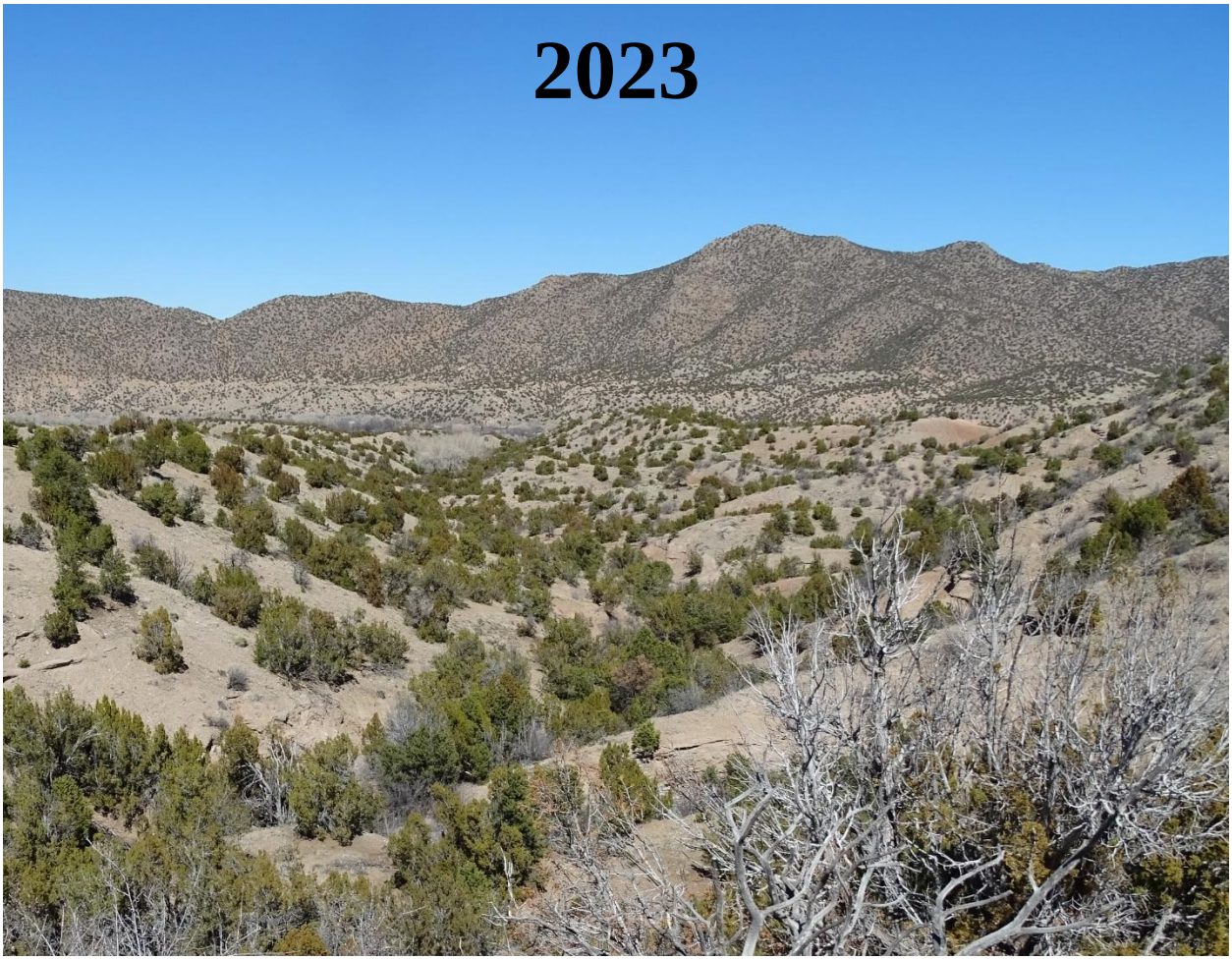
Dixon, New Mexico

Community Wildfire Protection Plan

2023



Prepared for:

New Mexico Counties
444 Galisteo Street
Santa Fe, NM 87501

Prepared by:

Dixon Volunteer Fire Department
183 A NM State Road 75
P.O. Box 247
Dixon, NM 87527

Ecotone Landscape Planning, LLC
1413 2nd Street
Suite 5
Santa Fe, NM 87505

The Forest Stewards Guild
2019 Galisteo St. Suite N-7
Santa Fe, NM 87505

Cover Photo: Taken by Jan-Willem Jansens on New Mexico state trust land, Section 2, east of Dixon.

Signatures

2023 Dixon Community Wildfire Protection Plan

We the undersigned, approve the 2023 Dixon Community Wildfire Protection Plan:

Signature	Printed Name	Date
DocuSigned by: Mark Meyers 516B764B2D2B4A9...	Mark Meyers	6/5/2023
Title: Forester	Organization: New Mexico State Land Office	
DocuSigned by: Martha Graham 93AFB3BCCD0C404...	Martha Graham	6/12/2023
Title: SWP Specialist	Organization: New Mexico Rural Water Association	
DocuSigned by: Steven Jenison 7F1E52FD9D42449...	Steven Jenison	6/6/2023
Title: District Chief	Organization: Dixon Volunteer Fire Department	
DocuSigned by: Adrian Porchas D6D75709FF88492...	Adrian Porchas	6/9/2023
Title: Fire Management Officer	Organization: Carson N.F, East Zone	
DocuSigned by: Alex Amend C7AC7CFCFE124A6...	Alex Amend	6/5/2023
Title: Firefighter	Organization: DVFD	
DocuSigned by: BE332D523FEF4CD...	Alex Sisneros	6/6/2023
Title: DIRECTOR	Organization: Rio Arriba County	

Signatures

2023 Dixon Community Wildfire Protection Plan

We the undersigned, approve the 2023 Dixon Community Wildfire Protection Plan:

Signature	Printed Name	Date
DocuSigned by: 406F871C4D91474...	Anthony Alvarez	6/8/2023
Title: Owner and CEO	Organization: Baby Gorilla Tree Service	
DocuSigned by: 70F98AAE8FB44F4...	Bob Lesch	6/6/2023
Title: carpenter	Organization: Bob Lesch	
DocuSigned by: E72F3C0EA082416...	Camilla Romero	6/5/2023
Title: Project manager	Organization: New Mexico State Land Office	
DocuSigned by: 3AC15AB7494740C...	Luther Martinez	6/6/2023
Title: Director of Forestry & Fire	Organization: Pueblo of Picuris	
DocuSigned by: 34A279879F76470...	Gabe Kohler	6/6/2023
Title: Program Manager	Organization: The Forest Stewards Guild	
7C4749CB954144D... Adam Mackie DocuSigned By: Adam Mackie	Adam Mackie	6/8/2023
Title: Dep Chief	Organization: DVFD	

DocuSign Envelope ID: EBBD8EE3-3217-4542-874E-DECD57060805

Signatures

2023 Dixon Community Wildfire Protection Plan

We the undersigned, approve the 2023 Dixon Community Wildfire Protection Plan:

Signature	Printed Name	Date
DocuSigned by: 869522744D704DE...	Jan-Willem Jansens	6/7/2023
Title: Owner/Principal	Organization: Ecotone Landscape Planning, LLC	
	Jose P. Carrillo Jr.	6/8/2023
Title: District Forester	Organization: NM Forestry Division-Chama Dist.	
DocuSigned by: 9162552992294BC...	Lenny Ortiz	6/6/2023
Title: Vegetation Mangement	Organization: Jemez Mountains Electric Coop.	
DocuSigned by: 080E451EB9034C3...	Kathy Miller	6/8/2023
Title: Committee Member	Organization: DixonVFD	
DocuSigned by: 745D3BD55C04485...	Lou Malchie	6/8/2023
Title: Committee Member	Organization: Lou Malchie	
	Dennis G Astley	12 June 2023
Title: Asst General Manager	Organization: Jemez Mountains Electric	

Dixon CWPP 2023

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Executive Summary

The 2023 Dixon Community Wildfire Protection Plan (CWPP) documents, updates, and formalizes the past efforts and future ambitions of key partners in the area to increase opportunities for residents and landscapes to safely interact with increasing wildfire frequency and severity. As the first community CWPP for the community of Dixon, this document captures locally specific information regarding previous wildfire preparedness actions and future needs to improve wildfire planning, response, and recovery across the Dixon Volunteer Fire Department's district. The CWPP identifies complementary planning documents that can be used in tandem with this document and discusses lessons learned from recent wildfires in northern New Mexico.

This plan assesses the wildfire preparedness needs in Dixon, including needs for building capacity for implementing wildfire risk reduction projects in partnership with land management agencies, the use of prescribed fire, as well as education and outreach through both the Firewise and Fire Adapted Communities programs. This plan uses data from the 2020 NM Forest Action Plan and attempts to align with planning efforts related to Shared Stewardship, the Forest and Watershed Restoration Act, the Lower Rio Embudo Watershed-based Plan, and many other efforts to address wildfire risk reduction and watershed health across boundaries.

In many ways, the process of developing this CWPP is as important as the document itself. With this in mind, we encourage Core Team members and Dixon residents to think of this document as a living document that requires updating every ten years and as an actionable plan that guides participants to work collaboratively to move from planning to implementation.

The most important elements of this CWPP are the priority actions and priority fuels projects that guide future actions in the Dixon fire district to prepare for wildfire (Table 2). These were developed in consultation with the Core Team and community stakeholders and are the heart of the CWPP. By fulfilling these recommendations, Dixon will have a chance to become better prepared for wildfire and grow the resilience to recover quickly, as further detailed in the Post-Fire Recovery section of the CWPP.

This CWPP is intended to inform existing planning efforts across Dixon and the State of New Mexico. To use this document most effectively, users are advised to find areas of overlap between priority areas in the 2020 NM Forest Action Plan, Shared Stewardship priorities between the US Forest Service and NM State Forestry Division, priority action items within this Dixon CWPP, and strategies outlined in the 2019 Updated Watershed-Based Plan for the Lower Rio Embudo Watershed. Planning projects in areas where priorities overlap in high-risk areas will improve the likelihood of receiving funding and provide the greatest benefit to the community of the Dixon area.

The various sections of the CWPP provide more detail to clarify the recommendations in the priority action tables. The CWPP includes sections on companion plans, wildfire preparedness in general, recommendations for post-fire recovery, the collaboration process used in this CWPP update, the WUI and Communities at Risk determination process, and the fire threat analysis process. The CWPP also covers details on previous actions that have increased wildfire preparedness in Dixon.

Introduction

What is a Community Wildfire Protection Plan?

A Community Wildfire Protection Plan (CWPP) sets a community on the right path towards being prepared for wildfire. This takes many forms but what we have highlighted in this plan are the priority actions that residents and entities within the Dixon Community fire department district should take to prepare the community of Dixon, its lands, water resources, and residents for wildfire. These priority actions are formed through the recommendations of a group of dedicated stakeholders called the Core Team. The process of forming the Core Team and keeping that team together to act on the recommendations of the plan is as important as the plan itself.

The federal government has recognized that many communities in the United States live in or near fire prone ecosystems that often bring inherent risks of wildfire. The Healthy Forest Restoration Act (HFRA) (Public Law 108-148 2003) acknowledges this and the fact that the federal government cannot provide funds to reduce hazardous wildland fuels for all communities at risk. The HFRA therefore established a mechanism to prioritize communities at risk to ensure that federal funds to reduce hazardous fuels go to those communities at highest risk. This mechanism is the CWPP (Public Law 108-148 2003). With a completed CWPP a community or group of communities can apply for federal funds appropriate to reduce hazardous fuels or other prioritized actions that have been identified through the CWPP process. As a result of the implementation of a CWPP the ecosystem and the communities will be able to coexist with wildfire more safely.

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 mutually agree to the final contents of a CWPP:

- The applicable city or county government:
- The local fire department(s); and
- The state entity responsible for forest management.

Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities was released in 2004 and provided a basic outline for CWPP preparation. This was supplemented in 2008 by the more comprehensive *Community Guide to preparing and implementing a Community Wildfire Protection Plan.* Both guidance documents can be accessed at: https://www.forestsandrangelands.gov/resources/communities/index.shtml. These guidance documents provide excellent links and resources for CWPP development. The resources section in the 2008 document is especially useful for CWPP implementation and tracking accomplishments and progress.

CWPP Updates

Planning efforts periodically need updating. The New Mexico Fire Planning Task Force recommends that CWPPs be updated every five years to assess new hazards and monitor progress made since the last CWPP update. This evaluation can generate new ideas, recommendations, or changes. Building community resilience to wildfire requires an adaptive approach that uses the lessons of the past to inform future management.

It is important to remember that this CWPP is a living document. As new information becomes available and conditions on the ground change, priorities may need to be updated.

In 2021, the New Mexico Association of Counties (NMAC), in collaboration with New Mexico State Forestry (NMSF) and the Forest Stewards Guild (the Guild), developed guidelines for updating CWPPs (EMNRD, 2021). The 2021 guidelines were designed to improve CWPP effectiveness based on actual experiences from the planning process. You can view these guidelines in full by visiting: https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/State-Forestry-CWPP-Requirements-2021.pdf. In addition to these guidelines, our planning team practices and promotes the inclusion of water resource protection criteria into the community wildfire protection planning process (Figure 9).

How to Use this CWPP Document

This Community Wildfire Protection Plan (CWPP) provides a wildfire risk analysis for the Dixon Volunteer Fire Department District. This plan includes accomplishments, community risk ratings, recommendations for priority fuel reduction activities, and priority actions for wildfire risk reduction. The 2023 CWPP is the first document compiled for the community of Dixon and is an important foundation for prioritizing and tracking wildfire risk reduction activities. This document is to be utilized as a tool by the community and local partners to begin prioritizing projects that make Dixon a safer and more resilient community to wildfire.

CWPPs are the best process we have for organizing wildfire risk reduction projects across jurisdictional boundaries at the county or, in this case, local level. The community risk ratings in this plan (high, medium, and low), as well as 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 that is located within or adjacent to a high-risk community will receive stronger consideration for funding from New Mexico State Forestry Division, New Mexico Counties, the US Forest Service, and many other potential funders.

This CWPP is best used in tandem with other planning efforts that relate to the community of Dixon and the State of New Mexico broadly. Finding areas where the priority actions in high-risk areas identified in this plan align with priorities identified in the Watershed-Based Plan for the Lower Rio Embudo Watershed, NM State Forestry's priority areas in the 2020 NM Forest Action Plan or in the Shared Stewardship priorities between NM State Forestry and the US Forest Service, will bolster project proposals. This CWPP process has informed the DVFD's Firewise application in 2023 and there may be opportunities to reference these actions in both the Firewise application and in the 2023 CWPP to strengthen funding proposals (see tables 9-11 for funding opportunities on public and private lands). To support information sharing and coordination in the project planning process work, use the Shared Stewardship portal to explore and propose actions within Shared Stewardship priority areas: https://nmssp.org/#/

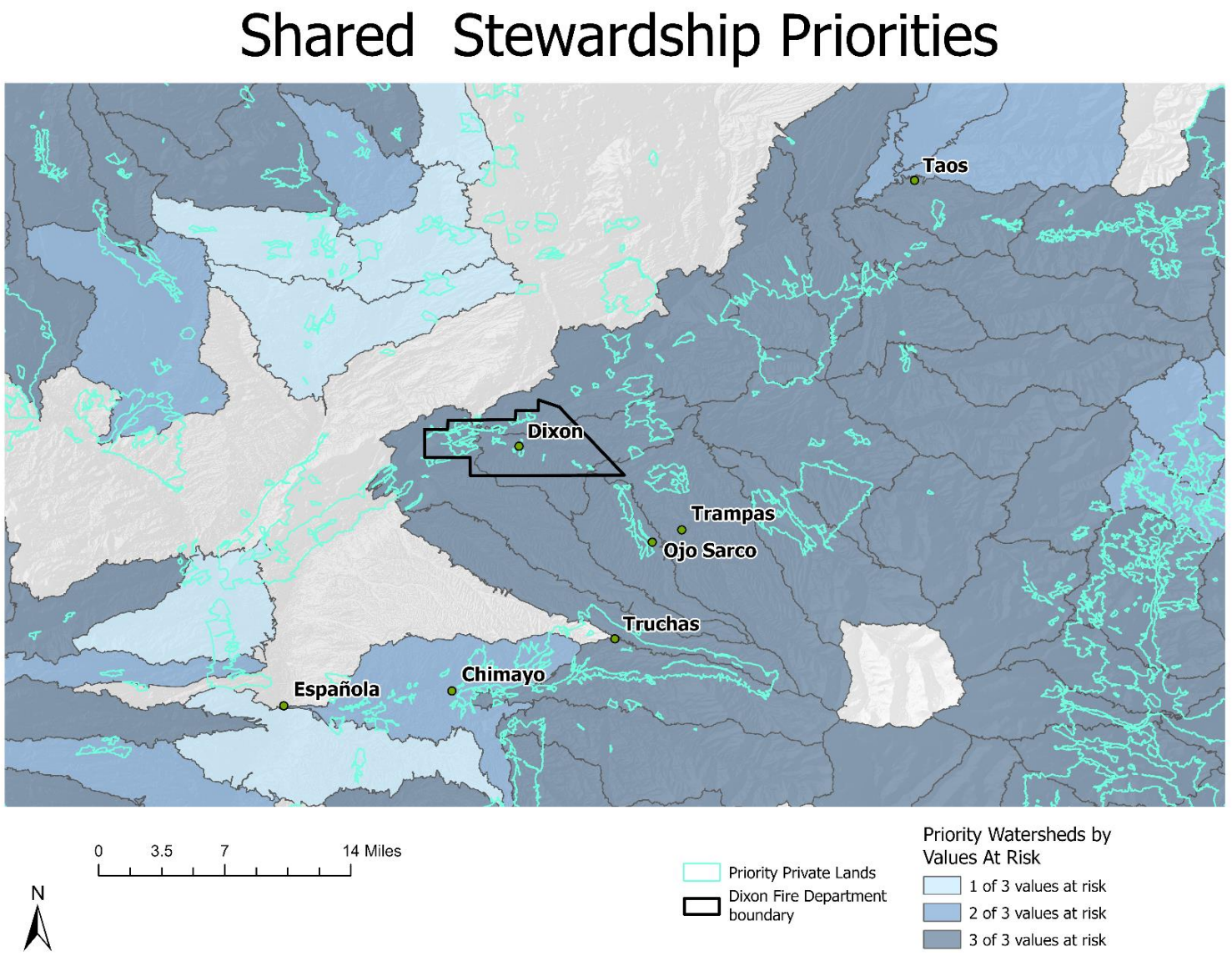

Figure 1 Dixon Fire Department boundary and Shared Stewardship Priority Watershed Areas between NM State Forestry Division and US Forest Service from the 2020 NM FAP.

Previous and Ongoing Wildfire Planning in the Dixon Volunteer Fire District and Rio Arriba County

This plan represents the first community-level CWPP to be completed for Dixon. Previous wildfire planning for the area includes Rio Arriba County-level planning which has taken place in 2007 and again in 2017. The county is preparing to update the plan again in 2024. Wildfire planning has also taken place for the nearby community of Peñasco in 2018, which is located in Taos County, adjacent to the Dixon Volunteer Fire District at its east side.

2017 Rio Arriba County Community Wildfire Protection Plan

In accordance with the Healthy Forests Restoration Act (HFRA) of 2003, Rio Arriba County completed a CWPP update in 2017. The previous Rio Arriba County CWPP was completed by the Chama Peak Land Alliance in coordination with AmeriCorps VISTA, the Forest Stewards Guild, Unique Places, and NM State Forestry. It is available at New Mexico State Forestry (NMSF) website:

https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/RioArribaCWPP_2017_FINAL.pdf

The County plan covers background information regarding CWPP guidelines, the geographical make-up of the county, county-wide accomplishments and priority actions, a variety of wildfire preparedness topics, and risk ratings for the numerous communities located in the county. The Dixon CWPP hopes to build upon this broader county plan by providing more detailed and locally specific information regarding wildfire risks, values within the community, and priority actions needed to improve wildfire preparedness in Dixon. The plan will also provide a more detailed mapping of wildfire and post-wildfire risks throughout the district.

Community-Level Wildfire Protection Plans

This CWPP for the Dixon Volunteer Fire Department represents the first community-level CWPP to be completed within Rio Arriba County. In 2008, a regional CWPP was created for the Upper Chama which encompasses approximately 15% of the land area of Rio Arriba County, extending from the eastern boundary of the Jicarilla Apache Reservation to the western boundary of the Carson National Forest, and from the Colorado/New Mexico border south to the community of Canjilon. The plan is available on the NMSFD website:

Upper Chama CWPP (2008): https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/UpperChamaCWPP2008.pdf

Accomplishments

There have been many accomplishments that have advanced Dixon's wildfire preparedness in recent history. A CWPP aims to catalog these accomplishments and determine how wildfire risk has been reduced in previous years or since the most recent plan. Volunteer fire departments, such as the Dixon Volunteer Fire Department (DVFD), play a critical role in reducing the likelihood of a catastrophic wildfire through:

1) educating the public about wildfire risks - which Dixon VFD does on a regular basis through social media sites and the "Dixon Through The Grapevine" Facebook site;

2) promoting and enforcing outdoor burning regulations; and

3) timely and effectively responding to small wildfires before they spread.

The following list is a synopsis of accomplishments identified during the compilation of the 2023 Dixon CWPP. With no previous community plan to serve as a starting point, accomplishments completed within approximately the last decade are described. Presumably, many other accomplishments have occurred that are not listed here, especially on private land along the bosque, as mentioned during informational interviews. Figure 7 displays the location of many of the described projects.

Private Land

- Dixon Volunteer Fire Department (DVFD) hosted community chipper days in in 2022 which community members could sign up to reduce fuels around homes and create defensible space, servicing more than 50 properties in and surrounding the community
- Individual use of tree service for fuel reductions
- Implementation of County CWPP treatments at approximately 30 locations including bosque thinning, removal of dead and down, and some defensible space treatments between 2009-2011
- Implementation of thinning and cleanup of dead wood in several parcels (approx. 4.4 acres) in the bosques along the Rio Embudo with an EPA Environmental Justice grant in 2013

Fire District Improvements

- DVFD acquired a 2,000-gallon Fire Tender
- DVFD acquired a commercial-grade chipper with funding from NM State Legislature
- DVFD received a grant from NM Association of Counties to expand the community chipping project
- DVFD promotion of (and enforcement of) outdoor burning regulations has had a very significant impact upon the risk of wildfire in the District. These include Burn Ban notices in the Town Crier, Burn Ban flyers at the Dixon Post Office, placing "BURN BAN" feather flags at both fire stations and responding in a timely manner to every 911 call for illegal burns. Effective responses by DVFD over the past few years have

controlled bosque fires before they could destroy significant amounts of habitat or structures

BLM Land

- Thinning and fuel breaks outside of the district towards Peñasco
- Completion of Copper Hill EA including a treatment plan for the BLM lands in the Lower Rio Embudo Watershed encompassing most of the Dixon Fire District (2020)

NM State Trust Lands

- 2022 Selective thinning of approximately 79 acres of piñon-juniper woodlands in Section 2 south of Cañoncito and Montecito for a Collaborative Forest Restoration Project
- 2016-2017 selective thinning of approximately 15 acres of piñon-juniper woodlands in Section 2 south of Cañoncito and 68 acres of piñon- juniper woodlands in Section 2 and on Copper Hill (outside Fire District) for a Collaborative Forest Restoration Project

Wildfire and Prescribed fire

- 2011 wildfire (unnamed) burning approximately 2 acres on private and BLM land along the Rio Embudo around the bridge of County Road 65
- 2012 wildfire (unnamed) burning approximately 40 acres on BLM land immediately outside the southern FD boundary in the headwaters of Arroyo Pino

Community Organizations and Participation

- DVFD is currently working towards a FireWise community designation
- DVFD working towards ISO 4/4Y department classification to upgrade from 5/5Y
- DVFD has participated in advanced wildland training events
- DVFD has hosted a Junior Cadet Week and other activities promoting fire awareness in schools
- DVFD has hosted several events including FireWise events and handed out literature on matters such as defensible space

Companion Plans

This CWPP is intended to be used in tandem with existing planning efforts across Dixon, Rio Arriba County, and the State of New Mexico. To use this document most effectively, we recommend finding areas of overlap between priority areas in the 2020 NM Forest Action Plan, priority areas and actions described in the 2019 Lower Embudo Watershed-Based Plan, and priority action items within this CWPP. Planning projects in areas where priorities overlap will improve the likelihood of receiving funding.

Lower Rio Embudo Watershed-Based Plan

The Dixon Volunteer Fire Department District falls within the planning area of the 2019 Updated Watershed-Based Plan for the Lower Rio Embudo Watershed, NM (Proyecto Embudo de Agua Sagrada). This plan, coordinated by Ecotone Landscape Planning, was written in collaboration with the Embudo Valley Regional Acequia Association, BLM, New Mexico State Land Office, Carson National Forest, and local residents, based on research that started in 2013 and earlier watershed plans completed in 2007 and 2010. Section 5–Plan Description–of the 2019 Watershed-Based Plan (WBP) describes a series of

strategies and best practices for ecological restoration, soil stabilization, and forest health, including wildfire risk reduction. Table 5.1 lists 18 priority projects aimed at achieving sediment reduction in priority sub-watersheds. Table 5.2 lists recommended management practices, including forest land management and wildfire risk reduction treatments in forests and in riparian bosques. Implementation of these priority projects would directly benefit the goals of the CWPP, and vice versa, implementation of CWPP activities will likely support the goals for the WBP.

The 2019 WBP provides detailed background information about abiotic, biotic, and cultural elements of the landscape. The WBP also documents the area's ecosystems and ecoregional characteristics. The Lower Rio Embudo watershed contains two level III ecoregions within its 195,199 acres. Most of the watershed is in the Southern Rocky Mountain Ecoregion with only the northwestern tip of the watershed falling in the Arizona/New Mexico Plateau Ecoregion.

The 2019 WBP also documents the anticipated impacts of climate change and the associated trends of increased drying due to increasing minimum winter temperatures, greater temperature extremes, more erratic precipitation, and increased evaporative water losses. The WBP concludes that this will likely lead to increased wildfire risk and associated runoff, erosion, flash flooding, and sediment accumulation in the communities and the area's rivers.

Wetlands Action Plan for the Lower Rio Embudo Watershed

Conceived as an amendment to the 2019 Updated WBP, the 2023 Wetlands Action Plan for the Lower Rio Embudo (WAP) focuses on the far western area of the watershed and overlaps with the southern part of the Dixon Volunteer Fire Department District. The development of the WAP was coordinated by Ecotone Landscape Planning in collaboration with the New Mexico State Land Office, BLM, the Embudo Valley Regional Acequia Association, and local residents, with funding from the NMED Surface Water Quality Bureau. The WAP describes various spring-fed wetland complexes in sandstone canyons south of the village of Dixon set amid the area's piñon-juniper woodlands. The WAP also describes, although in less detail, the existence of riverine wetlands and riparian areas along the perennial and intermittent streams in the lower watershed area.

Many of the wetlands are dominated by a woody component of cottonwoods, willows, and Russian olives. Wetland degradation has led to die-back of the riparian woody vegetation. Due to the close proximity of most wetlands to the woodland ecosystem and to residential areas, many wetland areas are part of the Wildland Urban Interface of the Dixon Volunteer Fire District and at an elevated risk of wildfire. The riverine wetlands with "bosques" of cottonwoods, willows, and Russian olives are particularly susceptible to fire and possible wildfire in these wetland bosques poses a high risk to surrounding community values.

The WAP explains the importance of wetlands in relation to flash flood control and the capacity of wetlands to buffer flooding impacts on downstream communities. The WAP describes the causes and likely sources of flash flooding in the landscape and how flash flood processes would be exacerbated by wildfire. The loss of the wooded wetland areas to fire would greatly increase the risk of post-fire flooding in the community and of increased sediment pollution in the Rio Embudo and Rio Grande.

The 2023 WAP provides a comprehensive table of priority actions for wetland restoration and conservation as well as descriptions for community outreach and organizing. Implementation of these proposed actions would help reduce the drying impacts of the changing climate on the wetlands and increase community capacity for ecological stewardship. Together, these activities would directly support the goals of the CWPP.

