County 2020).

Technically, the WUI comprises (a) the *interface* or edge area between forest or other wildland and developed areas and (b) the *intermix* of structures surrounded by wildland vegetation of variable density. The greater Eldorado CWPP area has a complex blend of interface and intermix conditions. The vegetation component that defines the WUI in the greater Eldorado area does not only comprise trees of woodland ecosystems but also grass-shrub patches of the savannah ecosystem. The latter vegetation types are highly flammable when dry and can rapidly spread fire when patches are continuous and when flames are driven by wind in the open landscape.

The map of the WUI for the CWPP area is based on the WUI map provided on the New Mexico Wildfire Risk Portal (NMWRAP) website and updated by buffering all identified buildings with a 0.25-mile mapping margin (UNM 2024). The WUI map for this 2025 CWPP corrected inaccuracies in the NMWRAP WUI map regarding mapped interface and intermix areas by combining these two types of areas into one mapping unit because mapping the distinction of interface and intermix would generate a fine-grained pattern of intermix conditions with interface conditions that is not relevant for planning purposes in this CWPP. In general, intermix conditions occur more in the western part of the CWPP area and interface conditions predominate east of U.S. Highway 285.

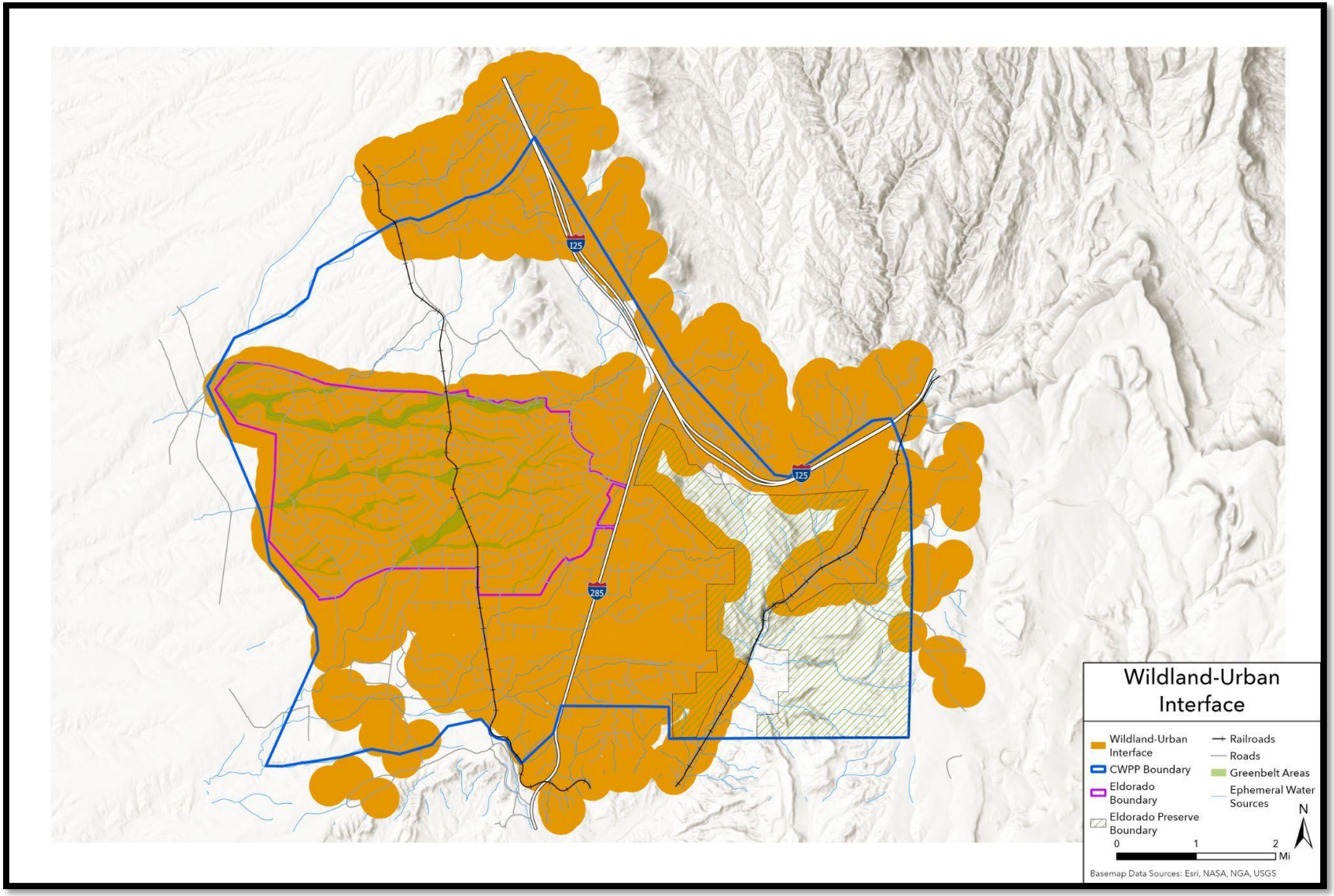

Figure 10. Map of the wildland-urban interface area for the CWPP planning area.

Identification of the WUI area in this CWPP shows the widespread exposure to wildfire of valuable residential, business, or infrastructure assets in the greater Eldorado area and offers opportunities for prioritized interventions to mitigate fire risks to these assets. Funding sources, such as those under the HFRA of 2003 (H.R. 1904) and the Inflation Reduction Act of 2022 (H.R. 5376), focus a considerable percentage of their funds on mitigation activities in WUI areas. The New Mexico Forestry Division maintains a web page that lists ongoing funding opportunities based on these statutes and state funds (https://www.emnrd.nm.gov/sfd/forestry-and-fuels-grants/). Mitigation techniques for fuels and fire management can be strategically planned and implemented in WUI areas; the development of defensible space around homes and structures is one example (Figures 11 and 12, and Appendix E).

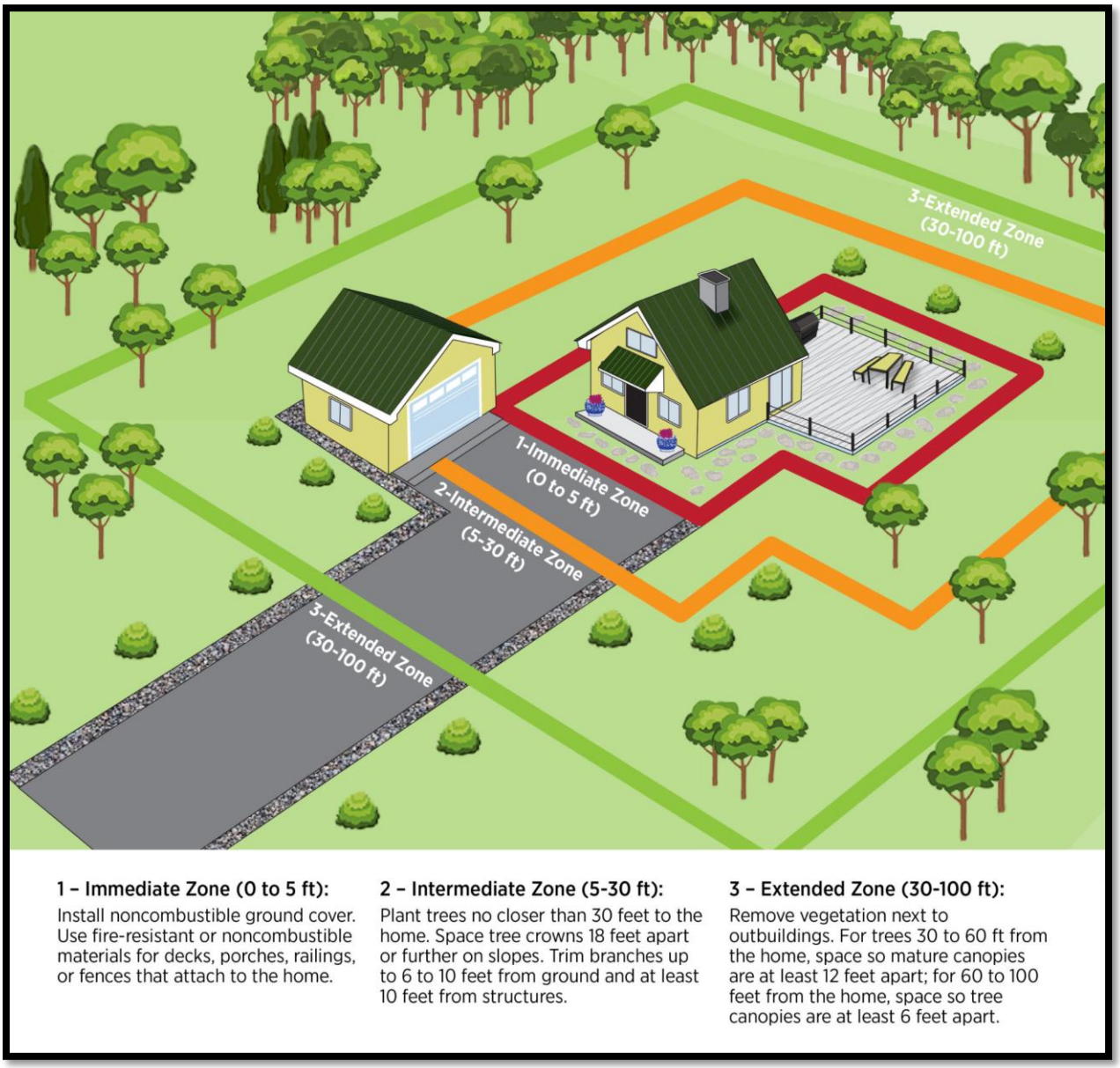

Figure 11. Graphic image of the concept of defensible space (Tiburon Fire District n.d.).

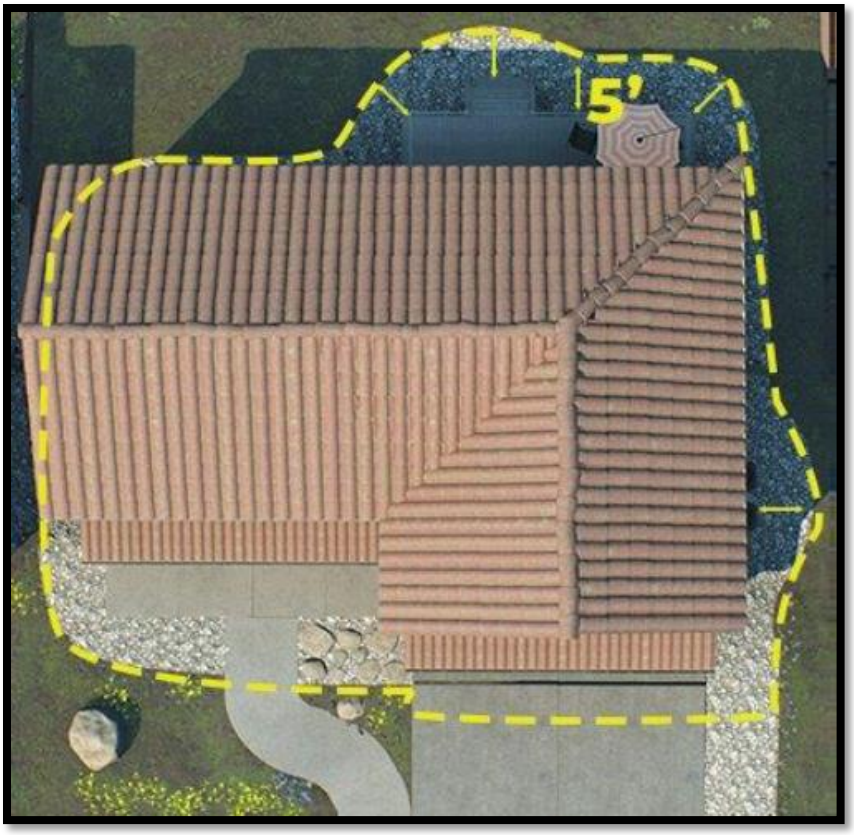

Figure 12. The area for a five-foot non-combustible buffer around a home (Courtesy of Wildfire Prepared, a Program of IBHS).

In December 2018, the County Board of Commissioners adopted Ordinance (2018-8) which is cited as the Santa Fe County Fire Code and referred to as the Fire Code. The Fire Code is effective within the unincorporated boundaries of the County, including private land and land owned by the United States. The Fire Code applies to new construction only and includes provisions including but not limited to fire protection water supply, access road width, and locations of above-ground propane tanks (Santa Fe County 2020). During the promulgation process for the Fire Code, the County revised the original Santa Fe County CWPP WUI delineation. The classification the County used in the 2020 Santa Fe County CWPP for delineating the WUI areas was based on an analysis of fuels, similar to a hazard assessment.

The CWPP for the greater Eldorado area deviates from the Santa Fe County WUI delineation in order to follow a more customary WUI mapping protocol (such as in NMWRAP) and to address the key purpose of indicating the exposure factor in a WUI area. The county WUI map expresses instead a fire hazard assessment that renders all of Santa Fe County (including the greater Eldorado area and its wildland areas) a WUI.

Wildfire Risk

This CWPP defines ***wildfire risk*** as the combination of the wildfire hazard (a combination of wildfire likelihood and fire intensity) at a certain place and the vulnerability of the associated valued assets. This definition is an informal paraphrase of the formal USFS definition, which states wildfire risk is “the

likelihood that an adverse or beneficial event occurs to *Highly Valued Resources or Assets* (HVRAs), such as cultural, ecological, or bio-physical resources, and human-made improvements" (Scott et al. 2013). In the risk assessment framework developed for the U.S. Forest Service and used by many wildfire professionals today, the potential for wildfire effects can be quantified as "the expected value of the probability of an event occurring multiplied by the magnitude of the effect, given that an event has occurred" (Scott et al. 2013). Risk determination is, therefore, the statistical chance for an event to occur combined with the susceptibility of human populations, valuable ecosystems, and valuable assets to such catastrophic events.

The conditional aspects of changes in time and place make wildfire risk a complex concept. Add the values people attribute to assets or resources that are vulnerable to fire, and the concept becomes even more complicated due to the strong human dimension that is wrapped up in the concept of risk. The sometimes-confusing concept of wildfire risk can be understood better when considering its components in a simple equation (Figure 13).

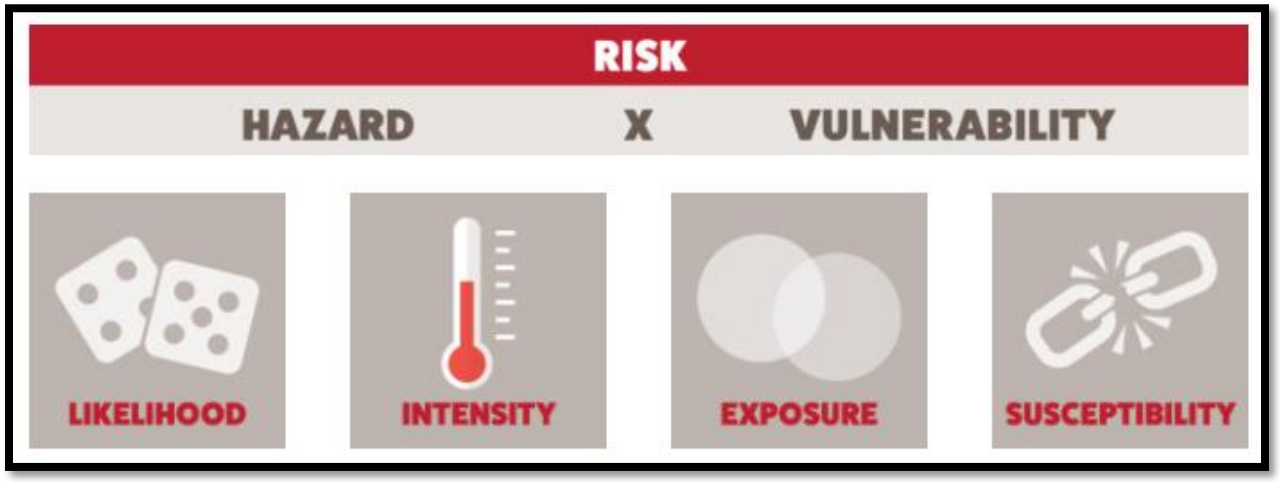

Figure 13. USDA's Wildfire Risk Equation (Courtesy of the USDA).

According to Scott et al., ***wildfire hazard*** consists of "two characteristics: (1) the probability of a fire occurring at a specific point during a specified time period, and (2) the expected distribution of intensity given that the event does occur" (Scott et al. 2013). The authors clarify that wildfire hazard "can be described qualitatively as a fire environment—fuel, weather, topography, and ignitions—with potential for causing harm or damage" (Scott et al. 2013).

Likelihood (or probability) of fire is related to the chance that an ignition occurs—often expressed in the recent occurrences of fire in an area—and the chance that fire spreads, which is related to the presence and connectivity of fine and coarse fuels and local weather, soil, and topographic conditions at the time of the fire. ***Fire intensity*** is often expressed in the fire temperature or the flame length of the fire and is related to the volume of fuel at a certain location in combination with weather and topographic factors.

Dixon (2017) observed that neither scientists nor planners can predict the exact timing of certain disastrous events, but they can, with reasonable certainty, analyze the events' approximate location and size. In many cases, they also know the conditions under which the chance of catastrophic events occur

increases and can indicate the approximate recurrence time for such events. Together, these factors help experts determine the risk levels of certain catastrophic events for specific locations.

Vulnerability of treasured resources is defined as the extent of the exposure of such objects to fire and their susceptibility to be impacted by the fire. ***Exposure*** is related to the location of objects in the path of fire, the proximity to the fire, and the size of the exposed surface or shape of the objects. ***Susceptibility*** pertains to the sensitivity of the object to be damaged by fire impacts, such as heat, soot, and smoke. The inverse of susceptibility is the resilience (or "hardening") of an asset to withstand the fire impact. By this definition, if the resource vulnerability (exposure and/or susceptibility) increases, the risk of wildfire will increase. In plain words, homes located in a path of wildfire and poorly protected to withstand fire are more vulnerable and increase the risk of being damaged.

Based on these definitions, wildfire hazard can be assessed in a quantitative manner and lends itself to scientific study and projections. Vulnerability of values at risk can be determined in a quantitative manner by identifying the monetary values of properties and infrastructure. However, wildfire vulnerability is also determined in a qualitative manner due to its social and experiential implications.

Liability is the level of responsibility that could be attributed to landowners, and which is expressed in costs associated with the occurrence of events that bear certain risks and hazards. It is because of one's awareness of liability related to wildfire risk that preparedness is important—and that is where this CWPP aims to support private landowners and their HOAs in finding ways to reduce their liabilities in the face of possible fire events.

Fire Risk in the Greater Eldorado Area

The mapping of fire risk for the 2025 Greater Eldorado Area CWPP follows the same approach as the one used for the 2020 CWPP for Santa Fe County. This approach generates a composite risk assessment map based on maps that define fire hazard and maps that define vulnerability to wildfire. The 2025 Greater Eldorado Area CWPP defines fire risk as per Scott et al. (2013), which is consistent with the mapping approach. However, in so doing, the 2025 Greater Eldorado Area CWPP deviates from the risk definition in the 2020 CWPP for Santa Fe County, which defines fire risk merely as fire likelihood combined with "the presence and activity of causative agents" (Santa Fe County 2020).

The composite fire risk map for the 2025 Greater Eldorado Area CWPP combines the likelihood of fire based on historical ignitions and the intensity of fire based on Santa Fe County's map data for crown fire, fireline intensity, flame length, and rate of spread (Figure 14). These fire hazard components are combined with the vulnerability factors of the area, which include the WUI map layer for the greater Eldorado area and the map on community values at risk. This ultimate composite model consists of five fire hazard component maps and two vulnerability maps. Conforming to the method applied to the 2020 CWPP for Santa Fe County, the data sets used in the risk assessment for the composite risk map for the 2025 Greater Eldorado Area CWPP were placed in a Weighted Sum Model (WSM). When applying a WSM to raster datasets in GIS, the weighted values of each cell in each input dataset are added together to calculate the composite risk for each cell. The methodology for the composite risk assessment map along with the individual map elements that are combined for the composite risk map are included in Appendix F. Figure 14 illustrates the combination of maps to form the composite risk map.

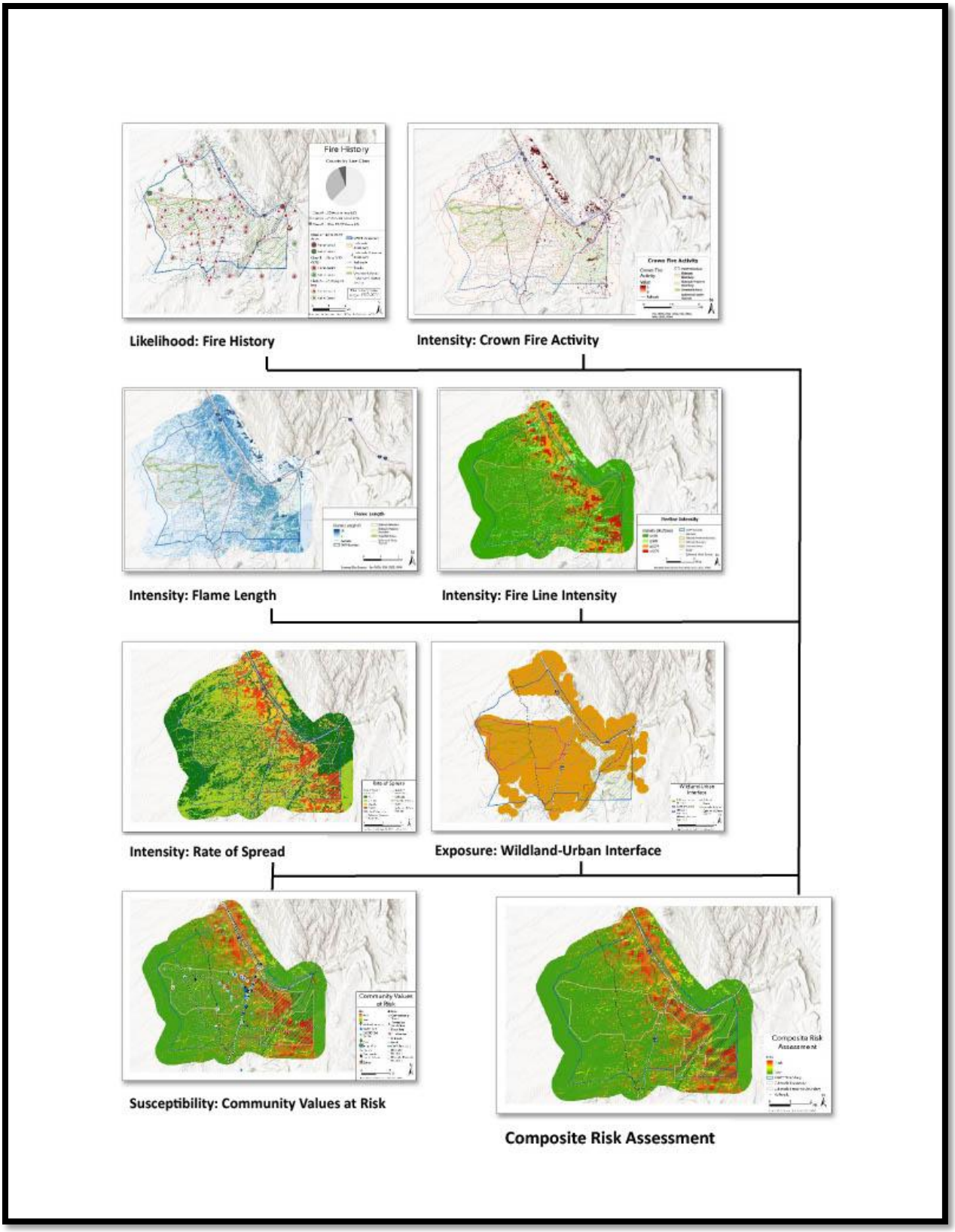

Figure 14. Composite risk assessment map for the CWPP planning area.

Ignition Likelihood

As part of the estimation of fire hazard and exposure to fire, the likelihood of ignition plays a key role. Therefore, it is important to consider an area's fire history, the density of past fire occurrences, and the present and possible future ignition sources.

Figure 15 includes a map of historical fire occurrences in the CWPP area. It must be noted that this map is based on data compiled by the State of New Mexico and does not include any personal observations by area residents. As a result, the map only provides an indication of fires based on officially recorded ignitions and does not completely depict the total number of historical ignitions and fires in the area.

Historical ignitions can be grouped in fires with natural causes and human causes and in fire classes by area size affected by the fire. Analysis of the mapped ignitions between 1997 and 2024 in the greater Eldorado area shows that 88.5% of all recorded fires were human caused. Only 9 out of the 78 recorded fires had natural causes. Most fires were small Class-A fires (<0.25 acres), 21 were Class-B fires (0.25 - 10 acres), and 3 were Class-C (10-20 acres). All Class-C fires were human caused.

Potential ignition sources in the CWPP area include:

- Lightning
- Wind-driven embers brought in from nearby fire
- Flame fronts advancing across the landscape from wildfire in the vicinity
- Backyard ignitions originating from open burning of yard debris and from barbecues and fire pits
- Sparks from powerlines, transformers, and other power distribution-related equipment
- Sparks from railway lines
- Sparks from metal objects on vehicles dragged on pavement or stones
- House fires
- Vehicles with a hot catalytic converter parked on grass or weeds
- Vehicle accidents, especially when highly combustible cargo is present
- Power saws and other powered equipment
- Embers from smoldering campfires
- Unextinguished cigarettes
- Arson
- Ignitions caused by malfunctioning of potential future (solar) power installations
- Fireworks
- Misuse of fire by a minor

The listing of potential ignition sources and their locations on the map reflect the statistical finding that most past ignitions in the CWPP area have originated from human causes. Based on present conditions and logic, it is to be expected that human causes will also be the lead ignition sources in the future.

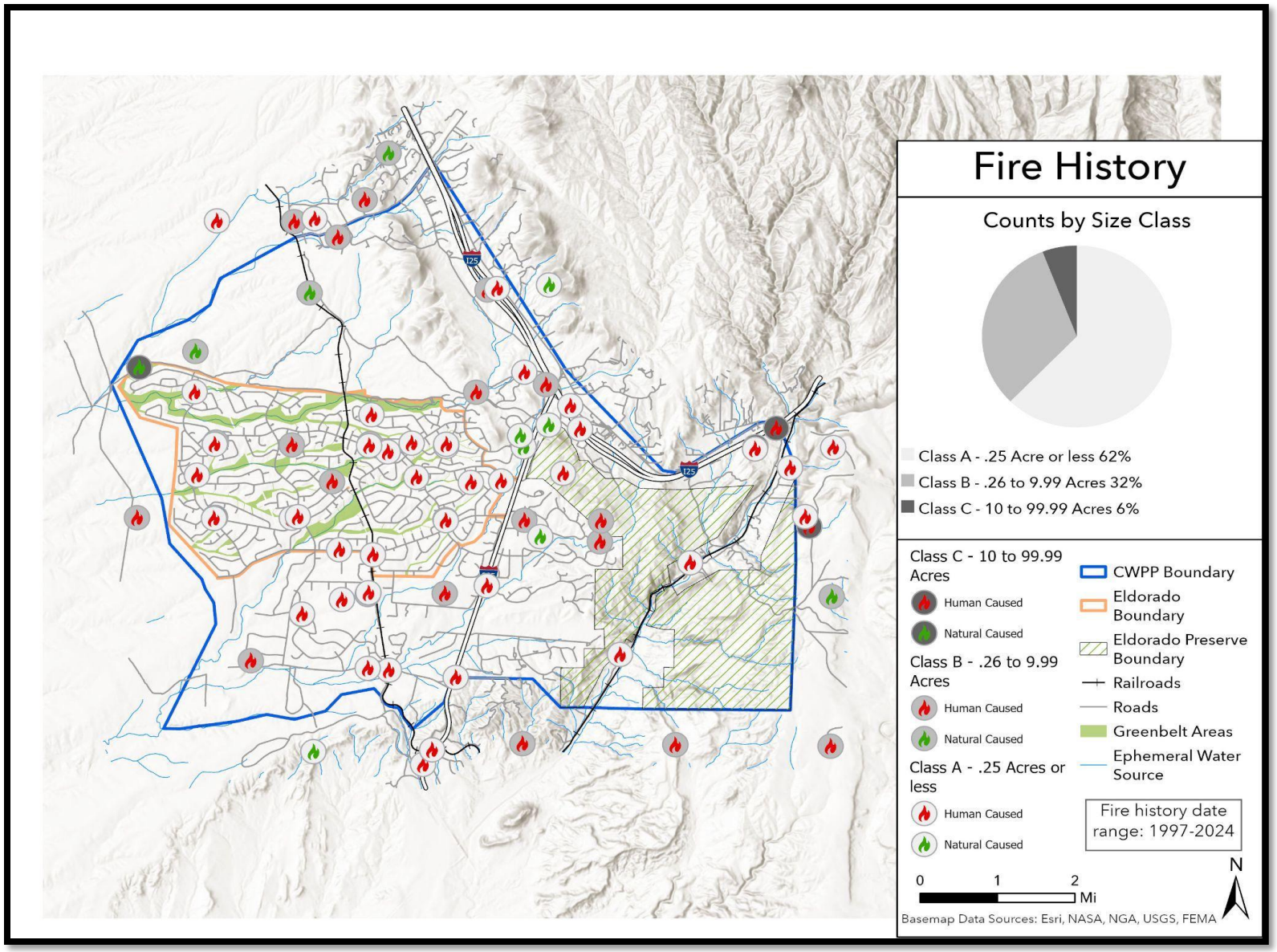

Figure 15. Map of historical fire occurrences in and immediately adjacent to the CWPP planning area.