2020 New Mexico Forest Action Plan

The 2020 New Mexico Forest Action Plan (FAP; EMNRD 2020) provides detailed information about the state's natural resources, including threats to resources, resource assets, resources at risk, and data gaps, as well as a series of strategies to manage forest and watershed resources at risk. The FAP identifies Shared Stewardship Priorities by HUC-12 watersheds. This process involves the use of Scenario Investment Planning (SIP) analysis to align restoration activities with state and regional management goals, weighing various options to determine where agencies can invest to get the most benefit from each restoration dollar spent (EMNRD, 2020). The analysis investigates where activities can achieve multiple objectives, including reduced wildfire risk and post-fire impacts on water supply and quality, communities and infrastructure, and biodiversity for each HUC-12 watershed with forest and woodland land cover types. Four HUC-12 watersheds that comprise 99.6% of the land area within the Dixon Volunteer Fire District were included in this analysis. The FAP'S Priority Landscapes Model is a product of the SIP analysis which identifies watersheds that score in the top 500 of watersheds across the state for meeting water, community, or biodiversity objectives. The four HUC-12 watersheds within Dixon each scored within the top 500 watersheds for all three objectives (Figure 1), making this a high-priority landscape for forest and woodland restoration activities. This information is intended to guide partners in planning, funding, and conducting restoration activities across jurisdictions. Effective implementation of the CWPP will, therefore, greatly contribute to the goals of the FAP and the reduction of risks to biodiversity, communities, and water resources in these watersheds.

2018 NM State Hazard Mitigation Plan

The New Mexico Department of Homeland Security and Emergency Management (NM DHSEM) released an update to the statewide Natural Hazard Mitigation Plan in 2018. The community of Dixon (within Rio Arriba County) falls into Preparedness Area 3, along with the counties of Taos, Santa Fe, and Los Alamos. Within Preparedness Area 3, the plan's vulnerability analysis describes wildfire as the top priority hazard, followed by flood and drought. The plan encourages the development and regular updates (every 5 years) to CWPPs as a key mitigation strategy for wildfire hazards.

https://drought.unl.edu/archive/plans/GeneralHazard/state/NM_2018.pdf

Rio Arriba County also has a hazard mitigation plan; however, it covers a limited jurisdiction within the county in which Dixon is not included.

2020 BLM Copper Hill Vegetation Restoration Project Environmental Assessment

In 2020 the BLM published an Environmental Assessment (EA) of an area of approximately 26,360 acres which encompasses much of the Dixon Volunteer Fire Department's district (approximately 68% of the land area; Figure 12). The EA proposes to implement a fuels management program across the project area to reduce hazardous fuels and protect and enhance the area's ecological diversity with the ultimate goal of returning the area to a state where fire can be carried in a manner that is consistent with historical dynamics. The proposed action includes the use of prescribed fire on 10%-25% of the BLM project area, thinning of approximately 5,400 acres of forest, the reduction of invasive and noxious species across 220 acres of riparian forest, and the treatment of fewer than 250 acres of sagebrush-dominated areas primarily with prescribed fire and possibly with the use of a targeted herbicide for sagebrush. Many of the actions proposed in the EA fall outside of the district; however, all riparian treatments and a small portion of ponderosa thinning is proposed within the district. The plan also proposes to manage the entire project area to utilize unplanned wildfire ignitions, meaning that in the event of a wildfire start anywhere in the project area, the fire would be managed to meet the objectives of hazardous fuels reduction and restoration.

The EA details the precise methods to be used for each action and discusses the potential impacts of the proposed actions on soils and soil erosion, herbaceous and woody vegetation, invasive/non-native species

proliferation, sensitive/threatened/endangered species, migratory birds, the Copper Hill Area of Critical Environmental Concern (ACEC), cultural resources and management, and public safety within the WUI areas. The EA also describes current conditions which include unnaturally high densities of trees and high basal areas and elevated risks of crown fire due to climatic variations, fire suppression, past logging practices and livestock grazing in the past century.

The EA further enforces many of the recommendations laid forth in the CWPP priority actions, especially pertaining to bosque fuel reductions via the removal of invasive/noxious species and thinning of dense piñon and juniper stands surrounding WUI areas and high-risk communities. The goals of the EA also tie into larger plans including the BLM Taos Resource Management Plan (2012), and the BLM Farmington Fire Management Plan (2017) , and the need for the proposed actions are supported by the NM Statewide Assessment Strategy (EMNRD, 2010) . BLM land represents a majority of land ownership in the district (~66%) and therefore the completion of an EA for much of their land within the district represents a significant opportunity for wildfire preparedness activities outlined in this CWPP.

Geospatial Analysis and Map Descriptions

Additional information regarding the maps in Figures 4-11 is available in Table 1.

Fire Threat Analysis

A critical component in the creation of a CWPP is the identification of areas with the greatest threat of wildfire to aid in the documentation of priority actions that are specific to the conditions on the ground (Williams et al., 2013; Brummel et al., 2010). Using a data-driven process to locate these treatments can lead to better outcomes and a better cost-benefit ratio (Low et al., 2010). This process is also useful for identifying wildfire threats that confront stakeholders and residents so that they may be encouraged to take action. Wildfire risk is determined by locating the intersection between areas where hazard occurs and the values that are placed at risk by that hazard (Bar Massada et al., 2009).

To establish a rating of wildfire risk for the Communities at Risk rating, the stakeholders of the CWPP Core Team used a collaborative process to identify important values in the community, including human infrastructure such as homes, communication towers, or powerlines, as well as areas that provide public benefits, such as water infrastructure for acequias and public water systems. By determining the fire hazard rating at those values, a preliminary assessment of the fire risk was made. This risk assessment was then modified by adjusting ratings according to local knowledge, including prevalent features throughout the community such as limited ingress/egress, water sources, and potential infrastructure issues. Even though the threat map does not show the conditions of any one real-world fire, it shows how fires under a single set of modeled fuel and weather conditions will burn across the entire district to aid in comparing the risk in one area relative to another area.

The wildfire threat map was created utilizing spatial data from the 2020 NM Forest Action Plan, which considers fuel and topographic conditions (EMNRD, 2020). Wildfire threat combines burn probability and conditional fire intensity into a single value that together identifies threat at a pixel level (EMNRD, 2020). Burn probability describes the likelihood that a fire will start or spread in a given location, taking into account the connectivity of fuels surrounding a location, wind direction patterns during fire season, and the likelihood of an ignition occurring in a place that will spread to the given location (EMNRD, 2020) Conditional fire intensity describes the probability that the fire will burn at a specific intensity if that location does burn, which depends on fuel loading, weather conditions, and topography (Andrews, 2018). Together, this data portrays the relative threat of wildfire in one area compared to another. Ultimately the threat of a wildfire, its intensity, and the probability of it occurring, combined with its likelihood to impact values at risk, such as communities and communication points (Scott et al., 2013), will determine the priority of wildfire preparation and mitigation actions across the community.

It is important to understand the assumptions and limitations of this map before its use in determining wildfire risk. Before this map can be used to determine wildfire risk it is important to understand its assumptions and limitations. The modeling that is depicted in the maps below uses historical weather conditions observed by Remote Automated Weather System (RAWS) from each predictive services area and historical ignitions of fires over 300 acres (from 1992-2011). Additionally, the modeled conditions are based on assumptions of fuel data from 2012 LANDFIRE. The wildfire threat map does not reflect changes in fuel conditions from fuel treatments or wildfires since 2012. It's crucial to understand that this map is simply a model based on one set of conditions we chose to closely match reality. Actual fires in Dixon could be influenced by an infinite set of weather conditions that are not represented in this model.

However, given these limitations, this model will give stakeholders in the CWPP process a visual basis to help frame what they already know about wildfire hazards. The threat map shows how fires under a single set of conditions will burn across the community to aid in comparing one area relative to another area.

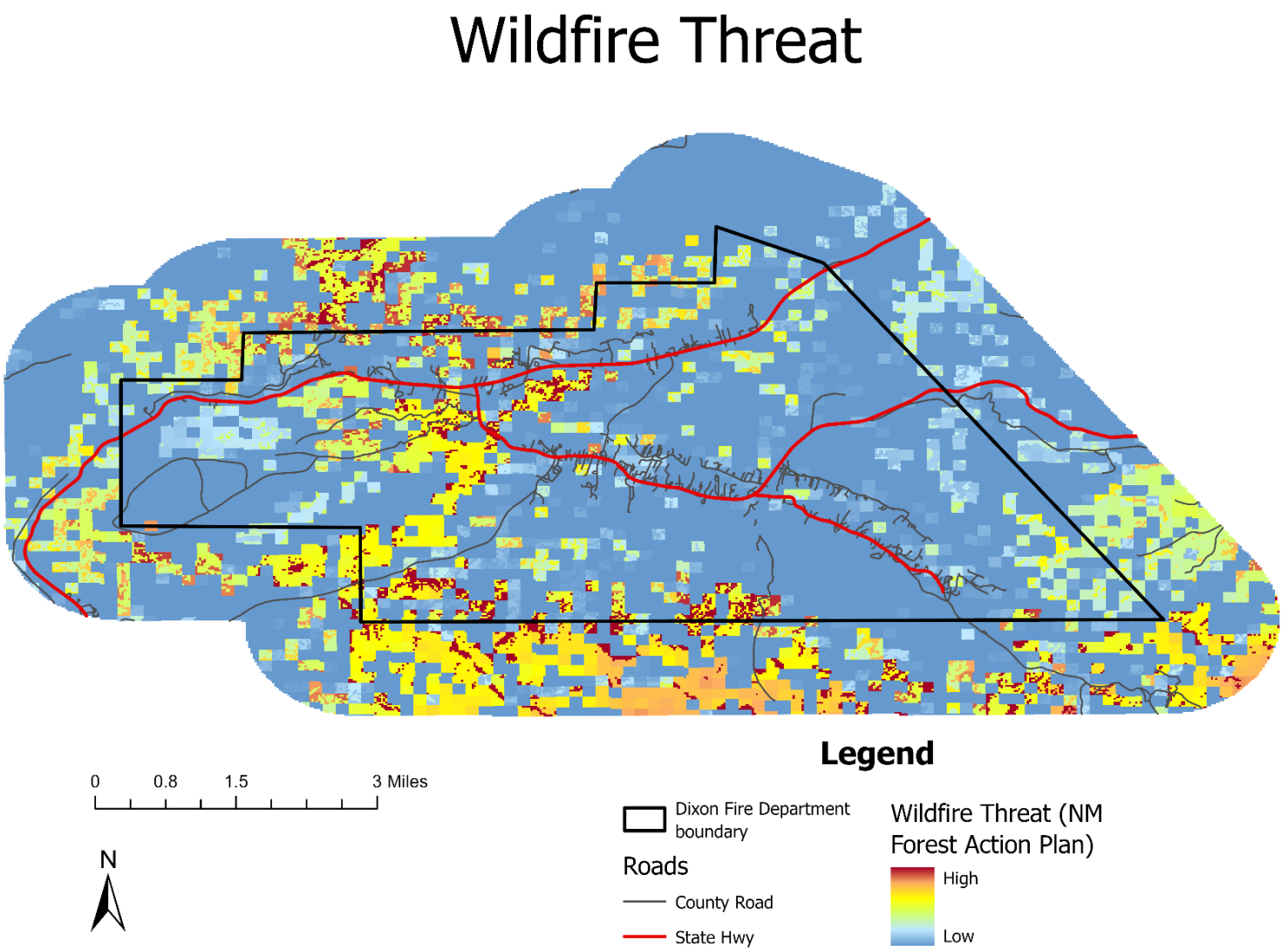

Figure 2 Wildfire Threat Map from 2022 NM FAP.

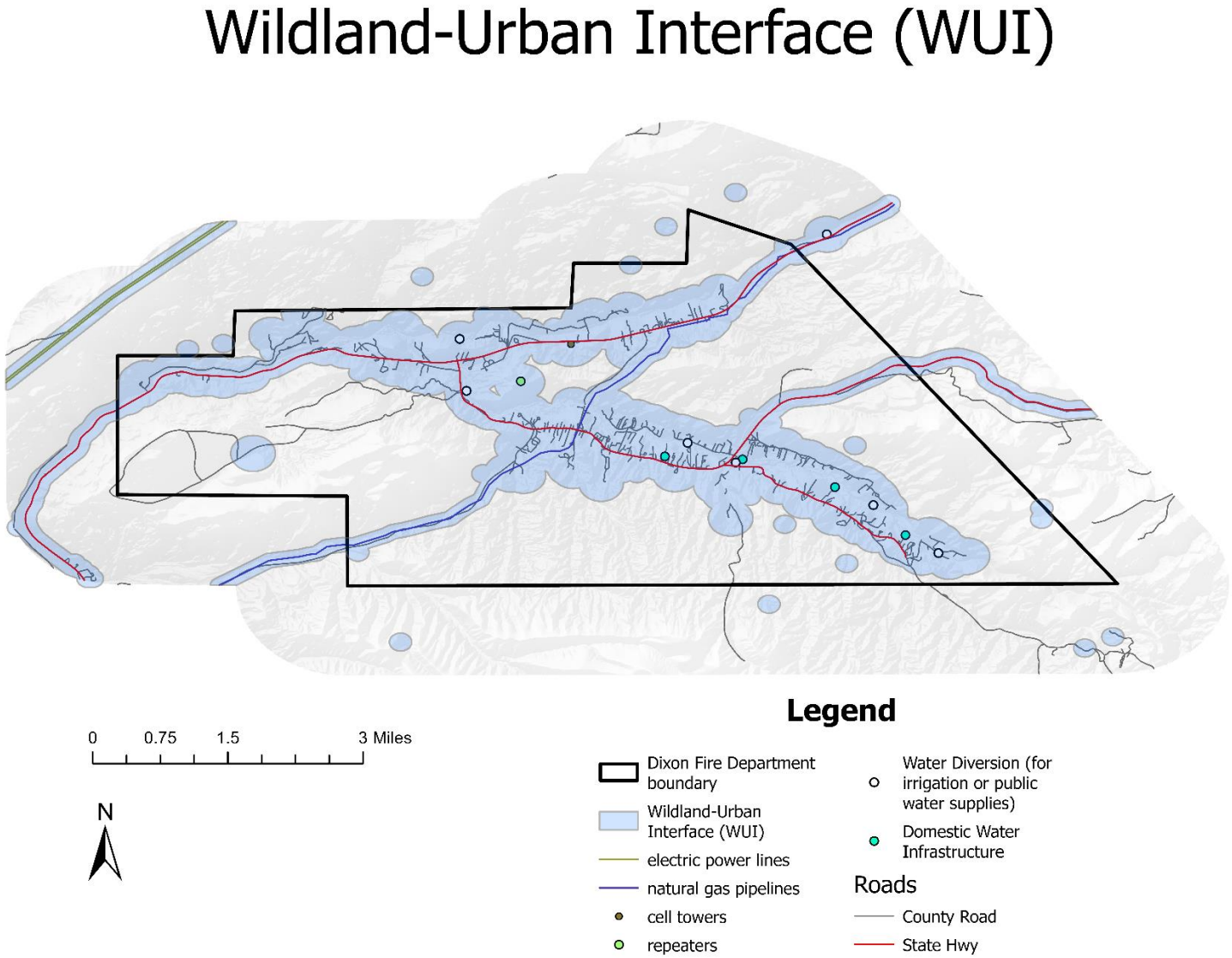

Figure 3 The Wildland-Urban Interface (WUI) Map. For more information see pg.43 (WUI Determination Process).

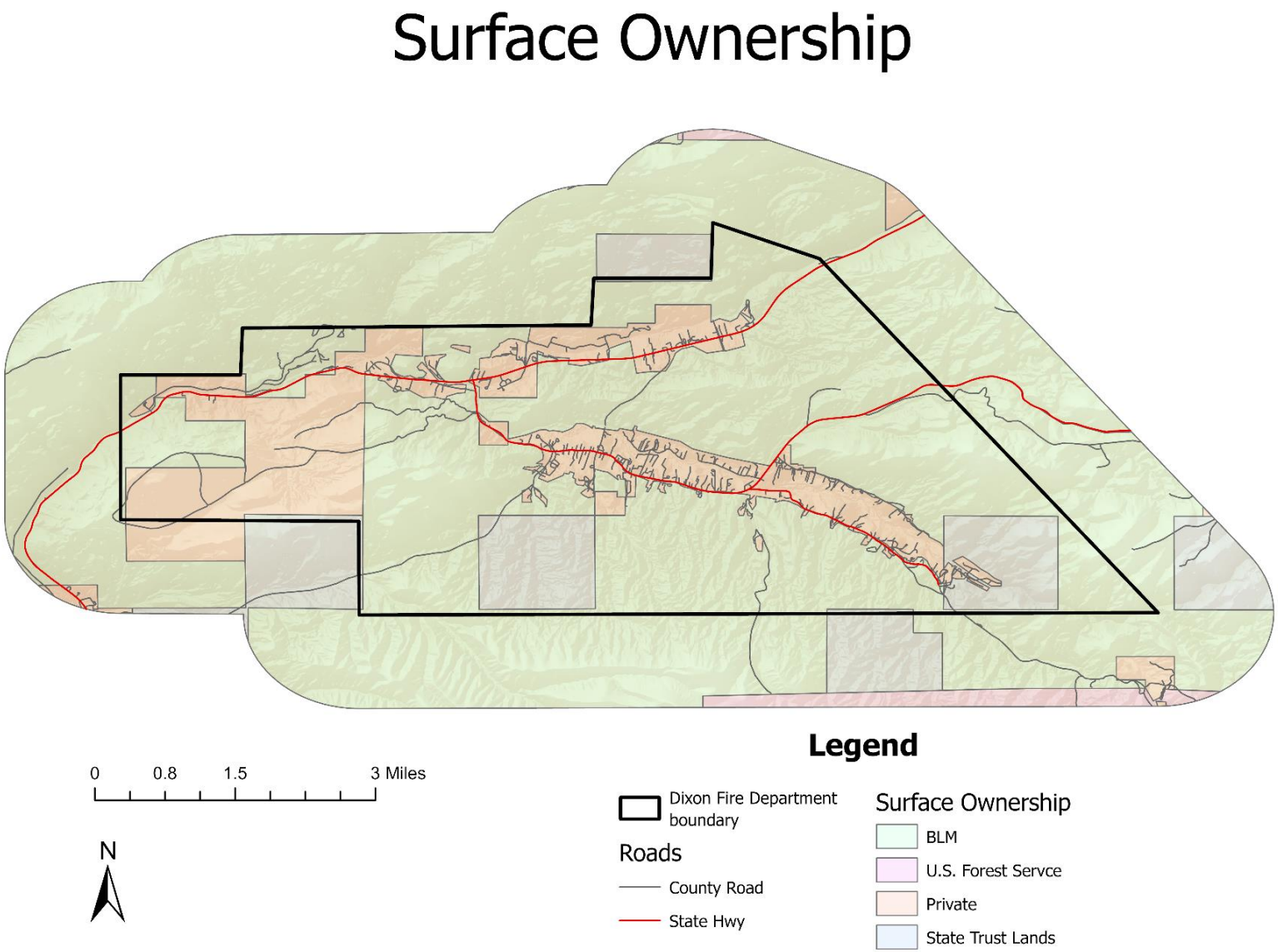

Figure 4 Surface Ownership Map.

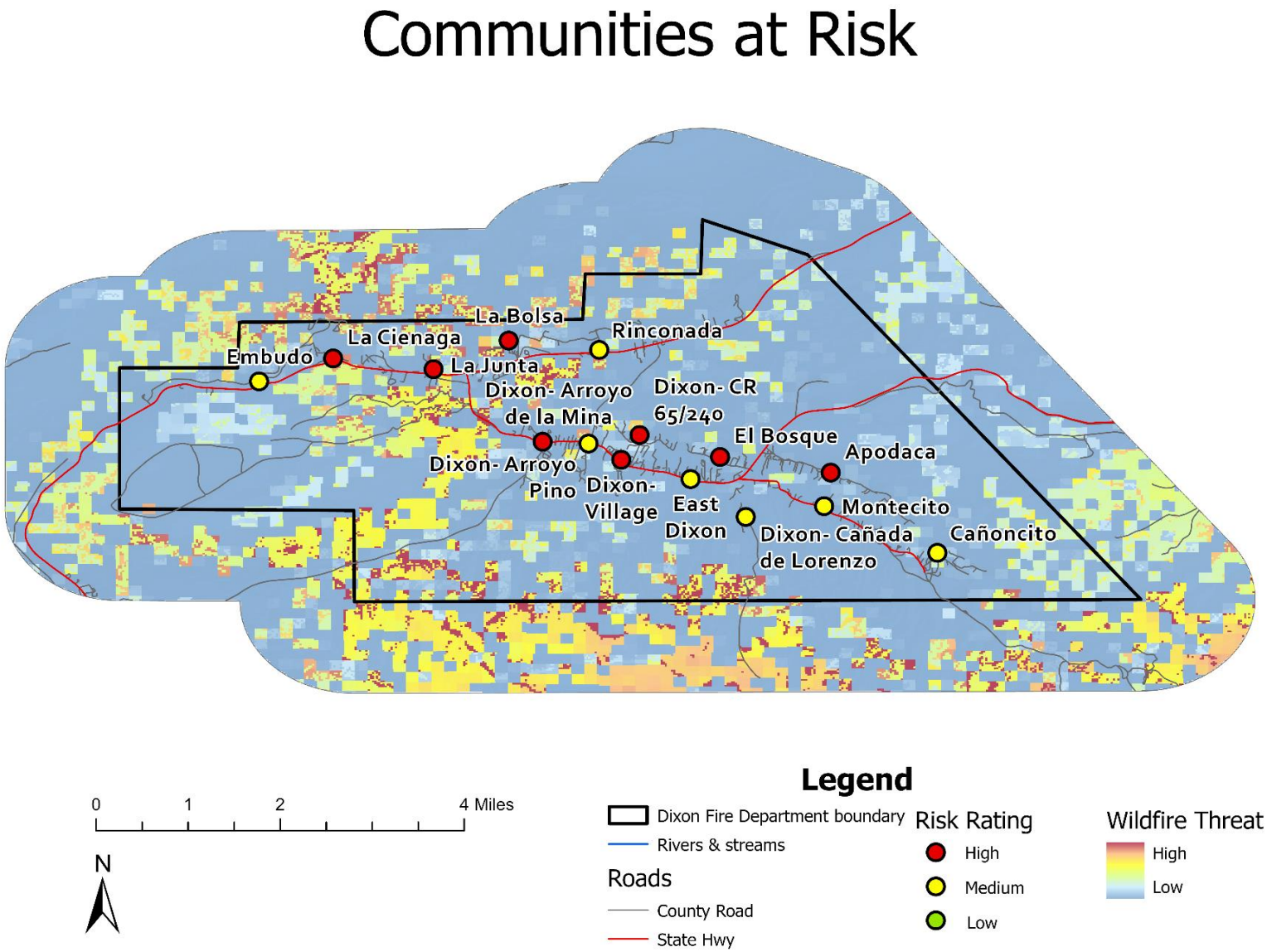

Figure 5 Communities at Risk Map displaying wildfire threat from the 2020 NM FAP.

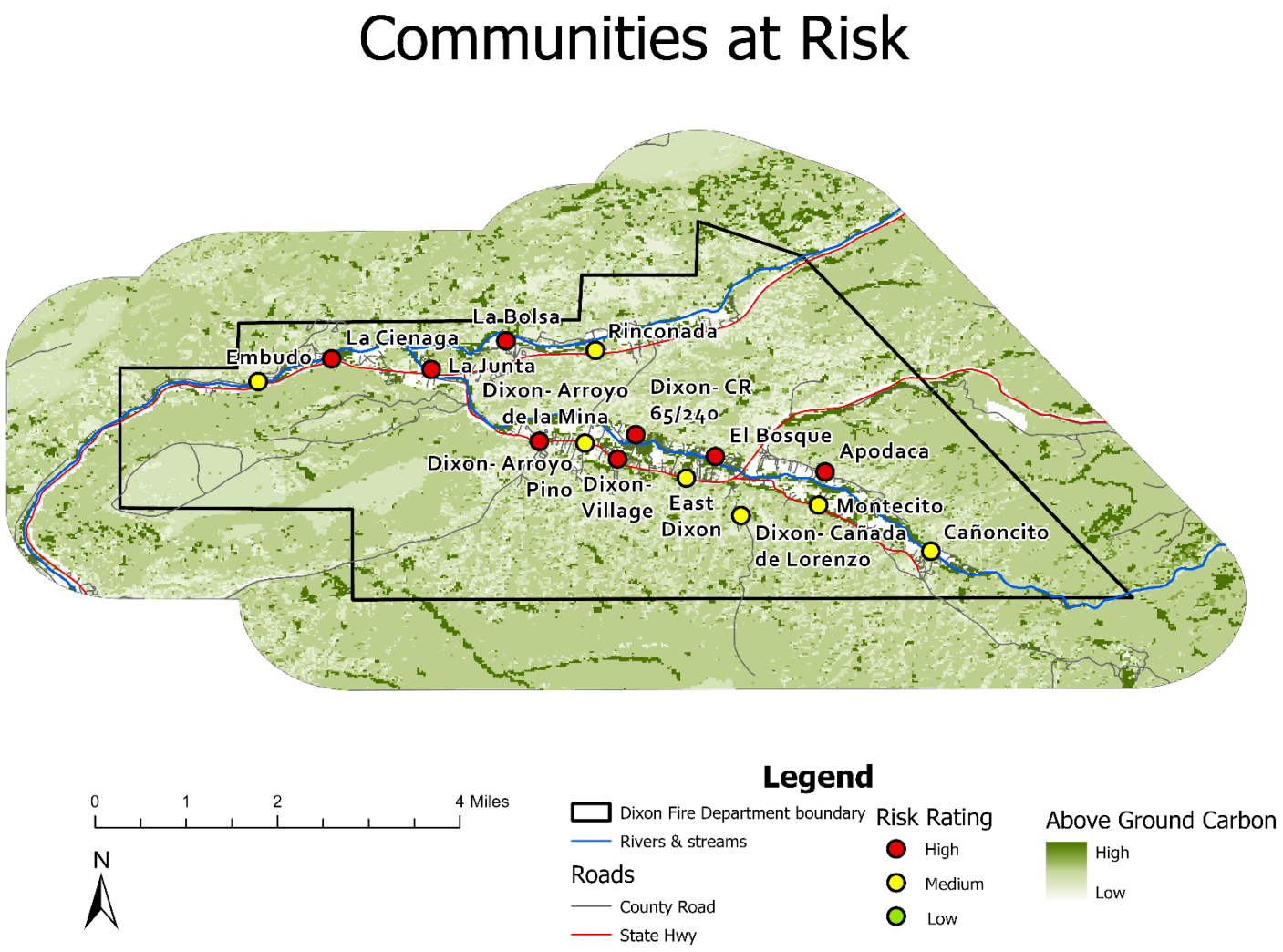

Figure 6 Communities at Risk Map displaying above-ground carbon levels from the 2020 NM FAP which includes living and dead biomass as a surrogate for overall fuel loading. This map shows that while the fire threat is not particularly high surrounding many of the high-risk communities (previous map), there is a high density of vegetation along the river corridor, which together with limited ingress/egress and community values and resources at stake, create a high risk for these communities.

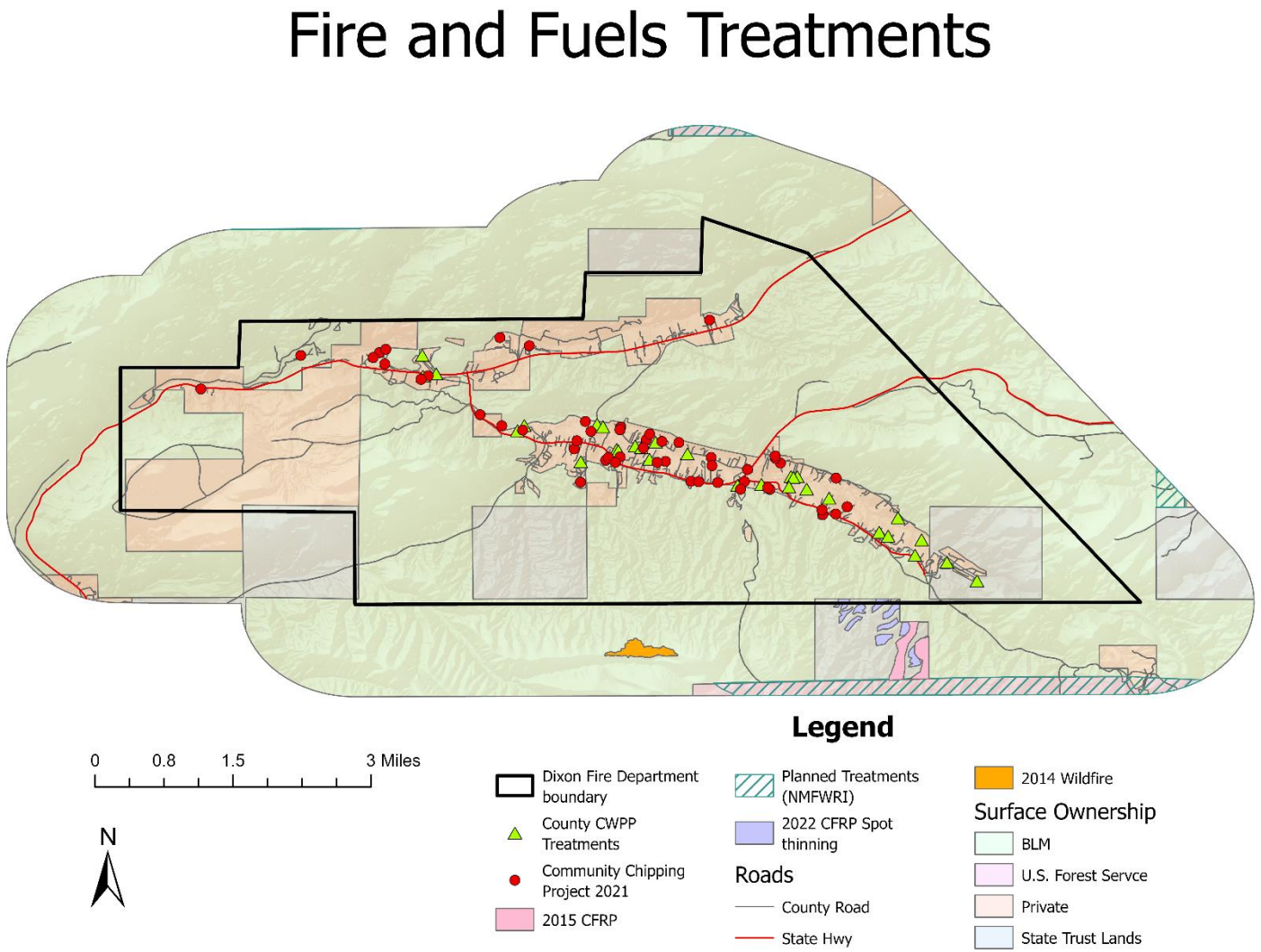

Figure 7 Treatment and Fire Areas Map. Wildfire perimeters were obtained from a New Mexico State Forestry Division database. Treatments are further described in the Accomplishments section.

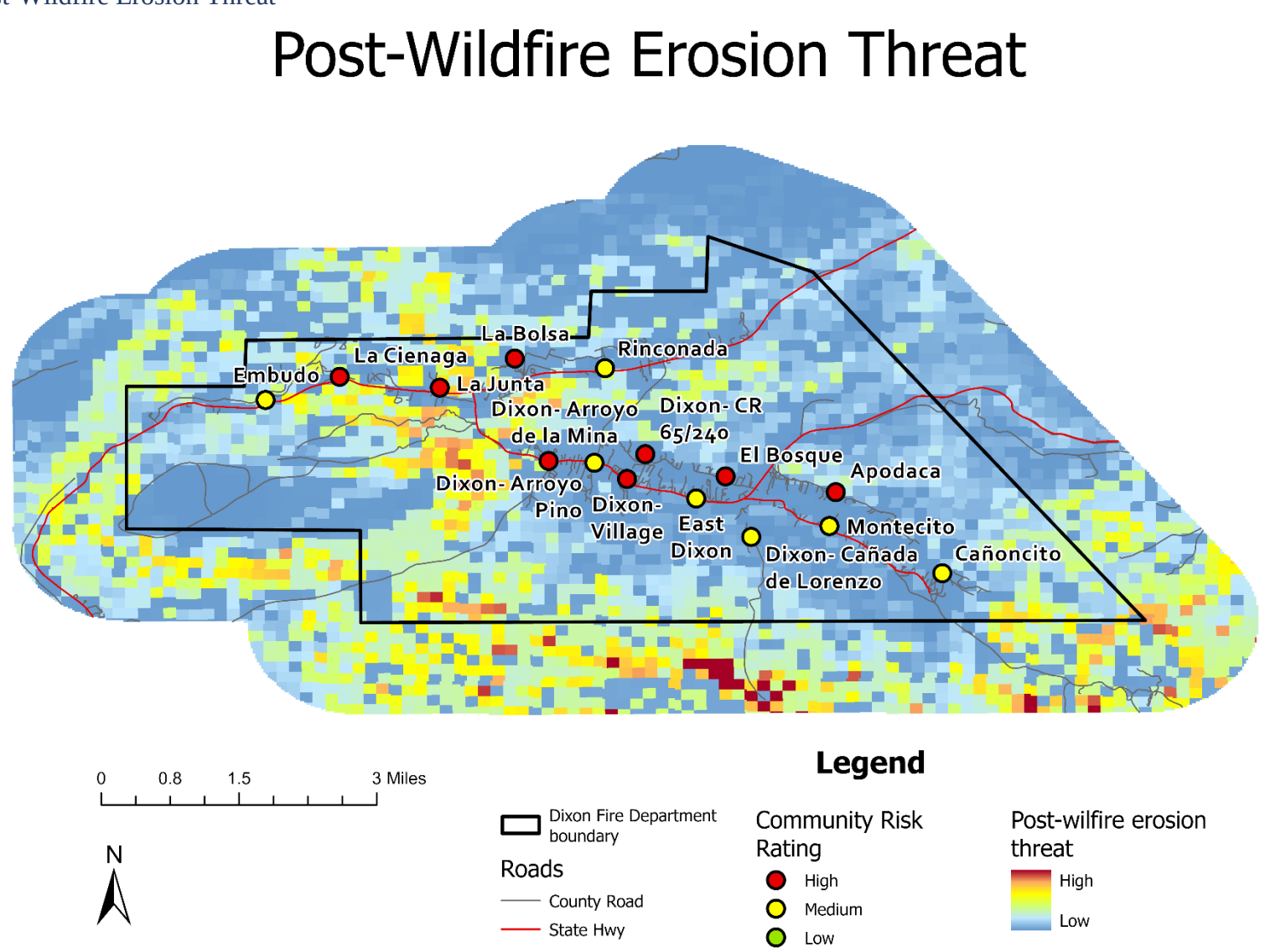

Figure 8 Post-Wildfire Erosion Threat Map.

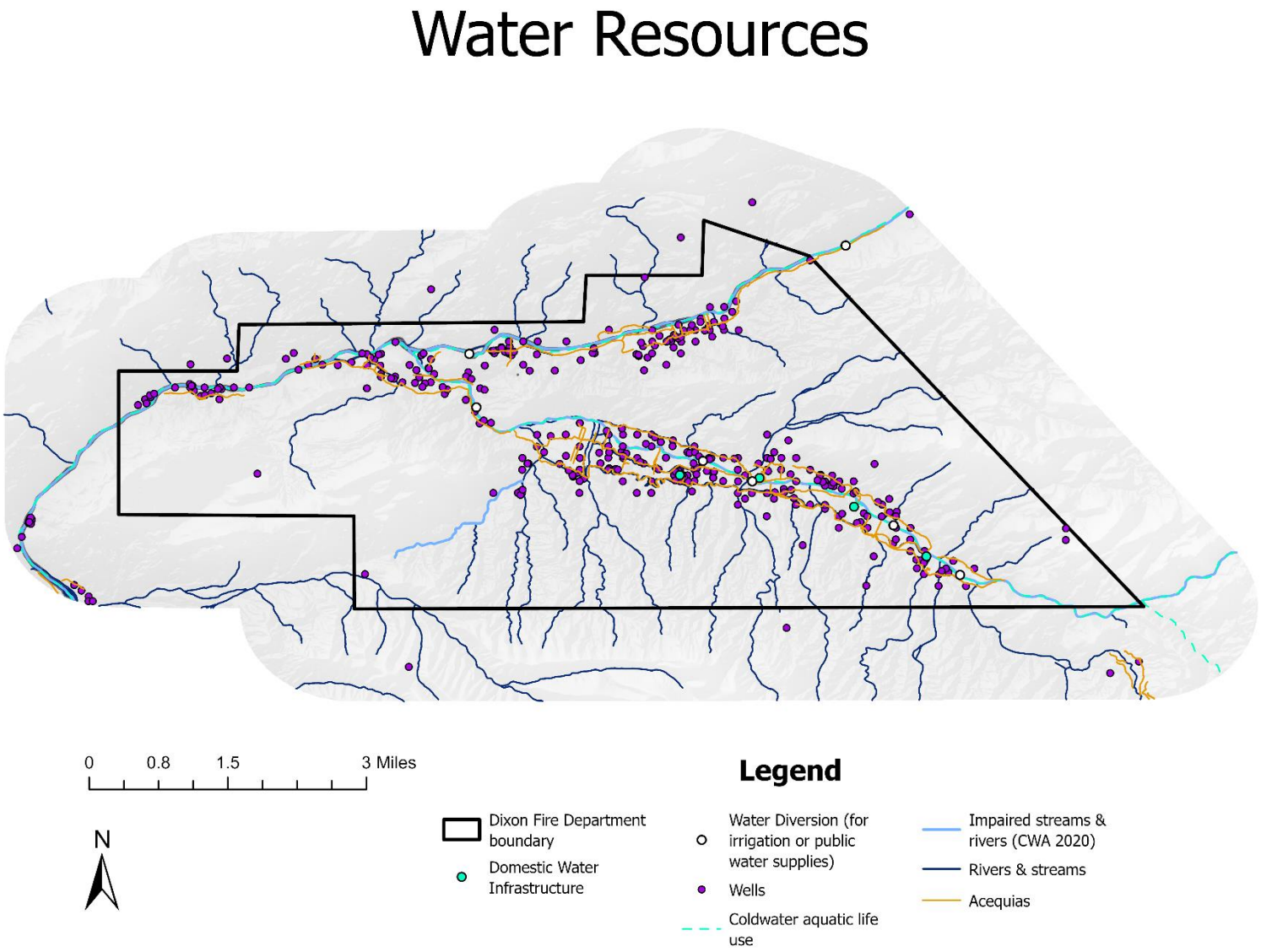

Figure 9 Water Resources Map.

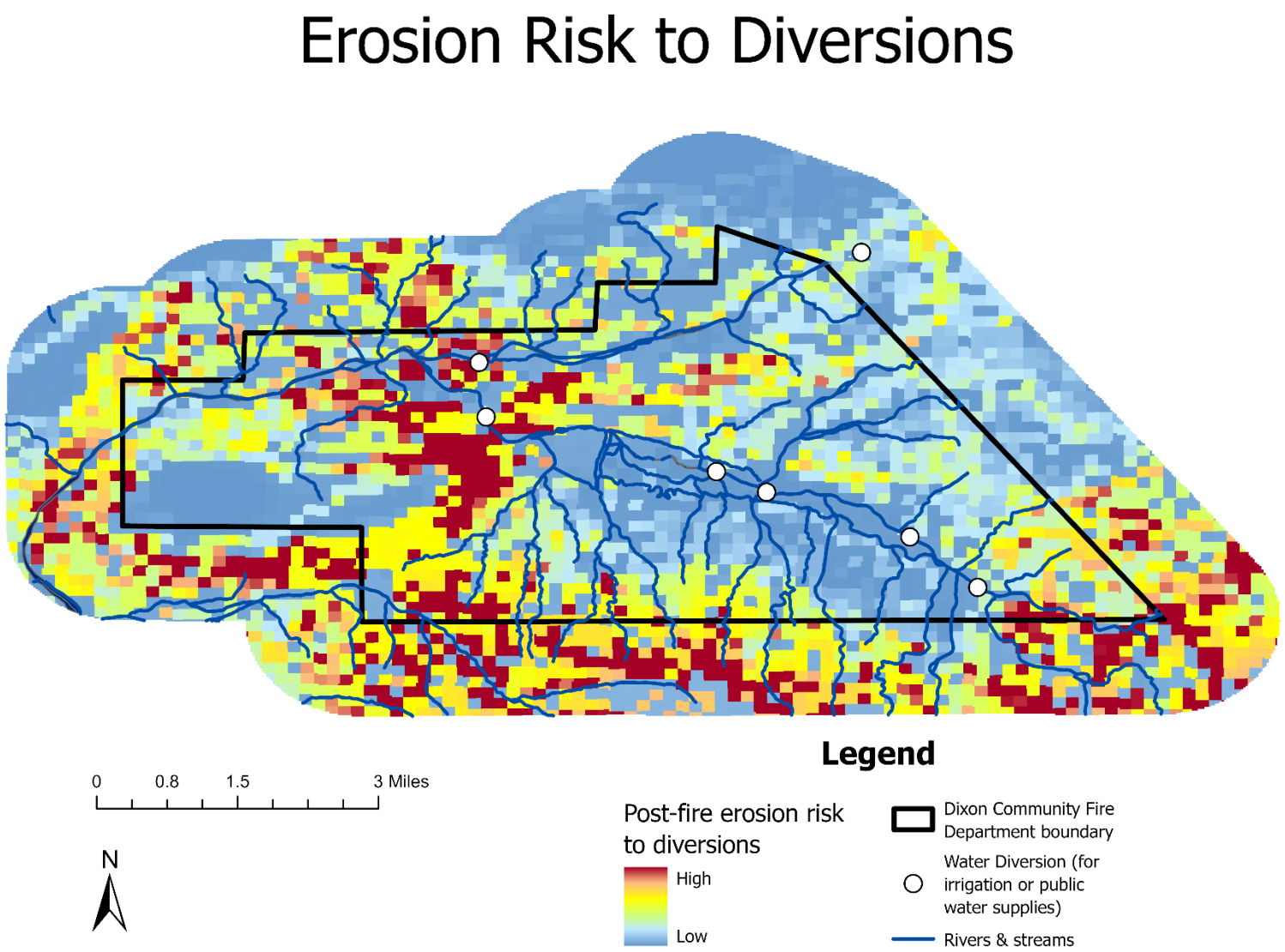

Figure 10 Post-fire Erosion Risks to Diversions Map.

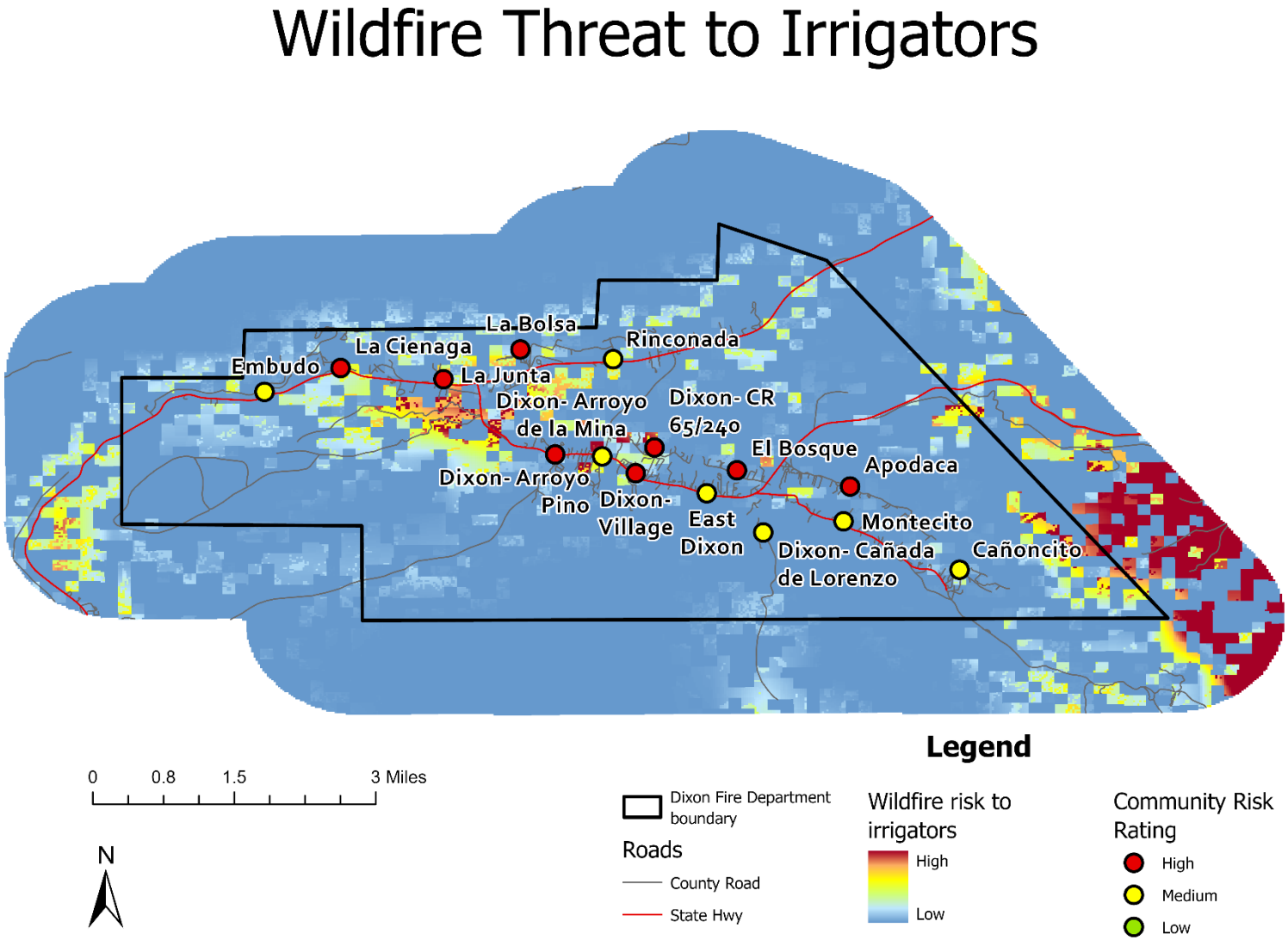

Figure 11 Wildfire Risks to Irrigators Map.

BLM Copper Hill Environmental Assessment Boundary and Treatment Areas

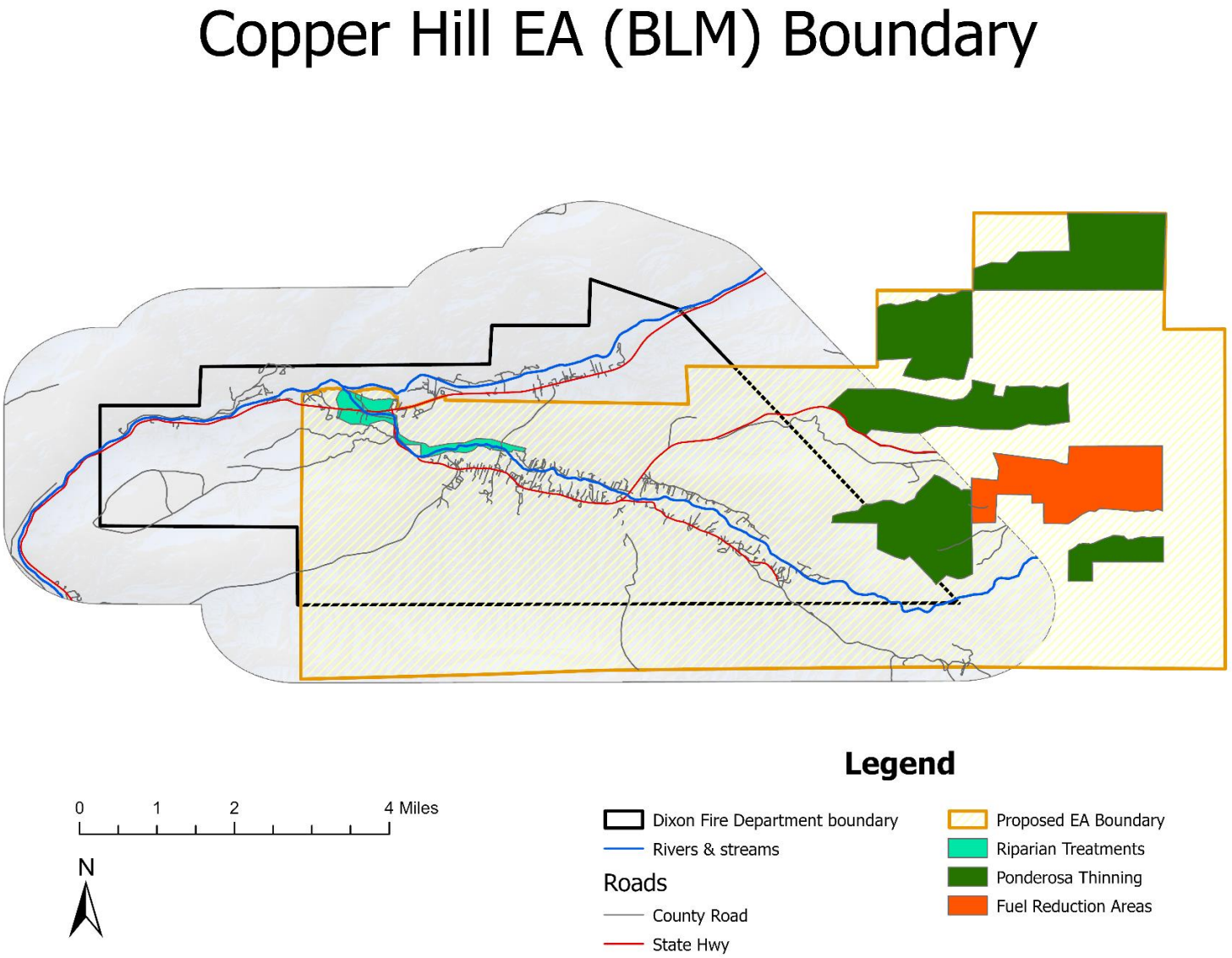

Figure 12 Map displaying BLM's Copper Hill EA boundary and proposed treatment locations in relation to Dixon FD boundary.

Map Descriptions

Table 1 Additional map descriptions for Figures 4-11.

Map Title	Map Description
Surface Ownership (Figure 4)	The surface ownership map displays the ownership of land by the various public land managers and private entities within and immediately surrounding the Dixon Fire District. Data were obtained from the BLM.
Communities at Risk (Figure 5 & 6)	This Communities at Risk Map displays communities that are at risk of wildfire within Dixon. Key factors determining wildfire risk aside from a community's hazard rating include ingress/egress, water resource availability, and values at risk. The communities are portrayed with the wildfire threat data (Figure 5; described on pg. 18) and with above-ground carbon data (Figure 6) which is a proxy for fuel loading obtained from the NM FAP.
Fuel Treatments & Wildfires (Figure 7)	Fuel treatments and prescribed fires were identified by project partners and the New Mexico Forest Treatments map. This map is a collaborative effort to record and make available key data about projects that are occurring across all jurisdictions in New Mexico to facilitate well-informed decision-making for future planning. It is hosted by the New Mexico Forest and Watershed Restoration Institute (NMFWRI) and managed by the NMSF Division's Forest and Watershed Health Office.
Post-Wildfire Erosion Threat (Figure 8)	This map displays post-fire erosion hazard accounting for the probability of each map pixel burning and the expected intensity of erosion. Erosion intensity is a combination of soil kf-Factor and slope. Data were obtained from the NM FAP.
Water Resources (Figure 9)	This map documents the locations of critical points of water resources throughout the community to support mitigation activities related to the protection of water resources and infrastructure. Data were obtained from the NM RGIS database, the NM FAP, the Office of the State Engineer, and the NM Environment Department.
Post-Fire Erosion Risk to Diversions (Figure 10)	This map identifies areas that are likely sources of post-fire erosion risk. These areas are located in contributing areas immediately upstream from points of surface water diversion used for irrigation and public water supplies. Data were obtained from the NM FAP.
Wildfire Risk to Irrigators (Figure 11)	This map depicts wildfire risk to irrigators dependent on surface water. This map identifies where water sources that are most valued by irrigators are most at risk of wildfire. This layer was created by overlaying wildfire threat data with surface water runoff and weighted by beneficiaries. Data were obtained from the NM FAP.

Priority Actions

In this CWPP "Priority Actions" include bottlenecks and prerequisites in the realm of coordination, planning, and capacity building for accomplishing listed priorities and priority actions at an implementation level. Other requirements include clarity in the procedures and funding mechanisms between state and federal entities and community organizations (e.g., fire departments, Fire Wise groups, and watershed associations) for local entities in support of the preparation of project proposals for funding.

Table 2 Priority Action Table. Note, actions indicated as a "high" priority include only those actions which the DVFD deems urgent and considers feasible for them to accomplish within the next five years. Many actions where no indication of a "high" priority level has been given may also be considered high priority by other groups or individuals within the community; however, they fall outside of the high priorities the DVFD may work to accomplish in the next five years. Other groups are encouraged to supplement the work that the DVFD is doing to make the district better prepared for wildfires by working towards the implementation of such actions.

Priority Fuel Reduction Projects

Priority Level	Action Description
HIGH	Bosque fuel reductions- thinning of non-native salt cedar and Russian olives, removal of dead and dying stands of willows and cottonwoods, and thinning of thick stands of wild plum
HIGH	Annually, complete a survey of fuel loads to help identify areas of concern
HIGH	Clearing fire hazards surrounding homes such as wood piles, chamisas, brush, and weeds
	Thinning along roads, major evacuation routes, and power line corridors
	Thinning of dense piñon and juniper stands surrounding WUI areas and high-risk communities, including on State Trust Lands
	Thinning of mature stands on CR 64 and NM 75 and/or creating fire breaks in these areas

Community Involvement

Priority Level	Action Description
HIGH	Seek partner organizations and build community capacity for applying for and acquiring grants for thinning projects and other wildfire preparedness measures
HIGH	Educate the community on Firewise certification and how this may be integrated with "Floodwise" planning through tabling at and hosting community events
HIGH	More public education and outreach- especially regarding general fire education, defensible space and associated cost-share programs, home protection, structure construction, fire proximity, post-fire preparedness, self-checks, propane, preplans, and the Ready Set Go! program. Create pilot projects for thinning, home retrofitting, and defensible space and have demonstrations to educate the public. Create fliers with preparedness information and to-do lists and other educational content such as maps. Educate residents on the need for evacuation kits and encourage them to prepare kits ahead of wildfire season.
HIGH	Continue to host community chipper days to aid in slash removal and establish a central accumulation site for landowners to bring debris when chipper days are not happening

HIGH	Special outreach to community members who have land that is within the bosques, adjacent to the bosques, or along arroyos to encourage participation in fuel reduction efforts. All residential structure owners should be encouraged to create clear spaces around their homes that will reduce the likelihood of spread to their homes.
HIGH	Recruit community members to serve as liaisons between the fire department and the community to assist during times of emergency, such as directing traffic, aiding in evacuations, and being in charge of communications and outreach
HIGH	Train and certify more local people on sawyering

Wildfire Preparedness

Priority Level	Action Description
HIGH	Host training on defensible space and home hazard assessments so that more individuals are equipped to perform these tasks
HIGH	Identify and address neglected and overgrown fields leading to the river that do not have adequate access for the Fire Department to reach the water from the river
HIGH	Enact very conscientious enforcement of burn bans
HIGH	Plan for smoke mitigation, such as educating the public on necessary safety precautions, obtaining HEPA filters, and donating HEPA filters to high-risk individuals
HIGH	Educate the community on the need for flood and fire insurance and on general resources available for residents to prepare for fire (such as Firewise resources)
HIGH	Create a list of people needing assistance evacuating in case of fire or another emergency
HIGH	Work with Dixon Animal Protection Services to create an inventory of people with needs and supplies such as individuals with livestock or large animals, and people with trailers or trucks available to help during evacuations
HIGH	Work with Embudo Valley Library to develop a plan for preserving important items and documents such as establishing fire-safe storage for historic documents and artifacts
HIGH	Establish with Rio Arriba County Fire & Emergency Services a secondary evacuation center at the Dixon Community Center
	Establish one or more safe air quality space(s) in the community for times of hazardous air quality
	Use a donated drone to conduct seasonal reconnaissance of field build-up
	Conduct systematic mapping of access issues, areas of built-up fuels, potential locations for fire breaks, and other potential hazards for DVFD apparatuses such as culvert locations
	Host trade-in days for fire extinguishers to reduce the chance of a house fire spreading in WUI areas

Communication

Priority Level	Action Description
HIGH	Develop a community-specific alert system. The County alert system is too broad and utilized with such frequency that people do not heed its warnings. Develop a phone tree, an automated call or text system, and an alarm system to better notify all community members in case of emergency, including a backup system in case phone lines and internet are down.