Besides the risk factors described in the 2020 Santa Fe County CWPP and the analysis of previous ignitions, several other potential ignition sources must be mentioned in relation to the 2025 CWPP for the greater Eldorado area. Area specific potential ignition sources include sparking along railroad tracks of the Sky Railway company, backyard cleanup, barbecue and home fires, and power lines across the area. Other potential future ignition sources of concern include the anticipated increase of fossil fuel tanker trucks on I-25 and U.S. Highway 285, which increases the risk of a local traffic accident that includes fossil fuel transport. In past years, community members have expressed concern about large-scale fossil fuel transport and redistribution by rail in Lamy.

To note, Santa Fe Southern Railway (dba Sky Railway) clears vegetation that encroaches on the tracks itself and is responsible for removing any debris or garbage that is dumped within the right of way. Santa Fe County maintains vegetation that encroaches on the Rail Trail. BNSF owns and maintains the railroad line east of Lamy and is required under federal regulations to clear vegetation that may impede visibility from the right of way. Recently, community residents have expressed much concern about some potential future ignition source related to a proposed large-scale solar system and battery storage facility within 5 miles of Eldorado. However, the likelihood of an ignition in such a facility is smaller than any of the ignition types that have led to historical fire events in the greater Eldorado area.

Intensity

Crown Fire, Flame Length, and Fireline Intensity

Wildfire intensity essentially describes the energy released by the fire and is expressed in crown fire activity, flame length, fireline intensity, and the rate of spread of a fireline.

A crown fire occurs if a ground fire that runs close to the ground through herbaceous plant matter ignites shrubs or low-hanging branches below tall trees. Shrubs and low-hanging branches are known as ladder fuels. The subsequent ignition of these ladder fuels drives flames and embers to ignite the tree canopies. The sudden increase of energy released by the combustion of tree canopies produces tall flames, explosions of embers, and an upward movement of hot air (Figure 16). In turn, this process directly ignites nearby tree canopies which leads to the spread of fire from treetop to treetop, which is called a crown fire.

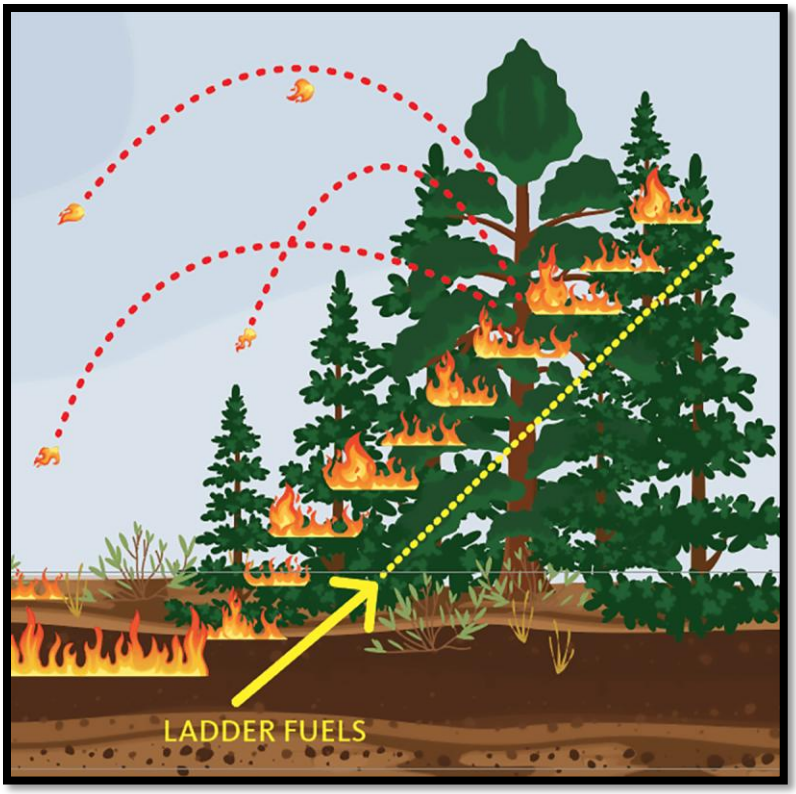

Figure 16. Ladder fuels are flammable materials that allow fire to spread up into the canopy of a tree, which can create windblown embers (Courtesy of: Christina Friehauf; Detweiler et al. 2023).

The presence of dense woody vegetation where fire can jump into the tree canopy and spread from canopy to canopy can be mapped in a crown fire activity map (Figure17). The map indicates what areas have a potential to develop crown fire. The darkest purple-red colors on the map show areas with the highest likelihood of crown fire activity. These areas coincide with dense woody vegetation in mostly the north and eastern areas.

Flame length is a result of the density and structure of live and dead vegetation at a specific place in combination with atmospheric factors, such as air flow (wind) and fuel moisture levels. Flame length is a key indicator of fire energy. As mentioned above, flame length relates to the potential for crown fire in relation to the density of woody vegetation and the potential presence of ladder fuels. Therefore, flame length mapping informs where fuel treatments may need to be considered and what fire suppression tactics need to be employed. Direct attack by hand lines is usually limited to flame lengths of less than 4 feet. In excess of 4 feet, indirect suppression is the dominant tactic. Suppression using engines and heavy equipment will move from direct to indirect with flame lengths in excess of 8 feet (Santa Fe County 2020).

Modeling shows that flame lengths across the planning area range from 0 to 25 feet, with the stretch from the northwest to the southeast having the greatest potential for larger flame lengths (Figure 18). Figures 19 and 20 depict flame length with regard to ground fires becoming crown fires.

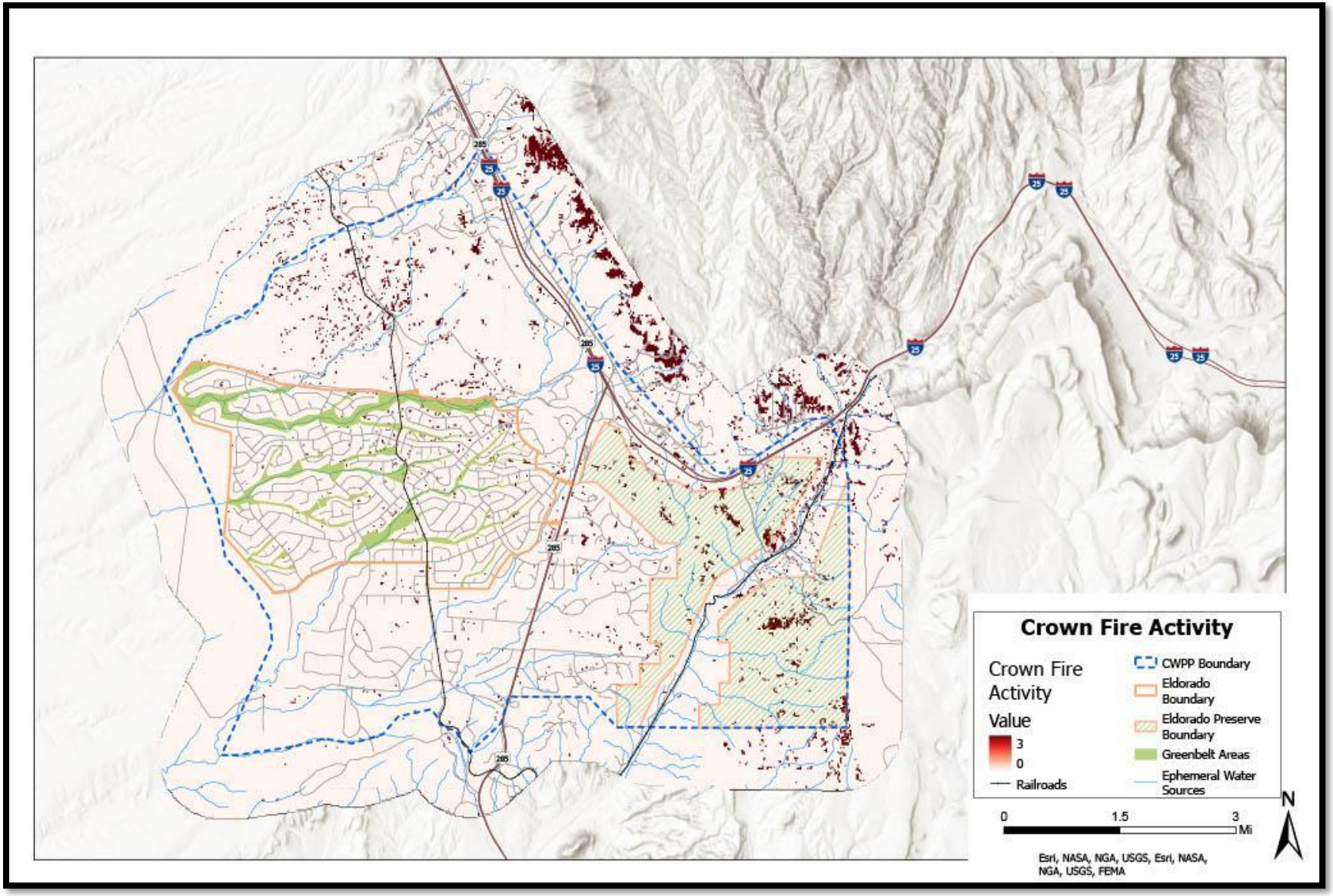

Figure 17. Crown fire activity map.

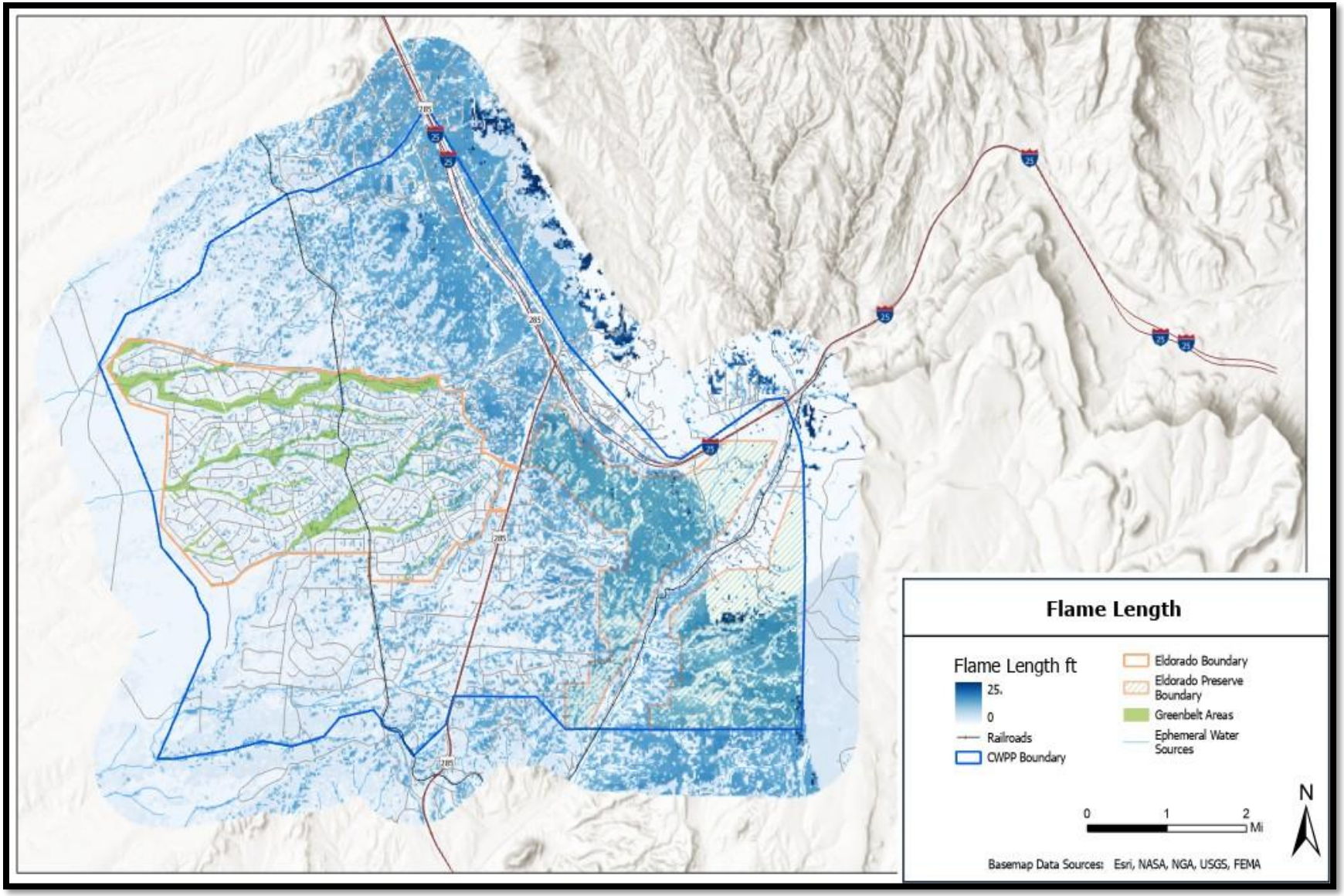

Figure 18. Map of modeled flame length expressed in feet.

Figure 19. Example of a grassfire experiment. Note the increase of flame length in the transition from grass to trees, which expresses the change from a ground fire into a crown fire (Courtesy of https://commons.wikimedia.org/wiki/File:CSIRO_ScienceImage_558_Grassfire_Experiment.jpg).

Figure 20. Image from 2022 Hermit's Peak/Calf Canyon wildfire. Note how flame length and intensity increase from left to right in image when a ground fire becomes a crown fire (Photo Taken by: Kevin Mohatt; Hay 2022).

The fireline intensity rating expresses the energy released at the fire head (aka fire front or flame front), expressed in British thermal units (Btu) per foot, per second (Btu/ft/sec). In the planning area, fireline intensities tend to range between 0 and >6,175 Btu/ft/sec (Figure 21) and are highest again in the stretch from the northwest to the southeast in the planning area. Like flame length, fireline intensity is used as an indicator in planning the kind of suppression activities needed for an area. The expected fireline intensity throughout the planning area is similar in pattern to the predicted flame length, because fireline intensity is a function of flame length, and both indicators are associated with the presence of tall shrubs and dense woody vegetation (Santa Fe County 2020).

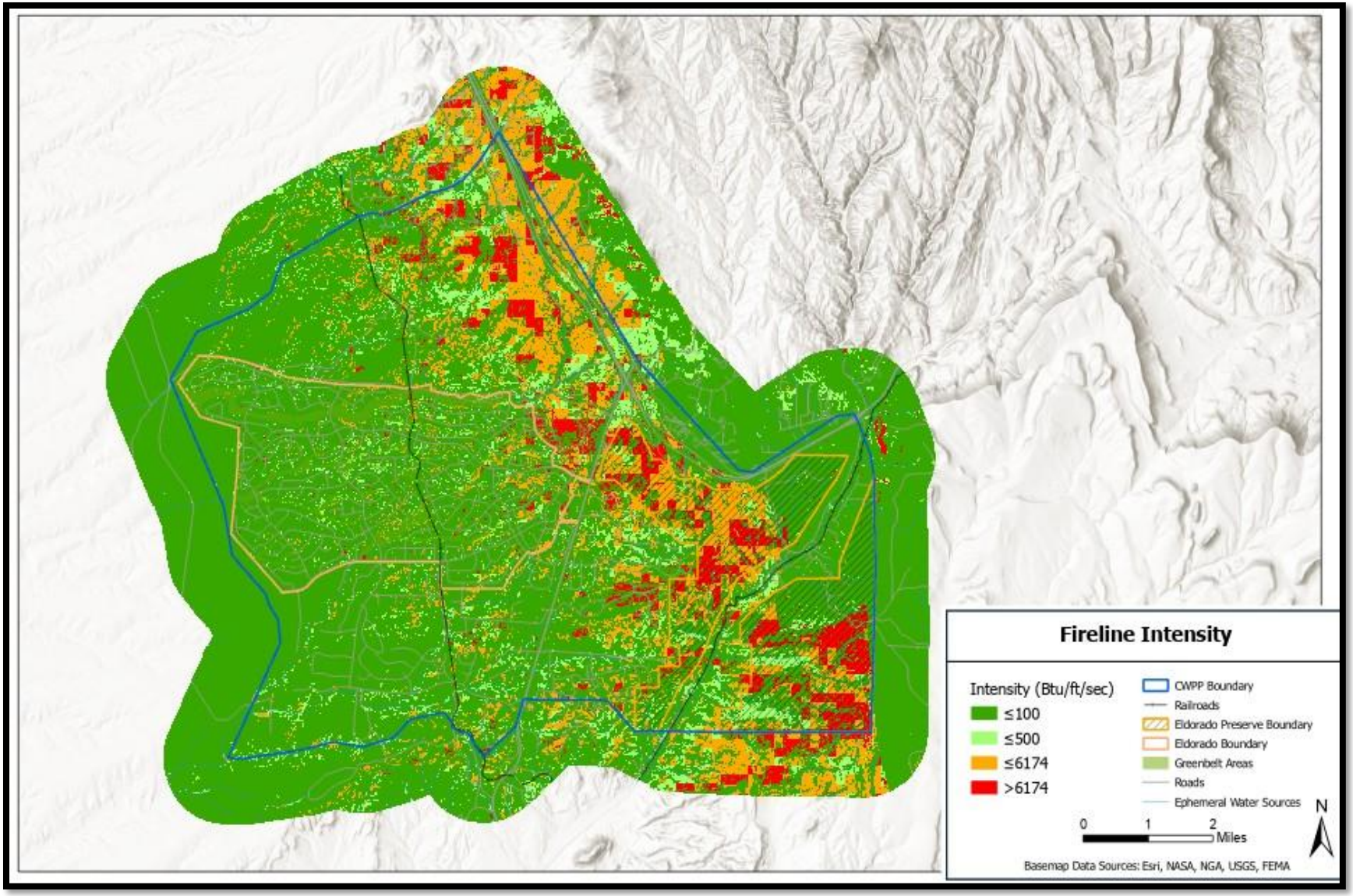

Figure 21. Map of fireline intensity, expressed in Btu/ft/sec.

Rate of Spread: Fire Risk and Wind

The rate of spread of wildfire is a function of fuel model characteristics, such as live fuel moisture, dead fuel moisture, wind speed, and slope class (NWCG 2002). The rate of spread is either expressed in feet per minute or in chains per hour (which equals 66 feet per hour or 1.1 feet per minute). The range of the rate of spread is open ended, meaning there is no upper limit. The Rate of Spread Map (Figure 22) expresses the "predicted forward rate of spread of a head fire" in chains per hour.

In the greater Eldorado area, it is reasonable to assume that fire risk is increasing over time due to increased spread factors, such as gradually increasing high wind events and increasing connectivity of fine fuels. In recent years, there has been plentiful late summer and fall precipitation combined with drought conditions and an observed structural lack of biomass removal in grasslands across the CWPP area, which leads to the increase of fire spread factors. The connectivity and volume of patches of fine fuels (plant litter, grasses, forbs, and shrubs) and the existence of ladder fuels beneath larger pine trees further increases the spread risk. High concentrations of fine fuels and high stem densities in woodlands and forest stands contribute to increased fire intensity projections. Combined with heat and wind, such conditions typically lead to high fire intensities.

As illustrated in the Rate of Spread map, the Greenbelts in Eldorado are where the rate of spread factors coincide. Green colors on the western side of Eldorado and in the Greenbelts align with yellow and red colors in a west to east and southwest to northeast direction, indicating increasing rates of spread in the community. As a result, areas where these alignments occur are priority areas for treatment in the Greenbelts. These areas specifically include the slopes of the Los Alamos Park, the neighborhoods north of Pueblo Cañon Park, and the Gallina Park Greenbelt area of Verano Loop. The map shows that many neighborhoods east of U.S. Highway 285 and the Eldorado Community Preserve's central wooded areas, especially where shrub and grassland vegetation are mixed with woodland vegetation, are also priority treatment areas. Specific treatment locations are described in Chapter 6.

Wind plays a significant role in fire risk assessment. Wind can fan a small ignition into a larger fire as it adds to the intensity of the combustion process. Additionally, it contributes to the rate of spread of a fire front in combination with live and dead fuel moisture conditions and rate of slope.

Southern and southwestern winds, and to a lesser extent western winds, predominate in the greater Eldorado area both in frequency and force. Springtime winds are the most powerful. These winds pose a risk of wind-driven wildfire across the grassland and savannah landscape toward the greater Eldorado residential areas. These prevailing wind directions in combination with the southwest to northeast uphill direction of the large arroyo system and their Greenbelts may further increase wind speeds due to wind tunneling (Venturi effect). This dynamic could accelerate the spread and intensity of wildfire spreading from west to east.

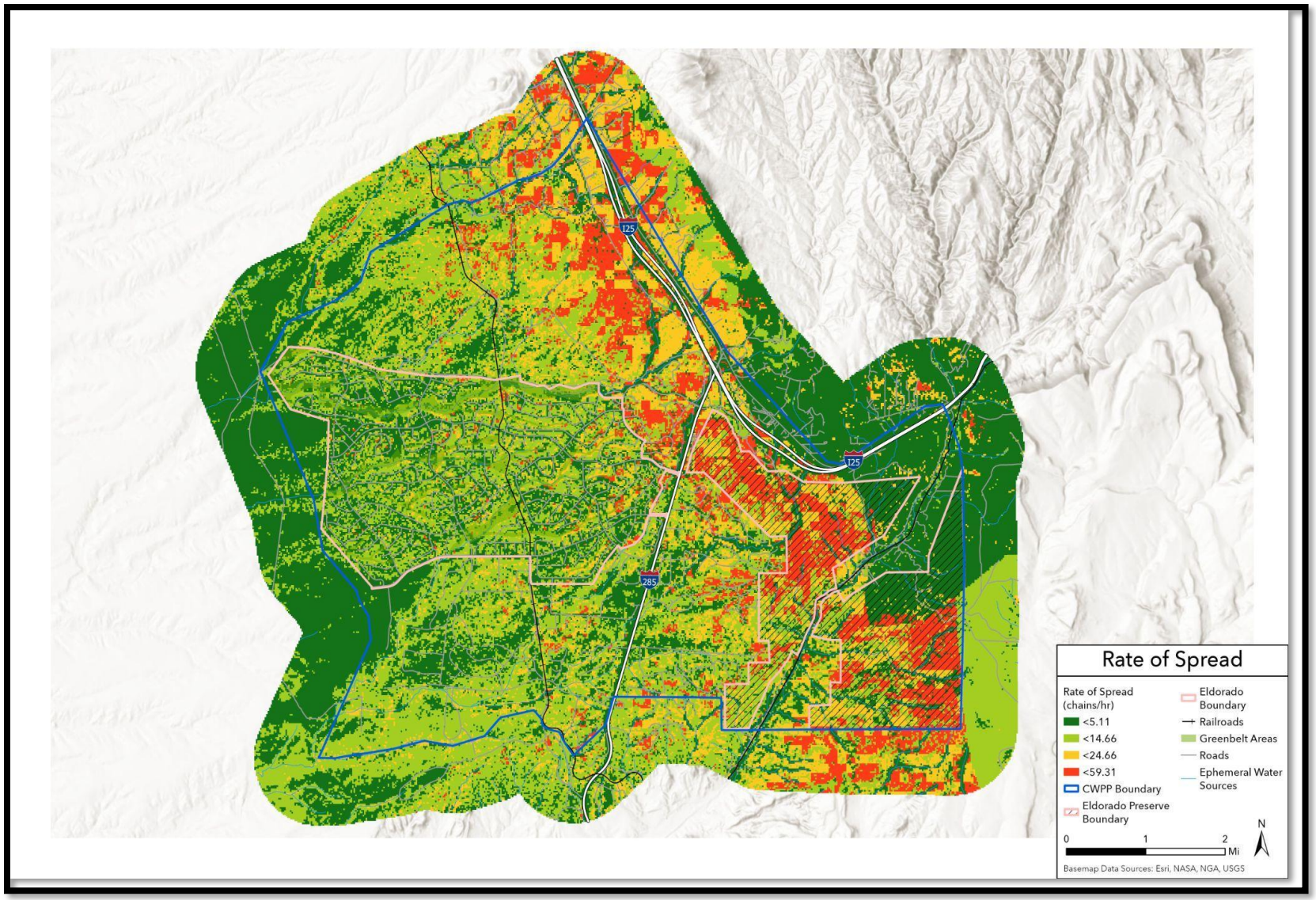

Figure 22. Rate of Spread map. For clarification, the indications for chain/hr translate to ft/min as follows: <5.11 ch/h = < 5.621 ft/min; <14.66 ch/h = <16.126 ft/min; <24.66 ch/h = <27.126 ft/min; <59.31 ch/h = <65.241 ft/min.

Wind speeds in excess of average wind speeds combined with low levels of relative humidity (RH) are of concern in relation to fire behavior. The greater Eldorado area is located within the Sandia and Manzano Mountain fire weather forecast zone, which is overseen by the National Weather Service (NWS) in Albuquerque. NWS issues so-called Red Flag Warnings (RFW) indicating an increased fire hazard when high wind speeds are forecast in association with low RH. RFWs can occur any time throughout the year. RFW records go back to 2006, and the NWS issued a total of 489 RFWs for its fire weather zone in the last 18 years. It should be noted that some of these warnings, especially in the windy fire months of April and May, were near continuous in nature, but separate warnings were issued (NWS Albuquerque, personal communication 2025). A breakdown by month is provided in Table 2.

Table 2. Red-Flag Warning Occurrences by Month between 2006 and 2024

Month	Total of RFW occurrences 2006-2024
January	4
February	30
March	81
April	159
May	119
June	64
July	1
August	0
September	3
October	16
November	8
December	4

Source: NWS Albuquerque, personal communication (2025).

The Albuquerque NWS office typically issues RFWs when there are sustained winds at elevations of 20 ft and 25 mph or greater or wind gusts of 35 mph or greater coinciding with RH values of 15% or less. In addition, NWS considers the Red Flag Threat Index, which takes into account the wind speeds and RH values and compares them to data of local climatological significance. This calculation can include comparisons of current conditions with past conditions, determinations whether the critical fire weather is "normal" or not, or the potential significance of any critical fire weather period that is approaching (NWS, personal communication 2025). The highest wind speeds are experienced in the northeastern part of the CWPP area, because these areas are at a higher elevation and more exposed to the predominantly western and southwestern winds.

Vulnerability

The presence of homes, infrastructure, and other valued community resources makes the greater Eldorado area highly vulnerable to serious wildfire impacts. This residential landscape is so vulnerable because of the exposure of homes to the possibility of wind-driven grass and brush fires from the south, southwest, and west that run through the Greenbelts and uphill through piñon and juniper trees to homes on the ridges of the hills. In some places the vegetation sequence from grass to shrubs to trees to homes is interrupted by roads or bare patches of soil, but in many places the sequence is continuous. The exposure factor has been expressed in the Wildland-Urban Interface map (Figure 10).

When trees and homes burn, they produce embers. Carried by wind, embers can create new ignitions up to several miles away downwind (aka “spotting”). The latter is of concern because the national forest lands surrounding the CWPP area have had very limited biomass removal in the past 50 years and are largely overstocked with small-diameter trees.

In the greater Eldorado area, there is an unknown level of home susceptibility to fire. Most homes are constructed with regionally common wood-frame and stucco technique and many homes have flat roofs. Stucco wall finishings provide some protection from fire fronts and embers. However, flat roofs and the presence of vents, wooden construction elements, decks, and wooden fences close to homes greatly contribute to home susceptibility. The level of precautionary home hardening and defensible space activities is unknown. There are few organized resources and people with knowledge of home hardening in the community. Aerial imagery shows that many homes have grass, shrubs, and woody vegetation, which constitute fine and coarse fuels directly around and touching the structures.

At the granular scale of the greater Eldorado area, residents identified other vulnerabilities, such as known and unknown cultural artifacts and cultural resource sites across the landscape. Other vulnerable and valuable landscape assets include mature and semi-old growth woodland patches and small wetland sites in the Eldorado Community Preserve and the wildlife corridor functions of the woodland and riparian corridors in the landscape.

Communities at Risk

The greater Eldorado CWPP area is listed in the 2023 Communities at Risk Assessment Plan (EMNRD 2023) compiled by the New Mexico Forestry Division as “at high-risk” of wildfire on a scale of high-moderate-low ratings. The 2020 Santa Fe County CWPP (Santa Fe County 2020) describes the community of Cañoncito (which is most likely intended to describe Upper Cañoncito) and provides a Community at Risk (CAR) rating of “90-High.” Several other communities within five miles around the greater Eldorado CWPP area are also included in the 2020 Santa Fe County CWPP with listed CAR ratings. These include Cañada de los Alamos (CAR: 96-High), Apache Ridge (CAR: 114-High), Glorieta (CAR: 95-High), Ojo de la Vaca (CAR: 99-High), and Lamy (CAR: 68-Moderate). No CAR rating was provided for Eldorado at Santa Fe, and this 2025 CWPP did not calculate any CAR ratings.