HIGH	Develop a local phone book or another repository of contact information for emergency communication and wellness checks (individuals on oxygen), including a section with important individuals whom the FD may need to coordinate with during emergencies including those involved with critical infrastructure such as public water systems and acequias, propane, and gas companies
HIGH	Install additional repeater(s) to improve communication between the department and central dispatch and to improve cell phone coverage across the district to ensure people can receive notifications
HIGH	Utilize DCFD, social media, local radio, flyers, and news sources to spread awareness about community events, trainings, resources, evacuation plans, and emergency notifications. Host more community events at the FD.
	Utilize the Shared Stewardship Portal to map completed and planned projects.
	Improve coordination between DVFD and Jemez Mountains Electric Cooperative to accomplish additional tree-trimming work around primary electric lines
	Ensure that Dixon and surrounding Fire Departments all have BK radios to support communications between FDs and incident command
	Acquire programmable traffic signs to alert the community of evacuations and other important updates during natural disasters with a backup source of electricity

Reducing Structural Ignitability

Priority Level	Action Description
HIGH	Conduct home assessments for interior fire risks including inspections of fireplaces and stoves. Include education about portable space heaters and associated risks
HIGH	Raise money to cover 100 community chimney cleanings annually
	Support farmers and homeowners in establishing outdoor sprinkler systems for fire prevention. If water is connected to municipal drinking water supplies this will need to be coordinated with local water systems to ensure water is not drawn down in excess
	Develop funding sources and guidance to retrofit homes with fire-resistant building materials as well as adjust exterior features (i.e. roofs, eaves, and soffits) and designs to be more fire resistant
	Enact more defensible space projects with special assistance for elderly or non-abled individuals
	Establish/update County ordinances about roofing and construction materials and develop defensible space codes
	Conduct home hazard assessments for community members, especially in high-risk and/or low-income communities
	Develop guidance for new home builders to utilize wildfire-resistant building materials and designs
	Work with gas companies to take stock and update gas meters
	Develop a community-wide plan to use IRA and other federal money to upgrade electrical panels

Post-Fire Flooding, Erosion, & Recovery

Priority Level	Action Description
HIGH	Establish whether the Dixon VFD is the information and response hub for flooding, wildfires, and other natural disasters and prepare accordingly.

HIGH	Work with NMDOT to address bridge infrastructure at risk of failing, such as bridges on CR 75 and CR 65. Assess other bridges throughout the community and replace them as necessary
HIGH	Maintain an inventory of sand and bags at DVFD for flooding response
HIGH	Formation of a watershed association or other local organization that would be eligible to receive recovery funds
HIGH	Designate a community member as the point of contact to work with Rio Arriba County to navigate disaster recovery and funding
HIGH	Pre and post-fire assessments to determine where risks exist and what recovery needs are
	Develop a protection and rapid recovery plan for water and gas lines as well as other buried lines and electricity
	Obtain more resources for debris and sediment removal following disasters. Acquire equipment and train community members in heavy equipment use to build local capacity for clean-up and recovery efforts
	Develop reserve to make water and food reserves available to the community following major disasters
	Participate in trainings on contour feeling and bank stabilization practices
	Outfit arroyos with check dams to soak in more water and reduce downstream flooding
	Education about federal and state funding opportunities following emergencies, such as what is available and who can apply. Special attention and education for resources relating to acequia and drinking water infrastructure damage and recovery. Include trainings on initiating and navigating the FEMA process
	Work on upland areas owned by BLM and a lesser amount of State Trust Lands to work on flooding, erosion control, and fire risk issues.
	Establish local groups of able-bodied individuals who can help neighbors during post-disaster recovery, need to have paid positions because few young and able-bodied members of the community have the ability to donate time
	Educate the community on flood mitigation practices and resources such as "New Mexico After the Fire"
	Develop a strategy for better coordination between County, State, and Local authorities following emergencies
	Work with NOAA to receive early warnings about large storms that may cause flooding and build this information into the community alert system
	Establish a system to assist private well owners with water testing post-fire and flooding

Fire Responders and Equipment

Priority Level	Action Description
HIGH	Acquire a "Quick Attack" vehicle that offers the functionality of a fire engine with a smaller profile to fit down the many narrow roads and driveways in Dixon.
HIGH	Locate and map water access points, possibly develop water access points in areas without fire hydrants
HIGH	Build capacity for DVFD to better aid the community during natural disasters. The FD needs a manned office within the building during these events to help provide the community with resources and be available for consulting.
HIGH	Obtain a small 4x4 utility vehicle with a pump and equipment
HIGH	Acquire chainsaws and sawyering gear

HIGH	Provide additional training opportunities such as ICS trainings, prescribed fires trainings in surrounding areas, training on driving on narrow roads found throughout the community, and training on how to deal with civilian bystanders
HIGH	Acquire additional woodchippers, tractors, and brush trucks to aid in community slash and brush removal
	Obtain additional equipment including upgraded PPE and foam hoses
	Work with local government agencies to develop training for first responders and work closely with government agencies on responding to wildfires
	Obtain fireproof cabinets for institutions with records and other important items such as PPE, medications, etc.
	Recruit responders to take advantage of equipment in Velarde main station, now manned from Alcalde.
	Establish recruitment programs to help obtain and train first responders.
	Acquire additional and higher quality portable water pumps, including smaller pumps that can utilize ditch water
	Acquire handheld bullhorns for communications during natural disasters

Evacuation Planning, Roads, Transportation

Priority Level	Action Description
HIGH	Routinely inspect the many primary evacuation routes that include bridges that can easily be blocked during emergencies and work to identify an alternative route
HIGH	Map out the many areas that have limited access for the FD such as river bottom lands below the plaza
HIGH	Establish an auxiliary team to assist with the communication and execution of evacuations plans and establish a community center or hotline where community members can go for information concerning evacuations, mobilization, and other pertinent information in times of emergency
	Establish a community-wide evacuation plan. Conduct practice drills ahead of time to spread awareness and determine what issues may arise. The plan should focus on the many areas with limited egress and ingress (such as one way in or out) and contingency planning. With limited routes in and out of the community, the plan should identify backup routes (such as the dirt road to Ojo Sarco) and improve those routes as needed, including additional signage and education.
	Inventory existing infrastructure and identify what improvements can be made including where additional roads may be needed to aid in evacuations. For example, roads can be constructed on private lands which can be closed during normal times and opened in emergencies.
	Conduct evacuation planning for livestock and large animals
	Promote broad awareness of future evacuation plans- post routes in communal areas or install road signs

Water Resource Protection

Priority Level	Action Description
HIGH	Collaborate with MDWCAs and EVRAA to identify key watersheds, map water infrastructure, and develop a plan for protecting these areas from being affected by catastrophic wildfire, especially upstream of acequias and public water systems' critical infrastructure
HIGH	Develop an action plan for shutting off acequias so they do not flood
	Mitigation planning and treatments around water infrastructure
	Educate the public on water systems and connection to the fire, including education on potential issues with septic tanks and private wells
	Obtain above-ground water storage tanks for use by residents or Fire Dept. and strategically place them in the community as a backup for filling water tenders if hydrants malfunction.
	Acquire backup generator(s) for water systems. Determine the need for private well owners to have backup power and educate well owners on steps to protect wells before and after fire and flooding.
	Promote constructed wetlands to help clean and retain water in the community
	Identify backup drinking water sources if main water supplies are compromised, especially for private well owners

Adjacent Lands

Priority Level	Action Description
HIGH	Look for opportunities for collaboration across boundaries and land management agencies on fuel projects
HIGH	Improve communications with and involvement of BLM and FS in meetings and planning due to the proximity of their land to the community. Develop a more well-defined communication strategy with the BLM in the case of wildfires extending upslope into their jurisdictions
	Work on flood structures in uplands and on private residences
	Identify locations for people to house livestock, heavy equipment, and other important items
	RX fire training and demonstrations of successful RX fires on FS land. Include opportunities for public demonstration and education on the importance of thinning and prescribed burns

Collaboration

A CWPP must be a collaborative effort involving all parties with a stake in wildfire risk in the community. This ensures that all viewpoints are represented, and the setting of priorities is balanced among all groups (Fleeger, 2008). The 2023 Dixon CWPP was a collaborative effort between the CWPP Core Team and CWPP stakeholders and the community at large. This CWPP features a robust outreach effort that included two Core Team and Community Meetings, an online survey to gather information not obtained through the meetings, targeted interviews, and outreach to the community through print and online methods.

Table 3 below lists CWPP stakeholders who participated in the 2022-2023 Dixon CWPP process. In addition to individual invitations, the CWPP meetings were publicized through multiple outlets, including: the Dixon Volunteer Fire Department's website and Facebook page, the local online newsletter, a radio announcement, and other informational materials distributed by Core Team members around the community. The CWPP update team also solicited input from area residents during community meetings and via an in-depth survey advertised at meetings, targeted emails, and on Ecotone's website.

The first Core Team and Community meetings were held on October 26, 2022, at the Dixon Fire Department with an option to join over Zoom. Due to the rather small turnout of the two events (a total of 19 participants between the two events including 5 members of the project team), the second meeting was held as a joint Core Team and Community meeting. The joint meeting took place on February 15, 2023, at the Dixon Fire Department, again with an option to join over Zoom. The second meeting included 13 Zoom participants and 10 in-person participants.

Table 3 Dixon 2023 CWPP Stakeholder List

Name	**Organization/Affiliation**
Adrienne Rosenberg	Dixon Resident, Ecotone Landscape Planning Consultant
Cathy Underwood	Dixon Resident, Embudo Valley Regional Acequia Association (EVRAA) President
Charlotte Madueno	Dixon Resident
Clark Case	Dixon Resident
Connie Wood	Dixon Resident
Darren Griego	Dixon Resident, Embudo Valley Library (EVL) Board member
David Leidy	Dixon Resident
Deanne Pola	Firewise Alcalde/Velarde
Emily Romero	Dixon Resident

Jennifer Birch	Dixon Resident
Jessie Nichols	Dixon Resident
Jorge Midon	Dixon Resident, EVRAA
Judy Pearson	Dixon Resident
Mickey Hale	Montecito Resident
Nancy Levit	Dixon Resident
Shel Neymark	Dixon Resident
Sylvia E. Vergara	Montecito Resident

Core Team

The CWPP Core Team makes up the heart of the CWPP. This group of community leaders, agency personnel, and individuals from other organizations participate in gathering information for the CWPP and guide the setting of priorities and designation of WUI and Communities at risk. For a CWPP to function and lower wildfire risk in the community, it is crucial that the CWPP Core Team continue to gather well after the CWPP is completed and coordinate efforts to match the priorities set in the plan and across boundaries that extend beyond the DVFD district. Table 4 below lists the members of the CWPP Core Team that participated in 2022-2023. This list should be modified as the Core Team changes.

Table 4 Dixon 2023 CWPP Core Team List

Name	**Organization**	**Title**
Adam Mackie	Dixon Volunteer Fire Department	Volunteer Fire Fighter
Adrian Porchas	U.S. Forest Service	Fire Management Officer Camino Real and Questa RD
Alex Amend	Dixon Volunteer Fire Department	Volunteer Fire Fighter
Alex Sisneros	Rio Arriba County	Fire, and Emergency Services Management Services Director
Anthony Alvarez	Baby Gorilla (tree service)	Owner
Bob Lesch	NA	Independent Contractor
Camilla Romero	State Land Office	Project Manager-Conservationist

Dominic Sanchez	BLM Taos Field Office	Engine Module Leader
Gabe Kohler	Forest Stewards Guild	Program Manager
Gabe Romero	U.S. Forest Service	Acting Deputy District Ranger- Camino Real RD
Jan-Willem Jansens	Ecotone Landscape Planning, LLC	Owner, Principal
Joe Carrillo	NM State Forestry	Chama District Forester
Jonathon Romero	U.S. Forest Service	Fire Management Specialist- Carson National Forest
Karen Wisdom	Jemez Mountains Electric Coop	Senior Manager of Contract Administration and Compliance
Kathy Miller	Dixon Volunteer Fire Department	Volunteer Fire Fighter
Lenny Ortiz	Jemez Mountains Electric Coop	Vegetation Management Coordinator
Lou Malchie	EVRAA, Town Crier	Founder
Luke Helfinstine	U.S. Forest Service	Incident Commander Type 4
Luther Martinez	Picuris Pueblo	Lead Forester
Maria Chilton	Rio Embudo MDWCA	Representative
Mark Meyers	State Land Office	Forester
Martha Graham	NM Rural Water Association	Source Water Protection Association
Rose Galbraith	NM Department of Health	Drinking Water Epidemiologist
Steven Jenison	Dixon Volunteer Fire Department	District Chief
Wayne Archuleta	Dixon Volunteer Fire Department	Volunteer Fire Fighter

Key Informant Interviews

To capture in-depth information from Core Team members, the DVFD, Ecotone, and the Guild conducted interviews with eleven key informants from the Core Team. Key informants were chosen to supplement in-person and survey data. Interviews attempted to represent the range of organizations, agencies, and private landowners across the Dixon Fire Department's district and adjacent land. Interviews were conducted over the phone and typically lasted around thirty to forty-five minutes. Eleven interviews were completed, and interviewees represented ten different organizations.

Table 5 Key Informational Interviews for 2023 Dixon CWPP.

Name	**Organization**	**Title**
Alex Sisneros	Rio Arriba County	Fire, and Emergency Services Management Services Director
Anthony Alvarez	Baby Gorilla (tree service)	Owner
Bob Lesch	NA	Independent Contractor
Cathy Underwood	EVRAA	President
Dominic Sanchez	BLM Taos Field Office	Engine Module Leader
Jonathon Romero	U.S. Forest Service	Fire Management Specialist- Carson National Forest
Luther Martinez	Picuris Pueblo	Lead Forester
Mary Stuever	NM State Forestry	Previous District Forester
Stan Crawford	Jemez Mountains Electric Coop	Assistant Secretary/Treasurer
Steven Jenison	Dixon Volunteer Fire Department	District Chief
Wayne Archuleta	Dixon Volunteer Fire Department	Volunteer Fire Fighter

The DVFD, Ecotone, and the Guild used an interview guide that covered various topics, including fuels treatments, community involvement, communication, evacuation planning, roads, transportation, wildfire preparedness, fire responders and equipment, reducing structural ignitability, post-fire preparations, communities at risk, and accomplishments.

Community Meetings and Outreach

Multiple meetings for residents and stakeholders of Dixon and the surrounding communities were held to discuss recent accomplishments, community risks, and priority action items for the 2023 CWPP. The community meetings engaged community members to discuss issues of wildfire protection and preparedness. Some questions posed at these meetings engaged homeowners in assessing their wildfire risk prevention practices, such as open space thinning, fuel breaks, and defensible space zone treatments. Table 6 below provides an overview of the Core Team and public meetings convened for the 2023 Dixon CWPP and organizations that were represented at those meetings.

Table 6 Meetings and Outreach Conducted for 2023 Dixon CWPP.

Date	**Meeting Type**	**# Of participants**	**Representation (organizations, e.g., Forest Service, State Forestry, etc.)**
October 26th, 2022	Core Team	9	State Land Office, Dixon Volunteer Fire Department, Jemez Mountains Electric Coop, NM Rural Water Users, Rio Embudo MDWCA, Forest Stewards Guild, Ecotone Landscape Planning
October 26th, 2022	Public Meeting	10	Embudo Valley Regional Acequia Association, Dixon Volunteer Fire Department, Firewise Alcalde/Velarde, Forest Stewards Guild, Ecotone Landscape Planning
February 15th, 2023	Joint Core Team & Public Meeting	23	Rio Arriba County, Forest Service, Embudo Valley Regional Acequia Association, NM Rural Water Users, Department of Health, Embudo Valley Library, Forest Stewards Guild, Ecotone Landscape Planning

Large, printed maps were used as a tool in all community meetings to facilitate location-specific conversation about wildfire protection. Maps helped to prompt discussion between Core Team members and their communities about wildfire risk throughout the district.

Outreach about the CWPP update was completed through in-person visits, where flyers were hung on bulletin boards, and through social media and web outreach, through email campaigns, and through the use of the local online newsletter and local radio station.

In many ways, the process of developing this CWPP is as important as the document itself. With that in mind, we encourage Core Team members to think of this document as an actionable plan and work collaboratively from planning to implementation.

Community Survey

In addition to meetings, stakeholders and members of the public were invited to complete a survey that helped inform priorities and action items for the CWPP. This survey was available on the Dixon Volunteer Fire Department's website, was advertised at CWPP meetings, and through an email campaign.

The working team solicited input from area residents on their actions, priorities, and concerns regarding wildfire risk mitigation. The survey was completed by 20 participants including 15 community members, several members of the DVFD, and two Core Team members who were unable to attend the first Core Team meeting. Survey data provided direct input to initial drafts of the priority fuel reduction projects, priority action items, community risk ratings, and accomplishments sections of the CWPP.

Wildland Urban Interface and Communities at Risk

Understanding Wildfire Risk

Wildfire risk can be understood as a combination of the likelihood and intensity (together called the "hazard" or "threat") and the exposure and susceptibility (together called "vulnerability") related to a wildfire event. In this plan, we use GIS data and fire behavior modeling to account for wildfire threat and input from the Core Team and the general public to understand the vulnerability of the communities throughout Dixon. Both the threat modeling and input from the Core Team can improve risk ratings. In some cases, the threat of wildfire may be low according to our modeling, but vulnerability is high enough that the overall risk will be rated as high. Vulnerability accounts for things like the susceptibility of a community to losing an important water source, having limited financial resources to recover from wildfire, or not having an adequate evacuation plan in place, for example. To learn more about wildfire risk to communities, visit: https://wildfirerisk.org/understand-risk/.

Wildland Urban Interface

The WUI is defined as any area where human infrastructure intersects with wildland fuels that cause a fire hazard (Radeloff, 2005). Having a clearly defined WUI area helps a community to develop strategies, such as fuel treatments and other fire mitigation work, that need to happen in the community to reduce fire hazards. WUI areas include flammable vegetation, human structures, and ample ignition sources, creating an inherent risk of wildfire (Platt, 2010). The CWPP team decided to take a more extensive definition of the WUI based on other examples from the U.S. that use consistent buffers of identified values at risk throughout the community. Although most WUI definitions use potential fire behavior as a main driver when defining WUI, our method emphasizes the human infrastructure within an area (Stewart, 2007). This approach creates a consistent definition of WUI uninfluenced by potential fire behavior, that is more inclusive and provides all communities and individuals the justification they need to proceed with their own fire mitigation efforts and recognizes what they value most within their communities. This approach is also appropriate for the relatively small scale of the DVFD district, wherein complex and dynamic factors determine fire behavior. Understanding areas of wildfire risk to human life, property, and infrastructure can help decision-makers focus wildfire mitigation and response efforts (Stewart, 2007). By coupling the WUI layer with wildfire modeling, a more robust representation of community conditions and risk can be interpreted by the Core Team, Stakeholders, and the community as they plan their wildfire mitigation activities.

WUI Determination Process

This plan bases its WUI definition on specific values at risk as determined collaboratively during the CWPP development process. There are approximately 5769 acres of WUI in the DVFD district included in the 2023 CWPP, comprising nearly 40% of the total land within the district. During the WUI

determination process drafts of the WUI area were reviewed by the Core Team and community and refined based on their local knowledge. These values were included in the 2023 WUI layer with a specific buffer distance for each value.

The input data included:

- Address Locations and Values at risk – The NM RGIS database provided point data for all addresses in the county, these points were visually verified and buffered at 0.2 miles.
- Microsoft Building Footprints – this dataset contains computer-identified building footprints across all 50 states. These data capture building locations that may not have been included in address data. Verified points were buffered at 0.2 miles. https://wiki.openstreetmap.org/wiki/Microsoft_Building_Footprint_Data
- Primary Escape Routes – While no evacuation plan exists for Dixon, the DVFD described that state highways within the district would serve as the primary escape routes for residents. These data were obtained from the NM RGIS database and buffered at 0.1 miles.
- Cell towers and Radio Repeaters- Point data were obtained from the Homeland Infrastructure Foundation Level Data (HIFLD) database and buffered at .25 miles.
- Powerlines –Homeland Infrastructure Foundation Level Data (HIFLD) Major transmission lines were buffered at 0.1 miles to indicate areas that are more prone to ignitions and should be considered for treatment.
- Natural Gas Pipelines – Homeland Infrastructure Foundation Level Data (HIFLD) Natural Gas transmission pipelines were buffered at 0.1 miles to indicate areas that are more prone to ignitions and should be considered for treatment
- Domestic water and municipal water diversion points- Point data were obtained from a Department of Health representative and the 2020 NM FAP and buffered at 0.2 miles.

Communities at Risk

Following New Mexico CWPP guidelines, a CWPP must delineate communities and assign them a community hazard rating (CHR) of low, medium, or high wildland fire risk (EMNRD, 2021).

Fifteen communities in Dixon were assessed for wildfire risk. A community here is a locally known area where people live, including neighborhoods and more loosely defined areas. Many of these communities are combined with adjacent nearby communities where the fire risk is similar, these grouped communities can be seen in the table below. We intended to cover every community in Dixon with this list, so even if it is not explicitly listed, the risk rating for nearby communities should apply. In the most recent County CWPP of 2017, three communities within the DVFD district were assigned a CHR, including the communities of Dixon (including Estaca), Rinconada, and Embudo. These community delineations each encompass several of the fifteen communities defined in this community-level CWPP. In the County plan, Rinconada and Embudo were assigned a Low-risk rating, while Dixon was assigned a Medium-risk rating, based on a hazard rating matrix that took into account fire behavior modeling, vegetation and building characteristics, community involvement, and access.

The CHRs in this community-level CWPP take into account similar factors but on a finer scale which allows for a more in-depth and localized analysis. Ratings were initially determined by surveying the Core Team and the public at the first set of meetings. To propose initial CHRs survey results were combined with a community risk assessment completed by the project team to evaluate access, surrounding fuel conditions, presence and structural ignitability of human infrastructure, social issues, and values at risk, such as water infrastructure and other important community assets. The initial ratings were further refined by recommendations of the Core Team and the public at the second Core Team and public

meeting based on local knowledge of on-the-ground conditions and previous wildfire preparedness actions.

While many communities throughout Dixon are not assessed as having a high threat of wildfire according to NM FAP data which combines wildfire probability and intensity, on-the-ground conditions in many of Dixon's communities create exceptional risk if a wildfire were to occur. This is especially true in the many communities located in the bosque of the Rio Embudo, where high fuel loads often exist in combination with a single point of ingress/egress for the community. This was consistently described as a major concern by the DVFD, community members, and Core Team members. Furthermore, a lack of evacuation planning and bridge infrastructure at risk of failing create high levels of risk in many otherwise low-fire threat communities. The threat of post-fire erosion and flooding emanating from the more forested upper watershed which has a greater burn probability is also a concern to the community of Dixon, especially given the economic importance of acequia infrastructure in this mostly rural community. Flooding from the monsoons in 2022 led to widespread destruction and sedimentation of acequia infrastructure as well as home flooding, which enhanced the community's attention to this threat post-fire. These concerns were also considered in community risk ratings.

This list should be used to prioritize how fire mitigation work occurs in Rio Arriba County. Also, this list should be updated as conditions change that might lower a community's risk rating. To see Communities at Risk, see the map in Figure 5.

Table 7 Communities at Risk Ratings: Parentheses denote which community from the 2017 Rio Arriba County CWPP the 2023 CWPP community was assessed with.

2023 Communities at Risk	2017 County CWPP Rating	2023 Rating
Apodaca	Medium (Dixon)	High
Dixon- Village	Medium (Dixon)	High
El Bosque	Medium (Dixon)	High
La Cienega	Low (Embudo)	High
Montecito	Medium (Dixon)	High
Cañoncito	Medium (Dixon)	High
Dixon- CR 65/24	Medium (Dixon)	High
East Dixon	Medium (Dixon)	High
La Junta	Low (Embudo)	High
Cañada de Lorenzo	Medium (Dixon)	Medium

Dixon- Arroyo de la Mina	Medium (Dixon)	Medium
Dixon- Arroyo Pino	Medium (Dixon)	Medium
Embudo	Low (Embudo)	Medium
La Bolsa	Low (Rinconada)	Medium
Rinconada	Low (Rinconada)	Medium

Wildfire Preparedness

Community Oriented Programs

Fuel reduction projects and wildfire risk reduction projects in general are just one component of a successful strategy to reduce the negative effects associated with wildfire. We must couple fuel reduction projects with education and outreach about how to live within landscapes that are prone to wildfire.

The following sections provide an introduction to the Fire Adapted Communities and Firewise frameworks. These sections provide a starting point to engage in a more in-depth discussion into each of these topics. See Appendix C for in-depth sections on: structure hardening, developing defensible space, conducting home ignition zone assessments, planning for evacuations, planning and improving ingress/egress systems and improving roadways, managing human sources of ignition, planning for smoke impacts and smoke impact mitigation, developing communication systems (emergency notifications and first responder communications), forming a community emergency response team, and a comprehensive Firewise plan for the Community of Dixon Fire Department District.

Fire Adapted Communities

The concept of "Fire Adapted Communities" comes from The National Cohesive Wildland Fire Management Strategy (NCWFMS), which was initiated in 2009. The NCWFMS is a strategic push to work collaboratively among all stakeholders and across all landscapes, using best science, to make meaningful progress towards the three goals: 1) resilient landscapes, 2) fire adapted communities, and 3) safe and effective wildland fire response. Since the NCWFMS, this reference of fire adapted communities has been refined conceptually and embedded within formal networks that are committed to putting the concept into action.

The core idea of a Fire Adapted Community (FAC) is an acknowledgement that with increasing frequency and severity of wildfire, our communities need to learn to coexist safely with wildfire. Improving community wildfire adaptation involves working across sectors to consider before, during, and after the wildfire. 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 between residents, fire departments, businesses, local governments and land management agencies. This process is incremental and ongoing. Topic areas related to fire adapted communities include but are not limited to: resident mitigation; wildfire response; safety and evacuation; recovery; infrastructure and business; regulations policy and plans; prevention; public health; landscape treatments;

and partnerships and community engagement. This approach is broader than the Firewise Communities program, which focuses on public education and resident-led fire risk mitigation before a wildfire. Firewise is an important component of a fire adapted community and one of the best tools for resident/homeowner mitigation before a wildfire.

Table 8 Components of a Fire Adapted Community.

Components of a Fire Adapted Community			
	Before a wildfire	**During a wildfire**	**After a wildfire**
Residents	***Firewise***, defensible space, home hardening, packing a go-bag, signing up for alert systems.	***Ready, Set, Go!*** Evacuation for people and livestock	***After the Wildfire Guide***, Insurance claims, rebuilding/re-entry, erosion/flood mitigation, replanting.
Fire departments	Evacuation planning, wildland training, assessments, wildfire prevention campaigns, public education, fuel reduction treatments, establishing mutual aid agreements	Wildfire response, evacuation, emergency alerts systems, shelters, equipment and PPE.	Coordinating reentry, erosion/ flood mitigation, applying for post-fire funding.
Businesses	Backing up important documents, appropriate insurance policy, planning for evacuation and alternative income streams.	Evacuation, alternative income streams, communication to clientele	Insurance claims, rebuilding/re-entry, inventory.
Local governments	Codes and ordinances, responsible development, infrastructure to support wildfire response, community wildfire protection planning, education and outreach to residents, working with public health departments for smoke readiness	Alignment with emergency communications and evacuation, working from alternate locations in case of evacuation, smoke resources	Seeking post-fire funding, reentry/rebuilding, restoring utilities.

Land management agencies	Planning and implementing landscape scale fuel reduction, prescribed fire implementation, wildland training, establishing mutual aid agreements	Safe and effective wildland response, early rehabilitation and erosion mitigation,	Erosion/flood mitigation, replanting, salvage logging, infrastructure stabilization
Core processes: communication, peer-learning, relationship-building			

New Mexico has the Fire Adapted New Mexico learning network (FACNM), which is set up to support communities in their incremental 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 many more.

The core of the FACNM network is its members and leaders, who can share lessons learned about how to approach wildfire adaptation efforts. We encourage anyone who is interested to visit the website www.facnm.org and consider joining the network as a member and for more information.

Both individuals and organizations can join FAC and FACNM to gain access to resources, tools, and connections with other members working toward wildfire resiliency. See Appendix C for additional information about FAC and the FACNM Learning Network.

Firewise Communities

Firewise Communities is a recognition program administered by the National Fire Protection Association (NFPA). Firewise Communities (i.e., communities with a Firewise USA Community designation) focus on reducing the loss of life and property from wildfire – particularly before a wildfire is burning -- for residents and homeowners. This 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 emphasizes fuels reduction and gives recommendations for steps homeowners can take to reduce their individual risk to wildfire. For example, practices to reduce flammable materials close to the home and home maintenance practices that reduce the chance of a home catching fire. Several resources for homeowners, such as an online toolkit and checklist for steps to reduce wildfire risk can be found at www.firewise.org.

In conjunction with this CWPP update, the Dixon Community Fire Department has completed the steps necessary to receive Firewise recognition (Appendix A). Firewise recognition requires a 6-step process:

1. Forming a Firewise 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, State Forestry Division, or US 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 Day” outreach event.
5. Investing a minimum of $2 per capita in local Firewise actions for that year.
6. Submitting an application at portal.firewise.org to your Firewise state liaison.

Firewise recognition is an important tool for a community in the ongoing process of becoming fire adapted. Many communities working to become fire adapted begin by becoming recognized as a Firewise Community.

Ready, Set, Go!

The Ready, Set, Go! (RSG) program is the best tool for evacuation planning and communicating about evacuation to residents – it is the tool used by the USDA Forest Service, and New Mexico State Forestry Division. See Appendix C for a comprehensive list of resources related to evacuation planning.

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, saving lives and property. Share the New Mexico-specific RSG Wildfire Action Guide with residents early and often: https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/FINAL-new-mexico-RSG-guide-2017_000.pdf

Familiarize the DCFD and Dixon residents with the following RSG stages:

GET READY:

Being “Ready” for wildfire starts with maintaining an adequate defensible space around your home. Clear dry brush and vegetation away from the outside of your 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 your home. Consider fire resistant landscaping and hardening your home with fire-resistant building materials. Flying embers from a wildfire can destroy homes up to a mile away.

GET SET:

Prepare yourself and your home for the possibility of evacuation BEFORE wildfire arrives. Follow these simple steps to get “Set”:

- Create a Wildfire Action Plan that includes evacuation planning for your home, family and pets
- Assemble an Emergency Supply Kit for each person in your household
- Fill out a Family Communication Plan that includes important evacuation and contact information
- Stay informed by following local media, local fire alerts, and county emergency notifications.

GO!

If there is an active wildfire in your area, be prepared before it’s time to Go!

> If time allows, review your Wildfire Action Plan and complete the Pre-Evacuation Preparation Steps in the RSG guide. Load your emergency supply kit and evacuation bags (including pet kits) into your vehicle and park facing the road for a quick exit. You don’t need to wait for an

evacuation order. If you feel threatened, then evacuate early. When an evacuation order is issued, there is no time to waste. Ensure your bags and kit are in your vehicle, locate and load your pets, wear clothing that will protect you against heat and flying embers, and GO!

Other Wildfire Preparedness Strategies

Besides getting organized and developing participatory learning experiences for residents, there are several key wildfire preparedness strategies that have become part of the standard package of community wildfire protection planning. The most important strategies are described in Appendix C and include:

- Structure Hardening
- Developing Defensible Space
- Conducting Home Ignition Zone Assessments
- Planning for Evacuations
- Planning and Improving Ingress/Egress Systems and Improving Roadways
- Managing Human Sources of Ignition
- Planning for Smoke Impacts and Smoke Impact Mitigation
- Developing Communication Systems (emergency notifications and first responder communications)
- Forming a Community Emergency Response Team

Planning for Post-Fire Recovery

As a wildfire or other natural disaster will eventually occur in, or around, Dixon, it is important to plan for how the community will recover following such an incident. The New Mexico State Forestry Division (NMFD) provides an excellent resource for thinking about post-fire recovery called *After Wildfire* (www.afterwildfirenm.org).

This CWPP covers certain aspects of the topic of post-fire recovery that are particularly relevant to the Dixon Fire District. We recommend that the Core Team reconvene to discuss this topic at length and create detailed plans for the community in anticipation of a need for coordinated action following fire or other natural disasters. The 2022 flooding in Dixon demonstrated the need for the community to have a more rigorous emergency response plan as well as a designated organization to lead response and recovery actions in the community.

Immediate Post Fire Safety

The foremost post-fire recovery concern is safety. After a wildfire, it is important that residents do not return to their homes or businesses until officials have determined it is safe. Because utility services can be disrupted by wildfire:

- Do not drink or use water from the faucet until officials say it is okay;
- Use extreme caution around trees, power poles, and other tall objects that may have lost stability during the fire or subsequent flooding and erosion;
- If you have a propane tank or system, contact a propane supplier, turn off valves on the system, and leave valves closed until the supplier inspects your system.

In addition:

- Be on the lookout for smoke or sparks that may still be burning.
- Be aware that smoke levels in the air may continue to be hazardous to health even after residents are allowed to return following an evacuation.

Emergency Management Planning, Procedures, and Capacity Building

The community of Dixon currently lacks a community-wide emergency response plan. Anecdotally, community members often seek guidance or assistance from established community organizations, such as the Dixon Volunteer Fire Department (DVFD), the Embudo Valley Library (EVL), or local acequias. However, without an established role in emergency response beyond the response to fire or medical emergencies the DVFD does not have adequate resources or procedures in place to respond to alternate types of emergencies. Several priority actions have been defined in this plan (Table 2) to document the needs of the DVFD to step into this role. During the second CWPP community meeting, the DVFD used the opportunity of having the community convened to ascertain from community members whether this duty should, in fact, belong to the DVFD. Meeting participants' support for this idea was unanimous; however, it is important to note that only a small segment of the community was present.

The establishment of an emergency response plan for the community of Dixon should include coordination with Rio Arriba County Fire and Emergency Services (FES) and the New Mexico Department of Homeland Security and Emergency Management (DHSEM). As the DVFD District is in Rio Arriba County, this county is ultimately responsible for emergency management planning in the Dixon Fire District. A county emergency management plan is required for a community to receive Federal Emergency Management Agency (FEMA) funding for emergency response (further funding details on pg. 62).

Due to the proximity of Taos County to the northeast of the Dixon Fire District and the predominant presence of BLM lands in the Dixon Fire District coordination at a regional level with Taos County and BLM will be of importance as well. While formal coordination will likely need to run through Rio Arriba County's FES, informal coordination by entities in Dixon may facilitate and accelerate desired actions.

In addition, it would behoove the community of Dixon to develop and/or maintain lines of communication and ongoing coordination about long-term land management concerns and possible future emergency management and disaster mitigation needs with public agencies that provide services in the community or are neighboring land management agencies, such as: East Rio Arriba Soil & Water Conservation District, New Mexico Forestry Division (NMFD), the NMED Surface Water Quality Bureau (SWQB) and Drinking Water Bureau (DWB), the NM State Land Office, Picuris Pueblo, NM Department of Transportation (NM DOT), the Carson National Forest, and the Jemez Mountains Electric Coop (JMEC). As described elsewhere in this CWPP, the community of Dixon would probably benefit also from participating in the statewide Fire Adapted Communities Network (FACNM). This network helps share information and educate participants about many fire-related emergency aspects, including post-fire recovery preparedness. Coordination with these entities will ensure that local infrastructure can be better protected pre- and post-fire and that there is a mutual, general understanding of each other's responsibilities and roles at the time collaborative action is necessary in response to an emergency. Coordination could also lead to the establishment of efficient protocols and procedures for collaboration and emergency management between these agencies and the community. DVFD already has longstanding Memorandums of Agreement with neighboring Fire Districts (Ojo Sarco, Penasco, Rio Grande) as well as frequently consulting with Picuris Pueblo on a variety of Fire & EMS issues. Through their connection with Rio Arriba E911, the DVFD also has the ability to contact and dispatch both JMEC and NM DOT in emergency situations. There is a need to establish reliable communication between the DVFD and administrators of local acequias, as detailed as a priority action in Table 2. Communications with acequia leaders, in association with the Embudo Valley Regional Acequia Association, would aid in the DVFD response to flood emergencies.

The need for developing local coordination capacity underscores the high-priority action for the community of Dixon to designate a point of contact to coordinate emergency management and response with the county. Establishing a point person for communication with the County can impact the timeliness of FEMA funds being acquired and distributed within the community, as further described in the *Lessons Learned from the Hermit's Peak and Calf Canyon Fire* (pg. 61). Useful steps for initiating a FEMA claim have been provided by a representative of the Jemez Mountains Electric Cooperative in Appendix D.

Identifying one or more local points of contact is particularly important in relation to local infrastructure protection during and after a natural emergency event. It is essential for fire suppression and public safety that infrastructure, such as roads, telecommunication, and water resources, remain available and accessible. Ideally, the community has designated people who are intimately familiar with the operations and maintenance status of local infrastructure and can interact and negotiate with public agencies and other service providers on how the infrastructure should be handled, what its capacity is, and how it could be preserved during the incident with a view toward its protection and use during the recovery process.

The community of Dixon has many unique attributes which must be addressed in emergency response planning and which will require special attention. Many of these attributes have been previously addressed in the plan, such as limited ingress/egress in many neighborhoods and poorly maintained bridge infrastructure, both of which create obstacles in emergency scenarios that require evacuation. The demographics of Dixon pose additional challenges, as a significant portion of the population is aging and therefore may require assistance with evacuations and with recovery efforts. As a farming community, many residents have large livestock and equipment that may also require evacuation assistance. The Dixon Animal Protection Society (DAPS) may be well-positioned to provide aid or other resources relating to animal evacuations. Furthermore, with farmers' livelihoods depending on the health and productivity of the landscape, the long-time impact of wildfire disasters on the land and its water resources can be especially devastating to these individuals. Planning for the mitigation of these impacts will be an important component of emergency response planning in Dixon.

FEMA has a program called Community Emergency Response Team (CERT) to help community members take part in the response to disasters. 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 the following web pages: https://www.ready.gov/community-emergency-response-team https://www.fema.gov/news-release/2003/05/29/community-emergency-response-team-cert-program. Participation of community members in the CERT program would build capacity for emergency response as well as fulfill a priority action of this CWPP, which describes the need for community liaisons to assist with emergency response.

Flooding and Erosion

Post-fire flooding and erosion are high-risk concerns for much of Dixon. The map in Figure 8 displays post-fire erosion hazard and illustrates which community centers are most at risk. In this map, post-fire erosion is a combination of the probability of a wildfire occurring within a pixel with the expected intensity of erosion to occur. Erosion intensity is calculated by a simple model combining slope and the soil kf-Factor which is a measure of the relative susceptibility of soil to erosion (EMNRD, 2020).

The heavy monsoon-season rains common in New Mexico in the late summer and early fall can often bring flooding, erosion, and debris flows after a wildfire. These storms are typically local, very intense, and of short duration, delivering large amounts of rain in a short period of time. When such storms

develop over burned areas, the ground cannot absorb the rain quickly enough, forcing the water and topsoil to run off the burned area, accumulate in streams, and produce flash floods. This process is particularly sudden and intensive when occurring in relatively small and steep drainage areas, of which there are many around Dixon. Post-fire debris flows pose a risk to water infrastructure, such as reservoirs, acequias, and pipe systems. They can affect water quality through increased sediment loads and turbidity or the introduction of contaminants in water bodies such as heavy metals, nitrates, and *E. coli*.

FEMA flood risk maps can help guide post-fire preparation for flooding. Homes and businesses in Dixon should consider reevaluating their flood insurance coverage as post-wildfire floods are often more extensive than the flood risk might indicate before a wildfire.

Important resources related to flooding in Dixon can be found at:

- NM Flood, Projects, and Maps: https://nmflood.org/?page_id=336
- New Mexico Multi-hazard Risk Portfolio: https://nmflood.org/wp-content/uploads/2013/10/NM_MHRP2015.pdf

These post-fire flood, erosion, and debris flow recommendations and resources also apply to flooding risks that are not caused by burned areas. The Dixon Fire District includes many small drainage areas with a sandstone subsurface and soils of poor quality that support sparse vegetation. As a result, thunderstorms induce rapid stormwater runoff which often leads to flash flooding in the drainage areas affected by the storms. Therefore, nearly the same needs for coordination and planning apply as for post-fire terrain conditions. Flood and debris flow events that are not caused by wildfire could trigger the same recovery procedures if Rio Arriba County or the State of New Mexico declare an emergency or disaster as a result of the flooding. This CWPP, therefore, serves the dual purposes of post-fire recovery and both post-fire and non-fire-related post-flooding recovery.

An important lesson that many communities across New Mexico are learning is that with climate change the risk of wildfire and (flash) flooding increases. More frequent and larger volumes of flood flows should be expected to pass through communities in years to come. The community of Dixon and its surrounding neighborhoods are particularly affected by flood risk, as has been clarified in the 2019 Watershed Based Plan and the 2023 Wetlands Action Plan for the Lower Rio Embudo Watershed (see section on Companion Plans).

Flood risks are further illustrated in the FEMA flood zone maps in figures 13-20. These maps demonstrate the areas of high flood risk which occur primarily along the Rio Embudo and Rio Grande corridors, as well as in several large drainages throughout the community. These maps highlight the concerns regarding access and infrastructure throughout the community. For instance, there are two bridges that serve as critical points of egress for the communities of Apodaca, El Bosque, and CR 65/240, both of which fall within the floodplain and have a high potential to be entirely inaccessible when the area experiences flooding. Many residential roads also traverse these flood zones, and in many instances, these roads are the single point of egress or ingress for either the entire community or a subset of it.

The areas of high risk along the Rio Grande (FEMA Zone A) and Rio Embudo (FEMA Zone AE) include fields, orchards, and several homes and businesses, and are susceptible to flood events caused by runoff events accumulated across tens of thousands of acres in upstream watersheds. As a result, these flood events have a considerable lag time between the time of precipitation and the time of flooding, but the duration of the flooding can encompass many days. The areas of high risk along and near the confluences of the tributaries to both rivers (FEMA Zone A) include many homes and businesses along with irrigation and road infrastructure, orchards, vineyards, and other high value agricultural areas. Moreover, these high risk areas also affect many dead-end roads in the community. Flood events in these tributaries are caused

by runoff accumulated across relatively small and steep drainage areas of up to at most a few thousand acres. As a result, flood events in these tributaries have very short lag times between the time of precipitation and the time of flooding, while the duration of the flooding is often limited to at most one day. Such sudden, short, but intense flood events are known as flash floods and are often more dangerous to people because of their unexpected nature and their great impact on community values.

As stated elsewhere, fire exacerbates these flood risks. Fire-caused flooding in the rivers can lead to flow volumes that are one or more orders of magnitude larger than common flood events and carry large amounts of debris, coarse sediment, and fine sediment and ash. Such floods are likely to cause severe damage to infrastructure, homes, and agricultural land on the active floodplain and on the historic floodplain which encompasses many urban and agricultural development values. In addition, sedimentation of debris and sediment loads can locally widen the flood-prone area and increase flood damage. Fire-caused flooding in the tributaries can also lead to greatly increased flood flows and more widespread flood damage in the community.

Individual property owners and the community as a whole will need to give thought to how they can allow larger volumes of water to pass through the community to reach the Rio Embudo. The most durable solution is to provide more space for water between homes and infrastructure. This is often only possible if areas that have been set aside for specific functions, such as fields, pastures, driveways, or vegetative buffer strips, can occasionally double as areas for water spreading. Alternatively, if space can be made available for high volumes of water, large retention ponds could be constructed, and the open floodplain areas could be preserved to serve as solutions for water spreading and sediment accumulation. Such areas will require maintenance, such as debris removal and sediment excavation, but at far less cost and effort than when homes and higher-valued assets must be cleaned and recovered from flood impacts. Concepts of creating “space for water” or “room for rivers” have been prominent in Europe for decades and have only recently begun to make their entry into the U.S. after several flooding disasters in the past decade (e.g., https://news.climate.columbia.edu/2011/06/07/making-room-for-rivers-a-different-approach-to-flood-control/ and https://www.scientificamerican.com/article/how-water-cycles-can-help-prevent-disastrous-floods-and-drought/).

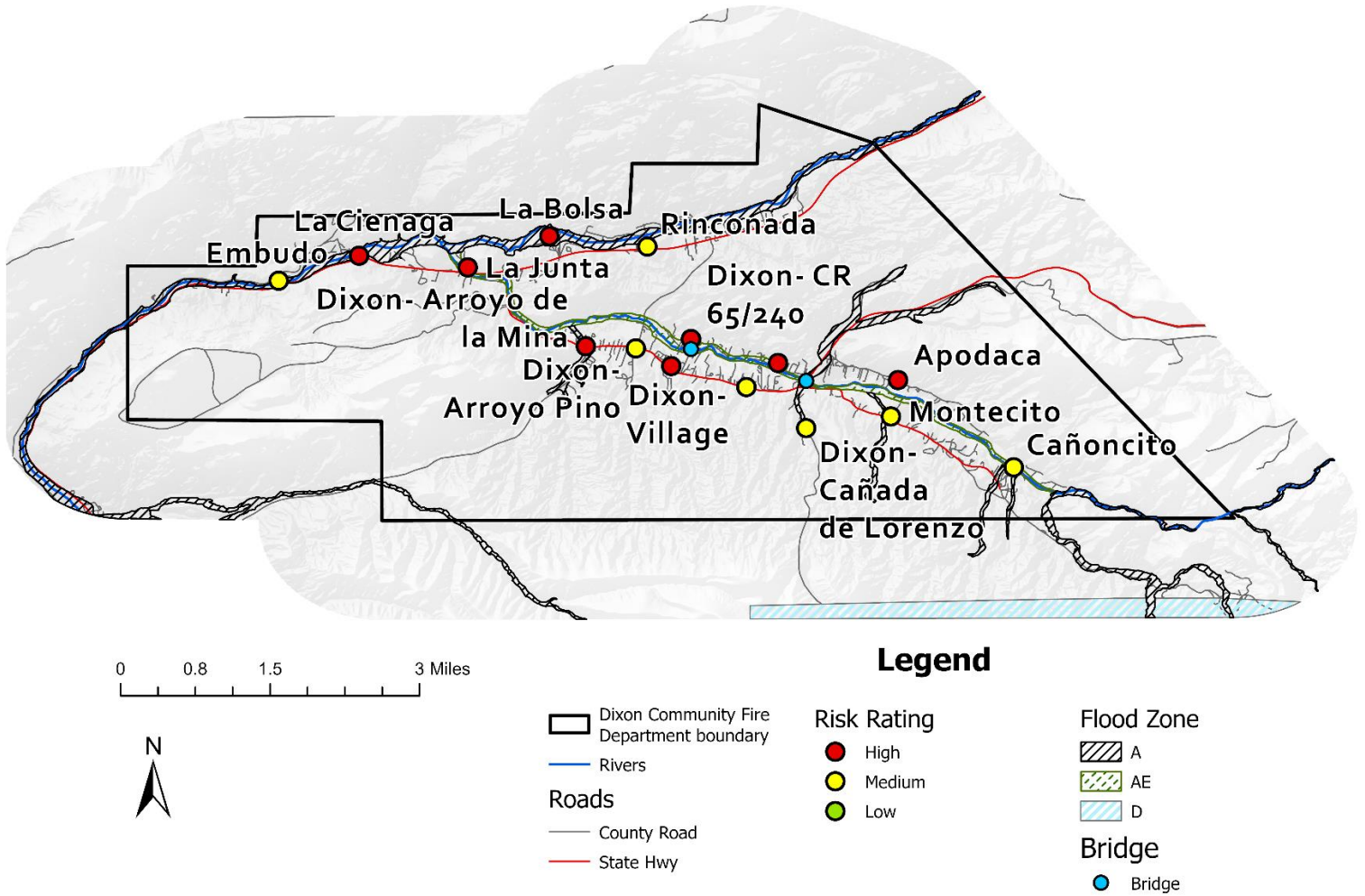

Figure 13 FEMA Flood Zones in the Dixon Fire District. Flood Zone A: Area inundated by the Base Flood with no Base Flood Elevations determined. Flood Zone AE: Area inundated by the Base Flood with Base Flood Elevations determined. Flood Zone D: Areas in which flood hazards are undetermined but possible. The remainder of the district in Flood Zone X: Areas determined to be outside the 0.2% annual chance floodplain.

FEMA Flood Zones

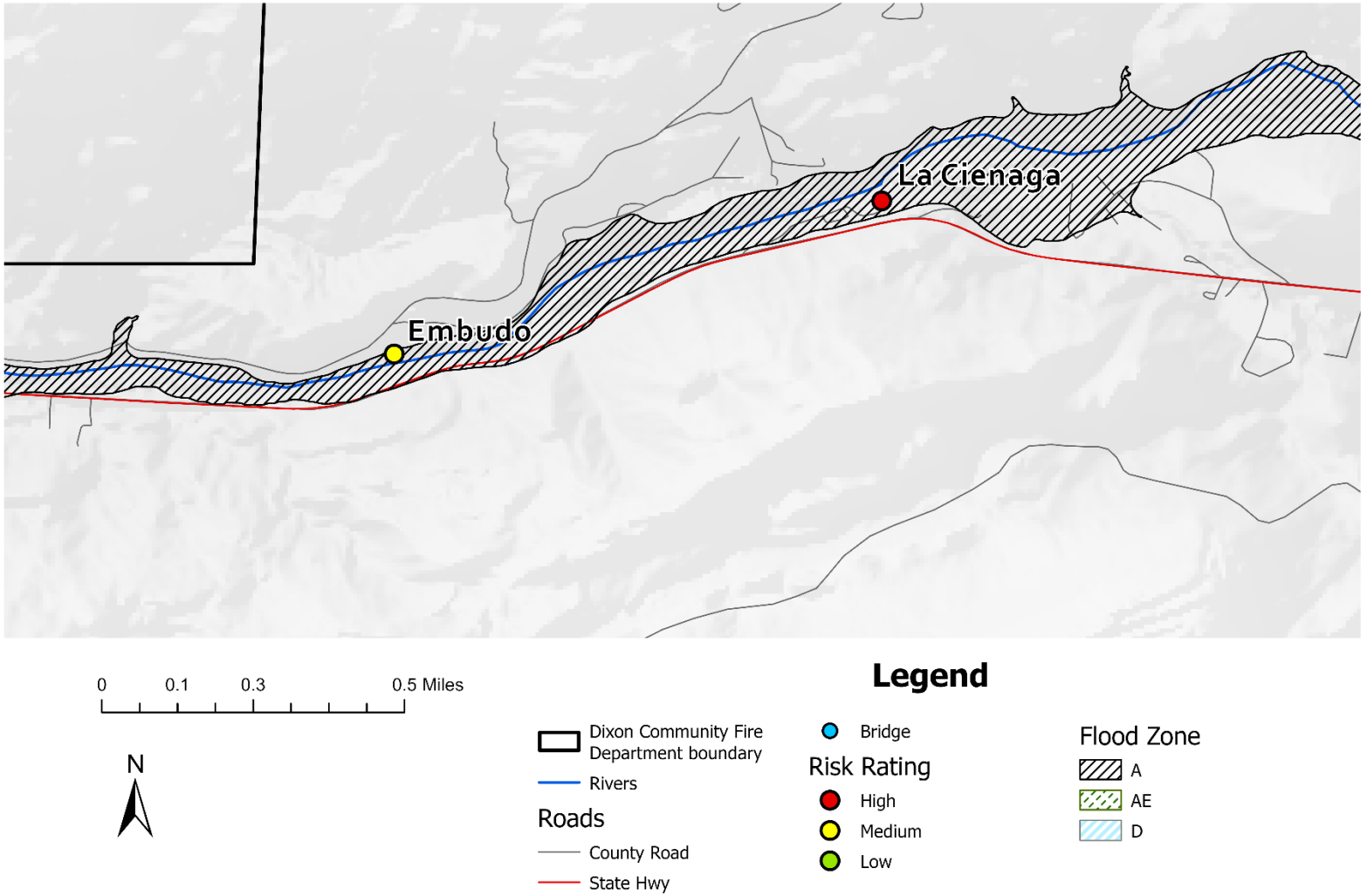

Figure 14 FEMA flood zones for the communities of Embudo and La Cienaga.

FEMA Flood Zones

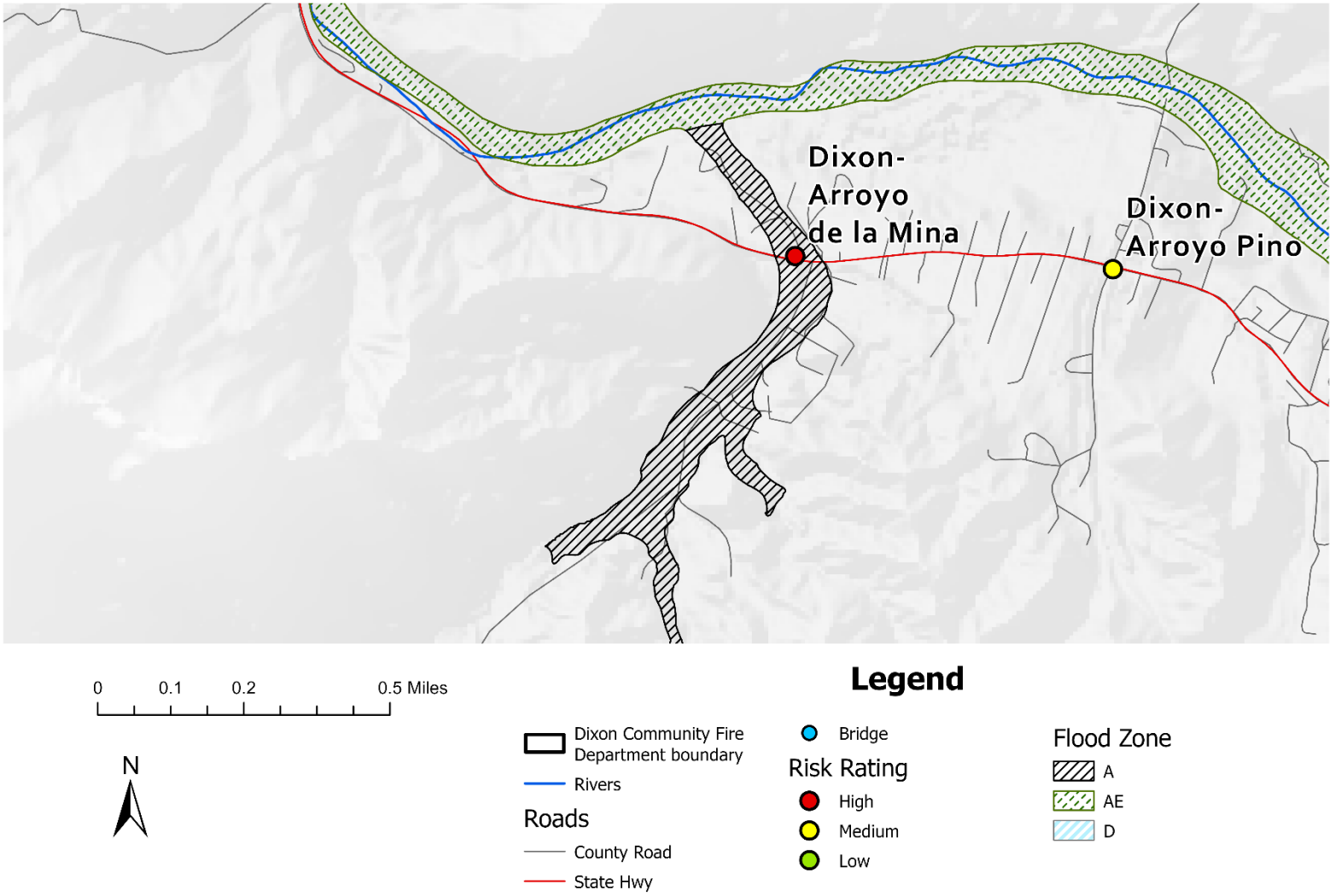

Figure 15 FEMA flood zones for the communities of Embudo and La Cienaga.