Given the CAR ratings for the communities surrounding Eldorado at Santa Fe as high in the 2023 Communities at Risk Assessment Plan (EMNRD 2023), the predominance of WUI conditions throughout

the CWPP area, and the overall risk of landscape-scale fire, the entire CWPP area must be considered one community at risk with the rating "high." The 2020 Santa Fe County CWPP indicates this high-risk level by mapping the northern and eastern part of the greater Eldorado CWPP area as a "Priority Area of Interest" on the Fuel Treatments map of the 2020 CWPP. Residents in each community or subdivision can conduct a self-assessment to confirm or nuance the overall community hazard assessment and at-risk status. Figure 23 maps the 17 subdivisions and neighborhoods in the CWPP planning area in relation to the area's composite fire risk assessment. The map shows that many subdivisions and neighborhoods are located in or directly adjacent to areas with high fire risk, which corresponds to the identified Priority Area of Interest for fuel treatments.

In sum, the risk of fire in the greater Eldorado area is mixed and depends on site-specific and timing-related conditions. The fire risk map resulting from modeling shows that fire risk for the entire planning area varies from low to moderate to high. For specific vulnerable assets, a more granular zoomed-in look shows that specific communities and areas with homes and development have a moderate to high fire risk. It must be noted that the maps in this CWPP are not developed with the purpose of providing property-specific information.

With four to five recorded ignitions per year, the likelihood of wildfire igniting and spreading somewhere in the greater Eldorado area is very high. On a per acre basis, the likelihood of ignitions across the 27,000-acre planning area equates to one annual ignition per 5,500 to 6,750 acres. Fire intensity and crown fire risk are low to moderate in the western and southern part of the area and high in the more densely wooded areas in the northern and eastern part. Risk of spread varies in relation to variable vegetation patch connectivity and seasonal wind intensity variations, but rate of spread increases toward the northeast in relation to increasing wind exposure and vegetation densities associated with the increasing likelihood of crown fire activity in dense woody vegetation. In sum, the risk of wildfire increases rapidly toward the eastern parts of the planning area due to increased vegetation density, fuel load, and wind exposure conditions.

Priorities for treatment are, therefore, areas where neighborhoods (Figure 23) and other valued resources (Figure 24) are within or adjacent to the line of fire or within areas that are highly flammable or have a high risk of spread. The Communities at Risk map and Community Values at Risk map show that such areas include: most neighborhoods immediately north and south of Interstate-25, the Alteza and Dos Griegos subdivisions, the U.S. Highway 285 corridor and most subdivisions east of U.S. Highway 285, the heart of the Eldorado Community Preserve, many neighborhoods on the northern and eastern sides of the Greenbelts, and the areas east and north of the Tierra Collinas and Los Caballos subdivisions.

It must be noted that the values associated with the Eldorado Community Preserve include: a regional wildlife corridor along the Galisteo Creek from the Sangre de Cristo Mountains to the mountainous areas southwest of the Galisteo Basin, water storage and conveyance mediums for downstream ecosystems and landowners, local wetland and riparian habitats, trail systems, views, and mitigation opportunities for flooding risk and debris flows. All these values will be seriously jeopardized in case of a wildfire in the Preserve. Given the high wildfire risk in much of the Eldorado Community Preserve, it is of critical importance to identify treatment priorities that are guided by a stewardship plan for this area.

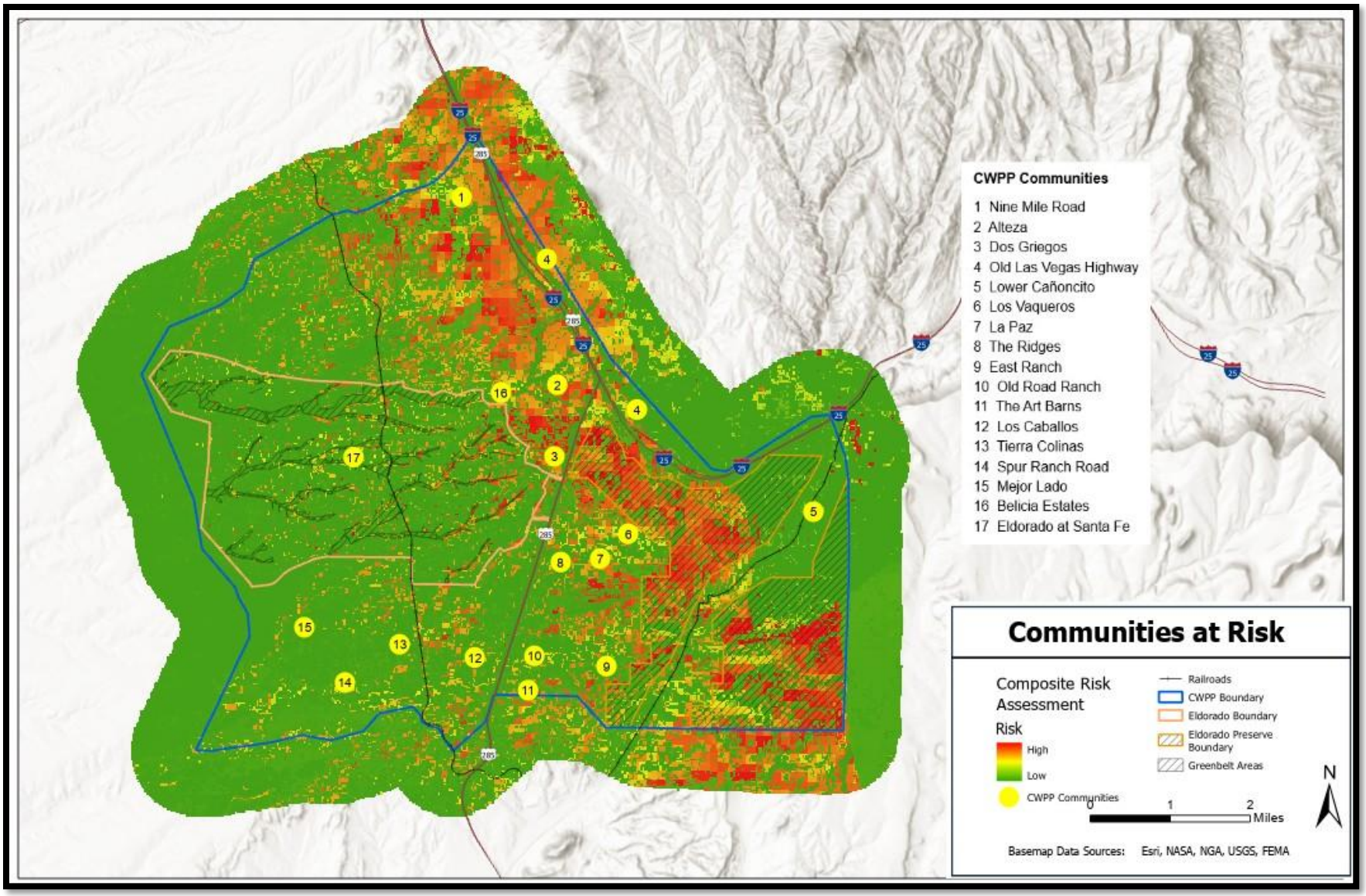

Figure 23. Communities at Risk map, based on the composite fire risk map overlaid with the locations of neighborhoods and subdivisions in the CWPP area.

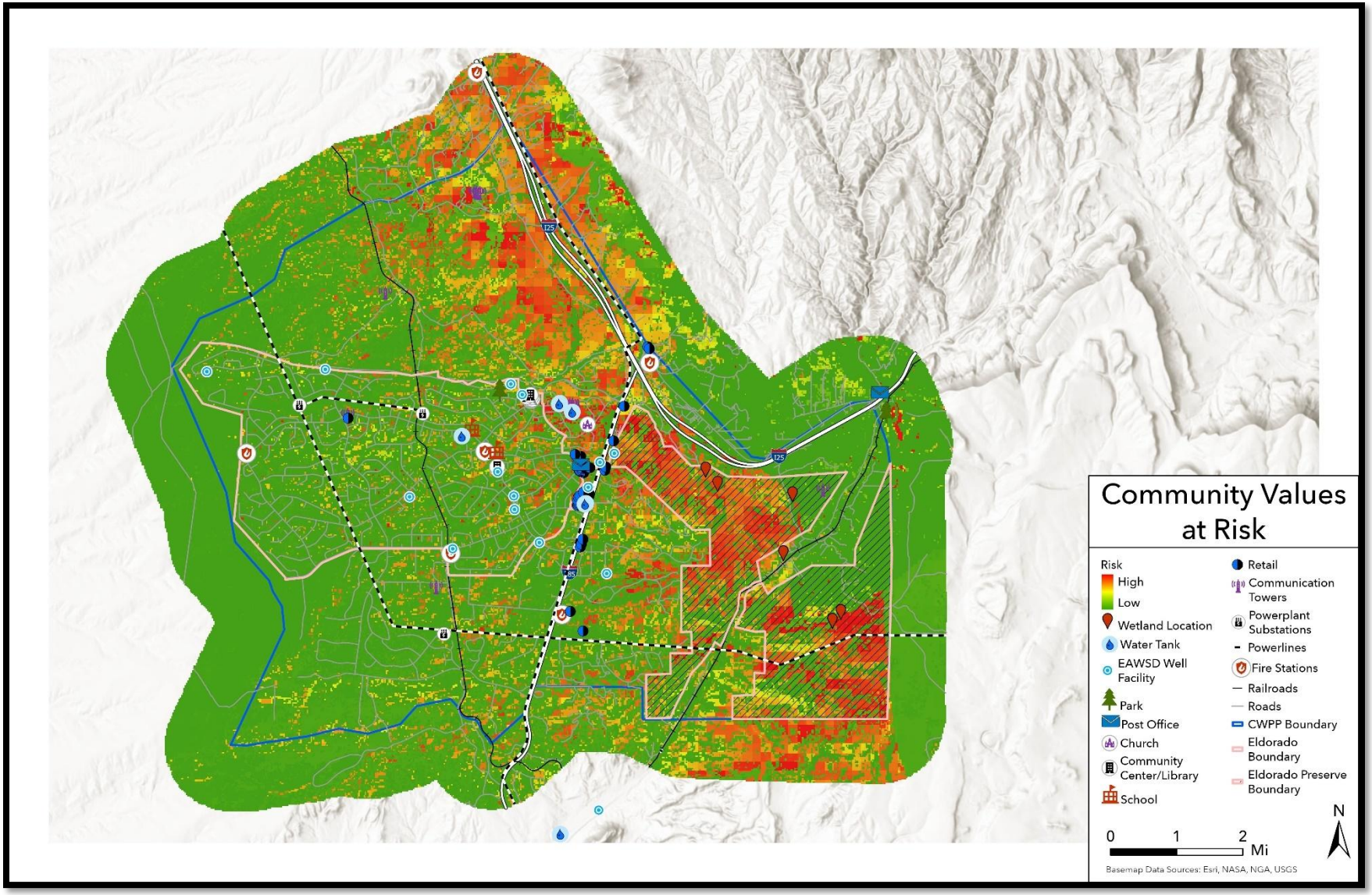

Figure 24. Community Values at Risk map, based on the composite fire risk map overlaid with the data layer of critical infrastructure and other community values in the CWPP area (see Figure 4).

Adding vulnerable community assets in the WUI, such as homes, infrastructure, and sensitive cultural and ecological values, to the wildfire likelihood and intensity equation results in the wildfire risk determination for the planning area. The composite wildfire risk on average is moderate but varies locally from low to moderate and high. Since wildfire risk varies from place to place and between times of the year, average fire risk is estimated to be high where concentrated vegetation surrounds a home or other valuable assets. It is moderate to low where no community assets exist or where vegetation patches are interrupted by non-flammable surfaces, such as roads. However, seasonally, the risk rating changes under weather conditions with low moisture levels, high temperatures, and high wind velocity from the west and southwest. In combination with the area's topography, such conditions can lead to very high fire risk for many homes, businesses, and infrastructure in the area.

Clarification of Other Fire Risk and Fire Hazard Models

Various documents and maps available online indicate details about wildfire risk, hazard, threat, potential, or likelihood. Some of these documents can be interpreted interactively to arrive at results for the greater Eldorado area (Table 3 and Appendix D). However, each document presents a different risk definition or rating assessment. This inconsistency is the result of differences in methodologies and definitions.

One such difference is the assessment of fire risk based on local conditions as opposed to a rating in comparison with other communities throughout the U.S. When considered at a national scale, New Mexico's risk of wildfire ranks higher than 82% of states in the U.S. and New Mexico is in the 86th percentile for risk to homes. As a result, many communities in New Mexico, including Eldorado, rank high in their comparative fire risk (USDA 2025 and NMLFC 2024).

Table 3. Summary of Wildfire Hazard and Risk Modeling Sources

Method	Key Agency	Scope	Reference
2023 LandFire data and WFDSS modeling	U.S. Forest Service	Fire hazard mapping (analysis of likelihood and intensity; modeling tool for experts)	https://www.wildfire.gov/application/wfdss#:~:text=The%20Wildland%20Fire%20Decision%20Support,risk%20informed%20decision%20process%20fo
2020 Santa Fe County CWPP	Santa Fe County Fire Department	Fire hazard and risk mapping (fixed maps and narrative)	https://www.santafecountynm.gov/fire/wildland

Method	Key Agency	Scope	Reference
NMWRAP - New Mexico Wildfire Risk Assessment Portal	UNM - EDAC	Fire hazard mapping (partly interactive online mapping system)	• https://edac.unm.edu/nmwrap/ • https://nmwrap.org/ https://edacarc.unm.edu/arcgis/rest/services/NMWRAP/NMWRAP/MapServer.
Wildfire Risk to Communities	USDA and U.S. Forest Service	Wildfire risk in a rating based on a nationwide comparison between communities (partially interactive online reference system for fire risk mitigation prioritization and treatment planning)	https://wildfirerisk.org/explore/overview/35/35049/3500022625/
Wildfire Models	First Street Technology, Inc.	Fire and flood risk (and other risks) for individual homes and communities (partially interactive online reference system)	https://firststreet.org/city/eldorado-at-santa-fe-nm/3522625_fsid/fire

Insurance

Insurance companies assess fire risks levels for large areas, for communities, and for individual properties. The insurance industry formulates risk levels at a national scale, and large fire events elsewhere in the country have caused increases in the insurance industry's risk calibrations nationwide (George Ducker, NMFD Communications Coordinator, personal communication 2025).

By extension, this trend applies also to the greater Eldorado area. Given New Mexico's rating in the 86th percentile for risk to homes nationwide and the statewide risk rating of the Eldorado area as high, insurance companies consider these relative nationwide rankings in their risk assessments. The New Mexico Legislative Finance Committee (NMLFC) reported in August 2024 that home insurance premiums in New Mexico increased by an average of 16% between 2020 and 2023. However, the national average increase in the same period was 33%. This inconsistency is likely related to the fact that between 2014 and 2024 insurers across the U.S. paid out more in claims than they received in premiums.

Despite losses in 2016, 2017, and 2022, insurers have been making a profit in New Mexico throughout 2024 (NMLFC 2024).

Anecdotal information has confirmed the recent fluctuations and challenges in maintaining individual homeowner insurance. Residents have mentioned that they lost their insurance or had to pay increased premiums. Non-renewal occurrences and premium increases are often related to construction features and vegetation in the home ignition zone. Referencing the Center for Insurance Policy Research, the NMLFC states that critical structural characteristics include roofing aspects (e.g., roof systems, shape, age, and vents); type of wall cladding; presence of wood patio deck; amount of ember accumulators (e.g., vents, porches, and other openings that can accumulate embers); and type of windows (NMLFC 2024). Relevant vegetation characteristics include the type of vegetation, slope, and distance to vegetation within a 30-foot perimeter around structures. Anecdotally, the distance between homes and fire hydrants may also play a role, especially if homes are more than 1,000 feet removed from a hydrant. *The New York Times* reported that, based on data from the U.S. Senate Budget Committee, in 2023 non-renewal rates of home insurance in Santa Fe County were between 2% and 4% (between 1 in 25 homes and 1 in 50 homes) (U.S. Senate Budget Committee, 2024).

As insurance companies take many factors into consideration at the regional and national levels, rates may stabilize or decline over time if many people in, for example, the greater Eldorado area heed the CWPP recommendations. Yet, if a large number of people do not act on the need to prepare their properties for the likelihood of wildfire, increases in home insurance premiums and in nonrenewal occurrences of individual home insurance policies are bound to continue.

6. Mitigation Strategies

Conforming to the 2020 Santa Fe County CWPP, this 2025 CWPP aligns descriptions of wildfire mitigation strategies with the National Cohesive Wildland Fire Management Strategy (aka Cohesive Strategy) (National Strategy 2014). Similar to the 2020 Santa Fe County CWPP, this section provides guidance for implementing recommendations under each Cohesive Strategy goal. For this CWPP, a separate Post-Fire Response and Rehabilitation section includes recommendations and guidelines for post-fire recovery activities.

- **Cohesive Strategy Goal 1: Restore and Maintain Landscapes**
  - Stewardship and Assessment Plans
  - Fuel Treatments for Vegetation Communities
- **Cohesive Strategy Goal 2: Fire Adapted Communities**
  - Community Awareness
  - Home Hardening
  - Home Ignition Zone and Defensible Space
  - Infrastructure, Travel, and Transportation
  - Codes and Guidelines
- **Cohesive Strategy Goal 3: Wildfire Response**
  - Community Capacity Building
  - Fire Suppression Capacity and Resources
- **Post-Fire Response and Rehabilitation**
  - Post-Fire Risks
  - Post-Fire Recovery

Tables with priority action lists are included at the beginning of each Cohesive Strategy Goal and together serve as an action plan for implementation. The exception to this is the Post-Fire Response and Rehabilitation sub-section. All the background information on post-fire risks was placed in this section since it is an amendment to the 2020 Santa Fe County CWPP structure and deserves more explanation before the suggested action items. All recommended actions were created using data from existing information sources, conversations with community members and experts, surveys from stakeholders and Core Team members, and in-depth interviews with key experts. The list includes actions that individuals, communities, businesses, and agencies can take for coordinating, planning, and capacity building. Most actions focus on community education and outreach as a preliminary step.

The actions have been divided into categories, and each action has been rated as a “high” or “low” priority. The CT justified high priority as an action that needs immediate attention, as an initial step, as likely to receive funding/support, and/or as obvious and easy to accomplish (“low-hanging fruit”). A low priority is an action that needs attention later, is a secondary step, is not likely to receive funding or support now, and/or is “high-hanging fruit.” Responsible entities are suggested participants in the action.

Please note that in the case of wildfire, the Santa Fe County Fire Department will initiate the fire response and various agencies will become involved to determine the necessary incident command (IC) structure. Community members should follow instructions from the IC authorities put in place at that time.

Summary Overview of Mitigation Strategies

This summary overview aims to clarify the logical sequential priorities of proposed mitigation strategies for fire preparedness in the greater Eldorado area amidst the multitude of recommendations provided in this chapter. Key mitigation strategies in order of sequential priority include:

1. Community awareness raising and public education about emergency preparedness.
2. Prioritization planning for key areas of intervention in the CWPP area, including the development of stewardship plans for common property areas.
3. Collaboration among HOAs and public agencies on key fire preparedness tasks.
4. Outreach and implementation of home hardening and defensible space measures.
5. Implementing selective vegetation management for fuels reduction in common property areas, along with monitoring of effects, identifying next steps, and developing annual maintenance protocols.

Community awareness of fire and flood risks and recommended mitigation strategies is an ongoing need in the area. HOAs and the Santa Fe County Fire Department are best positioned to take on this role. Increased community awareness can be achieved through specific educational outreach campaigns. Local and regional organizations with fire awareness expertise are available to play a role in such campaigns. National programs, such as Firewise USA and the Fire Adapted New Mexico Learning Network provide broad information and training services for ongoing awareness raising and wildfire preparedness strategies.

Increased community awareness is best aimed at increasing collaboration within neighborhoods and with the Fire and Rescue Districts on topics such as roadside weed management, rural addressing (Santa Fe County E-911 Addressing Section), and evacuation plan development. In addition, collaborating partners are advised to distribute information and develop training workshops and demonstration sites for home hardening and defensible space development, recruit and certify local home hardening experts, recruit and train volunteer fire fighters, identify the need for additional fire hydrants, and develop “what-if” scenarios for post-fire emergency management. Vegetation removal along roads and in individual backyard areas can be taken on by individual homeowners and entire streets or neighborhoods for increased effectiveness and mutual social support. Individual homeowners are encouraged to learn as much as they can about home hardening and creating defensible space and to implement these practices on their properties individually and as collaborating neighbors.

HOAs, in collaboration with Santa Fe County and the NMFD, are advised to develop prioritization plans for neighborhoods most vulnerable to wildfire and flooding. In addition, these entities are well positioned to work together in support of the development of land stewardship plans for large private properties and common property areas. The plans should outline the most optimal, strategic vegetation management interventions to reduce fuel loads while conserving ecological health, cultural resources, and scenic qualities.

The prioritization plans within HOAs and stewardship plans for common areas prepare HOAs, in collaboration with NMFD, SFP-SWCD, and NGOs, to start selective fuels reduction initiatives on common property areas and encourage similar activities on adjacent public lands and large, privately

owned areas. In so doing, protecting and hardening homes and other structures will go hand in hand with protection efforts in natural areas, such as the Greenbelts. Such treatments must be selective, strategically located, and rotational in spatial extent to ensure optimal soil health and habitat integrity over time. Priority must be given to the removal of highly flammable weeds, the interruptions of continuous vegetation patches, and the removal of ladder fuels. Techniques could include manual removal, grazing, mowing, individual, mechanical tree removal, thinning, and patch cuts. Grazing and mowing must be rotated with rest periods in between and should not be repeated in the same season each time it occurs in order to maintain plant species richness and optimize soil health. As a result, these treatments should generate firebreaks in grasslands, shrublands, and woodlands that are optimally aligned with the existing network of bare surfaces, such as roads, parking areas, utility corridors, and sandy arroyo channels while maintaining or improving the ecological integrity of the landscape.

Care must be given to a start-up phase that generates demonstration and learning opportunities while increasing buy-in from residents and an annual maintenance plan that ensures replication of the techniques across the CWPP area in subsequent years. In addition, it is essential that an annual monitoring program identifies feedback from HOAs, service providers as well as residents and collects data on ecological impacts and ongoing needs for adaptation of mitigation strategies.

Cohesive Strategy Goal 1: Restore and Maintain Landscapes

Recommendations for Hazardous Fuels Reduction

Cohesive Strategy Goal 1 is to restore and maintain landscapes, in such a way that landscapes across all jurisdictions are resilient to fire and other disturbances in accordance with management objectives. Management objectives will have to be defined through the completion of site-specific stewardship plans.

The Western Regional Action Plan of 2013, developed by 15 western states and which contributed to the formulation of the Cohesive Strategy goals states "…sustaining landscape resiliency and the role of wildland fire as a critical ecological process requires a mix of actions that are consistent with management objectives." The Western United States (the West)

> …will use all available methods and tools for active management of the landscape to consider and conserve a diversity of ecological, social, and economic values…The West will coordinate with all partners and seek continued stakeholder engagement in developing market-based, flexible and proactive solutions that can take advantage of economies of scale. All aspects of wildland fire will be used to restore and maintain resilient landscapes. Emphasis will be placed on protecting the middle lands near communities. (Western Regional Action Plan 2013:14)

In this CWPP, hazardous fuels include both fine fuels, such as dry grass, twigs, and small shrubs, and coarse fuels, such as large shrubs, logs, dead standing trees, and live trees. Hazardous fuels reduction initiatives will likely need to occur on properties of any size and ownership. However, recommendations in this section focus on treatments in larger areas for landscape-scale interventions, while treatment on smaller, private properties are addressed in relation to Cohesive Strategy Goal 2. Landscape-scale hazardous fuels reduction address treatments on common property areas, adjacent public lands, and large, privately owned areas. All the suggested treatments are guidelines and recommendations and are not required, due to private landownership or lessee rights.

Tensions may arise between the need for developing fire resiliency in the landscape and the need for maintaining and enhancing ecological resiliency and scenic quality across the landscape. Both needs can be argued and defended with scientific underpinnings that may require careful reconciliation. A first step toward the reconciliation of these needs will likely be found in defining mitigation treatments at a site-specific scale and within a specific time period.

As a result, treatments must be selective, strategically located, and rotational in spatial extent to ensure optimal soil health and habitat integrity over time. Furthermore, prioritizing areas of intervention, ignition sources, fuel types, and treatment techniques will further nuance the approach and increase the possibility to reconcile conflicts between needs for fire safety and the needs for ecological and cultural resource conservation and enhancement. Stewardship plans can address such priorities and identify the most suitable, site-specific treatment strategies for reconciling seemingly diverging needs regarding fire resilience and overall ecosystem resilience.

For example, priority should be given to the interruption of continuous vegetation patches, the removal of ladder fuels, and removal of highly flammable noxious weeds, such as cheatgrass (Figure 25). At a landscape scale, priority interventions may need to address the hazards associated with wind-driven wildfire advancing from the west and burning upward into the Greenbelts toward denser vegetation and homes on the ridgelines. The Greenbelts are also susceptible to flooding from the East. Table 4 summarizes treatments for Cohesive Strategy Goal 1 aimed at restoring and maintaining landscapes.

Figure 25. Cheatgrass (Bromus tectorum), a very flammable noxious weed, drying in the sun (Photo Taken by: Susan Allman).

Table 4. Priority Actions for Cohesive Strategy Goal 1: Restoring and Maintaining Landscapes

Action	**Priority**	**Responsible Entities**
Fuels Treatments		
Create a Woodland Stewardship Assessment and Plan for Eldorado Community Preserve	High	ECIA, NMFD, Consultants
Create a Grassland and Savannah Stewardship Assessment and Plan for Eldorado Greenbelts	High	ECIA, NMFD, Consultants
Create a Woodland Stewardship Assessment and Plan for Nine-Mile Road area	High	HOAs, NMFD, Consultants
Create Woodland Stewardship Assessments and Plans for Small HOAs	High	HOAs, NMFD, Consultants
Subcategories for all Stewardship Plans:	High	HOAs, NMFD, Consultants
Wildlife expert input on habitat	High	HOAs, NMFD, Consultants
Surveys of areas	High	HOAs, NMFD, Consultants
Ladder fuel treatments under ponderosa pine	High	HOAs, NMFD, Consultants
Cultural resource surveys	High	HOAs, NMFD, Consultants
Identify and treat fire ignition sources near above ground utilities	High	PNM, Sky Railway

Action	Priority	Responsible Entities
Identify and implement effective, appropriate, and feasible mitigation strategies for invasive vegetation	High	PNM, ECIA, HOAs, NM DOT, Santa Fe County (SFC), Sky Railway, PNM
Implement fuel reduction practices in common areas	High	ECIA, HOAs, Contractors

Stewardship and Assessment Plans

The Core Team recommends that HOAs consider developing woodland, savannah, or grassland stewardship plans that guide wildfire mitigation activities on areas that are under HOA jurisdiction outside private ownership from individual landowners. The development of stewardship plans could assist HOAs with identifying strategic treatment areas based on detailed terrain assessments and identify sensitive avoidance areas, such as cultural sites, wildlife habitat, and highly valued ecological sites. A stewardship planning process could also help HOAs achieve broader community support and understanding for the planned mitigation treatments and identify long-term maintenance work.

Stewardship planning will guide HOAs in selectively identifying treatment areas that lead to the greatest fire risk reduction effect across the landscape while optimizing the acreage of undisturbed terrain. Stewardship plans could include guidelines for the identification and periodic removal of ladder fuels under tall trees, such as ponderosa pine, and combustible vegetation near aboveground powerlines. Additionally, stewardship plans could indicate ecological restoration sites for the removal of invasive plants, the recovery of native plant cover, and the restoration and protection of wildlife habitat and wildlife corridors in conjunction with fire risk reduction treatments. The CT recommends that all stewardship plans obtain wildlife expert input on habitat protection and include cultural resource surveys in the plan area.

In order to be selective and strategic, most treatments will need to take place in a rotational manner in their spatial extent. This would mean that grazing and mowing treatments must include ecological recovery periods and are not repeated at the same places in successive years to ensure optimal soil health and habitat integrity over time (Appendix E). For woody biomass removal it would mean that treatments take place locally and in different places over time, returning to the same place after a cycle of one or more decades. Additionally, such woody biomass treatments must take place in the fall and winter to avoid bird migration and nesting seasons and the active season of pine beetles. Moreover, in order for all treatments to avoid cultural resources sites, the approximate location of such sensitive sites will need to be included in the stewardship plans as avoidance areas. Such a planned, strategic approach will help save costs and ensure that biological and cultural resources are optimally protected.

For treatments that are funded through NRCS or the NMFD Forest Health Initiative, the agencies require that a stewardship plan has been completed or is underway (Lawrence Crane, Bernalillo District Forester, personal communication 2/25/2025). Stewardship plans are not required for treatments that are privately funded or covered by the Non-Federal Lands grant program through the Santa Fe-Pojoaque Soil & Water Conservation District or NMFD. NFL programs only apply to lands that contribute to protection from wildfire on adjacent or nearby national forest lands. Stewardship plans are also not needed for treatments funded by the GSFFC Community Wildfire Defense Grant program.