FEMA Flood Zones

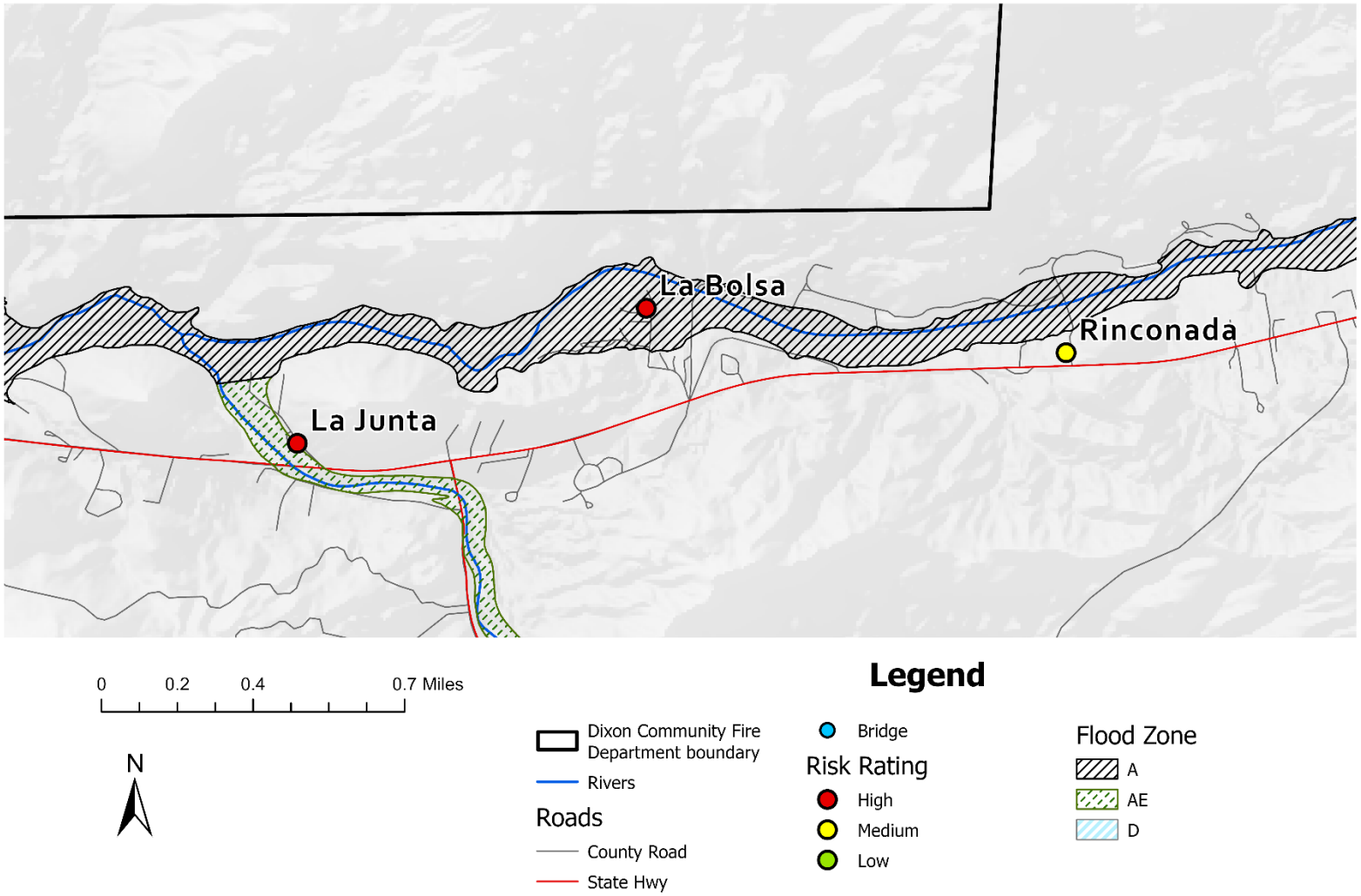

Figure 16 FEMA flood zones for the communities of La Junta, La Bolsa, and Rinconada.

FEMA Flood Zones

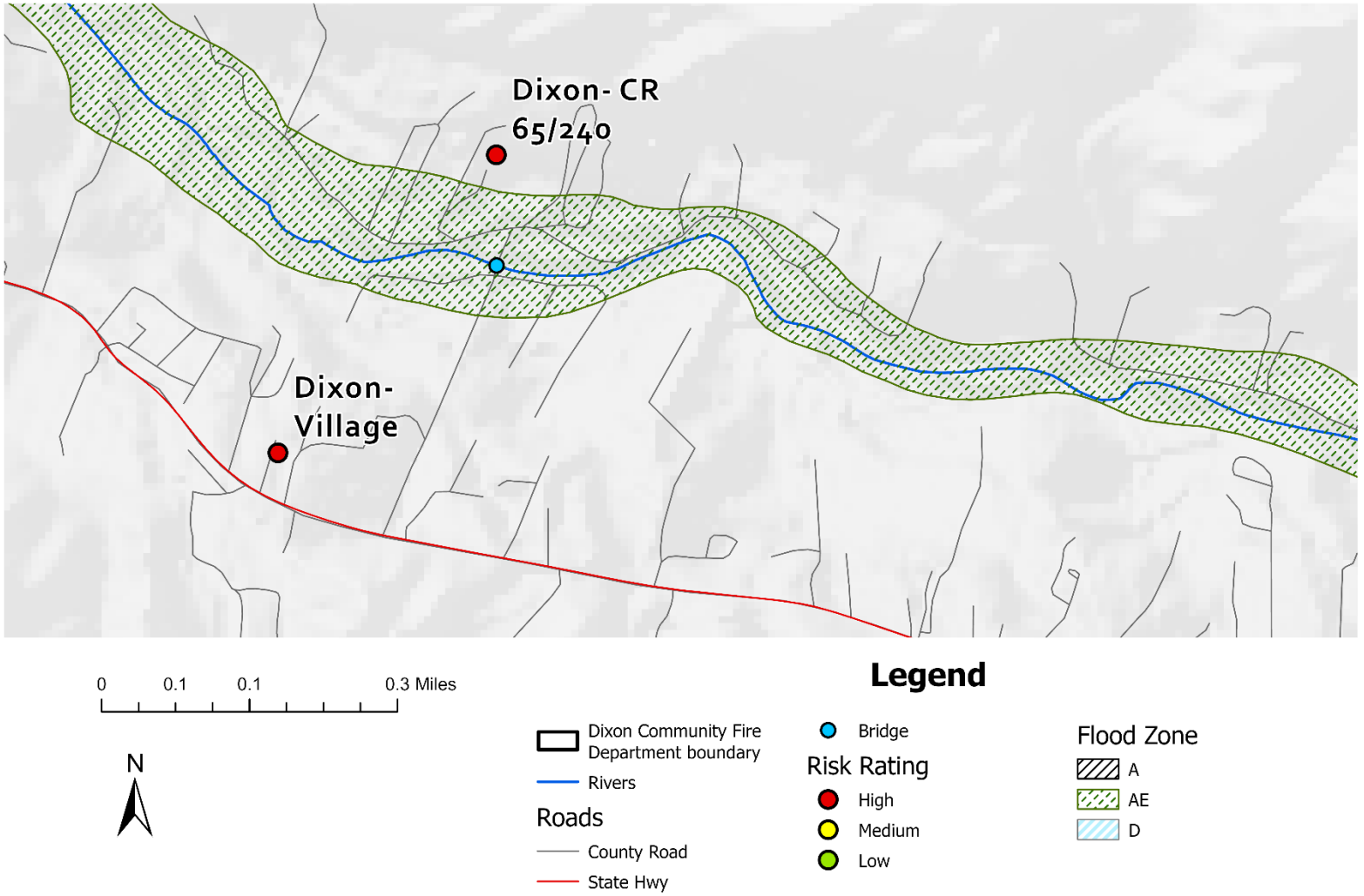

Figure 17 FEMA flood zones for the communities of Dixon Village and CR 65/240.

FEMA Flood Zones

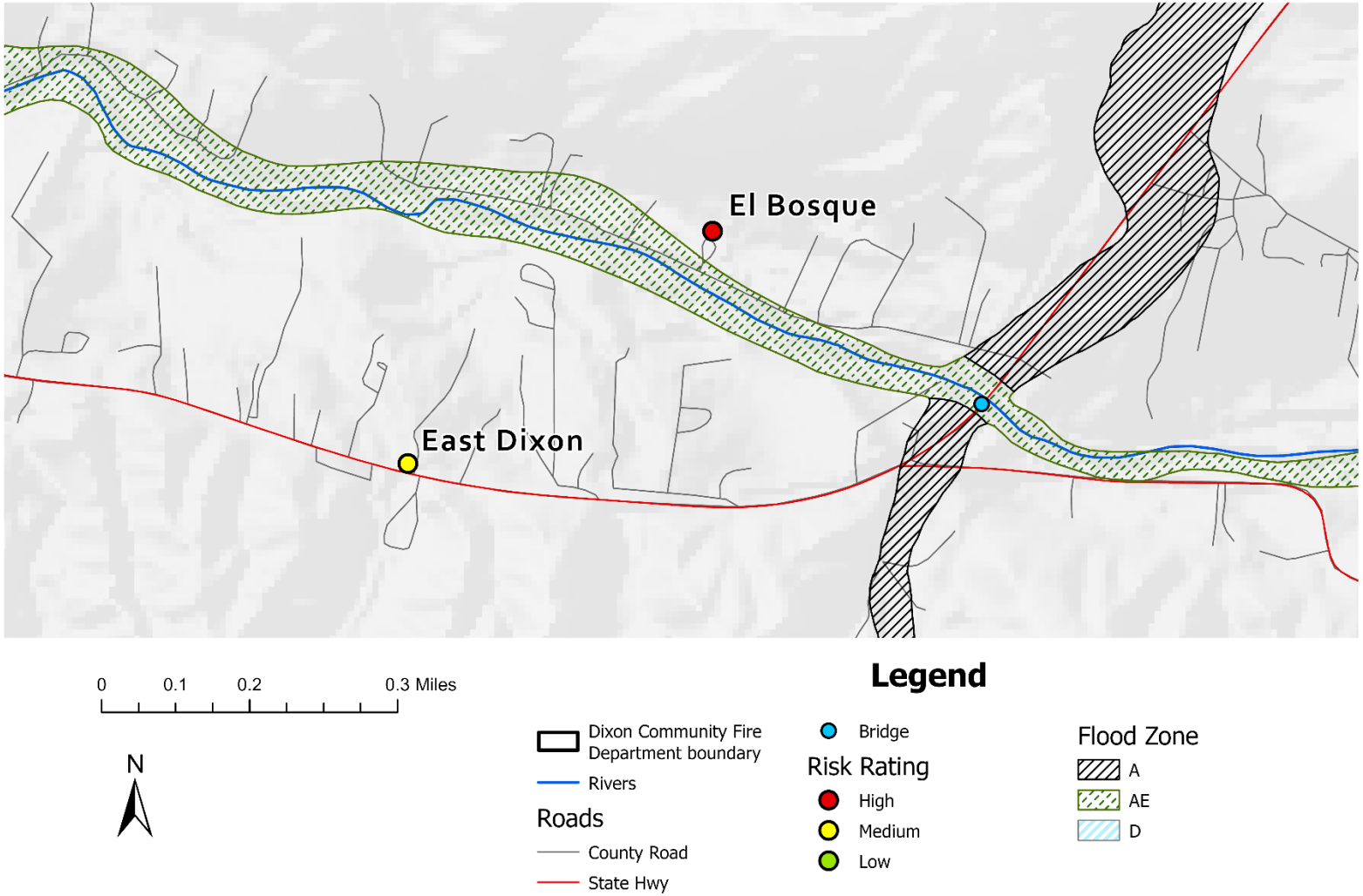

Figure 18 FEMA flood zones for the communities of East Dixon and El Bosque.

FEMA Flood Zones

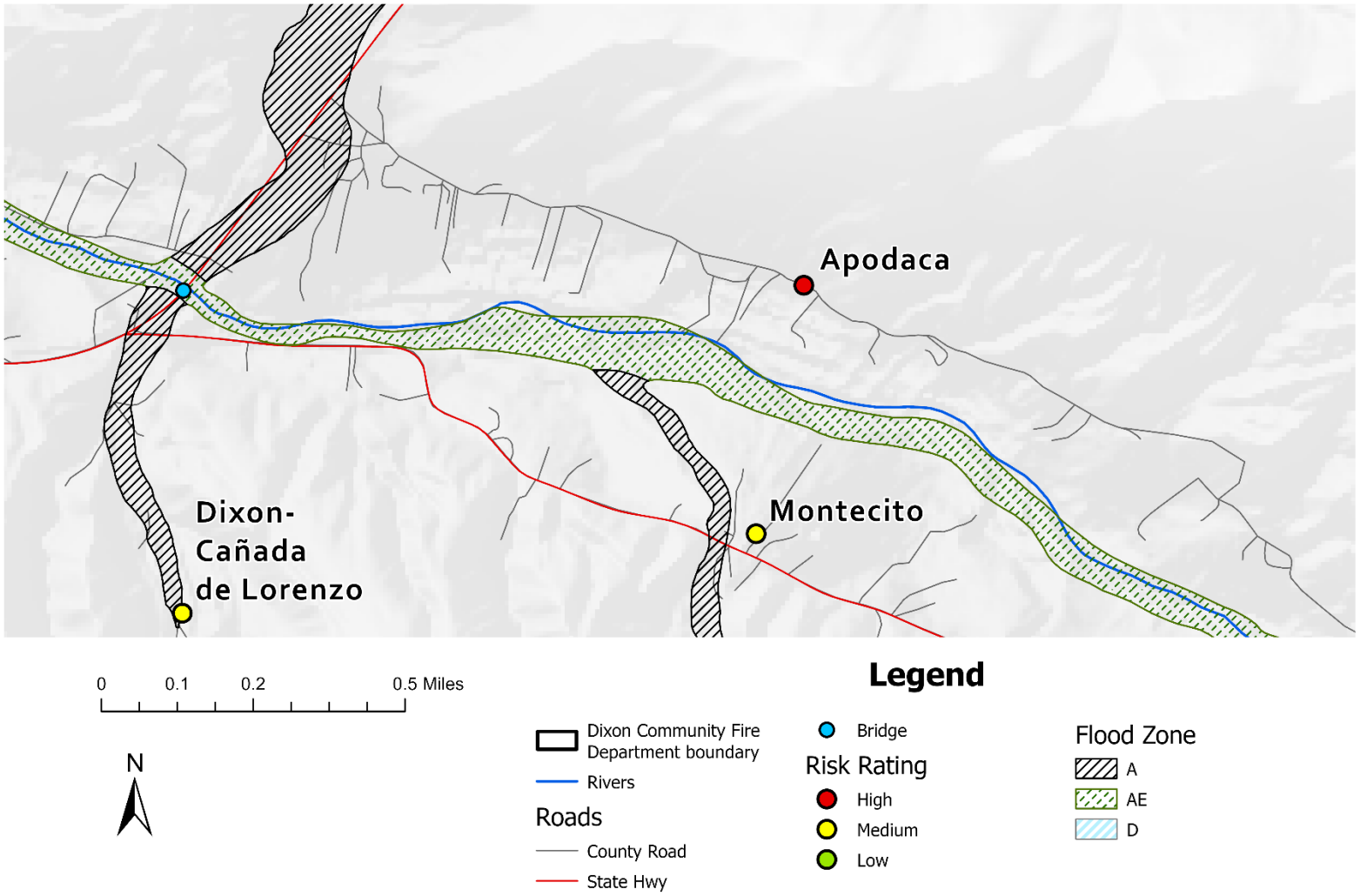

Figure 19 FEMA flood zones for the communities of Cañada de Lorenzo, Apodaca and Montecito.

FEMA Flood Zones

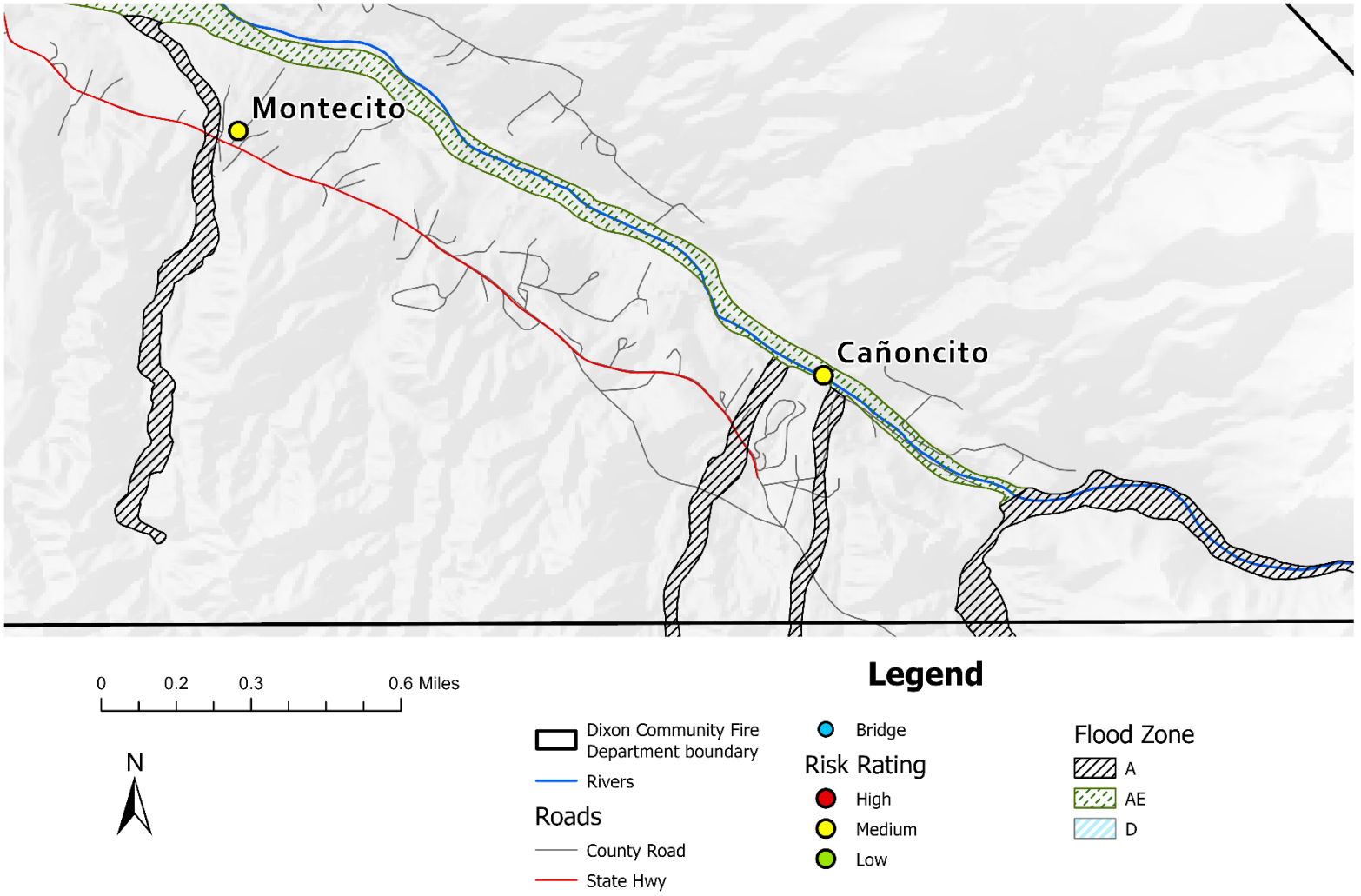

Figure 20 FEMA flood zones for the communities of Montecito and Cañoncito.

NM After Wildfire Guide

The New Mexico *After Wildfire* guide (http://afterwildfirenm.org/) is a comprehensive resource for communities seeking to develop emergency plans ahead of potential wildfires. Besides offering guidelines on immediate safety and flood information, the guide also includes the following sections:

- Mobilizing your community – provides points to help local governments and community leaders get started on recovery coordination
- Who can help? - describes programs and services provided by agencies and nonprofits for communities and individuals affected by wildfire
- Post-wildfire land management treatments to facilitate recovery
- Financial tips for individuals and communities after wildfire

The guide suggests that communities designate a Post Fire Coordinator (or multiple coordinators) to work directly with local, state, or federal agencies, emergency response officials, volunteers, and other stakeholders to address needs and seek assistance. Post Fire Coordinators may be part of the CERT mentioned above in the Wildfire Preparedness section.

It may be appropriate to implement post-wildfire recovery efforts, such as erosion control or planting, in affected forested areas. First, however, communities should be sure to identify values-at-risk post-wildfire and focus on treatments that reduce the threats to those values. The *After Wildfire* guide has a catalog of potential treatments that include:

- Seeding and mulching to reduce erosion;
- Contour log felling and other erosion barriers;
- Installation of check dams and other channel treatments; and
- Culvert modifications and other road treatments.

Lessons Learned

Hermit's Peak and Calf Canyon Fire 2022

The Hermit's Peak and Calf Canyon Fire occurred in the early spring of 2022 burning over 340,000 acres northwest of Las Vegas, NM to become the largest wildfire in the state's history at that time. This fire offers many lessons to be learned. The distribution of FEMA recovery funds is perhaps the most relevant for post-fire planning in Dixon. Through Congress, nearly $4 billion of FEMA funding was appropriated to assist victims of the fire with recovery, including funding for eligible loss of personal property, business or financial loss, or losses due to personal injury. The two acts of Congress providing this funding occurred in September and December of 2022. However, as reported by local news outlets in late February of 2023 (Albizu, 2023), many wildfire victims are still awaiting FEMA financial assistance at the time of this writing (March 2023). The delay is reportedly due to procedural slowdowns and a lack of institutional infrastructure in place to help distribute funds. According to FEMA's interim final rule regarding the Hermit's Peak and Calf Canyon fire assistance, individuals must request assistance by filing a claim online or at a local Claims Office, which have yet to open across the affected counties. The claim must then be reviewed by the local Claims Office, and proof of loss must be submitted before a written decision can be provided. FEMA is given 180 days to review the claim and determine the amount to be paid, which can be appealed by the claimant. If accepted by the claimant payment can then be initiated. This process is time-consuming in nature, especially in rural communities that lack the organizational infrastructure to act as intermediaries between individual wildfire victims and FEMA, as exemplified by the many rural communities affected by the Hermit's Peak and Calf Canyon fire. Moreover, reportedly

many rural residents and landowners do not have all the required paperwork for property identification and for filing the claim.

The Ute Park Fire 2018

The Ute Park Fire occurred in the late spring of 2018, burning approximately 36,740 acres within Colfax County, NM. Post-fire flooding from the Ute Park Fire has been a major problem with few good solutions. After the fire, debris flows closed US Hwy 64 on an almost daily basis during the 2018 monsoon season. NM DOT installed concrete Jersey Barriers along the right of way and assumed responsibility for cleaning sediment from the highway and the right of way. Debris flows onto the highway have decreased since 2018, partly due to decreased rainfall during 2019, and perhaps because much of the available sediment has washed away, leaving mostly bedrock in the ephemeral drainages.

While impacts to US Hwy 64 have decreased, post-fire flooding continues to be a problem in the community of Ute Park and in many of the ephemeral drainages that run off the fire scar directly in the Cimarron River. One heavily burned drainage has impacted several homes in the Ute Park Community. These homeowners have spent a considerable amount of their own money to divert debris flows away from their homes, keep roads open, and haul away sediment and debris. A few homeowners have reportedly given up and no longer attempt to protect or occupy their homes.

Infrastructure for drinking water and irrigation water have been severely impacted by the Ute Park Fire's post-fire flooding and sediment and debris flows. Sediment removal can be very problematic, and the Ute Park Fire has been cited as a huge source of sediment in local water diversion systems. Sometimes four feet of sand is deposited overnight in the irrigation systems since the Ute Park Fire. The City of Raton diverts water from the Cimarron River immediately below the confluence with Turkey Creek. After the Ute Park Fire, turbidity in the Cimarron River became a significant problem at the Raton diversion. Dan Campbell of Raton Water Works reported that whereas turbidity might have maxed out at 100 NTUs before May 2018, turbidity since the fire has been measured as high as 1,000 NTUs. Besides suspended sediment, large boulders and woody debris have been transported down the river and Turkey Creek tributary. Some of this debris has been deposited and lodged near the water intake. After some summer storms, it has taken multiple days with heavy machinery to clear the diversion of debris before water treatment could resume (Walton, 2021).

A Burned Area Emergency Response (BAER) report for the 2018 Ute Park Fire was prepared by SWCA Environmental Consulting for the New Mexico DHSEM and can be found here: https://www.swca.com/sites/default/files/final_ute_park_report_compressed.pdf

Funding Emergency Response

Throughout the CWPP planning process, several needs regarding Dixon's ability to pursue funds for wildfire mitigation, response, and recovery have been documented as priority actions. This includes having a designated point of contact to coordinate with Rio Arriba County's Emergency Preparedness department to help the community to navigate the FEMA funding process on behalf of the community following disaster declarations. At present, both actions should be considered high-priority actions as they are potential bottlenecks for the community in recovery following wildfire or other natural disasters.

While individual landowners can pursue NRCS-EQIP, NM Department of Game and Fish (NMDGF) grants, and Soil and Water Conservation District funding, a watershed association or other community group would be eligible to pursue a larger number of funding opportunities which often require a designated non-profit status for the applicant. The Dixon Community Fire Department (associated with the DVFD) and the Embudo Valley Library and Community Center (EVL) are designated non-profits in the community and may be able to pursue these opportunities. This would include larger-scale funding opportunities, such as the NCNMWRP, which uses NRCS, NMFA-WTB/WPF, and other State funds to support SWCDs and other entities with funds for landscape-scale projects. Private initiatives and contributions and support by conservation groups, such as Trout Unlimited (TU), Mule Deer Foundation (MDF), and the National Fish and Wildlife Foundation (NFWF) would also be important to build a comprehensive, multi-donor, landscape-scale funding strategy for the community.