Stewardship plans should recommend the most suitable types of treatments for suggested priority areas. Many types of treatments may apply at different locations and in sequence over time. Treatments to be considered may include weed removal, mowing, managed grazing, brush removal, woodland and forest thinning or patch cuts ("forest stand improvement"), mastication, pile burning, and various slash utilization and treatment techniques. Other than pile burns, the use of prescribed fire is likely unsuitable for the CWPP area because of insurance constraints in relation to the private land ownership in the CWPP area and ecological conservation goals for the area.

NRCS also offers a "brush removal" program (code 314) for grassland restoration and a "forest stand improvement" program (code 666) for savannah, woodland, or forest stand restoration. NRCS also offers to develop in-house stewardship and treatment plans and is available to work with qualified consultants who produce such plans.

Fuel Treatments for Vegetation Communities

In this section, the CWPP describes treatments for larger vegetation communities, such as grasslands, savannahs, woodlands, and forest lands, on private and publicly owned lands outside the residential areas. Treatments for the home ignition zone (aka defensible space) around individual homes, businesses, and small agricultural operations are addressed under Cohesive Strategy Goal 2. The Ecotone team formulated the following specific recommendations for each of the following vegetation communities.

Grasslands

- Continue the grazing leases on state trust lands (managed by the NM State Land Office) on the west side of the CWPP planning area.
- Introduce occasional managed grazing (i.e., deliberate cycles of rest and rotational grazing), combined with mowing of grasses and forbs and mastication of small woody plants on grasslands in the ECIA Greenbelt and the Eldorado Community Preserve. Treatments must be selective, site specific, and appropriate for the specific terrain conditions at the time of treatment.
- Encourage private landowners to include their land in any of the managed grazing, mowing or mastication activities listed above, if appropriate.
- Remove herbaceous plants, brush and PJ trees, saplings, and seedlings in areas where it is effective to create fire breaks (a pattern of belts or block of vegetation treatment to interrupt advancing flame fronts) that protect areas that are up to ten times larger than the treated area.
- Continue or introduce managed grazing and brush removal on other grasslands, such as those on private lands of the Rancho Viejo Partnership to the northwest of Eldorado at Santa Fe.

PJ Savannah

- Continue or introduce cycles of rest and rotational, managed goat grazing and woodland stand improvement (selective thinning and brush removal) in the ECIA Greenbelt, on private land, and any other ownership.
- Continue or introduce woodland stand improvement on New Mexico Department of Transportation right of ways and NPS areas, following specific agency requirements.

Persistent PJ Woodland and Open Woodlands

- Consider no action or very selective tree removal on Eldorado Community Preserve lands. Remove ladder fuels beneath tall and old trees.
- Continue to selectively remove trees in PJ woodlands within DOT ROW areas, following agency guidelines and requirements.
- Consider no action or very selective tree removal on all other private property. Remove ladder fuels beneath tall and old trees.
- Pile burn previous bark beetle kill when snow is on ground or chip woody debris near clumps of healthy trees.

Riparian Woodland

- Remove ladder fuels and thickets in ways to establish fuel breaks in and along riparian woodland strips on Eldorado Community Preserve lands.
- Remove ladder fuels and thickets in ways to establish fuel breaks in and along riparian woodland strips on other private lands as part of defensible space only.

Ponderosa Pine Forests

- Remove ladder fuels to "release" old and tall trees on Eldorado Community Preserve lands.
- Consider thinning of dense stands.
- Remove ladder fuels to "release" old and tall trees on other private lands. Consider a timber stand improvement cut.

Table 5 details prioritized fuel reduction locations at a landscape scale. Prescriptions for these prioritized fuel reduction treatments must be developed during the creation of each stewardship plan.

Table 5. Prioritized Fuel Reduction Locations at a Landscape Scale

Vegetation Community	Specific Location	Suggested Treatment
Grasslands in Greenbelt	Los Alamos Park: • Neighborhoods south of Avenida del Monte Alto and around Valencia Loop, Moya Loop, Raudo Road, Raudo Place, Chusco Road	• Interrupt continuous grass-shrub-tree sequences • Remove invasive plant patches (cheatgrass, tumbleweed, and dry kochia)

Vegetation Community	Specific Location	Suggested Treatment
	• South of Avenida Vista Grande around Avalon Road and Juego Road • Along Alturo Road • Between Condesa Road and Avila Road Pueblo Cañon Park: • Around Cerrado Loop neighborhood • Around Abanico Road and Enebro Road neighborhood • Between cul-de-sac streets off of Avenida Vista Grande and the Pueblo Cañon Greenbelt Gallina Park: • Around Verano Loop (especially between the railroad tracks and Verano Loop)	• Create mowed buffers along the railroad, streets, and utility corridors to enlarge existing fire breaks
PJ Savannah in Greenbelt	• East of U.S. Highway 285 neighborhoods • See Grasslands in Greenbelt	• See Grasslands in Greenbelt
PJ Savannah in Preserve	• Ecotones of grass and shrubland to PJ woodland • Trees encroaching in meadow areas	• Remove ladder fuels • Selectively remove trees in meadow areas

Cohesive Strategy Goal 2: Fire Adapted Communities

Cohesive Strategy Goal 2 is to create "fire adapted communities" (FAC). The concept of FAC comes from The National Cohesive Wildland Fire Management Strategy (NCWFMS), which was initiated in 2009. The core idea is to acknowledge that with increasing frequency and severity of wildfire, communities need to learn to coexist safely with wildfire. Improving community wildfire adaptation involves working across sectors before, during, and after wildfire. Fire adapted communities cannot meet a simple checklist because the work to reduce wildfire risk never ends. Table 5 summarizes treatments for Cohesive Strategy Goal 2 aims at creating fire adapted communities.

Table 6. Priority Actions for Cohesive Strategy Goal 2: Fire Adapted Communities

Action	Priority	Responsible Entities
Community Awareness		
Consider participating in the Firewise USA program and Fire Adapted Communities NM Network	High	ECIA, HOAs
Ramp up homeowner awareness	High	ECIA, HOAs
Local community meetings	High	ECIA, HOAs
Expert guest speakers as part of community meetings	High	ECIA, HOAs
Wildfire Community Preparedness Day	High	ECIA, HOAs
Promulgate Firewise USA or FAC information	High	ECIA, HOAs, FAC NM
Promulgate Ready, Set, Go! Information	High	ECIA, HOAs, NMFD
Educate about insurance ramifications from home hardening and defensible space treatments	High	HOAs, ECIA, SFC FD, Insurance, NMFD
Develop information campaign	High	ECIA, HOAs, Forest Stewards Guild ("the Guild"), SFC FD
Fire rating signs	High	ECIA, HOAs, Agencies
Audio/visual media	High	ECIA, HOAs
Articles in Vistas or Greet Eldorado	High	ECIA, HOAs
Host and further develop community cleanups with pre-cleanup educational workshops	High	ECIA, HOAs, FAC NM, Resident leaders
Cul-de-sac workshop pilot	High	ECIA, HOAs, FAC NM
Weed rodeo	High	ECIA, HOAs, FAC NM
Culvert cleanings	High	ECIA, HOAs, FAC NM
Hold meetings and activities for fire awareness	Low	SFC FD

Action	Priority	Responsible Entities
Cultivate Fireshed Ambassadors program	Low	ECIA, HOAs, GSFFC
Home Hardening		
Certify select individual in home hardening	High	SFC FD
Create information and incentives for home hardening	High	ECIA, HOAs, The Guild
Education around pros and cons of methods	High	Agencies
Hold "Train the Trainer" workshops	Low	SFC FD, Landscapers, The Guild, GSFFC
Home Ignition Zone and Defensible Space		
Create information and incentives for defensible space	High	ECIA, HOAs, The Guild, FAC NM
Trim driveway for fire trucks	High	ECIA, HOAs, SFC FD
Host "Train the Trainer" workshops	High	SFC FD, Landscapers, SG, GSFFC
Address private/public boundary clean up	High	ECIA, HOAs, Homeowners
Property and boundary line surveys		ECIA, HOAs, Homeowners
Host green waste disposal events during mitigation season (Oct-March)	High	ECIA, HOAs, SFC
Utilize biochar in common areas	High	ECIA, HOAs, SFC
Create chipping, composting, mulching program	High	ECIA, HOAs, The Guild
Request fire inspection	Low	ECIA, HOAs, SFC FD
Infrastructure, Travel, Transportation		

Action	Priority	Responsible Entities
Establish mitigation responsibility and maps	High	PNM, ECIA, HOAs, NM DOT, SFC, Sky Railway
Distribute PNM Wildfire mitigation action plan	High	PNM, ECIA, HOAs, NM DOT, SFC, Sky Railway
Establish collaboration for road maintenance	High	ECIA, HOAs, Santa Fe County Public Works (SFC PW)
Weed maintenance	High	ECIA, HOAs, SFC PW
Culvert inspections	High	ECIA, HOAs, SFC PW
Remove brush and junipers	High	ECIA, HOAs, SFC PW
Best treatments and approaches discussed	High	ECIA, HOAs, SFC PW
Herrada Road case study	High	ECIA, HOAs, SFC PW
Community mowing projects	High	ECIA, HOAs, SFC PW
Identify and treat segments along county road easements in Eldorado that present fuel accumulations	High	ECIA, HOAs, SFC FD, SFC Road Dept
Team Rubicon (TR) assistance available	Low	TR, ECIA, HOAs
Identify areas with flammable vegetation next to ignition sources (power lines, gas stations, rail lines, etc.)	High	EFR, ECIA, HOAs, Utility Managers, Business Owners
Codes and Guidelines		
Develop BMPs/guidelines on home hardening	Low	ECIA, HOAs
Obtain attorney opinion on new architectural guidelines	Low	ECIA, HOAs

Action	Priority	Responsible Entities
Enforce architectural guidelines regarding wooden fences and edit for fire hazards	Low	ECIA, HOAs
Review covenants for preserving and maintaining natural landscape	Low	ECIA, HOAs
Investigate if storage facilities have codes around combustible items	Low	HOAs, ECIA, Business Owners

Community Awareness

Fuel reduction projects and wildfire risk reduction projects in general—as listed under Cohesive Strategy Goal #1—are just one component of a successful strategy to reduce the negative effects associated with wildfire. Fuel reduction projects must be coupled with education and outreach about how to live within landscapes that are prone to wildfire.

Most greater Eldorado area residents understand that wildfire poses some form of risk to their communities, although the definition of risk and the categorization of the greater Eldorado area has been unclear to some. However, for many it may be challenging to choose what to do and where to start.

Many residents also realize that fire preparedness work needs to be done together at a neighborhood scale in order to benefit each individual homeowner. Therefore, increased community awareness is best aimed at increasing collaboration within neighborhoods. This can be achieved by working with the local fire and rescue districts on specific fire preparedness topics, such as roadside weed management, rural addressing, and evacuation plan development. In addition, HOAs and community leaders, in collaboration with the fire and rescue districts, are advised to distribute information and develop training workshops and demonstration sites for home hardening and defensible space development, recruit and certify local home hardening experts, recruit and train volunteer fire fighters, identify the need for additional fire hydrants, and develop “what-if” scenarios for post-fire emergency management. Vegetation removal along roads and in individual backyard areas can be taken on by individual homeowners and entire streets or neighborhoods for increased effectiveness and mutual social support.

Horse owners in the area are encouraged to spread manure piles no deeper than 4”-5” or remove the manure from the property to a waste disposal site. Barns and other hay storage structures should not be located near transmission lines or transformers. Individual homeowners are encouraged to learn as much as they can about home hardening and creating defensible space and to implement these practices on their properties individually and as collaborating neighbors in their neighborhoods.

HOAs, in collaboration with Santa Fe County and the NMFD, are advised to develop prioritization plans for neighborhoods that are most vulnerable to wildfire and flooding. Such prioritization plans would need to identify priority areas for fuels reduction through mowing, grazing, or vegetation removal, and for weed management, roadside maintenance, and culvert maintenance within the neighborhoods. Because

much of this work would need to take place on private properties of willing homeowners, it will be important to conduct a ramp-up phase in each neighborhood. In this way, small demonstrations and learning opportunities can be generated that increase buy-in from residents. Additionally, such treatments will require annual follow-up, which requires a collective plan for annual maintenance that ensures replication of the techniques across the CWPP area in subsequent years.

In order to ensure the fire precautions and annual maintenance work meet their goals, it will be useful for individual neighborhoods and HOAs to track their accomplishments and make sure ecological impacts are noted. Therefore, it will be useful to establish annual monitoring programs that identify feedback from HOAs, service providers as well as residents and collect data on ecological impacts and ongoing needs for adaptation of mitigation strategies.

Two national programs exist within the general fire adapted community's topic: Fire Adapted Communities Learning Network (FAC Net) and Firewise USA, which each provide information to homeowners and communities about fire risk and fire preparedness solutions. These programs have similar intentions—gathering and educating community members to reduce the risk of wildfire destruction—although they each have different services and benefits.

The following sections provide an introduction to the Firewise USA and FAC Net frameworks, which provide a starting point to engage in a more in-depth discussion and learning process about wildfire preparedness. Ecotone recommends that communities/HOAs consider whether the Firewise USA program is a good fit for their needs. If communities and HOAs want access to more resources, funding, and technical support to implement either Firewise USA or wildfire preparedness projects, the authors also recommend that a member of the community considers participating in the Fire Adapted New Mexico Learning Network (FAC NM).

Firewise USA

Firewise USA provides steps to help communities reduce the risk of wildfire destruction. "Firewise USA community" is a recognition program administered by the National Fire Protection Association (NFPA). The program focuses on reducing the loss of life and property from wildfires—particularly before a wildfire is burning—for residents and homeowners. This objective is accomplished through providing resources that allow communities to responsibly build and maintain structures on their properties and to assist each other in preparing for, and recovering from, wildfire.

Firewise USA emphasizes fuels reduction and gives recommendations for steps homeowners can take to reduce their individual risk to wildfire. For example, it promotes maintenance practices that reduce the chance of a home catching fire. Firewise may even improve insurance conditions for communities. Several resources for homeowners, such as an online toolkit and checklist for steps to reduce wildfire risk can be found at www.firewise.org.

Firewise USA recognition requires a six-step process:

1. Forming a Firewise USA board/committee of community residents and other applicable wildfire stakeholders.

2. Verifying community risk to wildfire by obtaining a wildfire risk assessment as a written document from the local fire department, New Mexico Forestry Division, or U.S. Forest Service. This assessment is a living document and needs to be updated every five years.
3. Developing an action plan based on the assessment, which should be updated every three years.
4. Hosting a "Firewise USA Day" outreach event.
5. Investing a minimum of $2 per capita annually in local Firewise USA actions.
6. Submitting an application at portal.firewise.org to the Firewise USA state liaison.

Firewise USA recognition is an important tool for a community in the ongoing process of becoming fire adapted.

Fire Adapted Communities Learning Network

The USFS, Department of the Interior, and other agencies promote and support FAC through various programs, such as FAC Net. FAC Net's mission is to connect and support communities working on wildfire resilience. The program offers community-based leaders resources, tools, and connections to reduce their community's wildfire risk and increase community resilience.

According to FAC Net, there are many roles within a fire adapted community, including residents, fire departments, businesses, local governments, land management agencies, and other stakeholders. The process of developing a fire adapted community requires professional relationship building and peer-learning. This process is incremental and ongoing. Topic areas related to fire adapted communities are displayed in Figure 26. The FAC Net approach is broader than the Firewise USA program, although Firewise USA is an important component of a fire adapted community and one of the best tools for resident/homeowner mitigation to avoid wildfire.

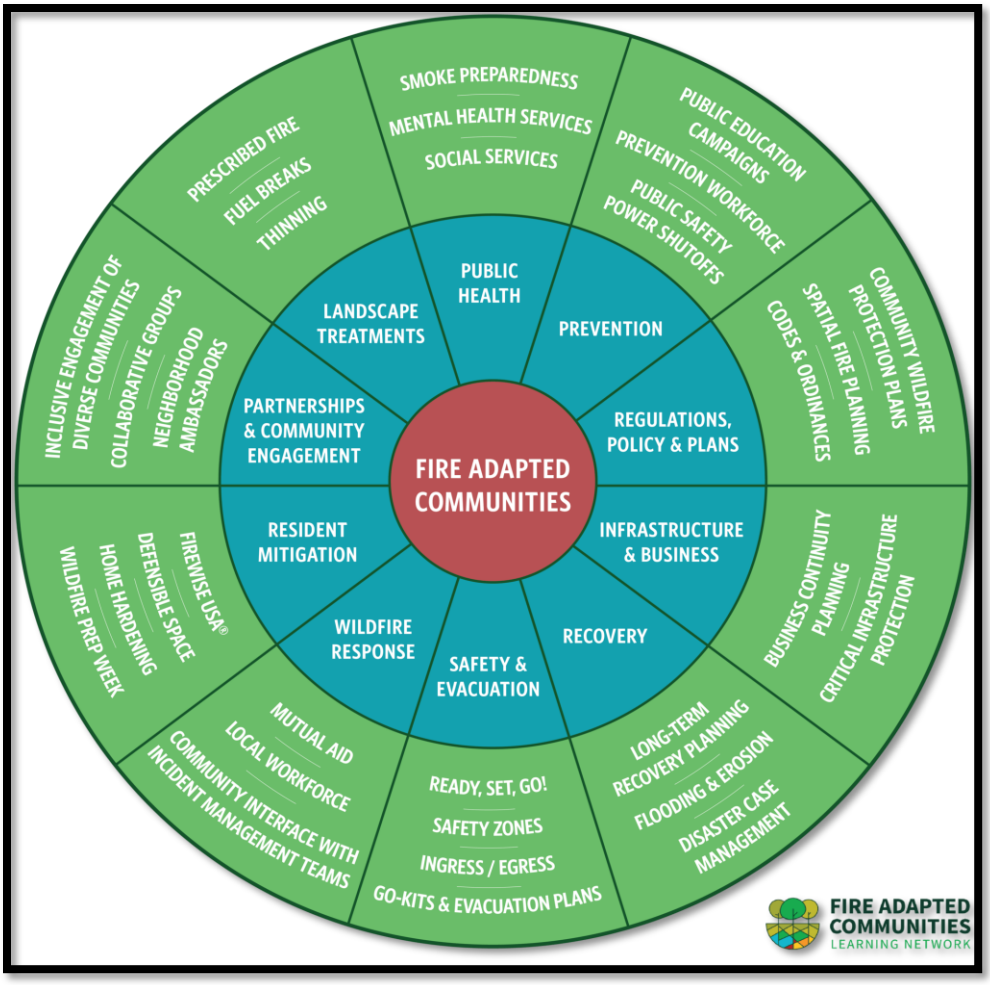

Figure 26. The Fire Adapted Communities diagram describes a set of components that make up community wildfire adaptation and gives examples of specific programs and activities that communities can undertake to reduce their wildfire risk and increase their resilience (Fire Adapted Communities n.d.).

Throughout New Mexico, the Fire Adapted New Mexico Learning Network supports communities in their process toward wildfire risk reduction. The statewide network hosts webinars, in-person events, monthly calls, and curated resources to support local leaders. The network is committed to supporting local communities by working with local leaders to set up learning and networking opportunities. Past examples include workshops to share best practices for pile burning on private land, webinars about community smoke programs, home hazard assessment training, and more.

The core of the FAC NM network is its members and leaders, who can share lessons learned about how to approach wildfire adaptation efforts. Anyone who is interested can visit the website www.facnm.org and consider joining the network as a member and for more information. The advantages of joining FAC Net and FAC NM are that both individuals and organizations can gain access to resources, tools, and connections with other members working toward wildfire resiliency. See Appendix E for additional information about FAC Net and FAC NM.

Regardless which program a community selects to follow, FAC NM or Firewise USA, homeowners must begin to understand the importance of wildfire risk reduction and how it impacts the larger community. Activities include developing community meetings with expert speakers, workshops and community clean ups, larger information campaigns, and general education materials, such as the New Mexico Ready, Set, Go! (RSG) program. Appendix E describes RSG, an effective tool for evacuation planning and communication, in more detail.

Home Hardening

Most homes lost in a wildfire are ignited by small flames and embers first. Through the wind, embers can travel up to five miles from a fire and ignite new fires far away from the initial fire (aka spotting), making one source of fire exponentially dangerous to nearby structures. Yet, 80% of homes that have been lost to fire could have been saved if strategic protection steps had been taken (Washington State Fire Adapted Communities Learning Network n.d.). Home hardening, one of these steps, is the process of protecting structures by retrofitting or replacing fire-vulnerable components of a home. For those building a home or remodeling the exterior of a home, it means selecting materials that are less flammable. Appendix E gives more information on home hardening methods and strategies.

The greater Eldorado area priority actions include creating information, along with the respective pros and cons, and incentives for home hardening practitioners. Suggestions from stakeholders and CT members included holding “train the trainer” workshops as well as certifying an individual in home hardening in order to bolster community expertise and proliferate outreach. As ECIA, and perhaps other HOAs, have not established architectural guidelines for home hardening, the CT suggested that efforts are made to formalize and codify this process.

Home Ignition Zone and Defensible Space Area

The home ignition zone (aka defensible space area) is the area that provides a buffer between a home and the open spaces or wildland areas. Coupled with home hardening, treatments in the home ignition zone will help slow or stop the progression of wildfire and protect the home site and other properties.

Starting with the 2020 Santa Fe County CWPP, Santa Fe County has been following guidelines for WUI activities and defensible space enforcement of new construction described in the International Wildland-Urban Interface Code (IWUIC), which was first published in August 2020 and last updated in February 2025 (IWUIC 2025). IWUIC prescribes defensible space planning and the extent of required vegetation treatment based on three factors that determine the IWUIC fire hazard definition: (a) number of days of critical fire weather per year; (b) slope (<40% is lowest category; >60% is highest category); and (c) applicable fuel models based on vegetation characteristics.

The vegetation in the CWPP area falls in three of the 21 template Fuel Models in the IWUIC vegetation classification system: Fuel Model A (grassland with forbs and sparse shrub vegetation), Fuel Model F (chamisa-oak and piñon-juniper components), and Fuel Model Q (dense short needle conifer woodland where flames easily reach the tree crown). Vegetation characteristics, such as biomass density and amounts of dead wood factor into computer modeling within these Fuel Models to generate the fire hazard level of the landscape. The resulting fire hazard rating determines the vegetation treatment

distance within the defensible space zone around a structure. Moderate hazard requires vegetation treatment over a distance of at least 30 feet. High hazard requires treatment over a distance of at least 50 feet, and extreme hazard requires treatment over a distance of at least 100 feet from the structure. Hence, the defensible space zoning distance is variable depending on site specific hazard characteristics.

The New Mexico Forestry Division and the National Fire Protection Association (i.e., the entity informing Firewise USA) use different defensible space zoning approaches than those defined by IWUIC. In the NMFD and NFPA approaches, the home ignition zone is divided into sub-zones that guide what actions to take within each given zone. However, NMFD and NFPA use different distance metrics. The NMFD approach includes variability of zone distances based on slope, similar to the IWUIC approach (https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/Wui_defzone.pdf). The NFPA approach is most commonly promulgated and uses fixed distances of 5 feet for a hardened zone around homes, 30 feet for rigorous vegetation removal, and 100-200 feet for selective vegetation removal (https://www.nfpa.org/education-and-research/wildfire/preparing-homes-for-wildfire). Please see Appendix E for more information on the treatment zones in relation to the home ignition zone concept.

As with home hardening, there must be an effort to create information and incentives for homeowners who enact defensible space techniques. One key suggestion from the SFC FD Captain is for community members to trim their driveways for fire trucks to access a potential fire. Public and private boundaries are repositories of weeds and other flammable materials that can be overlooked. The CT promoted surveying the boundary lines and then cleaning up the materials. Other key actions include hosting green waste disposal events during the October through March mitigation season and creating programs for chipping, composting, and mulching. In addition, the SFC FD is getting biochar equipment and hopes to utilize it in common areas. The “train the trainer” workshop was recommended within the home hardening category. In addition, any entity can request a fire inspection from the SFC FD to understand their vulnerability.

NMFD and the SF-P SWCD are the most important entities with access to funding sources for HOAs, private landowners, and homeowners who want to implement the CWPP’s recommendations. The 2025 Wildfire Prepared Act (SB0033), which will be managed through the NMFD, provides new, additional funding opportunities for eligible State subdivisions to provide private homeowners assistance for activities related to home hardening and the creation and maintenance of defensible space. The act also supports eligible agencies to implement hazardous fuels reduction to create buffers for structures and properties in high-risk areas and establish community-based programs to conduct assessments and provide certification.

The prioritized defensible space locations for fuel reduction treatments are the same as those mentioned in Table 5 due to their proximity to the Greenbelt priority treatment areas. Defensible space priority treatments should focus on removing ladder fuels, interrupting continuous grass-shrub-tree sequences, and removing invasive plants.

Infrastructure, Travel, Transportation

Within the greater Eldorado area, infrastructure jurisdiction is split among many entities including Santa Fe County, PNM, HOAs, NM DOT, Sky Railway, and New Mexico Gas. There is often confusion among

residents as to what entity oversees what space. Therefore, it is of high importance to establish public information about mitigation responsibility along with maps that are available to the public. From here, the entities can establish a collaboration for road maintenance that includes such activities as weed maintenance, culvert inspections, and community mowing projects. In addition, fire breaks can be bundled with existing infrastructure and roads to create more robust vegetation interruptions across the landscape. It is important to consider mowing guidelines for such wildlife as pollinators next to roads (see Appendix E). In the ECIA area, a subcommunity known as "Herrada Road" has implemented their own infrastructure clean up. Their experiences may provide insights for larger community projects.

Codes and Guidelines

Each HOA has its own codes, such as the bylaws and covenants. CT members and stakeholders have mentioned in several instances that there should be guidelines or best management practices created for home hardening, or, at most, updated architectural guidelines for fire hazards. Original covenants must be reviewed and taken into consideration with any updates. Some items do not fit within the previous categories but are fire adapted communities related. For example, the greater Eldorado area has a couple of storage facilities that need to be investigated for codes around combustible materials.

Cohesive Strategy Goal 3: Wildfire Response

Cohesive Strategy Goal 3 describes recommendations for improving wildfire response capacity during a wildfire. This Cohesive Strategy Goal aims to provide guidelines for all jurisdictions so they can participate in making and implementing safe, effective, and efficient risk-based wildfire management decisions. This section provides several recommendations for actions that jurisdictions, HOAs, and landowners could undertake to improve wildfire response in addition to those described in the 2020 CWPP for Santa Fe County. Table 6 summarizes actions for Cohesive Strategy Goal 3 aimed at improving wildfire response capacity during a wildfire event.

Table 7. Priority Actions for Cohesive Strategy Goal 3: Wildfire Response

Action	Priority	Responsible Entities
Community Capacity Building		
Promote campaign for Smart911	High	SFC FD, Homeowners, ECIA, HOAs
Initiate large scale evacuation training	High	SFC FD, Homeowners, ECIA, HOAs
Conduct annual drills in each neighborhood	High	SFC FD, Homeowners, ECIA, HOAs
County Emergency and PNM power outage alerts	High	SFC, PNM, ECIA, HOAs
Individuals with health concerns report to PNM	High	SFC, PNM, ECIA, HOAs
Create check in system for residents	High	ECIA, HOAs

Action	Priority	Responsible Entities
Create evacuation plans for all neighborhoods	High	ECIA, HOAs
Consider developing alternate evacuation roads	High	ECIA, HOAs
Hire consultant for evacuation planning	High	ECIA, HOAs
Verify proper rural addressing	High	ECIA, HOAs, SFC FD; SFC GIS
Address display outreach and education	High	ECIA, HOAs, SFC FD; SFC GIS
Educate residents about emergency alert notification systems	High	SFC FD
Social media alert	High	SFC FD
Create logistics training and establish communication procedures and roles between entities	Low	SFC FD, NMFD, NM DOT, New Mexico State Land Office (NMSLO), Bureau of Land Management (BLM), ECIA, HOAs
Organize and formalize groups that take care of pets, elderly, and other high-needs people	Low	ECIA, HOAs
Survey residents about smoke preparedness and needs	Low	ECIA, HOAs
Coordinate for smoke PPE	Low	ECIA, HOAs, The Guild, SFC FD
Expand and conduct outreach for the Guild HEPA Filter Loan Program	Low	ECIA, HOAs, The Guild, SFC FD
Improve access for emergency vehicles, especially in Greenbelt areas	Low	ECIA, SFC FD
Fire Suppression Capacity and Resources		

Action	Priority	Responsible Entities
Expand the fire preparedness workforce dedicated to prevention, and preparedness and recovery-designated staff or limited emergency response responsibilities	High	SFC FD
Improve recruitment and retention of volunteers	High	SFC FD
Maintain Insurance Services Office high rating		SFC FD
Collaborate on research for fire hydrants sufficiency, placement, and possible improvements	High	SFC FD, HOAs, EAWSD
Identify other water sources	High	HOAs, SFC FD, EAWSD
Timely replacement of aging equipment	Low	Fire Districts, SFC FD
Rehearse scenarios in green belt and preserve, wildfire training	Low	Fire Districts, SFC FD
Build fire station on the other side of HWY 14	Low	SFC FD

Community Capacity Building

The CWPP Core Team recommended several capacity building needs in support of Cohesive Strategy Goal 3, including training activities, communications, community organizing, homeowner education, and smoke preparedness. Community capacity regarding evacuation will need to be improved and residents and CT members suggested that there is a high priority need for funding and other support to initiate large-scale evacuation planning and training in the community.