FEMA Hazard Mitigation Grants

There are numerous funding sources available for pre-and post-fire mitigation through FEMA grant programs. These include the Building Resilient Infrastructure and Communities (BRIC) program, the Flood Mitigation Assistance Program (FMA), the Hazard Mitigation Assistance Program, and the Hazard Mitigation Program - Post Fire. These grants require an investment of time and substantial training to obtain. One of the first steps for some of these, but not all, is to create a FEMA Hazard Mitigation Plan. There is funding available through FEMA to develop a Hazard Mitigation Plan. However, non-profits, businesses, and individuals cannot directly apply to FEMA for these funds. Rather, they must work through an eligible entity (states or a unit of local government such as Rio Arriba County) as a sub-applicant. Together with a local government representative, interested parties can reach out to the State Hazard Mitigation Officer with the New Mexico Department of Homeland Security (DHSEM). This person will support training and proposal development in partnership with the county to obtain FEMA funding. For an overview of FEMA grant programs offered through the DHSEM, visit: https://www.nmdhsem.org/preparedness-bureau/mitigation/

Potential Funding Sources

PRIVATE LANDS

Table 9 Private Land Funding Sources by Type, Amount Range, Focus, Application Dates

Funding Source: Entity and Program	Funding Purpose/Focus	Funding Cycle	Eligibility Requirements	Amount Range & Match Needs
NM Forestry Division (NMFD) – Hazardous Fuels	Reduce fire threat for communities at risk adjacent to federal land, restoring fire-adapted ecosystems	Applications are due in March each year	Local and tribal governments; political subdivisions of the state	<$300,000; 10% non-federal match

Funding Source: Entity and Program	**Funding Purpose/Focus**	**Funding Cycle**	**Eligibility Requirements**	**Amount Range & Match Needs**
NMFD – Forest Health Initiative	Reduce insect and disease risk; improve degraded (incl. over-stocked) forest land	Varies depending on funding	Landowners who own at least 10 acres of forest land and have a stewardship plan	<$100,000; 30% non-federal match
NMFD – WUI grants	Planning and implementation of hazardous fuels mitigation work to reduce fire threat in WUI areas; within boundaries of approved CWPP	Applications due in March each year	Local and tribal governments; political subdivisions of the state	<$300,000; 1:1 non-federal match
NRCS – Environmental Quality Incentives Program (EQIP)	Implementation of measures to protect soil, water, plant life, etc., including thinning and riparian restoration	Throughout the year; long process (decisions early in year)	Landowners of non-industrial forest lands; tribes and pueblos	Varies (reimbursements made after work completion and approval)
Soil and Water Conservation District (SWCD)	Dependent on funding programs pursued by the SWCD	Varies, depending on funding	Landowners	Varies

Funding Source: Entity and Program	**Funding Purpose/Focus**	**Funding Cycle**	**Eligibility Requirements**	**Amount Range & Match Needs**
North-Central NM Watershed Restoration Project (coordinated by Deirdre Tarr)	Dependent on funding programs pursued by the NCNMWRP, based on NRCS Regional Conservation Partnership Program	Varies, depending on funding (allocated >$7M between 2014-2018)	Landowners (in collaboration with SWCD and NRCS)	Varies; projects with high match are more competitive
Coalitions and Collaboratives Inc. (COCO) AIM Grants	Capacity building for fire risk reduction and for increasing Fire Adapted Communities concepts in WUI areas next to USDA FS land	In January-February each year	Communities, non-profits, fire departments, counties, SWCD	TBD (rather small); 1:1 match
NM Finance Authority - NM Water Trust Board – Water Project Fund	Loans and grant programs for rehab of (1) water conservation and recycling; (2) flood prevention; (3) ESA collaborative projects; (4) water storage, conveyance & delivery; (5) watershed restoration and management	Annual cycle announced by NMFA; subject to detailed regulations (see nmfa.net website)	Mostly water management institutions, local and state government entities	Varies; often part loan and part grant funding

Funding Source: Entity and Program	Funding Purpose/Focus	Funding Cycle	Eligibility Requirements	Amount Range & Match Needs
USDA Forest Service - Landscape Scale Restoration, through the Landscape Scale Competitive Grant Program	See: https://www.thewflc.org/landscape-scale-restoration-competitive-grant-program/fy-2022-landscape-scale-restoration	Annual in the fall	See website (mostly State Forestry Departments in relation to FAP)	See website

PUBLIC LANDS

Table 10 Public Land Funding Sources by Type, Amount Range, Focus, Application Dates

Funding Source: Entity and Program	Funding Purpose/Focus	Funding Cycle	Eligibility Requirements	Amount Range & Match Needs
NM Game & Fish Department	Various funding programs aimed at protection of listed species and habitat restoration	TBD; depending on funding program	Non-profit organizations and/or private landowners	Variable
National Forest Foundation	Collaborative and innovative programs on national forest lands: Matching Awards Program (for on-the-ground restoration work); Ski Conservation Funds (SCF) and Forest Stewardship Funds (FSF)	MAP: January and June (in 2 phases); SCF and FSF by invitation only (in December)	Non-profit organizations, universities and tribes	Average award: $25,000 with a 1:1 match

PRIVATE AND PUBLIC LANDS

Table 11 Private & Public Land Funding Sources by Type, Amount Range, Focus, Application Dates

Funding Source: Entity and Program	Funding Purpose/Focus	Funding Cycle	Eligibility Requirements	Amount Range & Match Needs
NM Forest and Watershed Restoration Act (FAWRA) – annual projects	State FAWRA Board selected projects for forest and watershed restoration, based on landscape-scale planning criteria with a focus on (a) on-the- ground restoration treatments, (b) project planning, (c) economic development programs to advance the use of small-diameter trees and wood biomass removed for hazardous fuel reduction and forest and watershed restoration, and (d) workforce development for wood utilization projects	Annually around February 1	Consult FAWRA application criteria annually at https://www.emnrd.nm.gov/sfd/forest-and-watershed-restoration-act-fawra/	Varies between years
U.S. Forest Service Community Wildfire Defense Grants	Assist at-risk local communities and Indian Tribes with planning for and mitigating against the risk created by wildfire	Annually in fall	Non-profit organizations, tribes, local government agencies, state forestry agencies	CWPP funding < $250K with 10% match; Project implementation <$10 million with 25% match
National Wild Turkey Foundation's America The Beautiful Challenge	Implement or lead towards implementation of large-scale, multi-state, on-the-ground conservation activities through capacity building, community engagement, planning, and project design.	Annually in spring	State gov. agencies, territories of the US, Indian tribes non-profits, local gov, municipal gov, educational institutions	Varies per category, $200K- $5 million

Funding Source: Entity and Program	Funding Purpose/Focus	Funding Cycle	Eligibility Requirements	Amount Range & Match Needs
Private Donors	Mostly unrestricted	N/A	N/A	N/A
Volunteers	N/A	N/A	N/A	N/A
Trout Unlimited	Determined in collaboration with TU	TBD	TBD	TBD
Mule Deer Foundation	Determined in collaboration with MDF	TBD	TBD	TBD
Rocky Mountain Elk Foundation	Determined in collaboration with RMEF	TBD	TBD	TBD
National Fish & Wildlife Foundation	Various grant programs that sustain, restore and enhance fish and wildlife habitat	Dependent on grant program	Dependent on grant program	Dependent on grant program
Wildlife Conservation Society – Climate Adaptation Fund	Competitive grants for on-the-ground actions focused on implementing priority conservation actions for climate adaptation at a landscape scale with a focus on implementing priority actions and strategies identified in State Wildlife Action Plans.	TBD	non-profit conservation organizations	Variable

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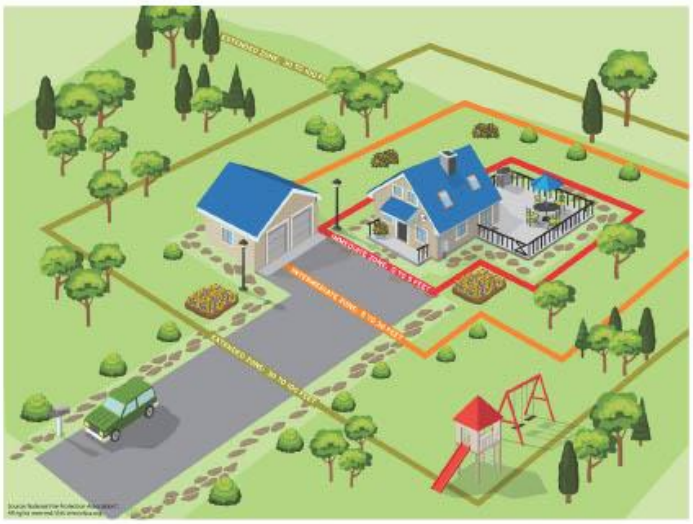
APPENDIX A: Dixon Firewise Assessment

FIREWISE USA®
RESIDENTS REDUCING WILDFIRE RISKS

FIREWISE USA® RECOGNITION PROGRAM COMMUNITY WILDFIRE RISK ASSESSMENT

Firewise USA® and the US Wildfire Problem
Every year, devastating wildfires burn across the United States. At the same time, a growing number of people are living where wildfires are a real risk. While these fires will continue to happen, there are things you can do to help protect your home and neighborhood as well as your family's safety.

The NFPA Firewise USA® recognition program was designed to help people learn about wildfire and how they can make their homes and neighborhoods safer. It's based on research that shows how to prepare homes to withstand embers and prevent flames or surface fire from igniting the home and its immediate surroundings, by working in an area known as the home ignition zone (HIZ). This is the home and everything around it within 100 feet.



The community risk assessment should focus on the vulnerability of homes and surrounding home ignition zones to embers.

Red Boundary = Immediate Zone
Orange Boundary = Intermediate Zone
Green Boundary = Extended Zone

In many neighborhoods, home ignition zones often overlap onto adjacent properties—meaning that homes are closer than 100 feet to one another. This makes the conditions of neighboring homes and vegetation a part of the wildfire threat. It's extremely important that neighbors work collaboratively with each other—and talk with each other—to reduce their shared risk.

Using Firewise USA® to create ignition-resistant communities
Firewise USA® is a voluntary recognition program that provides a framework to help neighbors get organized, find direction, and take action to increase the ignition resistance of their homes and communities from wildfire.

1

There are several steps to take to become recognized as a Firewise USA® site:

- Organize — Create a **board or committee** of volunteers to represent your community, including residents and partners such as local forestry agencies or the fire department. Identify a **resident leader** who will be the program point of contact.
- Plan — The board or committee defines the boundaries of the site and obtains a **community wildfire risk assessment**. From the risk assessment, the board/committee creates a multi-year action plan to identify and prioritize actions to reduce ignition risk to homes.
- Do — Each year, neighbors complete educational and risk reduction **actions** identified in the plan.
- Tell — When the above criteria have been met, the Resident Leader **applies for recognition** through the **Firewise® Portal** (portal.firewise.org), describing educational and mitigation work in the site. Each year, **sites renew their status** by reporting their activity.

The community wildfire risk assessment is one of the most important steps in the process. It's a tool to help residents understand their wildfire risk and engage in risk reduction efforts.

There are many ways to assess risk from wildfires, using many different scales. The assessment is focused on the risk of home ignition from wildfires and will help guide residents on the most effective actions to prevent home ignitions that could result in wildfire disasters.

The recommendations provided by the completed assessment will be the board/committee's primary tool in determining the action priorities within the site's boundaries. The Firewise USA® program requires risk assessments be **updated at a minimum of every five years.**

HOW TO CONDUCT THE RISK ASSESSMENT

Each state may designate its own template and special requirements for Firewise USA® participation. **Before starting this assessment, please contact your state liaison to determine your state's process. The best assessments result from a collaboration between residents and their state forestry agency, local fire department, or another designated partner.**

The community wildfire risk assessment speaks to the general conditions of the overall Firewise USA® site and does not provide details on each individual dwelling.

The assessment should focus on:

- Vulnerability of homes to ember, surface fire, and crown fire
- Condition of the structures themselves
- Immediate hazards within the home ignition zone on individual properties
- Concerns presented by common/open space areas or adjacent public lands

It should also consider factors that impact risk and influence fire behavior or structure ignitability, such as:

- Structural characteristics (roofing, siding, decks)
- Vegetation types
- Slope and aspect (the direction a community faces—north, south, east, or west)
- Housing density

ASSESSMENT OVERVIEW

Features of a community risk assessment include:

- It can be completed in a variety of ways, including a walkthrough or a drive by, and does not require each individual dwelling unit to have a home risk assessment completed prior to the community assessment.
- It should focus on condition of vegetation within the participating site's boundary; general landscaping characteristics; home construction (materials used for roofs, siding, decks, etc.); and relationship of ignition potential of combustible materials on adjacent properties.
- It needs a logical recognized site boundary (HOA, defined neighborhood, street, etc.).

Assessment Participants

List the principal participants who assisted in data gathering and development of this assessment (include name, role/organization, phone and email). Participants can include your district forester, or Firewise® Board members for instance.

Participant 1	Gabe Kohler	Forest Stewards Guild		
Participant 2	Alex Amend	Dixon Community Fire Department		
Participant 3	Steve Jenison	Dixon Community Fire Department		
Participant 4				
Participant 5				

DEFINING YOUR FIREWISE USA® SITE

If there is already a Community Wildfire Protection Plan that includes your site, it can be helpful to use in filling out this information. Ask your State Forestry representative if one exists.

General Site Description

Site name: Dixon Community Fire District

City: Dixon

County: Rio Arriba

State: NM

Boundary description (this could be defined by your HOA, subdivision, defined neighborhood, street(s), etc.):

See Map

Area (please indicate your unit of measurement) (OPTIONAL): _____

At the end of this document, please use the section provided to insert a map of your community's defined boundary.

3

General Site Information

Number of dwelling units – Firewise USA® participation requires a minimum of 8 individual dwelling units not to exceed 2,500 units within the site's identified boundary.

Contact Firewise USA® if you have questions about your area's eligibility, visit our contact us page.

Number of dwelling units: 752

Number of residents: 1248

Description of Properties within the Boundary

Residential types in your site (check all that apply):

- ☑ Single family
- ☐ Duplex
- ☐ Townhomes
- ☐ Apartment
- ☑ Mobile
- ☑ Other: yurts

Types of ownership (check all that apply):

- ☑ Private
- ☑ Common
- ☑ Public (county, state, or federal)

Lot sizes (check all that apply):

- ☑ Less than 0.10 acres or 4,356 square feet
- ☑ 0.10–0.50 acres or 4,356–21,780 square feet
- ☑ 0.51–1 acres or 22,215–43,560 square feet
- ☑ Greater than 1 acre or 43560 square feet

Other site information that you would like to provide (OPTIONAL): Irregular lot sizes, thin tracts of land going towards waterways.

Description of local wildland fire characteristics:

Fire intensity and rate of spread depend on the vegetation type and condition (live/dead), topography, and typical weather patterns. This information can be obtained from your state forestry agency or local fire department.

Describe the common vegetation type(s) in your site (i.e., grasses, shrubs, and trees): Rio Grande cottonwood bosque. Chinese elms. Invasive species near waterways. Pinion Juniper, native shrubs, and highly-flammable early season grasses in foothills and arroyos surrounding the community of Dixon.

Describe the topography within your site (include geographical features such as canyons, chimneys, steep slopes, indicate which direction slopes face, or note whether the area is flat): Bosque through the center of town with steep slopes. This drainage may contribute to higher severity wildfire behavior. Arroyos and mountainous ridges surrounding the community that make access difficult in many places.

Severe wind exposure:

- ☐ Not in an area with regular exposure to winds
- ☑ Regularly exposed to winds
- ☐ Frequent severe winds

History of wildfire:

- ☑ Area with history of fire occurrence
- ☐ Area with no history of fire occurrence
- ☐ Unknown

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FIREWISE USA® SITE OBSERVATIONS AND RECOMMENDATIONS

Use this section to record observations from within your site and recommendations for action that can be included in the site's action plan. Consider taking photos to keep in your site's files that illustrate successful risk reduction efforts and areas that need improvement.

Remember, this is a community-wide view and should report on the overall conditions of the entire site. Although individual home risk assessments are not required in this section, they may end up being a recommendation for the Action Plan.

Observations

The observation section is broken down by the characteristics of homes and the vegetation management within the home ignition zones and common areas. Mark the appropriate box for each category that best represents the conditions within your site.

HOME IGNITION ZONES

Home: General building construction. Are the homes made of ignition resistant building materials?

Roofing materials: composite shingles, metal, cement tile and clay

- ☑ Greater than 75% of homes have metal, tile, or Class A asphalt or fiberglass shingles
- ☐ 50–75% of homes have metal, tile, or Class A asphalt or fiberglass shingles
- ☐ 25–50% of homes have metal, tile, or Class A asphalt or fiberglass shingles
- ☐ Less than 25% of homes have metal, tile, or Class A asphalt or fiberglass shingles

Soffit vents: a screened vent on the underside component of the eaves that allows air to flow to the attic or the space below roof sheathing

- ☐ Greater than 75% of homes have non-combustible soffit vents with mesh or screening
- ☐ 50–74% of homes have non-combustible soffit vents with mesh or screening
- ☐ 25–50% of homes have non-combustible soffit vents with mesh or screening
- ☑ Less than 25% of homes have non-combustible soffit vents with mesh or screening
- ☐ Unknown

Siding: stucco, masonry products, plaster, and cement

- ☑ Greater than 75% of homes have non-combustible siding
- ☐ 50–74% of homes have non-combustible siding
- ☐ 25–50% of homes have non-combustible siding
- ☐ Less than 25% of homes have non-combustible siding

Skirting: material used around the bottom of homes and sometimes decks to protect the underside from exposure

- ☐ Greater than 75% of homes have skirting underneath raised floors/decks
- ☐ 50–74% of homes have skirting underneath
- ☑ 25–50% of homes have skirting underneath
- ☐ Less than 25% of homes have skirting underneath

Attachments: wood vs. non-combustible materials. (Examples of non-combustible materials include decks made with wood-plastic composites, higher density tropical hardwood, or fire retardant treated decking materials, and fences that use metal or masonry where attached directly to the siding of a home.)

- ☐ Greater than 75% of homes have NO wooden attachments
- ☑ 50–74% of homes have NO wooden attachments
- ☐ 25–50% of homes have NO wooden attachments
- ☐ Less than 25% of homes have NO wooden attachments

Windows

- ☐ Greater than 75% of homes have multi-paned windows
- ☐ 50–74% of homes have multi-paned windows
- ☑ 25–50% of homes have multi-paned windows
- ☐ Less than 25% of homes have multi-paned windows
- ☐ Unknown what type of window exist (single pane vs. multi-pane)

Roof/gutter debris (leaf litter, pine needles, etc.)

- ☐ Greater than 75% of homes have cleaned and maintained their roof and gutters
- ☑ 50–74% of homes have cleaned and maintained their roof and gutters
- ☐ 25–50% of homes have cleaned and maintained their roof and gutters
- ☐ Less than 25% of homes have cleaned and maintained their roof and gutters

Gutter type

- ☑ Greater than 75% of homes have metal gutte
- ☐ 50–74% of homes have non-combustible gutters
- ☐ 25–50% of homes have non-combustible gutters
- ☐ Less than 25% of homes have non-combustible gutters

Immediate Zone: 0–5 feet from the furthest attached point of homes. This area addresses the immediate vegetation and materials, creating a combustible-free area.
Items to consider:

- Is there dead vegetation, dried leaves, pine needles, and ground debris near foundations?
- Has hardscaping been used around perimeters to keep them free of litter/debris? Are there concrete, stone, or gravel walkways?
- Have wood mulch products been replaced with non-combustible alternatives, such as crushed stone/gravel options?
- Are there trees/shrubs next to the home? Are there branches overhanging the roof or within 10 feet of chimneys?

- ☐ Greater than 75% of homes have treated vegetation and created a combustible-free area
- ☐ 50–74% of homes have treated vegetation and created a combustible-free area
- ☐ 25–50% of homes have treated vegetation and created a combustible-free area
- ☑ Less than 25% of homes have treated vegetation and created a combustible-free area

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Intermediate Zone: 5–30 feet from the furthest exterior point of the home. This area uses landscaping and breaks (areas of non-combustible materials such as dirt, cement, or rock) to help influence and decrease fire behavior. Items to consider:

- Are there fuel breaks such as driveways, walkways/paths, patios, and decks?
- Are lawns and native grasses maintained? General recommendation is a height of 4 inches.
- Is vegetation in this area spread out? It is recommended that trees and shrubs should be limited to small clusters of a few each to break up continuity; trees should be spaced to a minimum of 18 feet between crowns.
- Have ladder fuels (vegetation under trees) been removed so a surface fire cannot reach the crowns? Have trees been pruned? General recommendations are up to 6 to 10 feet from the ground; for shorter trees, do not exceed 1/3 of the overall tree height.
- Are plants, trees, and lawns watered to keep them from becoming dry?

- ☐ Greater than 75% of homes have treated vegetation
- ☐ 50–74% of homes have treated vegetation
- ☐ 25–50% of homes have treated vegetation
- ☑ Less than 25% of homes have treated vegetation

Extended Zone: 30–100 feet, out to 200 feet (where applicable). Generally, this area focuses on landscaping—managing the vegetation to influence fire behavior and spread. The goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the ground. At these distances, property lines may overlap, presenting the opportunity and need to work collaboratively with neighbors. Items to consider:

- Are there heavy accumulations of ground litter/debris?
- Is there dead plant and tree material that should be removed?
- Are storage sheds and/or other outbuildings in this zone clear of vegetation?
- Do mature trees have small conifers and brush growing between them or is the space maintained?
- Do trees 30–60 feet from the home have at least 12 feet between canopy tops? Is there at least 6 feet between canopy tops of trees located 60–100 feet from the home?

- ☐ Greater than 75% of homes have treated vegetation
- ☐ 50–74% of homes have treated vegetation
- ☐ 25–50% of homes have treated vegetation
- ☑ Less than 25% of homes have treated vegetation

Common areas or adjacent public lands: (community owned/managed)

- ☐ Not adjacent to wildlands with accumulated fuels
- ☑ Adjacent to wildlands with accumulated fuels

Is there a management plan for these fuels? If so, please describe:

There is uncertainty about management responsibility of arroyos and bosque. These areas are overgrown with willows, wild plum, salt cedar, etc. and represent a high wildfire risk.

Additional comments or observations regarding site conditions:

Both in bosque and in juniper areas there is a lot of growth of early season grasses that increase the fine fuel component on the landscape and support ignition and spread of wildfire.

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Summary

Use this section to summarize findings in observations. The percentages captured will help you briefly explain a snapshot of your community's current status and areas for successful focus. List areas where there is significant success and areas where improvements could be made, especially at low cost with sweat equity/volunteer labor. Of the three home ignition zones, emphasis should be on the immediate zone.

Example: Greater than 75% of homes observed have non-combustible roofs; however, there were several noted with wood shake shingles.

The major risk in the Community of Dixon is the spread of wildfire that starts in the bosque or along arroyos and spreads onto residential properties through fine fuels up into housing areas. An important focus for the community is to reduce fine fuel loads leading onto their properties. This is particularly important near the bosque and along arroyos.

To reduce wildfire risk in and along the bosques, the Dixon Community Fire Department (DCFD) has implemented a community chipping program that has been effective to increase awareness and empower community members to take action in reducing fuel loads on their properties. This program has been effective at reducing fuel loads from dead and down fuels in the bosque. Participants have addressed dead stands of willow, which can contribute to extreme fire behavior in the case of an ignition. The DCFC has submitted an application to VFA for a chipper that they can use to continue to build awareness into the future.

Another low-cost method has been educating about burn regulations and enforcing infringement of these regulations. This approach has encouraged people to act more responsibly with their use of fire in general. DCFD has been working with the Embudo Valley Acequia Association as well as individual acequias to support them in burning ditches in a responsible way that accounts for red flag warnings and other high fire danger conditions.

DCFD is playing a central role in reducing wildfire risk in the district by quickly and responsibly responding to calls within their district before wildfire ignitions can spread.

Information about fire risk has been shared proactively through the DCFC social media and other local news outlets and newsletters. This includes information about burn bans and general fire risk conditions. Other community events, such as pancake breakfasts, have distributed NFPA home ignition zone materials and other educational materials tailored to supporting landowners in reducing their risk. These educational programs could be expanded upon to include greater information about reducing wildfire risk in the home ignition zone.

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Recommendations

Using the findings from the observation phase, identify actions and steps that can be taken to reduce the site's risk from wildfire. Prioritize recommendations based on the potential fire threat to homes. It's recommended that residents address hazards at the home first and work their way out into the three home ignition zones. Remember, small things can have a huge impact on home survivability. Use these recommendations to create your site's action plan.

Examples:

- Less than 75% of homes observed had a roof free of leaf litter, pine needles, and other debris. Encourage residents to remove the debris and keep those areas clean to work towards greater than 75% compliance.
- Bark mulch is widely used within the immediate area. Recommend removing bark mulch and replacing with an ignition-resistant material, such as crushed stone or gravel.
- Work with residents to improve the number of homes that have removed flammable materials 0–5 feet from the home.

The DCFD is in the process of writing a community wildfire protection plan. The recommendations below were identified through the process of 2 core team meetings and 1 public meeting.

Fuel Reductions

Clearing fire hazards surrounding homes such as wood piles, chamisas, brush and weeds

Bosque fuel reductions- thinning of non-native salt cedar and Russian olives, removal of dead and dying stands of willows and cottonwoods, and thinning of thick stands of wild plum.

Thinning along roads, major evacuation routes, and power line corridors.

Thinning of dense pinon and juniper stands surrounding WUI areas and high-risk communities, including on State Trust Lands.

Education and Outreach

Educate residents on the need for evacuation kits and encourage to prepare them ahead of wildfire season

Host community wide clean up days where the community can work together at identified locations to help with chipping and clearing fuels and other debris, such as trash removal days in arroyos.

More public education and outreach- especially regarding defensible space and associated cost-share programs, home protection, structure construction, fire proximity, self-checks, propane, preplans, Ready Set Go! program, and general fire education.

Create pilot projects for thinning, home retrofitting, and defensible space and have demonstrations to educate the public. Create fliers with preparedness information and to-do lists and other educational content such as maps

Continue to host community chipper days to aid in slash removal and establish a central accumulation site for landowners to bring debris when chipper days are not happening

Special outreach to community members who have land that is within the bosques, adjacent to the bosques, or along arroyos to encourage participation in fuel reduction efforts. All residential structure owners should be encouraged to create clear spaces around their homes that will reduce the likelihood of spread to their home.

Host training on defensible space and home hazard assessments so that more individuals are equipped to perform these task

Develop a program to incentivize homeowners to maintain defensible space and to avoid building in areas that have post-fire flooding effects.

Provide technical assistance such as handouts to educate community about defensible space and ember awareness and host demonstrations of best practices. Include safety tips on DVFD's Facebook page

Develop a program to incentivize homeowners to maintain defensible space and to avoid building in areas that have post-fire flooding effects.

Provide technical assistance such as handouts to educate community about defensible space and ember awareness and host demonstrations of best practices. Include safety tips on DVFD's Facebook page

Conduct home hazard assessments for community members, especially in high-risk and/or low-income communities

Conduct home assessments for interior fire risks including inspections of fireplaces and stoves. Include education about portable space heaters and associated risks

Develop guidance for new home builders to utilize wildfire resistant building materials and designs

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NEXT STEPS

The information you have collected during the assessment process will help you develop recommendations that can be applied to your site's action plan. Action plans are a prioritized list of risk reduction projects and the related investments needed to achieve them for the site. Action plans also highlight suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. Action plans should be **updated at a minimum of at least every three years.**

Visit, **How to Become a Firewise USA site,** to view the full list of required criteria needed to complete the Firewise USA® recognition program's application process. Or **visit the Program Management portal** to start your application.

Although not required, you may also consider adding addenda that cover the following community/fire safety issues:

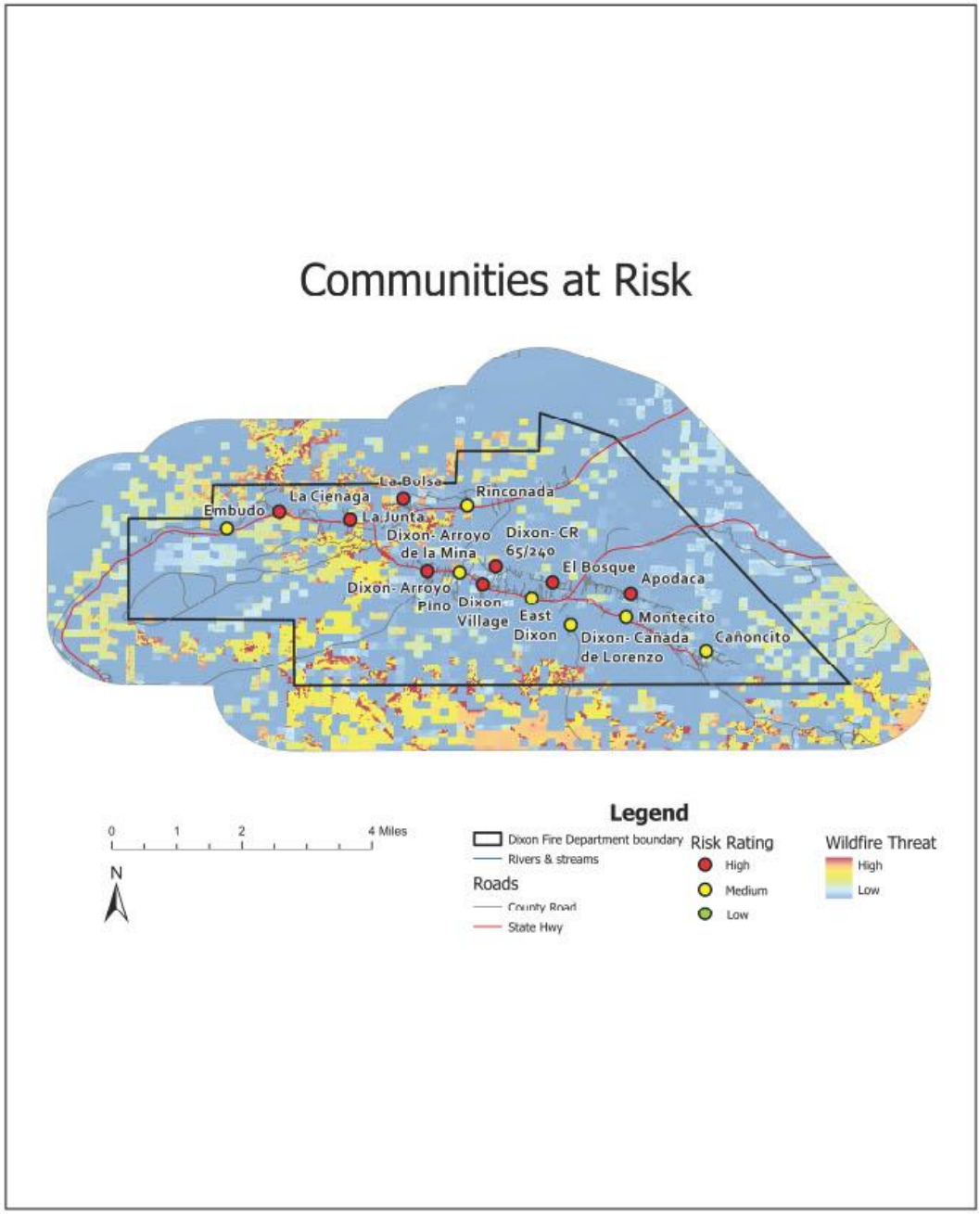
- Hydrant locations
- Ingress/egress routes for the community
- Location of fire district and its capabilities
- Street signs and address numbers
- Water supply for fire response

We recommend reaching out to your local fire department for assistance in determining what other safety issues to address.