Many residents have cited concerns around bottlenecking (or the congestion of traffic due to space), blockage of U.S. Highway 285, lack of alternative routes, and general chaos during evacuations. Ecotone highly suggests that a consultant is hired by HOAs collectively or individually to create the evacuation plan and communicate with Santa Fe County's office of Emergency Management. Developing annual drills with clear traffic protocols is advisable to ease anxieties and create practice scenarios.

The community can take certain actions for mutual assistance through the organization of formal groups that take care of pets, elderly, and other high-needs individuals in the community. While an evacuation plan for the stables area in Eldorado has been developed, testing and updating this plan over time is important for effective evacuation implementation (See Appendix E for more information or visit https://eldoradosf.org/wp-content/uploads/2024/08/Final-Fire-Doc-8-2024.pdf).

Community members have expressed a need to be better informed about the nature and process of existing emergency notification systems. Communications systems for alerts and evacuations for the area should be improved. One example of communication from the residents to emergency workers is the Smart911 campaign, a free service that allows individuals to create a safety profile for their home. When 9-1-1 is dialed, the safety profile associated with the caller (number of rooms, number of residents, allergies, etc.) is automatically displayed to the 9-1-1 call taker. In addition, an update toward improvement of the area's rural addressing system is recommended to clearly inform emergency crews of location, Santa Fe County E-911 Addressing Section is the current system, and residents are encouraged to utilize it. Other communication technology improvements include an updated emergency alert system and a protocol for mutual check-in among residents of individual HOAs and neighborhoods. Additionally, community members can develop local emergency alert systems in their streets, neighborhoods, and HOAs and coordinate these with county-wide emergency alert systems. The development of and education about such systems is included as a high priority in the priority action list. Although of lower priority, there also is a need to create logistics training and establish communications protocols and roles between public and private entities involved in a fire response.

While access into the Greenbelt areas of Eldorado at Santa Fe is not a problem for emergency vehicles, at some locations access opportunities could be improved. Improvements need to be identified in collaboration between the EFR and ECIA. HOAs and residents are advised to also prepare themselves for smoke by conducting surveys on smoke sensitivities in the community and identifying the need for smoke PPE.

Fire Suppression Capacity and Resources

Santa Fe County Fire Department and local fire fighting volunteers expressed a need for enhanced recruitment and retention of fire and rescue volunteers. In addition, the local Fire Districts identified that it is of a high priority to inventory what additional water sources exist in the area, leading to the identification of locations where additional fire hydrants are needed.

The local fire and rescue districts have adequate fire suppression equipment. However, it will be important to replace aging suppression equipment in a timely manner. Local Fire and Rescue Districts may benefit from ongoing training in relation to fire scenarios in specific locations, such as the Greenbelts and the Eldorado Community Preserve. Over time the Santa Fe County Fire Department would benefit from another fire station along Highway 14 that could service the west side of the greater Eldorado area once an east-west road connection is established.

Post-Fire Response and Rehabilitation

Until a few years ago, federal, state, and local post-fire responses were often overlooked during the wildfire planning process. However, it has now been widely recognized that the need for community safety continues after a wildfire has occurred and even after it has been controlled because there are many potential natural hazards remaining. Recent post-fire experiences in neighboring counties, such as San Miguel and Mora Counties, have highlighted the importance of addressing post-fire response and recovery in a CWPP (https://storymaps.arcgis.com/stories/f34410ac767d4b2cab0ca64fb2c5cd5b and https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/new-mexico/nrcs-new-mexicos-hermits-peakcalf-canyon).

Post-fire response addresses the rehabilitation of the natural environment; recovery of infrastructure; emergency housing and social services; long-term recovery and reconstruction of housing, services, and businesses; reestablishment and enhancement of human services programs; establishment of financial claims programs; financing or recovery activities; and last, but not least, anticipation of and protection against new post-fire risks. The 2020 Santa Fe County CWPP addresses many of these emergency response activities. However, for the greater Eldorado area, some more attention is needed regarding several specific post-fire risks.

Post-Fire Risks

After a wildfire, environmental risks continue to exist, and their severity may equal those of the fire event. Typical post-fire calamities are caused when even light to moderate rainstorms generate unprecedented stormwater runoff volumes resulting from the loss of vegetation and organic soil cover during a wildfire.

In severely burned areas, the soil may become hydrophobic, which makes it unable to absorb water. Even a small rain event can cause flash floods from burned areas with sealed soils. Severe runoff events in burned areas often result in widespread downstream floods carrying debris, sediment, and ash. These floods often lead to the clogging of culverts and damage to homes, businesses, roadways, and critical water and power infrastructure in and along the drainage channels and in downstream communities.

The greater Eldorado area has a high road density and includes hundreds of road culverts. When culverts get blocked by sediment and woody debris, the likelihood of flooding upstream from any blocked culverts is very high, leading to unanticipated flooding of developed areas beyond the identified flood zone. Additionally, blocked culverts increase the risk that road grades are overtopped or saturated by flood waters which can cause severe erosion and landslides (aka mass wasting).

While these kinds of risks are mentioned in general in the 2020 Santa Fe County CWPP, they constitute particularly serious risks for the greater Eldorado area and require special attention. The greater Eldorado area includes several broad arroyos that flow from the southern parts of the Sangre de Cristo Mountains or the hills in the eastern part of the CWPP area toward the west and southwest across the residential areas. Several arroyos are designated Federal Emergency Management Agency (FEMA) Zone-A drainage areas (Figure 27). FEMA flood Zone-A is a significant flood hazard area. FEMA states that “flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA).

SFHA are defined as the area that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year" (FEMA 2025-a) In a 2023 definition FEMA defines Zone-A as "areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones" (FEMA 2025-b).

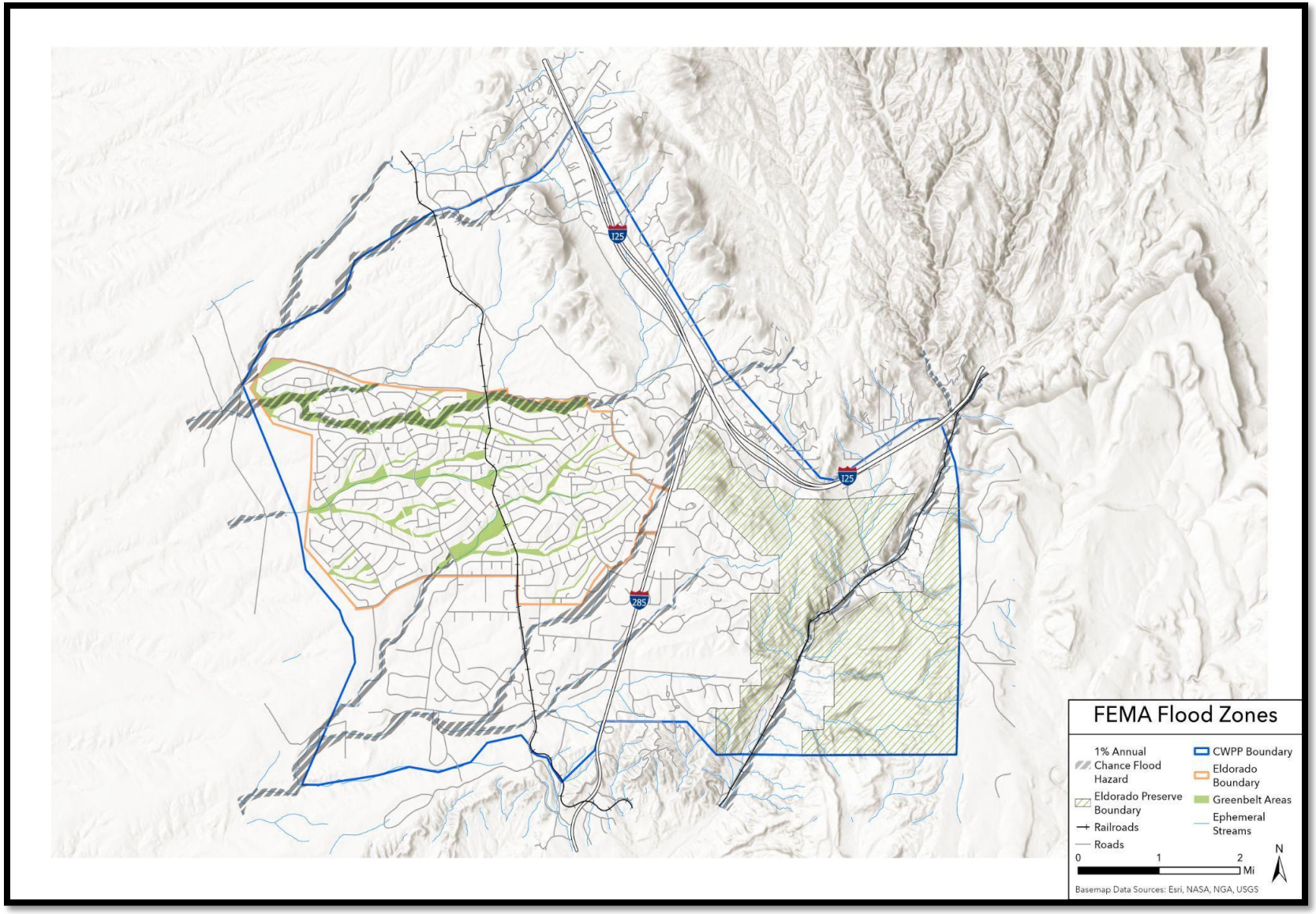

Figure 27. Map of FEMA flood zones in the greater Eldorado area.

In past years, periodic flash floods across the arroyo systems in the greater Eldorado area have caused large-scale gully erosion at the outflow points of culverts, in the corners of bridge abutments, and in bar ditches along roads (Figure 28). Several GIS-based flood risk assessments indicate the high likelihood and extent of flooding during either winter or summer months. To anticipate future potential erosion in relation to post-fire flooding, also post-fire erosion likelihood was mapped for the CWPP planning area, based on slope steepness and the soil erodibility factors for different soil types (Figure 29). The likelihood of flash floods and inundation of low-lying areas, such as those in the northern and western part of Eldorado at Santa Fe and in the Spur Ranch Road area, increases greatly after wildfire to the north and east of the CWPP area. Flash floods and inundation may severely damage structures and in combination with landslides wash entire structures away. Mass wasting beneath roads and pipelines may cause highly dangerous conditions for road users and residents. In this way, post-fire events may affect communities that are outside the direct wildfire footprint but are inside the watershed where the fire took place.

Figure 28. Image of severe gully erosion in one of the Greenbelt arroyos of Eldorado at Santa Fe in 2021 (Photo Taken by: Thomas Bredenberg).

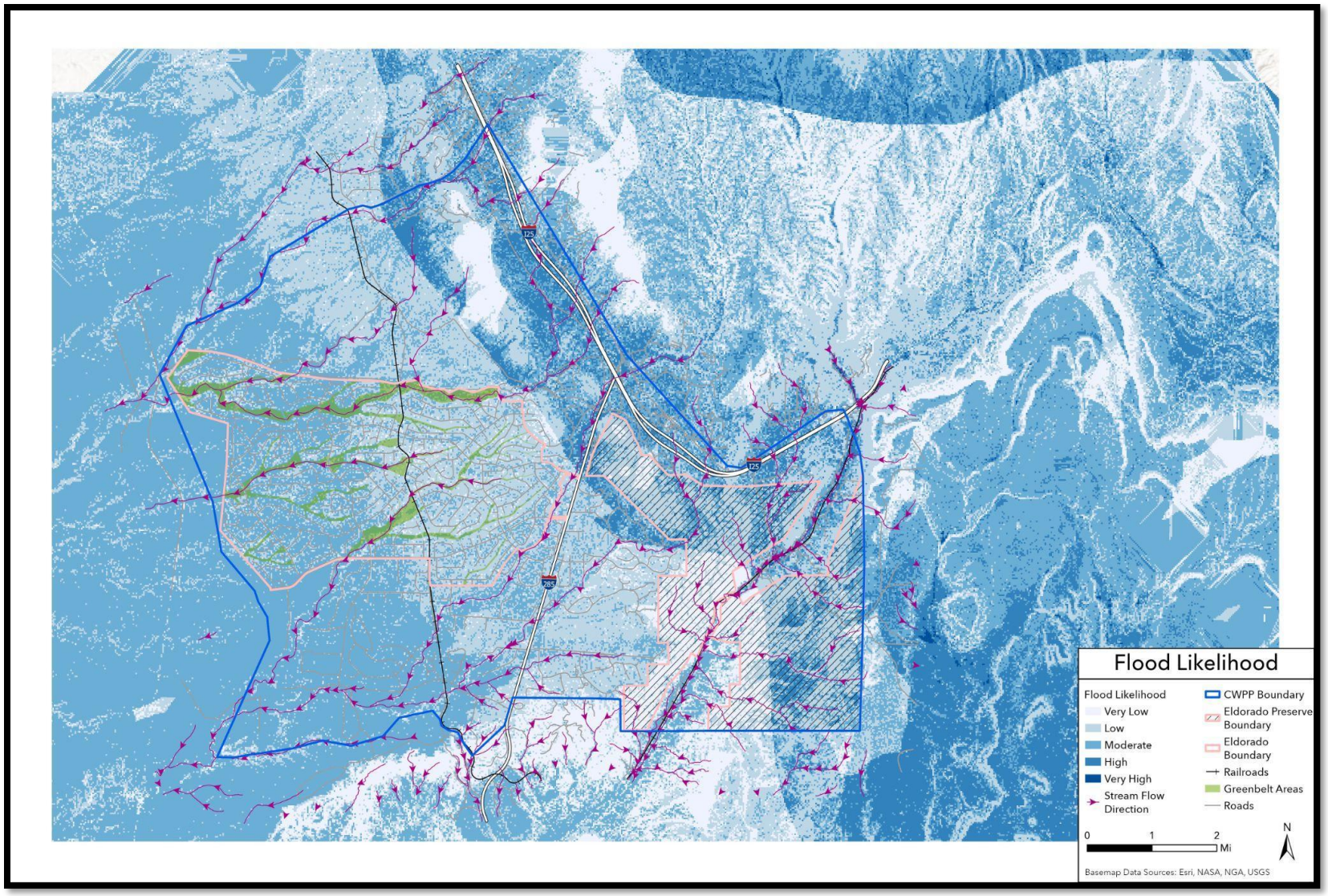

Figure 29. Map of flood likelihood in the greater Eldorado area.

In terrain with slopes of 15% and greater, and especially on slopes of more than 30% in the eastern and northern parts of the CWPP planning area, stormwater runoff in post-fire conditions is expected to carry down large amounts of rock material, soil, and woody debris (Figure 30). This material will most likely accumulate at the toe of the slopes and in arroyos where the post-fire erosion likelihood is lower but where sediment and debris accumulation are likely to be very high. Farther west in the planning area, the fine textured soil on low ridgelines and slopes is also highly susceptible to being carried off with stormwater runoff or to be blown away by wind.

When post-fire erosion likelihood and its intensity are paired with highly valued community resources and assets, the post-fire erosion risk to infrastructure can be determined and mapped (Figure 31). The Post-Fire Erosion Risks to Infrastructure map indicates where valued community assets, such as water tanks, wells, churches, and utility infrastructure, intersect with areas with a risk of post-fire erosion. Sites with erosion and encroaching vegetation have an increased likelihood of flow stagnation around culverts and underpasses that may cause flooding and associated erosion when water overtops road grades. The map also indicates places where culvert damage has been documented and where existing erosion features exist that may exacerbate erosion conditions after major flow events. The map indicates that U.S. Highway 285 and the northwestern quadrant of Eldorado at Santa Fe have the largest number of sites vulnerable to flooding and erosion.

Again, these safety concerns are heightened by the circumstance that U.S. Highway 285 is the only evacuation route out of the greater Eldorado area. Furthermore, the northwestern quadrant of Eldorado at Santa Fe is dissected by several Zone-A channel systems, is rated as having a moderate flood likelihood, and, at 5 to 6 miles from U.S. Highway 285, is somewhat isolated.

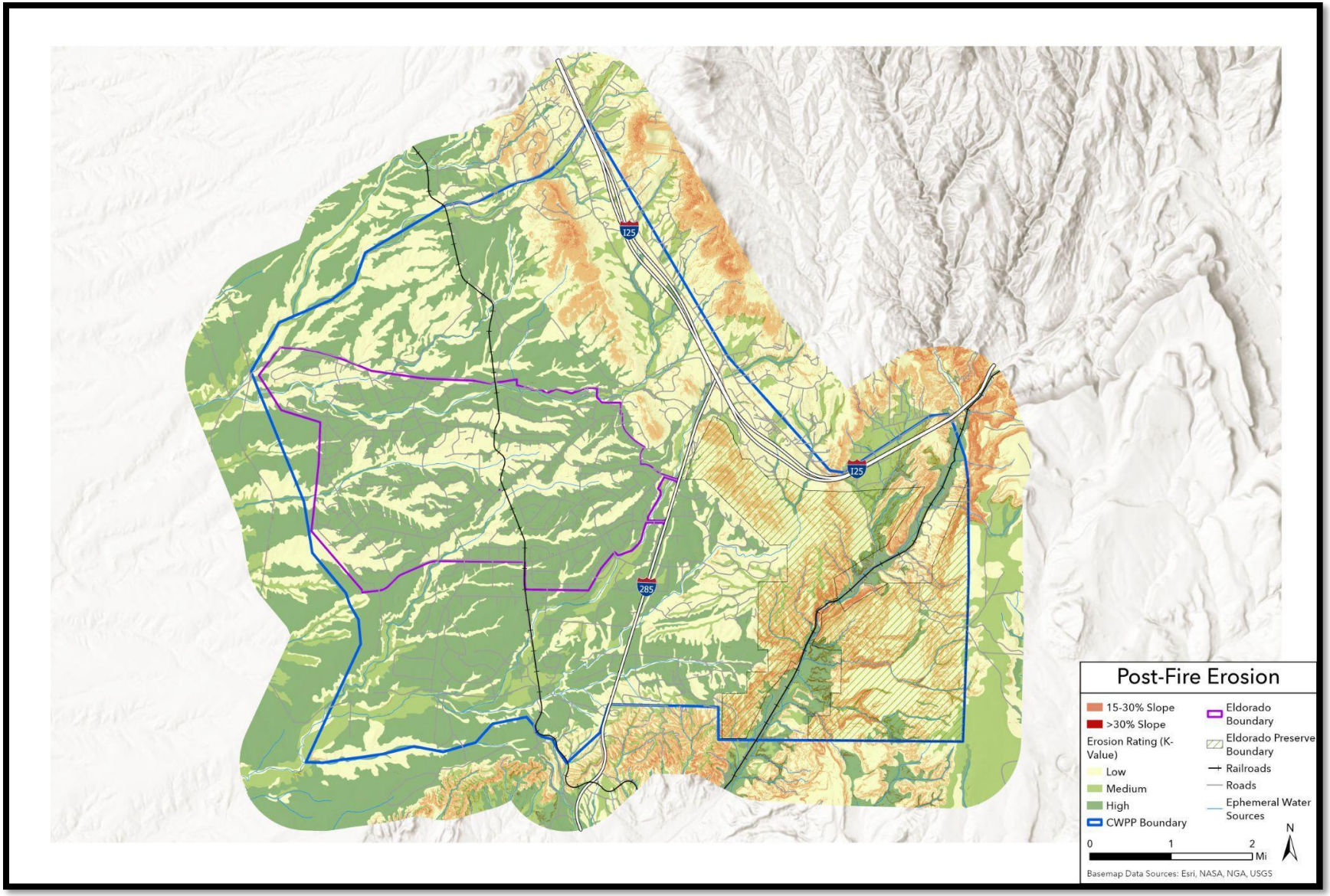

Figure 30. Map of post-fire erosion likelihood based on slope steepness and soil erodibility ratings in the greater Eldorado area.

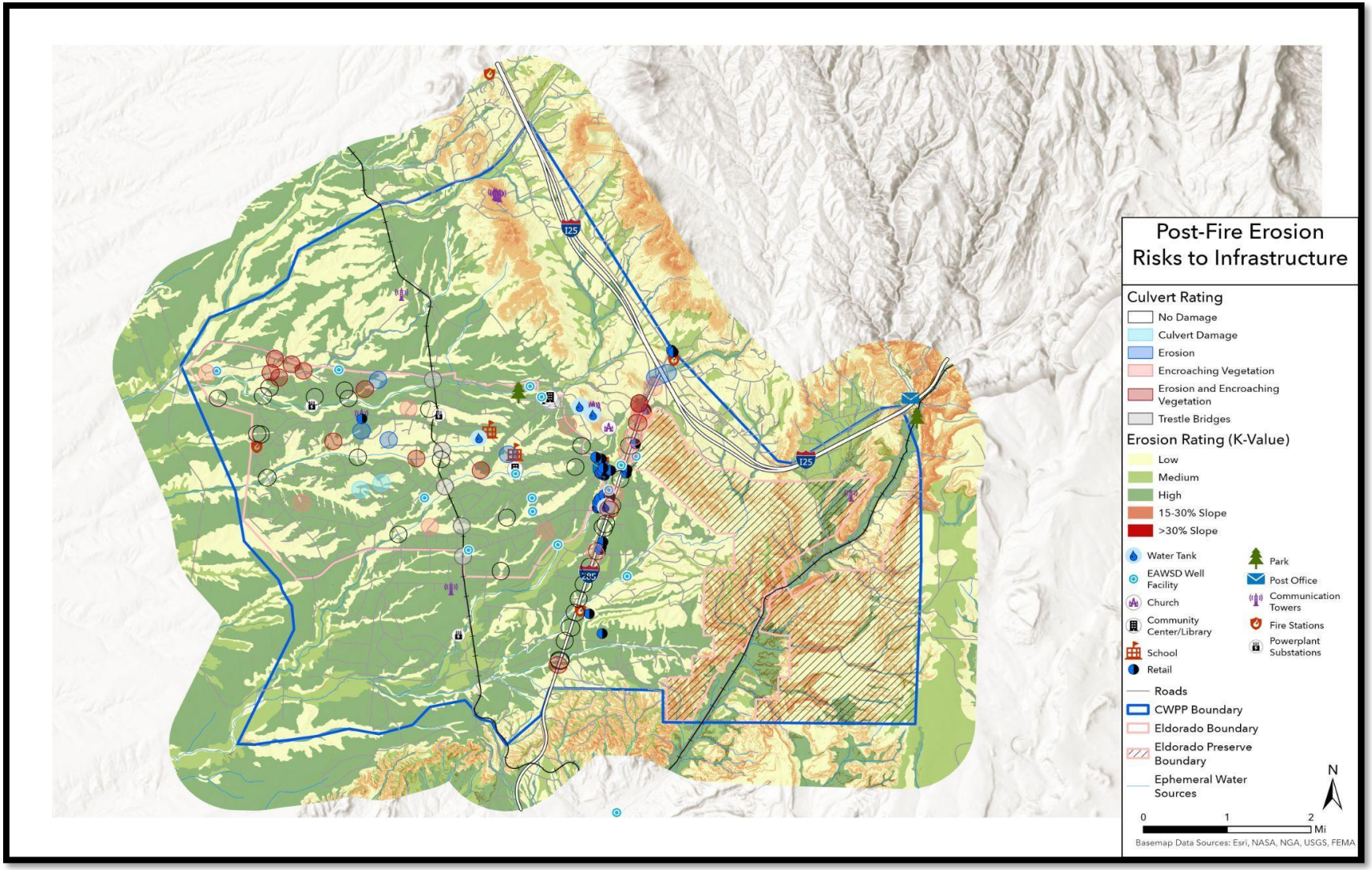

Figure 31. Map of post-fire erosion risks to infrastructure in the greater Eldorado area.

Post-Fire Recovery

The 2020 Santa Fe County CWPP lists several facets of post-fire recovery, such as the need to:

- Ensure public health and safety, including prompt removal of downed and hazard trees, addressing watershed damage, and mitigating potential flooding.
- Rebuild communities and assess economic needs: securing the financial resources necessary for communities to rebuild homes, business, and infrastructure.
- Restore the damaged landscape: watershed restoration, soil stabilization, and tree planting.
- Reduce fire risk in the future: identifying hazard areas and implementing mitigation.

The 2020 Santa Fe County CWPP notes:

> Recovery of the vegetated landscape is often more straightforward than recovery of the human environment. Assessments of the burned landscape are often well-coordinated using interagency crews who are mobilized immediately after a fire to assess the post-fire environment and make recommendations for rehabilitation efforts.
>
> For the community impacted by fire, however, there is often very little planning at the local level to guide their return after the fire. Residents impacted by the fire need assistance making insurance claims; finding temporary accommodation for themselves, pets, and livestock; rebuilding or repairing damaged property; removing debris and burned trees; stabilizing the land for construction; mitigating potential flood damage; repairing infrastructure; reconnecting to utilities; and mitigating impacts to health. Oftentimes, physical impacts can be mitigated over time, but emotional impacts of the loss and change to surroundings are long-lasting and require support and compassion from the community. (Santa Fe County 2020; p 72)

The 2020 Santa Fe County CWPP provides several useful recommendations for post-fire measures. These guidelines apply to residents in the greater Eldorado area as well and don't need repetition or specification in this CWPP. The 2020 Santa Fe County CWPP provides recommendations on returning home after a fire and the importance of following advice and recommendations from emergency management services and other officials. The 2020 Santa Fe County CWPP also provides recommendations about:

- Insurance claims (check with authorities for the latest information, because claim guidelines and procedures are subject to change after each fire or flood incident).
- Coordination of community volunteers for recovery work.
- Communication strategies for a community affected by post-fire conditions.
- Post-fire land rehabilitation, including appropriate soil stabilization and water management techniques, road and trail treatments, tree and timber salvage, invasive plant species management, and native plan regeneration.
- Long-term social and economic community recovery.

The Core Team of the 2025 Greater Eldorado Area CWPP identified several recommended actions for the planning area. Table 7 summarizes these recommended actions for Post-Fire Recovery aimed at improving post-wildfire response and rehabilitation.

Table 8. Priority Actions for Post-Fire Recovery

Action	Priority	Responsible Entities
Post-Fire Response & Recovery Preparations		
Play out "what if" scenario	High	NRCS, ECIA, HOAs
Flood modeling		ECIA, All Points GIS
Erosion points mapped		ECIA, All Points GIS
Create educational material	Low	SFC FD
Create post-fire emergency action plan	Low	SFC FD
Contacts for wattles, sandbags		
Research and distribute preparedness information	Low	HOAs, ECIA, Contractor
Inventory and map flood risk after fire	Low	HOAs, ECIA, Contractor
Inform neighborhoods at risk		
Miscellaneous		
Establish native forbs and grasses (pre- and post-fire)	Low	HOAs, ECIA, Contractor

Post-fire recovery priority actions in the greater Eldorado area will primarily need to focus on education and planning among community members and their HOAs. While general awareness of the area's wildfire risk appears to vary among residents, awareness of post-fire risk and recommended response actions are expected to be rather low across the entire community. Therefore, raising awareness by distributing educational materials and creating what-if scenarios based on flood modeling and identifying locations of potentially severe erosion may help increase residents' preparedness for post-fire calamities.

The CWPP Core Team recommended that as part of the what-if scenarios it is a high priority to continue the flood modeling initiated by ECIA, in combination with NRCS flood models, and to continue inventorying locations that cause flood and erosion risks in non-fire conditions as well as in post-fire conditions. Additionally, identification of present erosion would help predict future effects as part of the what-if scenarios. Eventually, these actions may help HOAs, in collaboration with the Santa Fe County Fire Department, develop a post-fire emergency plan for the area.

Post-fire emergency planning may include further public education with a focus on neighborhoods at a particular risk of flooding or erosion. Such planning may also include the identification or preparation of supplies for properties threatened by flooding (sandbags, stone supplies, and wattles) or supplies for the restoration of impacted areas (rock supplies, seedlings, and seeds). For purposes of ongoing ecological resilience and pre- and post-fire soil health in the greater Eldorado area, residents have recommended that HOAs, residents, and contractors increase the establishment of native plants through seeding grasses and forbs.

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APPENDIX A: List of Project Management Team, Core Team, and Key Interviewees

The Project Management Team, Core Team, key interviewees, and stakeholders all made significant contributions to this CWPP and the process of composing it. Table 8, 9, and 10 are the individuals, their title, and affiliation.

Table 9. Project Management Team Members

Name	Title	Affiliation
Amelia Adair	Board President	ECIA
Jonathan Turkle	Vice President	ECIA
Mike Rogers	Consultant	ECIA
Champe Green	Supervisor	SF-P SWCD
Allison Bale	General Manager	HOAMCO
Deb Grieco	President	AllPoints GIS
Mike Grieco	SR Analyst, Geologist	AllPoints GIS
Julia Young	Analyst	AllPoints GIS
Jan-Willem Jansens	Owner, Principal	ELP
Adrienne Rosenberg	Senior Ecological Planner	ELP

Table 10. Core Team Members

Name	Title	Affiliation
Amelia Adair	Board President	ECIA
Ken Adkins	Resident, Emergency Management Communication at LANL	La Paz
Reggie Antonio*	Prevention Officer, Farmington-Taos	BLM
Allison Bale	General Manager	HOAMCO
Thom Bredenberg	Member	ECIA, Conservation Committee
Lawrence Crane*	Bernalillo District Forester	NMFD, Bernalillo District
Captain Mike Feulner*	Wildland Captain	SFC FD, Wildland Division
Remington Gillum	WUI Specialist	SFC FD, Wildland Division
Champe Green	Supervisor	SF-P SWCD

Name	Title	Affiliation
Deb Grieco	President	AllPoints
Mike Grieco	SR Analyst, Geologist	AllPoints
Ted O. Harrison	President	Commonweal Conservancy
Elizabeth Hellstern	Representative	Ranchos de Santa Fe
Maya Hilty*	Fireshed Project Coordinator	Forest Stewards Guild
Jan-Willem Jansens	Owner, Principal	ELP
Jacob R. Key*	FireShed Coordinator, Acting Forest Environmental Coordinator	USFS
Mark Meyers*	Forester	NMSLO
Sarah Noss	Executive Director	Santa Fe Conservation Trust
Kevin Pacheco	Bernalillo District Fire Management Officer	NMFD, Bernalillo District
Nort Phillips	Fire Fighter	EFR
David Rasch	Member	ECIA, Conservation Committee
Rian Ream*	Fire Management Specialist- Fuels	USFS
Mike Rogers	Consultant	ECIA
Adrienne Rosenberg	Senior Ecological Planner	ELP
Michael Schlumpberger	Representative	Tierra Colonias
Zack Stalberg	Representative	East Ranch
Teresa Seamster	Representative	Los Vaqueros
Todd Smythe	Staff	NM DOT
Jonathan Turkle	Vice President	ECIA
Julia Young	Analyst	AllPoints
Al Webster	Representative	East of Rancho San Lucs

Note: A star next to a name indicates Core Team members who participated in an in-depth interview.

Table 11. Additional In-depth Interviewees

Name	Title	Affiliation
Andrew Alderete	Integrated Vegetation Management	NM DOT
Jordan Jarrett	Trails Resources Specialist	NPS
Alyssa Mineau	Former Fireshed Project Coordinator	Forest Stewards Guild

Responsibilities of Stakeholders and Jurisdictions

Many of the entities described above have a role in the recommended fire preparedness action implementation, especially in association with landownership and legal mandates. Given the large proportion of private ownership in the greater Eldorado CWPP area, a large portion of responsibility for plan implementation rests on private landowners and homeowners. Yet, they are not alone in this work. Various public agencies and private institutions and businesses are available to provide assistance. Such assistance can be on an individual basis or take the shape of larger, collective action in which residents can voluntarily choose to participate.

Public and institutional landowners and stakeholders include federal and state governments, Santa Fe County, PNM, SF-P SWCD, businesses, NGOs, and the boards of individual HOAs. Where such agencies and institutions have a fiduciary management responsibility, they are the principal entity to take action in their area of jurisdiction. However, they may also be able to provide assistance in other areas when asked. Table 11 provides a simple overview of the most important stakeholders and their jurisdictional authority and responsibilities. Ongoing initiatives of several of these key stakeholders is described in Appendix C.

Table 12. CWPP Stakeholders and Their Jurisdictions, Authorities, and Responsibilities.

Stakeholder	**Jurisdiction**	**Authority and Responsibility**
Private landowner/ homeowner	Individual private property	Decisions on private land
ECIA	Community areas (Greenbelts, Eldorado Community Preserve, parks, recreation areas) and limited architectural covenant enforcement	Management and covenant enforcement on lands under its care and associated HOA members
Eldorado Area Water and Sanitation District (EAWSD)	Well areas	Activities related to water supply management and water distribution
Other HOAs	Dependent on HOA covenants	Dependent on HOA covenants
Santa Fe County	County roads and county land	Management and code enforcement on lands under its care; emergency management actions
NM Forestry Division	None	Assistance to private landowners for vegetation and fire management; leadership in regional forest and fire management coordination on non-federal land
NM DOT	Federal and state highway right of ways and Santa Fe Southern railway	Management and code enforcement on lands under its

Stakeholder	Jurisdiction	Authority and Responsibility
	corridor	care
NM State Land Office	State trust lands	Management and code enforcement on lands under its care
National Park Service	Glorieta Battlefield National Monument	Management and code enforcement on lands under NPS management zones
US Forest Service	National forest land (all outside CWPP area)	Management and code enforcement on lands under its care; assistance with regional fire management coordination
Santa Fe-Pojoaque Soil & Water Conservation District	None	Assistance to non-federal entities for soil and water resource conservation and land productivity improvement
Sky Railway	None	Maintenance and operation of the Santa Fe Southern railway easement
PNM	Powerline easements	Management of its utility easements
Forest Stewards Guild	None	Assistance to landowners, communities and multi-jurisdictional partnerships regarding forest stewardship; coordination of creating fire adapted communities; leadership role in the Greater Santa Fe Fireshed Coalition
New Mexico Gas Company	Gas line easement on west side of Eldorado	Management of its utility easements

APPENDIX B: Alignment with State and Local Plans

2023-2028 Santa Fe County Hazard Mitigation Plan

As stated in the 2020 Santa Fe County CWPP for Santa Fe County, the 2023-2028 Santa Fe County Hazard Mitigation Plan (HMP) lists wildfire as "the top priority hazard" (Santa Fe County 2018). The greater Eldorado area is vulnerable due to factors such as rapid development near forested areas, high fuel loads, and prolonged drought, which is described as severe to extreme. Hazard is defined as "a highly likely hazard, with extensive spatial extent, with a critical magnitude/severity and high overall significance" (Santa Fe County 2018). In alignment with the 2020 Santa Fe County CWPP, this community-level CWPP dovetails with the HMP wildfire section, as it incorporates similar wildfire hazard mitigations identified in that plan. The HMP supports emergency management including the safe and effective evacuation of people and animals in the event of a wildfire or other emergencies.

2023 Update of the Wetlands Action Plan for Santa Fe County

The Wetlands Action Plan (WAP) for Santa Fe County, Update 2023 (Jansens and Rosenberg 2023) focuses on landscape-scale restoration and stewardship of wetlands across Santa Fe County. The WAP warns of the degrading effects wildfire and subsequent flash flooding can have on wetland functions. The WAP recommends the reestablishment, where possible, of natural fire regimes in forests, woodlands, and rangelands for the prevention of catastrophic wildfire. It advocates natural fire regimes for optimal soil stabilization, ecological resilience, and stormwater infiltration across the landscape. These conditions provide a healthy landscape context for wetlands. In turn, wetlands retain moisture in the landscape, which typically lowers ignition opportunities and reduces fire intensity.

The 2023 WAP describes the importance of wetlands in relation to groundwater sources, which in turn play a role in water supplies for residential uses and fire fighting. The WAP mentions the wetlands in the Cañoncito Arroyo in the Eldorado Community Preserve and provides examples of successful wetland restoration strategies in those wetlands.

In summary, wetland restoration and stewardship have beneficial side effects for wildfire preparedness and prevention. Implementation of recommendations stated in the WAP will support landscape-scale ecological conditions that help reduce fire risk and protect important water supplies for fire fighting activities.

2020 New Mexico Forest Action Plan

The 2020 New Mexico Forest Action Plan (NMFAP), by the New Mexico Energy, Minerals and Natural Resources Department Forestry Division, provides an assessment of the current conditions of New Mexico's natural resources and sets forth all-lands strategies that address key issues in forest and watershed management in a changing climate. Citing the NMFAP, it provides (a) "a vision and next steps for collaboration between agencies and organizations and is not just intended to guide the actions of the Forestry Division alone" and (b) "strategies and priorities to implement the Agreement for Shared

Stewardship signed by New Mexico Governor Michelle Lujan Grisham and USDA Forest Service Chief Vicki Christiansen on November 14, 2019 (EMNRD 2020)" To that effect the NMFAP includes 10 strategies, of which fire management is explicit. The stated goal of fire management is to restore the ecological role of fire to foster resilient landscapes and watershed health; sustain wildfire response on state and private lands; support regional, state, and national wildfire response in all jurisdictions; and foster collaboration of post-fire response after high severity wildfire.

The NMFAP recognizes the importance of local land planning, such as CWPPs, when developed through a critical planning process at the county or local community level. CWPPs both inform and are informed by the NMFAP. NMFAP promotes the role of CWPPs in providing local leadership and building collaborative partnerships through core teams that reduce the vulnerability of at-risk communities to catastrophic wildfire events.

The NMFAP does not make any direct reference to the greater Eldorado area, but it references forest and fire management functions of the Santa Fe National Forest, Santa Fe County, and the Greater Santa Fe Fireshed Coalition. It also mentions the old Santa Fe Trail, which runs on the northern perimeter of the CWPP planning area, as an example of cultural resources that are in play in the context of forest and fire management.

APPENDIX C: Ongoing Initiatives

Several entities have been creating or participating in ongoing initiatives that contribute to community preparedness.

ECIA and HOAMCO

The greater Eldorado area has several ongoing initiatives for fire prevention and preparation, and ECIA has been proactive with engaging its members. Since 2019, ECIA's Conservation Committee (ECIA CC) has focused on educating residents about invasive, non-native weeds, which can spread wildfires. Since 2021, ECIA has provided a roll-off dumpster at the ECIA Community Center where residents can drop off weeds free of charge. ECIA has also promoted "weed round-ups" in which residents are encouraged to bring weeds to two central locations on specific dates, after which they are transported to the roll-off dumpster at the Community Center.

In 2023, ECIA's Eldorado Volunteer Committee began holding quarterly new resident welcome events, which include education about native and non-native weeds. In a 2023 Town Hall meeting, the Santa Fe County Fire Marshall spoke about fire preparedness in Eldorado. In 2024, the ECIA Board approved applying to the Wildfire Risk Reduction Grant Program to create a plan for the greater Eldorado area. ECIA hired Ecotone Landscape Planning, LLC, in collaboration with Santa Fe-Pojoaque Soil and Water Conservation District, to write and submit the grant.

Other HOAs and Communities

At Los Vaqueros HOA, the community has an ongoing roadside dead tree removal program activity. Fire guidelines for Los Vaqueros HOA are within the home buffer protection zones with additional road and roadside maintenance, such as mowing, to ensure proper road crowning and drainage of stormwater runoff into the bar ditches.

Santa Fe County Fire Department and the El Dorado Fire Rescue Service

The Santa Fe County Fire Department has a Santa Fe County Defensible Space Certification program, which recognizes when private landowners meet the International Wildland-Urban Interface Code. Property owners can request a certification letter from the SFC Fire Department attesting that they have maintained their property's "defensible space" in accordance with the SFC Fire Code. Property owners can also request a site inspection by fire officials in preparation for obtaining the certification. SFC's 2023 Regulations Governing Issuance of Certification Regarding Compliance with Defensible Space Requirements of the Santa Fe County Fire Code states that "Section 202 of the IWUIC defines defensible space as an area either natural or manmade, where material capable of allowing a fire to spread unchecked has been treated, cleared or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur."

El Dorado Fire Rescue Service is a volunteer fire department with approximately 25 members. The department currently maintains 12 apparatus including:

- Four structural engines (one in reserve) with capacity to carry up to 1,500 gallons of water and pump up to 1,750 gallons of water per minute.
- Two wildland engines used for fighting wildland fires: one Type 3 and one Type 6.
- Two water tenders with a capacity to carry up to 1,500 gallons of water. These vehicles are used for fires in areas without hydrants.
- One ambulance capable of providing up to advanced life support.
- A heavy rescue vehicle carrying a wide variety of rescue and extrication equipment.
- A tower ladder, which is a 70′ aerial platform capable of pumping 2,000 gallons of water per minute.

EFR maintains an Insurance Services Organization (ISO) rating of 3. The ISO program evaluates fire protection services throughout the United States under the general principle that a community's investment in fire mitigation is a reliable predictor of future fire losses. Many insurance companies base their premiums for fire insurance on this rating. The EFR rating of 3 is the highest ISO rating for a volunteer fire department in New Mexico.

Kiowa Tribe

The Kiowa Tribe, whose ancestral lands are within present day Santa Fe County, are in the process of developing a Wildland Firefighting Crew and have requested being added as a resource for any future grass/forest fires within the greater Eldorado area. Please contact 2025 Chairman Lawrence SpottedBird at lspottedbird@kiowatribe for more information or check NMHPD's website for the current list of leadership at https://www.nmhistoricpreservation.org/outreach/native-american-consultations.html.

Greater Santa Fe Fireshed Coalition

The Greater Santa Fe Fireshed Coalition is a collaborative alliance of public and private organizations with the goal to identify and implement high priority on-the-ground projects that make the Fireshed and its communities more resilient to wildfire while maintaining and restoring resilient landscapes. In pursuing this goal, GSFFC uses a proactive, collaborative approach and works to build support, understanding, and shared knowledge of the role of fire in an adaptive framework. This goal will be realized when fire is used as a tool for management throughout the area's fire adapted forests and when communities in and adjacent to these forests become fire adapted. In GSFFC's approach, fire adapted communities understand the role of fire and are prepared for its occurrence (GSFFC 2025).

Since 2016, GSFFC has convened a diverse group of local stakeholders at quarterly meetings to discuss restoring resilient landscapes on public, private, and tribal lands. GSFFC maintains a website with local science/information and a regularly updated events page (www.santafefireshed.org).

Since 2018, GSFFC, under the leadership of the Forest Stewards Guild and the City of Santa Fe Fire Department, has run the Fireshed Ambassador program. This is a volunteer program providing education, resources, and peer support to community leaders who engage their neighbors to become wildfire prepared.

The 2025 Greater Eldorado Area CWPP area is outside but immediately adjacent to the GSFFC's "fireshed area," separated only by the alignment of I-25 (Figure 32). Activities that increase the GSFFC area fire adaptedness will benefit the greater Eldorado CWPP area as a downstream neighbor. At the same time, implementation of the recommendations of this CWPP will benefit the GSFFC area upwind and up the slopes above the Eldorado area. Although there are no ambassadors in the greater Eldorado area, there are ambassadors nearby in Glorieta.

The 2020 New Mexico Forest Action Plan identified priority watershed areas in New Mexico for actions under the Shared Stewardship program between the NMFD and federal land management agencies (EMNRD 2020). The GSFFC and the woodlands along the Galisteo Creek, including some of those in the Eldorado Community Preserve, are mapped as part of the Shared Stewardship priority watersheds in New Mexico. Parts of the Eldorado at Santa Fe subdivision are included in the mapping of priority private lands as part of the Shared Stewardship initiative.

In relation to these Shared Stewardship priority areas, in 2022, GSFFC published a Landscape Resilience Strategy. The broad objectives of this Strategy, such as public engagement, are relevant for the greater Eldorado area, but other information in the document is not necessarily applicable.

Subsequently, in early 2024, GSFFC, through the Forest Stewards Guild, acquired a five-year Community Wildfire Defense Grant for fuel treatments in the GSFFC area and several downslope areas outside the GSFFC area that are part of the Shared Stewardship priority watersheds in New Mexico. The eastern part of the 4,000-acre Eldorado Community Preserve lies within such a downslope area of the CWDG treatment area outside the official fireshed area. The CWDG is therefore an important funding source for potential implementation of fuel treatments in the Eldorado Community Preserve and for improving landscape-scale fire adaptedness and resilience of the wider area's forest landscape. The CWDG project funds free home wildfire risk assessments and a cost-share program for private landowners to create defensible space in parts of the 2025 Greater Eldorado Area CWPP. The CWDG also funds education and outreach about wildfire prevention, preparation, mitigation, response, and recovery.

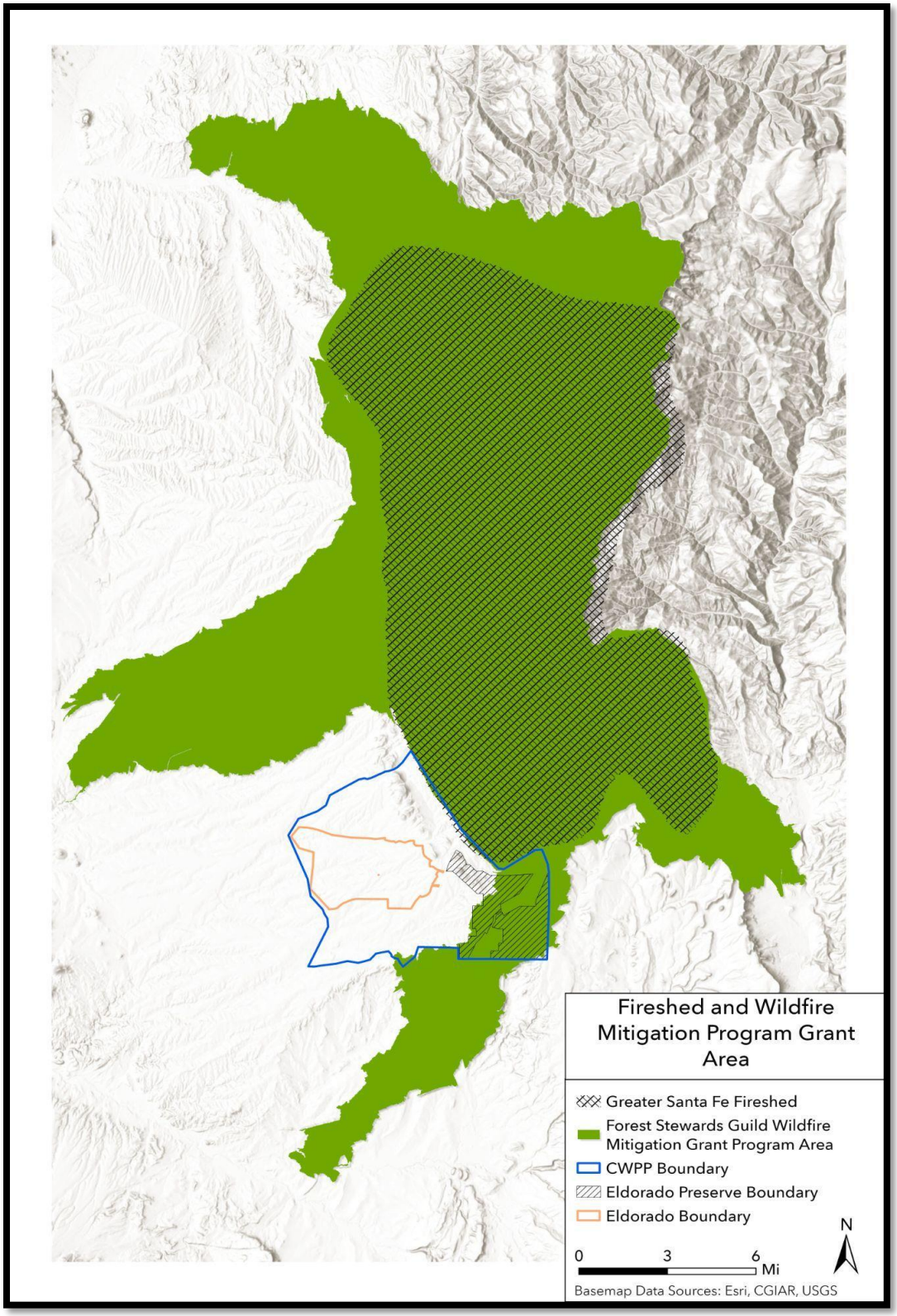


Figure 32. Map of the Greater Santa Fe Fireshed area and the program area for the Community Wildfire Defense Grant program of the Forest Stewards Guild and the City of Santa Fe.

Santa Fe-Pojoaque Soil and Water Conservation District

The greater Eldorado CWPP area lies nearly in the center of the boundaries of the SF-P SWCD. SF-P SWCD is the recipient of the New Mexico Counties Wildfire Risk Reduction grant for the development of the 2025 Greater Eldorado Area CWPP. SF-P SWCD serves as the fiscal agent for ECIA and its partners to help produce the CWPP. SF-P SWCD has also been successful at obtaining large non-federal lands grants from NM Forestry Division through USFS Region 3 for wildfire prevention and fuel load reduction.

The SF-P SWCD was a founding partner of the GSFFC in 2015. Since then, SF-P SWCD has dispersed approximately $850K in cost-share funding to private landowners within the Greater Santa Fe Fireshed and adjacent areas for wildfire defensible space treatments and fuel reduction forest thinnings. These treatments help to mitigate wildfire risks to residences and businesses in the Santa Fe wildland-urban interface. One recent grant was for approximately $250,000 for GSFFC. However, the service area of this grant does not include the greater Eldorado area.

State Initiatives

The planning area for the 2025 Greater Eldorado Area CWPP includes several areas under the jurisdiction of the State of New Mexico. These comprise state trust lands to the west of the Eldorado at Santa Fe subdivision as well as highway right of ways and the Santa Fe Southern railway easement managed by the New Mexico Department of Transportation. These infrastructure ROWs include Interstate-25, U.S. Highway 285, and the Santa Fe Southern Railway across the central parts of the planning area.

State initiatives in the greater Eldorado CWPP area have been limited. The most important actor is the New Mexico Forestry Division. The NMFD provides financial and technical support to private landowners on issues related to biomass removal and fire safety preparedness. The NMFD supported several small biomass removal projects on private lands just outside of and to the north of the CWPP area. NM DOT conducts occasional biomass removal work (mostly mowing and thinning) as part of maintenance work in the I-25 and U.S. Highway 285 ROW corridors.

Team Rubicon

Team Rubicon is a global non-profit organization of fire prevention and fire fighting volunteers with an “unwavering commitment to build resiliency for vulnerable communities across the globe” (Team Rubicon 2025). A volunteer member of the organization lives in the greater Eldorado area and has been involved in the Core Team for this CWPP. Represented in all states and territories of the United States, the organization provides disaster response and long-term recovery services nationally and internationally. Activities include training and on-the-land, hands-on activities for the prevention, suppression, and relief operations before, during, and after disasters, such as wildfire, flooding, and earthquakes. New Mexico is located in the Western Branch of the organization’s services in the United States (Team Rubicon 2025).

PNM

PNM has a regional wildfire preparedness program, which includes planning activities with community emergency personnel, expanded wildfire monitoring capabilities, active management of vegetation near powerlines, and internal PNM system improvements (PNM 2024). PNM has been informing area residents of its Public Safety Power Shutoff measures in case of wildfire emergencies. In coordination with emergency crews and first responders, PNM has the capability to de-energize lines and equipment. At times of high fire risk, PNM may also adjust settings on PNM equipment to lower the likelihood of wildfire ignitions. Such settings help detect conditions that indicate a problem and automatically de-energize lines (PNM 2024).

Through its monthly bill mailings and on its website, PNM seeks to stay in touch with energy users to enable PNM to contact users quickly during potential power outrage events. PNM has established text alert systems to customers' cell phone accounts and a call-in telephone number (888-342-5766) to help customers set up subscriptions on notifications and e-mails. More information is available at www.PNM.com/wildfire-safety.

APPENDIX D: Comparison of Fire Risk Assessment Methods

2020 Santa Fe County CWPP

https://www.santafecountynm.gov/fire/wildland

The 2020 Santa Fe County CWPP method for fire risk assessment and rating uses a composite mapping model that combines data layers for (a) crown fire activity, (b) fireline intensity, (c) flame length, (d) rate of spread, (e) fire occurrence density, (f) high values at risk, and (g) wildland-urban interface. The composite map provides a green to red color scheme to indicate a relatively low to high-risk rating without any quantitative indications.

NMWRAP - New Mexico Wildfire Risk Assessment Portal

https://edac.unm.edu/nmwrap/

https://nmwrap.org/

https://edacarc.unm.edu/arcgis/rest/services/NMWRAP/NMWRAP/MapServer

In collaboration with the Federal Emergency Management Agency under the Cooperating Technical Partners Program, Earth Data Analysis Center (EDAC) at UNM manages the New Mexico Wildfire Risk Assessment Portal. In an effort to increase wildfire awareness, NMWRAP was developed as an interactive web map that allows users to view if they are at risk for wildfires. The map also has tools for users to create maps and download data and reports.

What is referred to as a "fire risk assessment" is in fact a wildfire hazard model based on a variety of GIS data layers from federal agencies, such as USGS and NPS. The fire risk map identifies areas of potential wildfire based on estimates generated in 2016 of wildfire likelihood and intensity with the Large Fire Simulation system combined with data on spatial fuels and vegetation and point locations of fire occurrence from the Fire Protection Association (1992-2013). Map pixels with a color code are about 40 acres and indicate an aggregated risk level for an area. An interactive risk identification circle is available to identify the risk of a location on the map that is composed of multiple point locations because fire risk must be considered a landscape-level risk. The system also provides a toggle that indicates average buffered home risk ratings based on an aggregate of data for any point in the area. The interactive map website includes a vegetation layer, a WUI layer, and a watersheds at-risk layer. The data sources for NMWRAP are no longer up to date. In 2023, the USFS Rocky Mountain Research Station produced new wildfire potential data. This Wildfire Hazard Potential (WHP) model is no longer available and did not fully express fire risk based on weather conditions and indicators of landscape and community vulnerability for fire.

USDA - Wildfire Risk to Communities

https://wildfirerisk.org/explore/overview/35/35049/3500022625/

The USDA Wildfire Risk to Communities website provides comparative information on fire risk ratings between many communities in the U.S. Starting in 2020, the Wildfire Risk to Communities project draws from the 2020 version of the WHP modeling of the USFS Rocky Mountain Research Station (see above). The WHP mapping follows the methodology of the USDA Forest Service.

The legend of the USDA Wildfire Risk to Communities risk rating is a relative method for the ranking of an area's risk assessments in comparison with other listed communities. The interactive pages that provide information at a community scale express risk in a dot cloud of comparative risk with many other communities in the U.S. While Eldorado at Santa Fe ranks low to moderate in WHP modeling, which is based on local data, the USDA Wildfire Risk to Communities rating shows that in comparison with other communities in the nation Eldorado is relatively at high-risk. One possible explanation for this is the relatively high level of direct exposure of homes to the surrounding flammable vegetation combined with a relatively high presence of populations classified as vulnerable. This comparative rating system between communities across the country is not useful in the context of fire risk assessment in this CWPP.

First Street - Wildfire Models

https://firststreet.org/city/eldorado-at-santa-fe-nm/3522625_fsid/fire

The non-profit organization First Street Technology, Inc. provides a web-based information base regarding several climate-related risk factors, such as flooding, fire, wind, air quality, and heat. Information is aggregated based on a methodology description that can be accessed online. The site includes several interactive pages on which individual landowners can self-assess their property's fire factor rating. Other pages provide interactive information at a community scale, such as for Eldorado at Santa Fe. However, this CWPP does not address the level of detail for property-specific fire factors. There appears to be a strong relationship between the data presented on this site and the data of the USDA-Wildfire Risk to Communities site. It shows an expected increase in fire likelihood in the coming 30 years based on climate projections and impacts on the landscape.

APPENDIX E: Additional Information on Community Oriented Programs

Fire Adapted Communities Network

The Fire Adapted Communities in New Mexico is a statewide learning network with the mission to foster "fire adapted communities – communities that acknowledge and take responsibility for their wildfire risk, and take actions to protect residents, homes, neighborhoods, businesses, infrastructure, forests, and open spaces." FAC NM encourages and supports communities to become "fire adapted" by having informed and prepared citizens (and residents) who collaboratively plan and take action to safely coexist with wildland fire.

The risk of wildfire is shared between neighbors, communities, and jurisdictions. The reduction of that risk is best accomplished through both top-down and grassroots approaches. Top-down strategies (regulations, zoning, ordinances, etc.) provide guidelines for residents to follow that require them to take responsibility for their own safety, as well as that of their communities and neighbors. However, some rural communities in New Mexico have opposed past ordinances regarding wildfire mitigation (Weinstein 2014). In order to cultivate greater community support, the FAC NM utilizes a grassroots method focused on outreach, education, and the direct involvement of individuals residing in the WUI. By promoting and developing a Fire Adapted Community, local governments and land managers may find alternatives to ordinances and regulations or find a more receptive and educated public when proposing such measures as defensible space thinning.

Part of being fire adapted is recognizing that not all members of the community can prepare for, respond to, and recover from a wildfire in the same ways. Research and experience have shown that socially vulnerable populations may not be able to mitigate and recover from wildfire to the same extent as the less vulnerable members of the community (Lynn & Gerlitz, 2005). Residents of an older age may not have the ease of mobility to move their wood pile, clean gutters and eaves, or rake needles and debris. Households that are below the poverty threshold may not have access to funds to reduce structural ignitability by installing a new roof, or they may not be able to pay for fuels reduction treatments. Consideration to protect these groups from wildfire should be made when designing wildfire mitigation programs. For resources related to functional needs and accessibility in fire adapted communities, please see the following blogpost from the Fire Adapted New Mexico learning network: https://facnm.org/news/2022/5/11/wildfire-wednesdays-86-disability-and-wildfire

In order to successfully establish Firewise and Fire Adapted Communities, community members and leaders must acknowledge the differences in history, power, and access to land and resources in order to express the necessary respect for equal participation. Based on this knowledge, community members may then be able to establish creative and flexible opportunities for engagement that accommodates information sharing avenues that are appropriate for everyone.

The FAC NM Learning Network also provides microgrants of up to $2,000 for homeowners to engage in community wildfire risk mitigation. Funding application cycles and fund awards take place annually.

Several individuals in the greater Eldorado area have joined FAC NM as individual members. Homeowners' associations, businesses, and non-governmental organizations can also join FAC NM.