See next page to insert a map of your community's defined boundary.

MAP OF YOUR COMMUNITY'S DEFINED BOUNDARY

Click in the box to insert your image.



Appendix/Definitions

These resources will additionally provide aid in understanding the interaction between wildfire behavior and the home ignition zone:

- E-learning: Understanding the Wildfire Threat to Homes, **visit our online courses.**
- Preparing Homes for Wildfire: Actions that reduce risk – tips and resources, **visit our page Preparing Homes for Wildfire.**

Dwelling Unit: Household/residence built for occupancy by one person, a family, or roommates, including mobile homes and cabins, and for multi-family residential occupancies (i.e. duplexes, and other types of attached housing). An apartment building with 10 units would be considered 10 dwelling units.

Home Ignition Zone: The home and everything around it out to 100 feet. The condition of the home and surrounding landscape within 100 feet will influence the ignitability of the structure.

Firewise USA® Action Plan: A prioritized list of risk reduction projects/investments for the participating site, along with suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. The submitted action plan should be broken down by year and reflect those goals (with examples attached). This document is required to be updated at least **every three years**. As circumstances change (e.g., completing activities, experiencing a fire or a natural disaster, new construction in community, etc.), the action plan may need to be updated more frequently.

Firewise USA® Community Wildfire Risk Assessment: An assessment that focuses on the risk of home ignition from wildfires by looking at the conditions of the homes and surrounding home ignition zones. It is used to help guide residents on the most effective actions to prevent home ignitions and wildfire disasters. This document is required to be updated at least **every five years.**

Firewise® Board or Committee: A group comprised of residents and other applicable stakeholders. Consider inviting the local fire department, state forestry agency, elected officials, emergency manager, and, if applicable, the property management company to participate. The board/committee will guide the efforts of the Firewise USA® site, using the risk assessment to identify and prioritize activities in the action plan.

Firewise® Resident Leader: A member of the community that is designated as the lead for a Firewise USA® site and is a part of the Firewise® board or committee. They are the primary contact between the community and the program, responsible for completing the initial recognition application and annual renewal application via the online management portal (Firewise® Portal). A site may have more than one designated resident leader assigned in the Firewise® Portal.

State Liaison: Typically, the employee of the organization that hosts the official state forester. This person is designated by the state forester, is responsible for setting the direction of Firewise USA® implementation in the state, and is the state's main contact to the national program. They are also responsible for reviewing and approving new site applications and may choose to review annual renewal applications. A list of state liaisons can be found on NFPA's website so, you can **contact your state liason.**

Voluntary Recognition Program: Firewise USA® is a volunteer program that provides a set of criteria that residents choose to work towards. It is not required for individuals in wildfire prone areas to participate in or be a part of in order to take risk reduction actions.

Firewise USA® was loosely modeled after the Arbor Day Foundation's Tree City USA program, enabling residents to come together voluntarily to meet a set of criteria that qualify them for national recognition. This means that residents choose to be involved and determine their site's boundaries. When they meet the Firewise USA® criteria, they earn national recognition for doing so. Each year, when verifying they are continuing to reduce wildfire risks in the community, they continue to enjoy national recognition and remain in good standing by continuing to meet the criteria. Recognition comes in the form of signage and publicity on the Firewise.org website, at a minimum.

Firewise® Portal: Online community/Firewise USA® site management system. All new and renewal applications for recognition are completed via the portal.

Application for Recognition: In order to be a recognized participant in the Firewise USA® program, a site must meet program criteria and the online application found in the Firewise® portal must be filled out. There are eight steps to the application:

- Step 1: Overview — This includes the basic community information (contacts, size, location).
- Step 2: Risk Assessment — The wildfire community risk assessment must be uploaded into the application. It carries over each year until the five-year update cycle is reached.
- Step 3: Board/Committee — A site must acknowledge that they have a board/committee and may choose to share committee member names and email addresses. This provides NFPA with backup contacts in case the resident leader is unreachable.
- Step 4: Action Plan — The developed action plan must be uploaded to the application; it carries over each year until the three-year update cycle is reached.
- Step 5: Educational Outreach — Each participating site is required to hold a minimum of one wildfire risk reduction educational outreach event or activity annually. Examples of acceptable events can be found in that section of the application.
- Step 6: Vegetation Removal — A major component of wildfire risk reduction is the removal of vegetation (shrubs, brush, limbs, trees, etc.) from individual properties and common-area property. Tracking vegetation removal provides forestry and fire agencies with information on the quantity of potential wildfire fuel that's been eliminated from the area(s). This section provides tools to help a community estimate its vegetation removal in cubic yards.
- Step 7: Investment — Investing the equivalent of one volunteer hour (valued at $25.43) per residential dwelling unit within the site's boundary in annual wildfire risk reduction actions is a requirement of the national recognition program's criteria for maintaining an "In Good Standing" status. Annual investment information can be reported in hours worked or money spent.
- Step 8: Review — Verify that each component of the application has been filled out correctly before submitting the application.

Annual Renewal: In order to remain "In Good Standing" in the program participating sites will need to complete an annual renewal application. This application is typically due mid-November. Requirements are similar to the initial application for recognition. More information can be found online, by visiting our Annual Renewal Information page.

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Certificate of Recognition: Sites that successfully meet the participation requirements are provided a "Certificate of Recognition." This is provided upon approval of the initial application for recognition and on an annual basis upon approval of the renewal application. The certificate can be accessed from the community's dashboard on the Firewise® Portal.

Certified vs. Recognized: As described in the definition of Voluntary Recognition Program, Firewise USA® sites meet a set of criteria to earn national recognition, and continue to meet specific criteria annually to remain in good standing with the program. The words "certified" and "certification" are not affiliated with the Firewise USA® program. To be "certified" implies that an individual has demonstrated specific competency in a job role or skill set. An example would be a certified electrical safety technician. Organizations can also be certified, generally meaning they meet qualifications that give them access to specific benefits or resources. An example would be the Women's Business Enterprise National Council (WBENC) certification that validates that a business is 51 percent owned, controlled, operated, and managed by a woman or women. Firewise USA® sites are not certified, and neither do individuals nor their properties within site boundaries receive certification.

APPENDIX B: New Mexico Department of Health Resources for Well Owners

Obtained via: https://nmtracking.doh.nm.gov/environment/climate/WellsAndDisasters.html

Wells and Disasters: Wildfire, Flooding, and Winter Weather

Disaster events seen in New Mexico including wildfire, floods, and extreme weather, can damage or contaminate wells. Taking steps to protect your well before a disaster or weather event can greatly reduce the potential for damage and contamination.

If your well has been contaminated or you suspect that it may be contaminated, do not drink the water. You need to properly disinfect or treat the water and have it tested before drinking/using the water. Drink clean water from another source (e.g., bottled water) until you are sure the water from your well is safe to drink again.

Drilled, driven or bored wells are best disinfected by a well or pump contractor, because it is difficult for the private owner to thoroughly disinfect these wells. However, if you need to disinfect a well yourself, follow these safe guidelines from the CDC.

Working on a well after a natural disaster can be hazardous. Disasters can damage well piping and electrical systems. Unless you are highly skilled, electrical repairs are best conducted by a qualified electrician or well contractor.

Wells in a Wildfire Prone Area

If you live in a wildfire prone area and have a private well, follow these tips to help protect your well and respond should a wildfire occur:

- Maintain your private well.
- Know your private well and take pictures of storage or pressure tanks, pump, treatment system (including any filters), well documents, and electrical components to reference later if there is damage.
- Store things that easily start on fire away from your well (e.g., paint, gasoline).
- Use a well house made of fire-resistant materials and use fire-resistant electrical coverings.
- Keep the surface seal in good condition.
- Additional steps can be taken that may require a well contractor: Keep extra sanitary seals in case the seal gets damaged. Install shut-off valves right before and after the pressure tank. Install backflow prevention valves on all hydrants and outside taps. Use a non-PVC well casing.

What to do if a wildfire is coming

If a wildfire is likely and you have a private well, follow these tips to help protect your well and respond should a wildfire occur:

- Buy or store safe water to use for drinking, cooking, and bathing for several days.
- Have contact information for a licensed well contractor, health department, and certified laboratory on hand.
- Environmental Health Epidemiology on-call service: (505) 827-0006 or doh-eheb@state.nm.us
- Clear away debris near the wellhead.
- Turn off power to your well pump and equipment (if possible). Power switch may be by the water pump or tank or at the main electrical panel.
- Shut off the water (if possible) using shut off valves.
- Wrap the well cap and well casing with durable flame-retardant sheet plastic and duct tape to form as tight a seal as possible.
- Place fire resistant sandbags around the well. If possible, cover the wellhead with a sealed standpipe and bury it with fire-resistant sandbags.
- A well contractor can assist with other protective measures including removing any above ground well pumps or plumbing. Store them in a fire-resistant area.

After a wildfire

If a wildfire has occurred and you have a private well, follow these tips to help protect your health and respond safely after a wildfire:

- **Well Inspection and repair** - Electrical system, cap, casing, pressure tank, plumping, and well house. Clear debris and check for contaminants.
- **Flush the well** - may best be done by a well contractor. Check pressure (pressure gauge or running a faucet). Disconnect water softeners/treatment systems. Run the pump (30 min-hours) until water is clear. If water doesn't run clear use alternate water source and contact a well contractor.
- **Test your well water** - Coliform bacteria, E. coli, nitrate, other contaminants of concern. Retest the water in several weeks to confirm.
- Disinfect your well if water tests positive for bacteria (E. coli) or repairs were done.
- **Prepare for flooding** - Areas burned by fires have little to no vegetation increasing the chances of sudden floods and mudslides. Learn more in the section below.

Wells in a Flood Prone Area

If you live in area likely to experience flooding (including areas that may be affected by wildfire and flooding) and have a private well, follow these tips to help protect your well and respond should a flood occur:

- Maintain your private well and keep records of well maintenance.
- Keep chemical and other contaminants away from the well head including keeping animal waste piles located where water will not flow toward the well.
- Make sure the well has a cap or sanitary seal.
- Have the well water tested annually for bacteria, nitrates, pH, and conductivity.
- Make sure that the ground is sloped away from the well so that surface water flows away instead of towards the well head.
- Make sure that the well casing extends at least 18 inches above land surface (NMAC 19.27.4) (check with a licensed contractor).
- If you have a well pit, consider upgrading.

What to do if flooding is likely

If flooding is likely, including areas burned by wildfire and you have a private well, follow these tips to help protect your well and respond should a flood occur:

- Buy or store safe water to use for drinking, cooking, and bathing for several days.
- Have contact information for a licensed well contractor, health department, and certified laboratory on hand.

APPENDIX C- Additional information on Community Oriented Programs

Fire Adapted Communities

Once the Dixon Community Fire Department has secured a Firewise Community designation for the Dixon Volunteer Fire Department District (Dixon Fire District), the district and the community may consider engaging in the statewide network of Fire Adapted Communities in New Mexico (FAC NM; (https://facnm.org/). FAC NM is a learning network and is often called the Fire Adapted New Mexico Learning Network (FAC NM). This learning network has as its 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 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 (Figure 21).

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 form 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 accommodate the ways of information sharing appropriate to everyone.

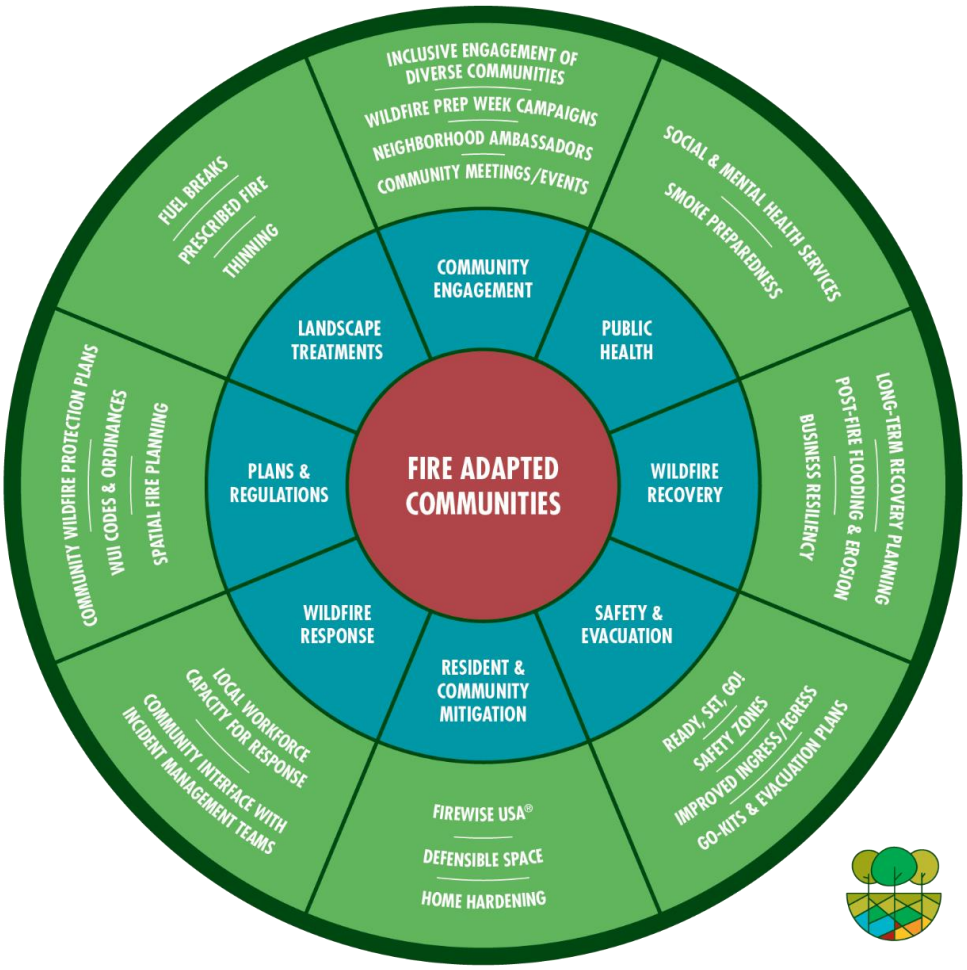

Figure 21 Fire Adapted Communities diagram: This diagram displays the many pieces that make up a fire adapted community.

Other opportunities would require engaging acequia associations, the emerging Dixon land grant organization, youth groups and the Dixon Elementary School, and homeowners in each of the neighborhoods and smaller communities that are spread through the Lower Embudo Valley. Doing this at times that suit these community groups would ensure optimized participation at community events that include an educational component. By hosting virtual events that are accessible to even those who are not physically present in the community and hosting in-person events during strategic times of the year, a greater number of people may be reached. These efforts will require a large amount of outreach to spread the word. The Dixon community would need to continue discerning how best to form a dedicated community group that can work with the fire department, Rio Arriba County, and FAC NM.

Visit Fire Adapted New Mexico at www.facnm.org or the national Fire Adapted Communities network at www.fireadaptednetwork.org for more information.

The Home Ignition Zone: Home Hardening and Defensible Space

Residents can significantly reduce their wildfire risk by creating defensible space around their homes and hardening their homes to the potential for ignition. The 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: www.facnm.org/prepare.

Structure Hardening

Addressing the materials and construction of the structure is important to reducing the risk of the home igniting. A significant resource that should guide residents as they consider new construction or retrofit of structures is the research from the Insurance Institute for Business and Home Safety on factors that contribute to home ignitions from wildfire. Their research addresses a wide variety of factors from vents that limit ember entry to buildings and materials that siding, and decks are constructed of that resist wildfire. Their 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 available here https://facnm.org/prepare.

Defensible Space Zones

Targeting trees, shrubs, and other vegetation in the immediate vicinity of the house can also make the home more fire resistant. Firewise USA recommends three zones of defensible space that provide useful guidance for County residents (Firewise USA, 2016) (Figure 22):

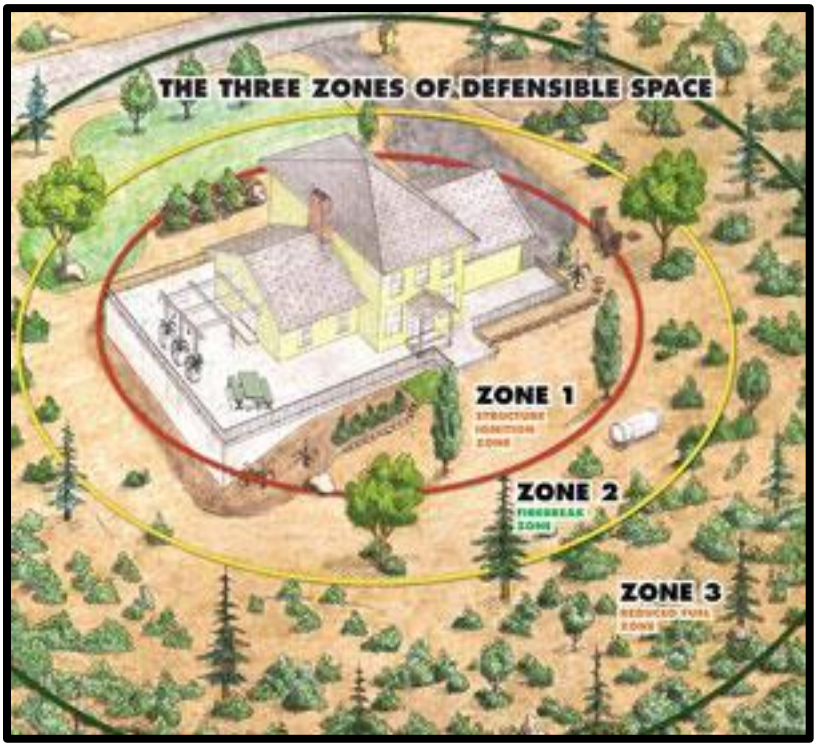

Figure 22 Three zones of defensible space.

Zone 1: Encircles the structure and all its attachments (wooden decks, fences, and boardwalks) for at least 30 feet on all sides. *Note:* the 30-foot number comes from the very minimum distance, on flat ground, that a wooden wall can be separated from the radiant heat of large flames without igniting.

In Zone 1:

- Space plants carefully, selecting those that are low-growing and free of resins, oils and waxes that burn easily.
- Mow the lawn regularly.
- Prune trees six to ten feet up from the ground.
- Space coniferous trees to allow 30 feet between crowns. Trim back trees that overhang the house.
- Create 'fire-free' area within five feet of the home, using non-flammable landscaping materials and/or high-moisture-content annuals and perennials.
- Remove dead vegetation from under decks and within 10 feet of the house.
- Consider fire-resistant materials for patio furniture, swing sets, etc.
- Remove firewood stacks and propane tanks; they should not be located in this zone.
- Water plants, trees and mulch regularly.
- Consider xeriscaping if you are affected by water-use restrictions.

Zone 2: 30 to 100 feet from the home.

In Zone 2:

- Select plants that are low-growing, well irrigated and minimally flammable.
- Leave 30 feet between clusters of two to three trees, or 20 feet between individual trees.
- Encourage a mixture of deciduous and coniferous trees.
- Create 'fuel breaks' such as driveways, gravel walkways, and lawns.
- Prune trees six to ten feet up from the ground.

Zone 3: 100 to 200 feet from the home. NOTE: Because of other factors such as topography, the recommended distances to mitigate for radiant heat exposure extend between 100 to 200 feet from the home – on a site-specific basis. In this area:

- Conduct thinning of trees, although less space is required than in Zone 2.
- Remove smaller conifers that are growing between taller trees (these can serve as "ladder fuels" and give ground-level fires a path into the crowns of larger, mature trees).
- Remove heavy accumulation of woody debris.
- Reduce the density of tall trees so that their canopies do not touch.

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 such as the one from Firewise https://www.nfpa.org/assets/gallery/riskassessment/story.html" https://www.nfpa.org/assets/gallery/riskassessment/story.html or at https://facnm.org/assessmentools, 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.

Evacuation

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 firefighters 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 (see the resources for residents section). Early preparation can help residents with everything from packing lists—essentials can include taking a supply of critical medications—to how to address pets and livestock.

Here is a list of resources related to evacuation:

- Ready, Set, Go. This is the best tool for residents to prepare for different stages of evacuation: https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/FINAL-new-mexico-RSG-guide-2017_000.pdf
- Past experiences and insights from evacuation: Firsthand Accounts: How to Prepare Your Community for a Wildfire Evacuation.
- Evacuation planning 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/

At the community level, the CWPP update includes a priority action item to establish safety zones and/or evacuation staging areas. A safety zone is an area without burnable fuel that is large enough so that the distance between the firefighters and flames is at least four times the maximum flame height. These should be established and made known in a community, but it should be made clear to residents that these safety zones do not allow any reduction in other preparations, since they should only be relied upon as a last resort.

Ingress and Egress/ Roads

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, such as Apodaca, face a 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 and the possibility of this should be assessed on a case-by-case basis. However, in many cases this is impractical and, in this case, widening roads and adding or improving turn outs will help ease this problem to allow for a two-way flow of traffic.

Many secondary roads that potentially provide access for fighting wildland fires in the Dixon Volunteer Fire Department District are very narrow, in poor condition, and in some cases unpaved (sometimes in arroyo bottoms). Many are dead-end roads. These road conditions hamper a timely response by firefighters and limit evacuation option by residents during an emergency. Specific roads that need evaluation and improvement are identified in the Priority Actions section.

Human Sources of Ignition

On average in the U.S., human-caused wildfires burn 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

For more information on human ignitions, risk awareness, and wildfire prevention in New Mexico, refer to the Guild's March 2018 report: *Increasing Wildfire Awareness and Reducing Human-Caused Ignitions in Northern New Mexico* (http://forestguild.org/wildfire_prevention).

Campfires

In outreach and education efforts, it is important to understand the causes and patterns of ignition. Especially considering that 80% of wildfires are caused by campfires within a ¼ mile of a road, it is necessary to redouble efforts at campfire education (Evans 2018). The above-cited report provides the following insights into campfire ignitions:

- Abandoned campfires account for 44% of human-caused wildfires in the Southwest since 2011.
- 80% of wildfires started by campfires are within a quarter mile from a road.
- Campfire bans have demonstrated limited effectiveness, possibly due to their great importance to people recreating.

Power Lines

Electric power lines are increasingly becoming common ignition points for large wildfires in New Mexico. Three major incidents have occurred since 2011, and in May 2018 a power line ignited the Los Alamitos fire, which burned 67 acres in two hours. 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 firefighting (Mitchell, J. W. 2009). In April 2013, the U.S. 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 in this listing.

Ongoing collaboration between the DVFD and local utility companies (Jemez Mountains Electric Cooperative, Northern New Mexico Gas Company, etc.) is essential for reducing the risk of wildfire caused by power lines. The DVFD has 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 have a role to play to identify power lines, poles, and transformers that are in poor condition or have excessive brush underneath and contact utilities or other authorities.

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 years old, under 18, 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 in bedrooms can provide around 8 hours nightly of clean breathing, 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 you are 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 your exposure to smoke.

Community Smoke Mitigation

For community leaders, here are some considerations and steps ahead of a potential wildfire to prepare your 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 that succeed in providing clear for the most vulnerable residents in an area.

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 - from Fire Adapted New Mexico
- Protect Your Health on Smoky Days - from New Mexico Environmental Public Health
- Wildfire Smoke Frequently Asked Questions - Environmental Protection Agency

- New Mexico's Smoke Management Program - New Mexico Environment Department's Air Quality Bureau

Communication

Communication is one of the best tools for reducing the impact of wildfires. Good communication allows firefighters 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, VFDs, 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 is a worthwhile investment to ensure seamless communication during a wildfire. These meetings also serve to build the personal connections and trust that can be very 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 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 has 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 would be helpful to ensure that there aren't gaps in accountability across the county.

An essential communication tool that is in place in Rio Arriba County to assist with wildfire and other emergency notifications is the "Code Red" reverse 911 system. The Code Red system will send notifications to all landline phones in a selected area. The new system allows you 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 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 can be sent out in the early stages of emergencies well before evacuation notices.

Communication for First Responders

Communication is a challenge in some parts of Rio Arriba County. Steep canyons and mountains limit the extent of radio and cell phone coverage in many areas. The lack of timely communication is a concern that we heard of from many community members and Core Team members. Eliminating radio dead spots will provide for firefighter safety and effective response by allowing better communication with the county dispatch and fellow first responders.

Community Emergency Response Team

The Federal Emergency Management Agency (FEMA) has a program called Community Emergency Response Team (CERT) to help community members take part in the response to disasters. 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 the following web pages:

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

https://www.fema.gov/news-release/2003/05/29/community-emergency-response-team-cert-program

APPENDIX D: FEMA Claim Steps

Provided by Jemez Mountains Electric Cooperative representative

Steps for FEMA:

- Contact the NM Department of Homeland Security and Emergency Management for a list of emergency managers listed on their website.
- An authorized JMEC representative must notify the New Mexico Department of Homeland Security and Emergency Management that your community is sustaining a Phase III Emergency Situation in order for the NMDHSEM Watch Officer to recommend to the Governor of the State of New Mexico to declare a disaster.
- The Stafford Act (§) requires: "All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State."
- The Governor's request is made through the regional FEMA office. State, local and Federal officials conduct a preliminary damage assessment (PDA) to estimate the extent of the disaster and its impact on individuals and public facilities.
- The team's work begins with reviewing the types of damage or emergency costs incurred by the units of government, and the impact to critical facilities, such as public utilities, individuals and businesses. This assessment includes the number damaged, the number of people displaced, and the threat to health and safety.
- As part of the request, the Governor must take appropriate action under State law and direct execution of the State's emergency plan.
- Federal disaster law restricts the use of arithmetical formulas or other objective standards as the sole basis for determining the need for Federal supplemental aid. As a result, FEMA assesses a number of factors to determine the severity, magnitude and impact of a disaster event. Primary factors considered include:
    - Amount and type of damage
    - Impact on the infrastructure of the affected areas or critical facilities
    - Imminent threats to public health and safety
    - Impacts to essential government services and functions
    - Unique capability of Federal government
    - Dispersion or concentration of damage
    - Level of insurance coverage in place for homeowners and public facilities
    - Assistance available from other sources
    - State and local resource commitments from previous undeclared events
    - Frequency of disaster events over recent period of time
- Congress amended the Stafford Act to give FEMA the ability to adopt new, much more flexible procedures for funding grants under the Public Assistance Program. The most important of these new procedures are:
    1. Permanent Work Alternative Procedures
    2. Emergency Work:
    a. Debris Removal Alternative Procedures
    b. Emergency Protective Measures and Regular Time Pay
- Hazard Mitigation Reforms
- Dispute Resolution Pilot Procedures

One of the first hurdles JMEC faced in the FEMA claim was establishing an insurance policy and coverage. Community members should remember to have their insurance policies and contact information with them in case of an evacuation.

Local government entities and political subdivisions of the state (i.e. acequias and Soil and Water Conservation Districts) are required to coordinate FEMA funded post-fire recovery actions with the State Historic Preservation Office (SHPO) through the completion of an application form available through FEMA (New Mexico Historic Preservation Division Temporary Staging Site Certification FEMA Form 4652-DR-NM). The form must be sent to the SHPO for certification after which the form should be sent to the FEMA Project Specialist.