For general information or how to join FAC NM, visit Fire Adapted New Mexico at www.facnm.org or the national Fire Adapted Communities network at www.fireadaptednetwork.org.

Assessments

Many resources exist to assist people in making their homes more resistant to wildfire. An assessment of the factors that make a building vulnerable to wildfire is the best place to start. Individuals and fire departments can perform this assessment themselves with the help of a guide, or they can contact a local professional to help with the assessment. An assessment completed by a professional or the homeowner themselves will provide a plan to tackle the most hazardous issues first and then move to less hazardous issues. For more information visit https://www.santafecountynm.gov/uploads/documents/Defensible_Space_Regulations_2023.pdf

The Home Ignition Zone: Home Hardening and Defensible Space

Residents can significantly reduce their wildfire risk by taking precautions in the home ignition zone (aka defensible space) and hardening their homes to the potential for ignition. The home ignition zone is defined as the home itself and an area up to 100 feet around the home or structure. The home ignition zone takes into account both the potential of the structure to ignite and the quality of defensible space surrounding it. The home ignition zone is typically subdivided in the structural ignitability area, which includes the structures on the property, a Zone-1 which is the area of 5 feet wide around the structures, a Zone-2 which encompasses an area between 5 and 30 feet around the structures, and a Zone-3 which encompasses an area between 30 and 100 feet around the structures. A combination of home hardening and defensible space is considered the home ignition zone.

To learn more about how to prepare the home ignition zone for wildfire, visit the National Fire Protection Associations page: https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire

For a collection of resources related to home hardening and defensible space, visit: https://facnm.org/residentresources/#DefensibleSpace

Home and Structure Hardening

Addressing the materials and construction of the structure is important to reducing the risk of home ignitions. Research from the Insurance Institute for Business and Home Safety on factors that contribute to home ignitions from wildfire is an important resource that can guide residents as they consider new construction or a retrofit of current structures. This research addresses a wide variety of factors, including vents that limit ember entry and deck and siding materials that are fire resistant. The research can be accessed at https://ibhs.org/risk-research/wildfire/ as well as in this series of one-page reviews on specific materials from NFPA https://facnm.org/residentresources/#DefensibleSpace.

Defensible Space Zones

Targeting trees, shrubs, and other vegetation in the immediate vicinity of a house can also make the home more fire resistant. Firewise USA recommends three zones of defensible space that provide useful guidance for County residents:

Zone 1: Immediate Zone (0'-5' from the house or structure): the non-combustible area

This area may include outdoor plants, decks, outdoor furniture, and the outside walls and coverings (aka cladding). Science indicates that this is the most vulnerable area to embers and flames and should be most aggressively maintained for fire resistance. When prioritizing work, start with the home itself and then move to the area within 5 feet of the home.

Recommendations include:

- Clean roofs and gutters of dead leaves, debris, and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles (if applicable) to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing ⅛ metal mesh screening.
- Clean debris from exterior attic vents and install ⅛ inch metal mesh screening to reduce embers.
- Repair or replace damaged or loose window screens and any broken windows.
- Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.
- Move any flammable material away from wall exteriors (e.g., mulch, flammable plants, leaves, needles, and firewood piles) However, composted mulch and large bark and chips are less flammable. Remove anything that can burn that is stored underneath decks and porches.
- Remove tree limbs that extend into this zone. Fire-prone trees should be aggressively pruned or, ideally, removed.
- Provide adequate spacing between all plants.

Zone 2: Intermediate Zone (5' to 30' from the home or structure): the landscaping/hardscaping area

This area may include careful landscaping and must include fire breaks (non-flammable areas) that can help influence and decrease fire intensity and progression.

Recommendations include:

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways, paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation underneath trees) so a surface fire cannot reach the crowns. Prune trees up to 6 to 10 feet from the ground; for shorter trees do not exceed a third of the overall tree height (e.g., prune piñon or juniper trees to a height of at most 6 feet; when pruning fruit trees, apply bark protection to prevent sun scald).

- Limit trees and shrubs to small clusters of a few each to break up the vegetation continuity across the landscape.
- Space trees to a minimum of 18 feet between canopies (of piñon-juniper clumps or individual tall trees) with the distance increasing with the percentage of slope.
- Plan tree placement to ensure the mature canopy is no closer than ten feet to the edge of the structure.

Zone 3: Extended Zone (30’ to 100’ and in some cases out to 200’ from the home or structure): the wider landscaping area

The goal in this zone is to interrupt the fire’s path and keep flames small and on the ground. Because of other factors such as topography, the recommended distances to mitigate for radiant heat exposure range between 100 to 200 feet from the home.

Recommendations include:

- Dispose of heavy accumulations of ground litter and debris.
- Remove dead plant and tree material.
- Remove small conifers (seedlings and saplings) growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopies (adjust spacing according to site specific conditions and expert advice).
- Trees 60 to 100 feet from the home should have at least 6 feet between canopies (adjust spacing according to site specific conditions and expert advice).

Mowing

Mowing is a nuanced, subtle issue. By mowing early (February-early March), the impacts on birds and wildlife are relatively low as the migratory bird season starts in mid-March. If residents choose to mow later, they should mow in strips to leave certain bands of taller grasses and mow a fire break of 5-10 feet per strip. Mowing cheatgrass in early April eliminates the plant before it sets seed. This reduces the regeneration of this invasive weed over time, reduces fire risk associated with this grass, and stimulates native grasses that better cover the soil against erosion.

It is not recommended to mow in May-June, because it depletes cool season grasses over time; these types of grasses that are useful but rare in the landscape due to past overgrazing. If residents feel a need to mow in May-June, it’s again recommended to mow selectively in bands, and don't repeat mowing the same bands in successive years in order to maintain biodiversity in the grass cover. If the mower's stubble height is set to 4 inches, optimal fire safety height is achieved while not compromising soil cover and wind erosion risks. This height is also good for strengthening the root mass of grasses; removing more would over time weaken the grass's vigor and cover.

While mowing in mid-to-late summer is acceptable, again, for the protection of insects and wildlife, mow in strips and selectively. Mowing in the fall is less of a problem. By waiting until the blue grama grass has matured (late September-early October), mowing also spreads the seed across the landscape and

strengthens grass regeneration. Mowing (and leaving stems on the soil) is generally viewed as positive, because it brings stems into the soil (as mulch) to prevent evaporation and to stimulate soil health and grass regeneration. Mowing in late October through December will reduce erosion risks later on because of improved soil health.

In general, don't mow the same area each year over and over again; this repetition in one area will deplete the grass and the soil. Mow rotationally and selectively over multiple years. Mowing within 30 feet of the house (home ignition zone) will require that grass clippings are gathered and discarded in the spring (February through June) and only later in the year if there is a severe drought. It is acceptable to leave some stems for mulch between the remaining grasses for soil cover and to promote erosion control and evaporation reduction.

Mowing Pollinator Habitat Next to Roads

Right of ways and roadsides can provide excellent pollinator habitat. Improper timing, frequent mowing, or short height settings can eliminate habitat, kill butterfly caterpillars and other pollinator larva, and interrupt wildflower lifecycles. Accounting for strategic mowing, as explained above, plus a few tips can allow pollinators to thrive along roadsides.

Mowing road shoulders and right of ways frequently over the wildflower growing season can reduce bloom and stunt plant growth, which in turn reduces wildflowers and the diversity and abundance of pollinators. Consider reducing mowing to once a year during the pollinator dormant season–later in the fall or after first frost. Also consider varying mowing times because if the roads are consistently mowed at same time each year, some plants will be favored over others. Or better yet, mow once every few years to reduce impact on pollinators, wildflowers, and songbirds. Reducing the mowing frequency can also reduce maintenance costs.

Avoid mowing when pollinators are less active (dusk until early morning). Since insects are ectothermic, they will be slower to move out of the way and may succumb to the mower. In addition, using a flush bar will encourage pollinators and other insects to escape. Adjust mowing height to 10 inches or more. Spot mowing weeds in patches is another strategy. Be sure when planting roadsides to include native grasses and wildflowers to encourage pollinators and songbirds (Hopwood et al. 2015).

Biological Considerations: Migratory Birds and Pine Beetles

Migratory Birds

When implementing woody plant removal in the home ignition zone, wildfire protection does not have to be at the expense of birds, wildlife, and tree health. For migratory birds, there are a few things to consider when practicing treatments on the personal and larger properties. Recommendations from Dan Collins, Migratory Game Bird Biologist, US Fish and Wildlife Service-Southwest Region Migratory Bird Program include:

- Vegetation removal, especially of trees, shrubs, cholla, limbs, etc. should be done outside of the breeding season.
- Mowing or grass removal should be done outside of the breeding season if possible.

- Creation and maintenance of fire breaks is recommended outside of the breeding season with the exception of turning soil while the ground is bare.
- Breeding season for the greater Eldorado area is generally considered to be March 15-August 15, though active nests may occur before or after these dates. Be particularly aware of raptor nests during the times extending beyond this window; some nest early or have long nesting periods that may extend beyond those dates.
- Grazing during the nesting season is acceptable.
- Check for active Burrowing Owls before manipulating soil and avoid manipulating soil if burrows are present.

Pine Beetles

The removal of pine trees, including piñon pine, should ideally take place in the period between late October and early February to avoid attracting bark beetles and Ips beetles. The active swarming and infestation season for pine beetles is between January and late June, when warmer temperatures start to occur. When harvesting pine material during this active beetle season, wood material should be removed from site within 30 days. Ideally, verify that there are no active beetle outbreaks within ⅔ of a mile in the vicinity of the treatment area.

Human Sources of Ignition

On average in the U.S., human-caused wildfires account for over half of the total acres burned by wildfire in a given year. Even in the Southwest, where lightning ignites many wildfires, people are responsible for many of the largest, most severe fires. Many of the human-caused ignitions originate from abandoned campfires and downed powerlines. Others arise from vehicles, fireworks, cigarettes, cook stove sparks, and burning yard waste. Understanding the patterns of human ignitions and effectiveness of prevention strategies is therefore crucial to reducing the impact of high-severity wildfire. Since human ignitions are preventable, increasing education and awareness could be the key to reducing the number of large wildfires. In the planning and implementation of education and awareness initiatives, it is important to keep in mind:

- Prevention efforts should recognize the variation in how and where people start wildfires.
- Prevention should be tailored to mode of ignition.
- Outreach should be implemented to reach people who are likely to build campfires.

Power Lines

Electric power lines are increasingly becoming common ignition points for large wildfires in New Mexico. Three major incidents have occurred since 2011. Part of the prominence of power line ignitions can be attributed to the fact that the conditions that often lead to downed powerlines—specifically high winds—also contribute to increasing the intensity and reach of wildfires, as well as the difficulty of fire fighting (Mitchell 2009). In April 2013, the US Forest Service held a summit with western utilities in Los Angeles to discuss the issue. The New Mexico representative identified 505 miles of transmission line at risk. This number likely underestimates the risk, as smaller energy cooperatives are underrepresented.

Ongoing collaboration between the Santa Fe County Fire Department, New Mexico Forestry Division, and local utility companies is essential for reducing the risk of wildfire caused by power lines. These entities have an opportunity to work with all communities in the district to identify areas where power infrastructure poses the risk of wildfire ignition. Regular inspections of lines, poles, transformers, etc. will help reduce the likelihood of human-caused wildfires from faulty power infrastructure. Strategies for reducing ignition potential from power lines include encouraging off-the-grid solar systems and burying future or expanded power lines networks. Communities and landowners play a role in identifying power lines, poles, and transformers that are in poor condition or have excessive brush underneath and contacting utilities or other authorities.

Communication

Communication is one of the best tools for reducing the impact of wildfires. Good communication allows fire fighters to efficiently suppress wildfires, residents to evacuate if the need arises, and responders to help those in need. In order to ensure good communication during an incident, it is crucial to have lines of communication established before an incident. Emergency responders from the County, FDs, and state and federal agencies need to be sure they understand each other's communications protocols and requirements. Pre-wildfire season meetings of key individuals are a worthwhile investment to ensure seamless communication during a wildfire. These meetings also serve to build the personal connections and trust that can be especially important during an incident.

Emergency Notifications

In addition to effective communication between first responders, a way to communicate emergency information to residents and visitors is crucial, especially in the event of an evacuation. The most basic version of this effort is going door to door during an emergency, but this takes time and is usually only employed at the last moment during the early stages of an incident or during large incidents after additional staff have been brought in to handle this task. An up-to-date rural addressing system will aid in these door-to-door efforts. A coordination meeting between the different agencies that manage address data is helpful to ensure there aren't gaps in accountability across the county.

An essential communication tool that is in place in Santa Fe County to assist with wildfire and other emergency notifications is the reverse 911 system. This system will send notifications to all landline phones in a selected area. It also allows citizens to enter additional information into the emergency notification system to be notified through other devices, cell phones, a text device, email address, fax number, or work phone number. This system allows for mass notifications to be sent out in the event of any sort of emergency. It also allows for more frequent one-way communication from emergency managers, pre-evacuation notices, and any other early warnings that can be sent out in the early stages of emergencies well before evacuation notices.

If residents do evacuate in case of an emergency, they can tune into the Emergency Communication Network station (770 am) for specific directions on where to check in at a designated Red Cross Evacuation Center.

Evacuation and Ready, Set, Go!

Ingress (access for wildfire suppression equipment and personnel) and egress (ways for residents and visitors to escape the wildfire) are crucial to wildfire preparedness. Communities with only one way in and out face greater risk during wildfires. Planning evacuation routes at the community or fire district level is one way to identify hazards ahead of time. Actions to improve ingress and egress during a wildfire may include thinning along roadways, road condition improvements, and signage directing residents where to go during an emergency. The best course of action to remedy one way in/ one way out roads would be to add a second access route. Undertaking this effort should be assessed on a case-by-case basis.

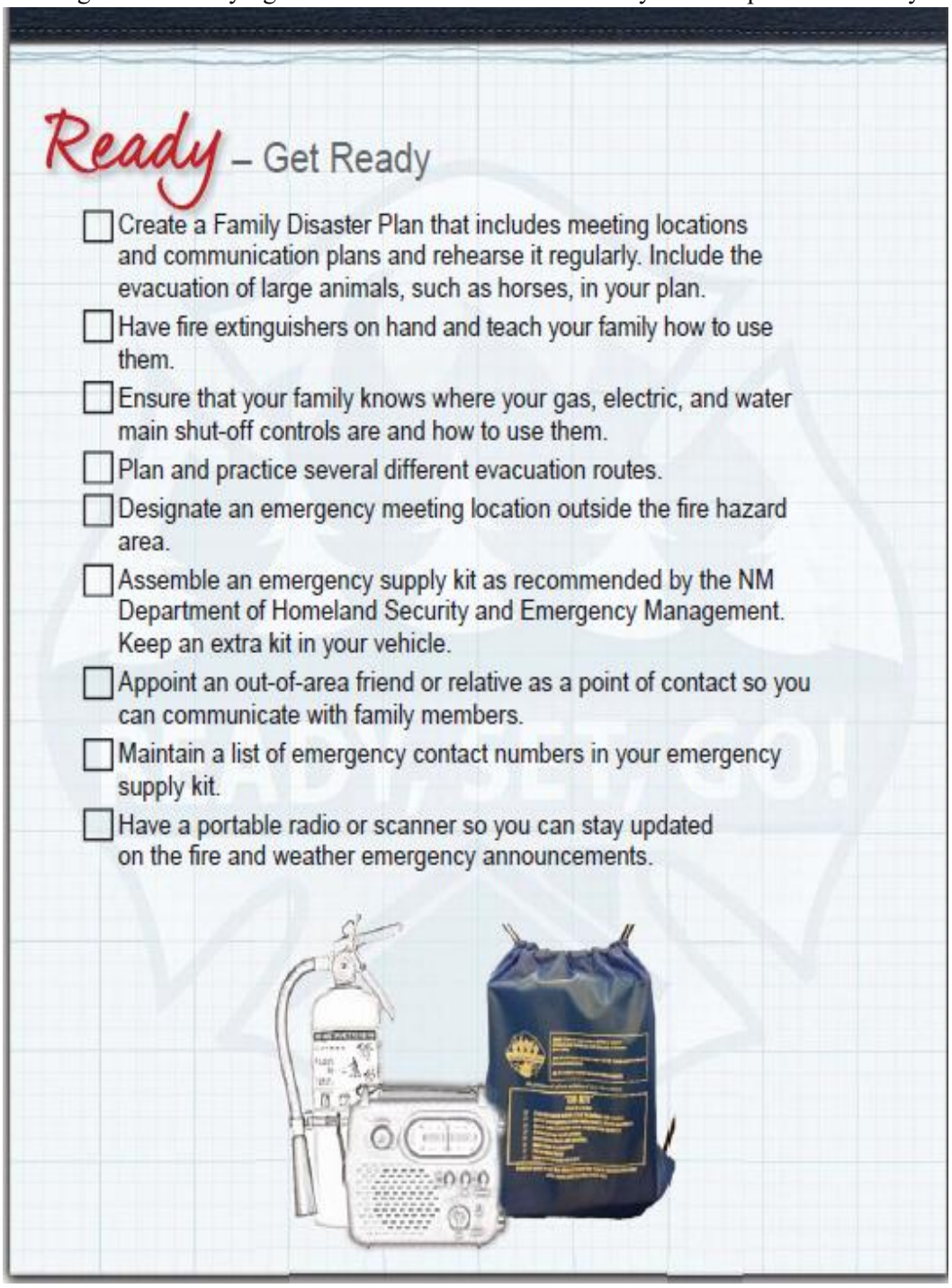
Residents should be ready to leave as soon as evacuation is recommended by officials, in order to avoid being caught in fire, smoke, or road congestion. Evacuating early helps fire fighters keep roads clear of congestion and lets them move more freely to do their job. Resources are available to help residents prepare ahead of time for evacuation. Early preparation can help residents with everything from packing lists (e.g., essentials can include taking a supply of critical medications) to how to address pets and livestock.

The Ready, Set, Go! program is the best tool for evacuation planning and communicating about evacuation to residents and is used by the USDA Forest Service and New Mexico State Forestry Division. The RSG program helps residents be “Ready” with preparedness understanding, be “Set” with situational awareness when fire threatens, and to “Go,” acting early when a wildfire starts.

The RSG is managed by the International Association of Fire Chiefs (IAFC) and seeks to make a difference in communities faced with wildland fire threats by providing guidelines around saving lives and property. The New Mexico-specific RSG Wildfire Action Guide should be shared with residents early and often: https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/FINAL-new-mexico-RSG-guide-2017_000.pdf

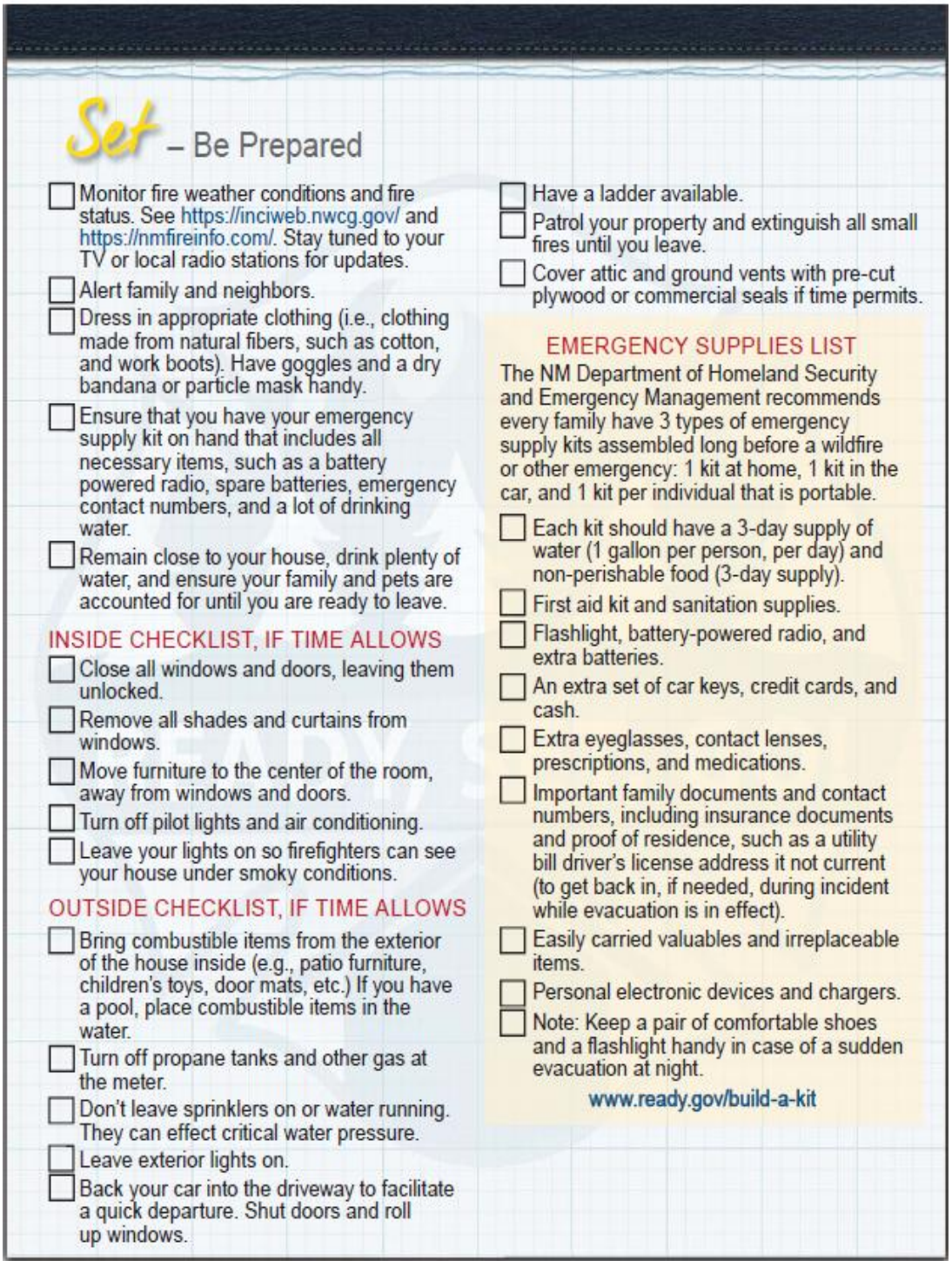
GET READY:

Being “Ready” for wildfire starts with maintaining an adequate defensible space around the home. Clear dry brush and vegetation away from the outside of the home, starting in the 5-foot zone and working your way out to the 100–200-foot zone. Without this buffer, the fire will quickly spread through surrounding vegetation to a home. Consider fire resistant landscaping and hardening the home with fire-resistant building materials. Flying embers from a wildfire can destroy homes up to a mile away.



GET SET:

Residents should prepare themselves and their homes for the possibility of evacuation BEFORE wildfire arrives. Follow these simple steps to get "Set" by creating a Wildfire Action Plan that includes evacuation planning for the home, family, and pets. Be sure to assemble an Emergency Supply Kit for each person in the household. Furthermore, fill out a Family Communication Plan that includes important evacuation and contact information. Remember to stay informed by following local media, local fire alerts, and county emergency notifications.



Set – Be Prepared

- ☐ Monitor fire weather conditions and fire status. See https://inciweb.nwcg.gov/ and https://nmfireinfo.com/. Stay tuned to your TV or local radio stations for updates.
- ☐ Alert family and neighbors.
- ☐ Dress in appropriate clothing (i.e., clothing made from natural fibers, such as cotton, and work boots). Have goggles and a dry bandana or particle mask handy.
- ☐ Ensure that you have your emergency supply kit on hand that includes all necessary items, such as a battery powered radio, spare batteries, emergency contact numbers, and a lot of drinking water.
- ☐ Remain close to your house, drink plenty of water, and ensure your family and pets are accounted for until you are ready to leave.

INSIDE CHECKLIST, IF TIME ALLOWS

- ☐ Close all windows and doors, leaving them unlocked.
- ☐ Remove all shades and curtains from windows.
- ☐ Move furniture to the center of the room, away from windows and doors.
- ☐ Turn off pilot lights and air conditioning.
- ☐ Leave your lights on so firefighters can see your house under smoky conditions.

OUTSIDE CHECKLIST, IF TIME ALLOWS

- ☐ Bring combustible items from the exterior of the house inside (e.g., patio furniture, children's toys, door mats, etc.) If you have a pool, place combustible items in the water.
- ☐ Turn off propane tanks and other gas at the meter.
- ☐ Don't leave sprinklers on or water running. They can effect critical water pressure.
- ☐ Leave exterior lights on.
- ☐ Back your car into the driveway to facilitate a quick departure. Shut doors and roll up windows.
- ☐ Have a ladder available.
- ☐ Patrol your property and extinguish all small fires until you leave.
- ☐ Cover attic and ground vents with pre-cut plywood or commercial seals if time permits.

EMERGENCY SUPPLIES LIST

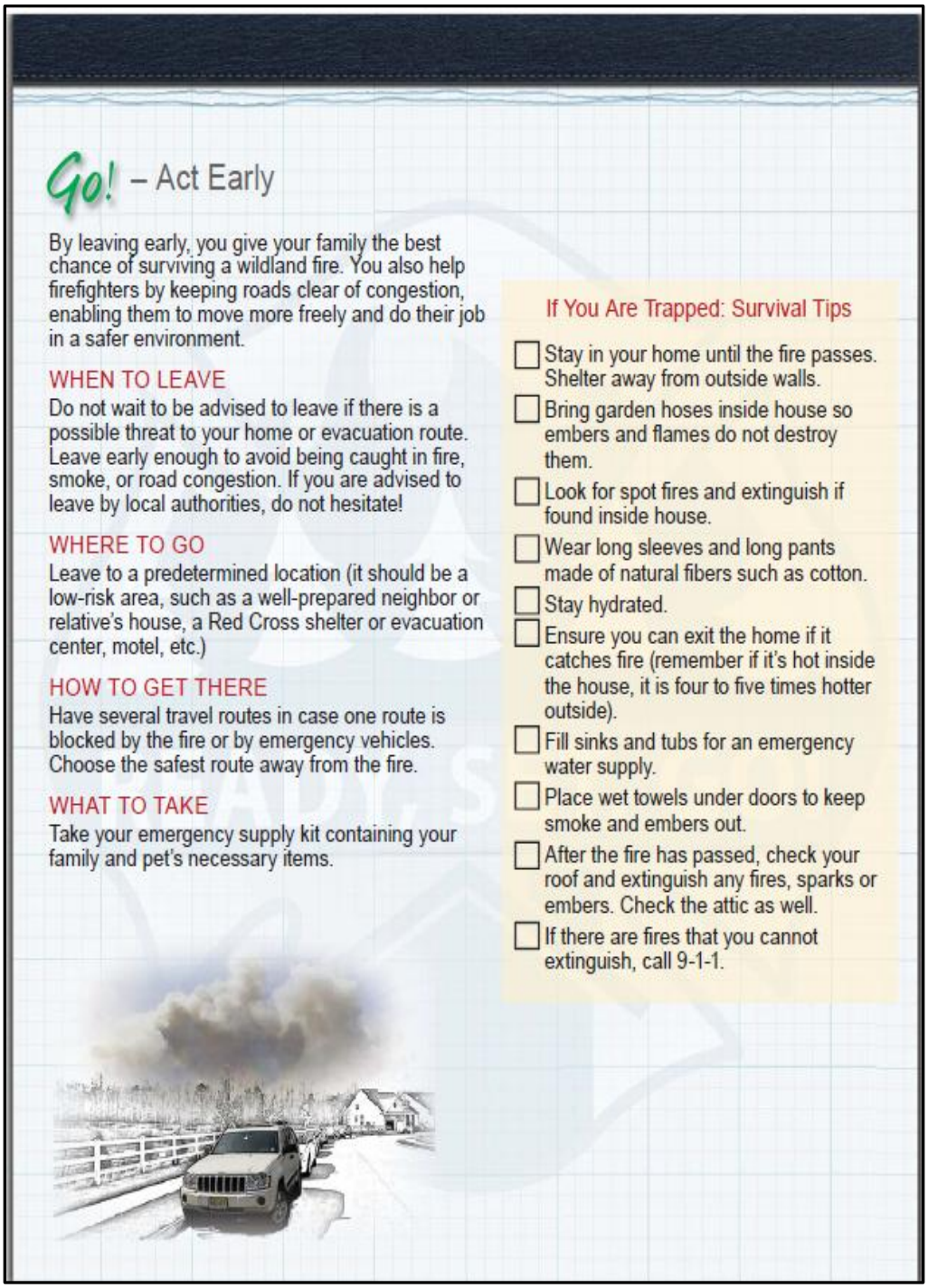
The NM Department of Homeland Security and Emergency Management recommends every family have 3 types of emergency supply kits assembled long before a wildfire or other emergency: 1 kit at home, 1 kit in the car, and 1 kit per individual that is portable.

- ☐ Each kit should have a 3-day supply of water (1 gallon per person, per day) and non-perishable food (3-day supply).
- ☐ First aid kit and sanitation supplies.
- ☐ Flashlight, battery-powered radio, and extra batteries.
- ☐ An extra set of car keys, credit cards, and cash.
- ☐ Extra eyeglasses, contact lenses, prescriptions, and medications.
- ☐ Important family documents and contact numbers, including insurance documents and proof of residence, such as a utility bill driver's license address it not current (to get back in, if needed, during incident while evacuation is in effect).
- ☐ Easily carried valuables and irreplaceable items.
- ☐ Personal electronic devices and chargers.
- ☐ Note: Keep a pair of comfortable shoes and a flashlight handy in case of a sudden evacuation at night.

www.ready.gov/build-a-kit

GO!:

If there is an active wildfire in the area, be prepared before it's time to "Go!" If time allows, review the Wildfire Action Plan and complete the Pre-Evacuation Preparation Steps in the RSG guide. Load an emergency supply kit and evacuation bags (including pet kits) into the vehicle and park facing the road for a quick exit. It is not necessary to wait for an evacuation order. If a resident feels threatened, then evacuate early. When an evacuation order is issued, there is no time to waste. Ensure the bags and kit are in the vehicle, locate and load pets, wear clothing that will protect against heat and flying embers, and GO!



Here is a list of resources related to evacuation for fire departments:

- https://www.fema.gov/sites/default/files/2020-07/planning-considerations-evacuation-and-shelter-in-place.pdf
- https://fireadaptednetwork.org/evacuation-a-resource-round-up/

Community Emergency Response Team

The Federal Emergency Management Agency offers a Community Emergency Response Team (CERT) program to help community members take part in disaster response. The CERT program helps volunteers use training learned in the classroom and during exercises to assist others in their community after a disaster when professional responders are not immediately available to help. More information on the CERT Program can be found on:

https://www.ready.gov/community-emergency-response-team

Smoke Impacts

Wildfire smoke can have significant negative effects on public health. This can be the case even from fires occurring miles away or after a local fire has been controlled. Some demographics are particularly at risk, including people over 65 or under 18 years of age and pregnant women. People whose health may already be compromised may also be particularly vulnerable to the effects of wildfire smoke; for this reason, special consideration should be given to preparing hospitals, assisted living facilities, and other health service centers. Residents with heart or lung diseases or with any kind of compromised respiratory functions are particularly at elevated risk of adverse smoke impacts.

Personal Smoke Mitigations

For residents, the Center for Disease Control recommends the following measures to decrease the impact of wildfire smoke:

- Check local air quality reports.
- Keep indoor air as clean as possible by keeping doors and windows shut; consider obtaining high efficiency particulate air (HEPA) filters to aid in keeping indoor air clean. Installing a HEPA filter, such as those provided through the Guild's Filter Loan program, in bedrooms can provide clean breathing for around 8 hours per night, regardless of air conditions outside and during waking hours.
- Avoid activities that increase indoor pollution such as smoking, burning candles, spraying aerosols, vacuuming, and using fireplaces or gas stoves.
- Assuming an individual is in a safe place, away from the fire, limiting physical exercise can help to limit smoke inhalation. During exercise, people can increase their air intake as much as 10 to 20 times over their resting level.
- Seek shelter in a designated evacuation center or away from the affected area if necessary.

- Above all, seek to limit exposure to smoke.

Community Smoke Mitigation

For community leaders, here are some considerations and steps ahead of a potential wildfire to prepare their communities:

- "Safe spaces" should be designated and prepared where community members can have a respite from smoky air. Communities should explore installing integrated HEPA filters at key locations such as public libraries, hospitals, nursing homes, and schools so that places provide clean air to vulnerable populations during their normal daily activities.
- Organizers should consider suspending certain outdoor activities and events if air quality is poor. Outdoor sports events and school recesses are examples of activities that can be canceled, postponed, or moved indoors to minimize exposure.
- Create a system to supply sensitive individuals with portable HEPA filters during times of smoke impacts. HEPA filter loan programs have been implemented on small scales successfully and providing clear air for the most vulnerable residents.

Helpful websites include:

- New Mexico Fire Info, Smoke Management: New Mexico Fire Information, an interagency effort by federal and state agencies in New Mexico
- Air Now, Interactive Map of Smoke Monitors & Fire Current Conditions: Environmental Protection Agency
- Smoke and HEPA Filter Loan Program: Fire Adapted New Mexico
- New Mexico's Smoke Management Program: New Mexico Environment Department's Air Quality Bureau

Evacuation Plan for the Stables Area

FIRE EVACUATION AND FIRE SAFETY AT THE ELDORADO COMMUNITY STABLES

Dated 8-2024

Six important points:

1. **There are eight ways to exit the Eldorado Community Stables in an emergency.** Six are locked and two are not. Three locked gates offer trailer exits: The two main gates along Avenida Eldorado, which are locked at night, with additional trailer egress off U.S. Highway285 near Barn 36 and over the cattleguard. The three locked walk-out gates are: One next to the cattleguard onto 285, the second across from Barn 36 opening to the trail abutting 285 and the other on the hill behind Barn 4. These locks are all set to the same combination. The two unlocked gates access the arroyo for trail riders, one by the lower gate and the other by the lower round pen.
2. **Lock codes throughout the stables are the same.** It is every barn owners' responsibility to know the most current version.
3. **Alert Santa Fe provides real-time fire alerts for both the city and the county.** We strongly recommend all barn owners sign up for this service. New Mexico Fire Information is also a valuable resource for fire information.
4. **Please keep your roster information up to date.** Your fellow stable owners will know how to contact you in the event of an emergency.
5. Every barn owner is charged with creating individual plans involving the emergency evacuation, care and where to take their equines for temporary shelter.
6. **If reporting an emergency of any kind (Fire, Medical, etc.) to 911, reference the Eldorado Community Stables address as 11 Avenida Eldorado.** The Regional Emergency Communications staff are not from Eldorado and need an address for GPS purposes.

Understanding the importance of fire prevention, the ECIA has been diligent in protecting our amenity with regular maintenance throughout the years. Please see the Appendices below, which also offer best practices for individuals to do their part for fire prevention at their barns, plus a public emergency shelter, designated by the state, for your horses if needed.

What follows next is a punch list in the vernacular of New Mexico emergency alerts, frequently broadcast statewide and which we should all be familiar with: **Ready, Set, Go.** Since early evacuation is always recommended, there is no need to wait for the state to issue these alerts. By the time the state issues a Go order, traffic can build considerably. **Leave as early as your plan allows.** The plan below is still helpful in being best prepared.

READY

- You may choose to work with a small group to execute your evacuation plan. It is important to know the reality of a fire evacuation: A friend or neighbor may offer to trailer your horse out of harm's way, but if this requires two trips, fire officials may not allow trailers back into the stables. Get out early.
- If you own a trailer but do not trailer your horse often, work with your horse or horses to train them to load easily. A fire emergency is chaotic and stressful for both horse and owner. Your horses must be obedient in order to evacuate safely. Consider practice drills.
- If you do not own a trailer, and are relying on a buddy system, the above trailer training also holds true: Practice loading into the trailer that will evacuate your horse so your horse can be taken to safety.
- Adhere to a regular maintenance schedule for your trailer and tow vehicle.
- Have travelling papers from the New Mexico Livestock Board for all of your horses, documenting you as the owner. These are required even when trailering for pleasure, medical emergencies and in non-natural disaster situations.
- Have a destination confirmed for the evacuation of your equines. Aside from friends out of harm's way, an emergency option is listed in the addendum below as a safe haven for your horse or horses.
- Consider a daisy chain locking system for your paddock. With this system, the gate appears to be locked but should neighbors need to evacuate your horses in your absence they can do so without bolt cutters.

SET

- Avoid dietary changes by storing three day's worth of hay in your trailer in an emergency.
- Gas up your tow vehicle.
- Consider halters with ID tags to include your name and phone number. Leather and cotton are preferred materials as these don't melt under extreme heat.
- You can also take a Sharpie pen and write your phone number on your horses' hooves. Permanent ID's are a microchip, lip tattoo or freeze brand.
- These measures are recommended because planned evacuation routes may change quickly depending on prevailing fire conditions and road closures.

GO

- Get out early.
- Horses trapped at the Eldorado Stables can be released in the upper arena. Per the fire marshal, this is a safe option as it is open with fire breaks.
- Sheltering in the upper arena can trigger aggressive behavior resulting in injury to equines. You assume this risk in an emergency.

- Do not set your horse loose in the stable amenity or the at-large community along 285. This impedes fire fighting efforts and endangers your horse.
- Don't try to save your barn by using hydrant water. You may cause a drop in water pressure that the Fire Department needs.

Appendix 1: ECIA Maintenance

- Regularly mows weeds around barns and in public areas to keep weeds in check
- Conducts annual tree trimming around the stables, with special attention to low lying and dead branches to mitigate fire danger.
- Addresses the same in the arroyo as best able.
- Created perimeter arroyo trails for riding pleasure as well as fire mitigation and emergency vehicle access.
- Maintains four stable roads which act as a fire break; though not guarantee against airborne embers, a definite asset

Appendix 2: Best Individual Barn Practices

- Keep a working fire extinguisher in your barn.
- Immediately call 911 should there be a fire in your personal barn. Be certain to reference the stable address (See above.)
- Make sure that your propane is stored properly. Here is a link.
- Never smoke or allow visitors to smoke at the Eldorado Stables.
- If you have solar lighting or battery powered lighting, ensure that wiring is in good working order.

Appendix 3: Public Evacuation Site

- Santa Fe County Rodeo Grounds: Call or text Jim Butler at 505-316-5141; his email is jgbutler408@gmail.com

Please note that this evacuation plan contains the original wording by the Eldorado Community Stables.

APPENDIX F: Maps and Map Information

Methodology for the Composite Risk Assessment Map

Conforming to the method for the 2020 CWPP for Santa Fe County, all data used in the risk assessment for the composite risk map for the 2025 Greater Eldorado Area CWPP have been processed using ESRI ArcGIS Desktop and the ESRI Spatial Analyst Extension. The data used were a combination of data from the 2020 CWPP for Santa Fe County and any updated data for datasets pertaining to the greater Eldorado area.

All fire parameter datasets were converted to a raster format, which is a common GIS data format comprising a grid of cells or pixels, with each pixel containing a single value. The cell size for the data is 30 × 30 meters (98 × 98 feet), based on the datasets provided by SWCA, the consulting agency for the 2020 CWPP for Santa Fe County. Each of the original cell values were reclassified with a new value between 1 and 4, based on the significance of the data (1 = lowest, 4 = highest). Prior to running the models on the reclassified datasets, each of the input parameters were weighted; that is, they were assigned a percentage value reflecting that parameter's importance in the model. The parameters were then placed into a Weighted Sum Model (WSM). When applying a WSM to raster datasets in GIS, the weighted values of each cell in each input dataset are added together to calculate the composite risk for each cell.

Visually, the combination of geographic data from different datasets (i.e., thematic maps) is often represented or described as "stacking" the data layers. WSM generates an output value derived from each cell value of the overlaid dataset in combination with the weighted assessment. In a WSM, the weighted values of each pixel from each parameter dataset are added together so that the resulting dataset contains pixels with summed values of all the parameters. This method ensures that the model resolution is maintained in the results and thus provides finer detail and range of values for denoting fire risk. Table 12 provides an overview of the key factors with associated raster input data for the composite risk model and their assigned weight.

Table 13. Key Factors and Assigned Weights

Risk element	Key factor	Assigned Weight
Hazard: Likelihood	Fire History (Occurrence and Density)	5%
Hazard: Intensity	Fireline Intensity	20%
Hazard: Intensity	Flame Length	20%
Hazard: Intensity	Crown Fire Activity	10%
Hazard: Intensity	Rate of Spread	10%
Vulnerability: Exposure	Wildland-Urban Interface	20%
Vulnerability: Exposure	Community Values at Risk	15%

Eldorado CWPP Map Figure Descriptions and Data Sources

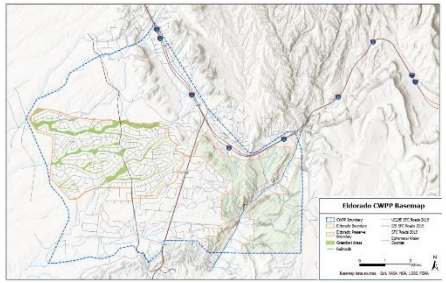
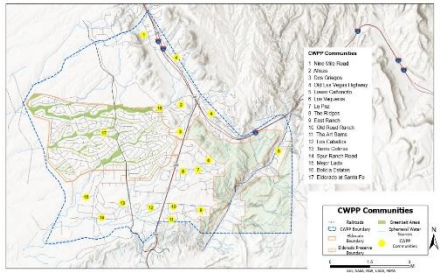
Image	Map Title	Description	Data Sources
	CWPP Study Area Base Map	Base map includes standard and relevant data used as a basis and background for all maps. Map includes study area boundary, ECIA boundary, greenbelts, and preserve. Select details are turned off in some maps to avoid clutter while preserving the clarity of the main theme of each map.	Santa Fe County, Esri© streaming services including NASA, NGS, USGS, others. USGS: detailed hydrological data. ECIA: community boundary, greenbelts, preserve
	CWPP Communities	Area communities inside and adjacent to the study area.	Developed from various data sources: Santa Fe County, area real estate maps, public comments, other references

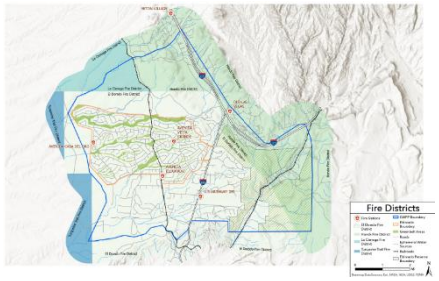
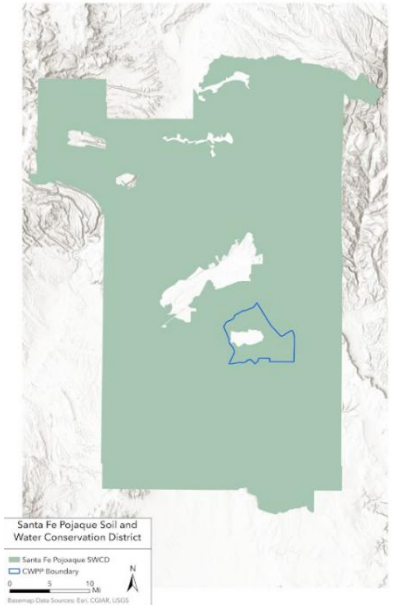
Image	Map Title	Description	Data Sources
	Fire Districts	Fire Department locations and primary response areas.	SFC CWPP 2020
	Santa Fe Pojoaque Soil and Water Conservation District	Santa Fe Pojoaque Soil and Water Conservation District.	Santa Fe Pojoaque Soil and Water Conservation District

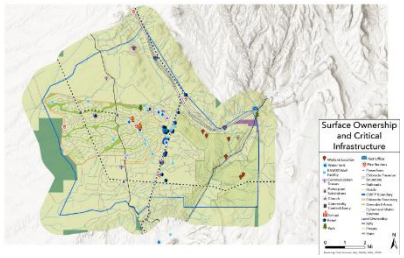
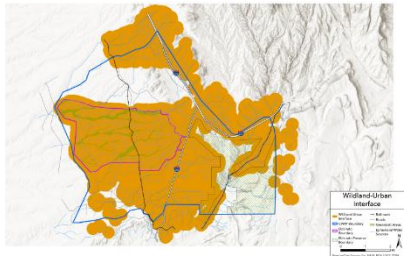
Image	Map Title	Description	Data Sources
	Surface Ownership and Critical Infrastructure	Ownership indicates federal, state, and private land ownership. Critical infrastructure is identified as systems vital to the economy, public health and safety, and national security. If critical infrastructure were to be destroyed or non-functional, it would cause widespread disruption.	Sante Fe County CWPP 2020; FEMA, ORNL, USGS Flood Risk 2016, Google 2024, Santa Fe County image streaming service, 2021
	Wildland-Urban Interface	FEMA definition: The WUI is the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.	FEMA: Santa Fe County structures data with an added buffer, ¼ mile

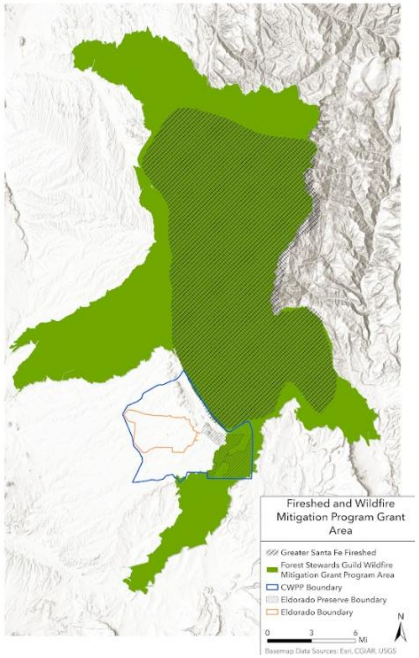
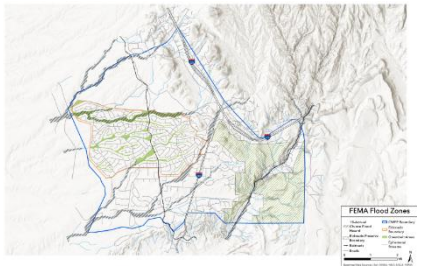
Image	Map Title	Description	Data Sources
	Fireshed and Wildfire Mitigation Program Grant Area	Firesheds delineate areas where fires ignite and are likely (or not) to spread to communities and expose buildings. Building exposure is the likelihood and intensity of a fire in the vicinity of a building. It is not the same as risk, risk predicts loss; exposure does not. (Definition by: USDA USFS Rocky Mountain Research Station).	Santa Fe County CWPP 2020; Greater Santa Fe Fireshed Coalition
	FEMA Flood Zones	Flood maps show how likely it is for an area to flood. Eldorado flood maps are designated as Zone A. Areas in Zone A have a 1% annual chance of flooding, also known as a 100-year flood. This means that over the course of a 30-year mortgage, there is a 25% chance of flooding in these areas.	FEMA

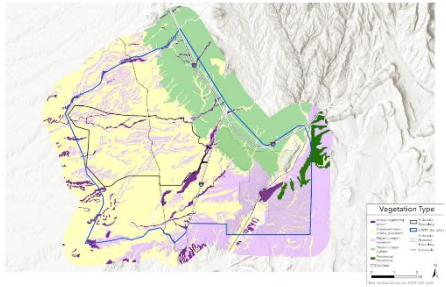
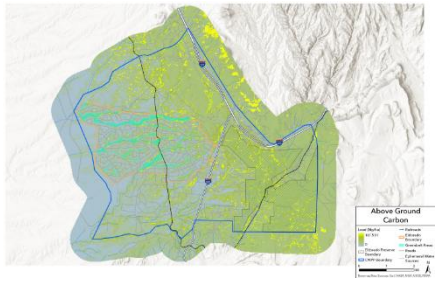
Image	Map Title	Description	Data Sources
	Vegetation Type	Extent of NRCS general vegetation categories / surface cover including: arroyo vegetation, gravelly; dispersed trees, shrubs, grassland; ponderosa / woodland; piñon upland; piñon -juniper grassland.	USDA Natural Resources Conservation Service (NRCS)
	Above Ground Carbon	Estimated total above-ground carbon (AGC) in live and dead biomass, reported in tons per hectare (Mg ha-1).	NM Forest Action Plan 2020

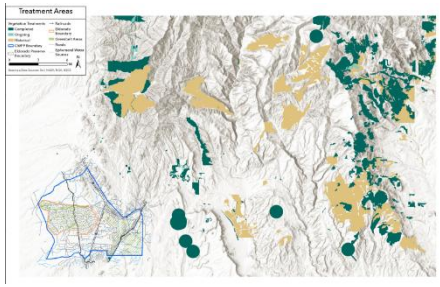
Image	Map Title	Description	Data Sources
	Treatment Areas	Ecologically sensitive treatments keep forests healthy by reducing vegetation density, recycling nutrients, and maintaining wildlife habitat. Treatment types may include: Prescribed Fire: Prescribed fire is a planned fire; it is also sometimes called a “controlled burn” or “prescribed burn,” and is used to meet land management goals. Hand Thinning: Hand thinning is primarily undertaken to remove small diameter trees (sometimes called ladder fuels) from stands that are too dense. Mechanical Thinning: Mechanical thinning of forests involves using heavy forestry equipment to greatly reduce tree densities across all size classes and increase the size and frequency of forest openings. Mastication: Mastication is a technique where a machine is brought into the forest that can chew up small trees and ground fuels, spitting out 3″-18″ chunks	Santa Fe County CWPP 2020; New Mexico Forest and Watershed Restoration Institute; Greater Santa Fe Fireshed Coalition; Forest Steward Guild; USFS Fire Program Analysis Fire-Occurrence Database (FPA FOD); NM Energy, Minerals, Natural Resources Department, Forestry Division.

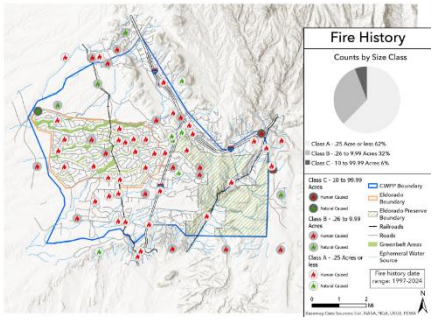
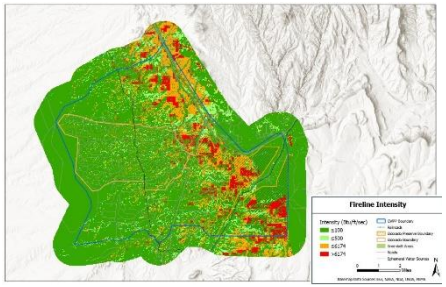
Image	Map Title	Description	Data Sources
		or strips of wood and spreading them over the forest floor. Slash Pile Burning: Piles of woody debris (slash) are burned in an effort to reduce hazardous fuels. These piles are made from slash left after mechanical thinning or hand thinning.	
	Fire History	Historical fires indicate past fire locations. Fire size and fire cause, natural or human, are also indicated.	Santa Fe County CWPP 2020, USFS Fire Program Analysis Fire-Occurrence Database (FPA FOD), and NM Energy, Minerals, Natural Resources Department, Forestry Division
	Fireline Intensity	Predictions of the likelihood of flame lengths greater than six feet, if a fire were to occur.	NM Forest Action Plan 2020; Santa Fe County CWPP 2020

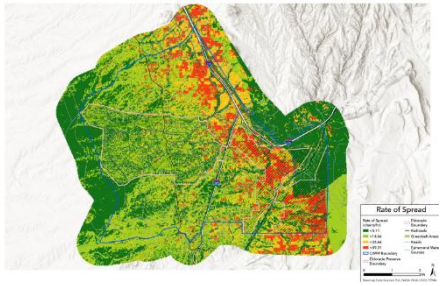
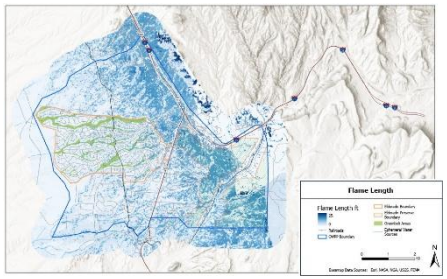
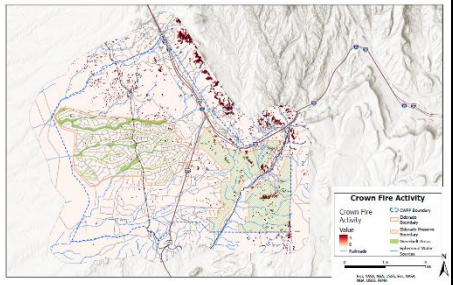
Image	Map Title	Description	Data Sources
	Rate of Spread	The rate of spread is in chains per hour (one chain is equal to 66 feet; one foot per minute is roughly equivalent to one chain per hour) and is defined as the speed with which the fire is moving away from the site of origin. Wind, moisture, and slope drive the fire. The flaming zone, or fire head, moves away from the origin quickly with great intensity.	National Wildfire Coordinating Group; Santa Fe County CWPP 2020
	Flame Length	Flame length is the distance measured from the average flame tip to the midpoint of the flaming zone at the base of the fire, serving as a key indicator of fireline intensity. Longer flames generally indicate a hotter and more intense fire.	Santa Fe County CWPP 2020
	Crown Fire Activity	Crown fire activity describes fire behavior in the forest or shrub canopy.	Santa Fe County CWPP 2020

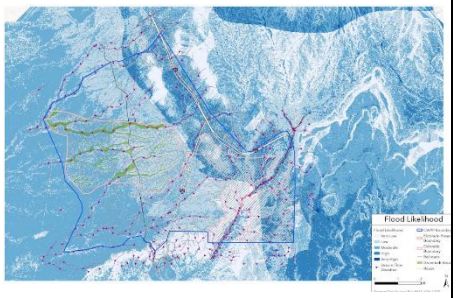
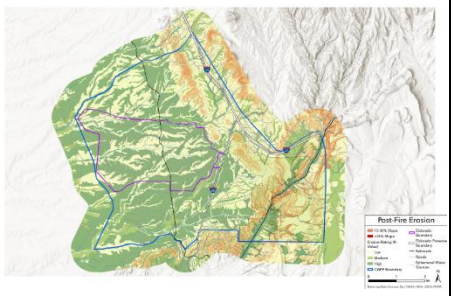
Image	Map Title	Description	Data Sources
	Flood Likelihood	Specialized map that overlays a standard flood risk map with additional data about areas affected by wildfire, highlighting the significantly increased flood risk in those regions due to the altered terrain and vegetation loss caused by the fire, making it crucial for post-fire emergency planning and mitigation efforts. Wildfires drastically reduce vegetation cover, leaving soil exposed and unable to absorb rainwater, leading to increased runoff and a higher potential for flash floods and debris flows after a fire. Informing residents about their increased flood risk after wildfire encourages preparedness measures.	Precipitation: RGIS, NOAA; hydrological, elevation, and slope data: USGS
	Post-Wildfire Erosion	Indicates the increased rate of soil erosion may occur following a wildfire due to the loss of vegetation and altered soil conditions.	National Wildfire Coordinating Group; Santa Fe County CWPP 2020

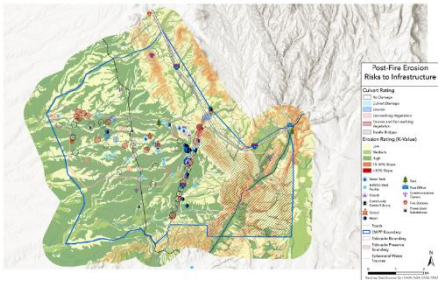
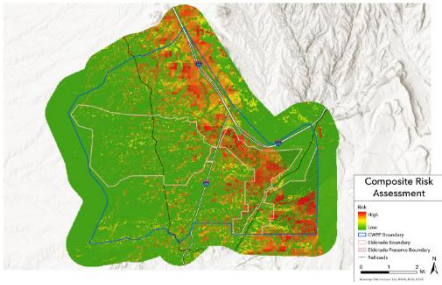
Image	Map Title	Description	Data Sources
	Post-Fire Erosion Risk to Infrastructure	Indicates where certain infrastructure may be at an increased risk based on post-fire erosion conditions.	NM Forest Action Plan 2020
	CWPP Composite Risk Assessment	Refers to a comprehensive evaluation within a Community Wildfire Protection Plan that takes into account multiple factors to determine the overall wildfire risk to a community, considering elements like vegetation fuel types, weather patterns, topography, population density, infrastructure vulnerability, and the community's preparedness level, providing a holistic view of potential wildfire threats to prioritize mitigation actions.	Santa Fe County CWPP 2020, expert input, Ecotone

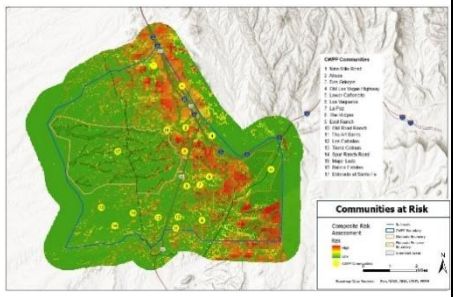
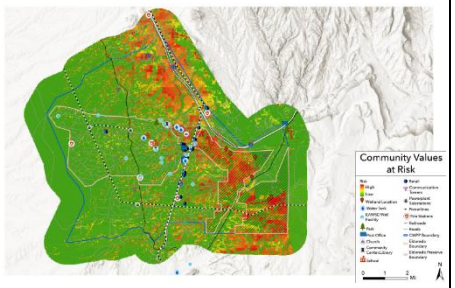
Image	Map Title	Description	Data Sources
	Communities at Risk	Wildfires are a particular threat where developed areas meet native ecosystems. Factors that increase the risk of wildfires include: Weather: High winds, high temperatures, low humidity, and dry fuels can create favorable conditions for wildfires. Other hazards: Floods, landslides, avalanches, and earthquakes can create areas with heavy fuel loads or increase the potential for ignition. Wildland-urban interface: Areas where natural terrain and flammable vegetation border man-made improvements are the most vulnerable to wildfires.	Same as above
	Community Values at Risk	Refers to the important aspects of a community that could be negatively impacted by a wildfire, including residential areas, critical infrastructure (power lines, water systems), historical landmarks, natural ecosystems, cultural sites, and economic livelihoods, which are all identified and prioritized during	Same as above.

Image	Map Title	Description	Data Sources
		the planning process to determine the most vulnerable areas needing protection from wildfire threats.	