

SEPTEMBER 2026

SHERIDAN
COUNTY
WYOMING EST. 1888

SHERIDAN COUNTY

COMMUNITY WILDFIRE PROTECTION PLAN

Working together to build
fire-adapted communities,
resilient to wildfire



SWCA[®]
ENVIRONMENTAL CONSULTANTS

CORE TEAM

The entities listed below participated in the development of, and/or reviewed and are in support of the Project Name CWPP and agree that the CWPP is viable, complete, and realistic in terms of risk reduction and implementation.

Signature	Signature
Name (printed)	Name (printed)
Date	Date
Agency /Position (printed)	Agency /Position (printed)
Signature	Signature
Name (printed)	Name (printed)
Date	Date
Agency /Position (printed)	Agency /Position (printed)
Signature	Signature
Name (printed)	Name (printed)
Date	Date
Agency /Position (printed)	Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)

Signature

Name (printed)

Date

Agency /Position (printed)



TABLE OF CONTENTS

Chapter 1 – Introduction

Introduction	1-1
Goal of a Community Wildfire Protection Plan.....	1-1
What the CWPP Does.....	1-1
What the CWPP Does <i>Not</i> Do	1-1
Navigation/How to Use This Plan	1-2
Alignment with The National Cohesive Wildland Fire Management Strategy	1-2
Alignment with Plans and Agreements.....	1-4
Planning Area	1-9
Collaboration.....	1-16

Chapter 2 – Wildfire Environment

Wildland Fire Environment.....	2-1
Vegetation and Landscape	2-1
Fuels and Fire Ecology.....	2-4
Wildland-Urban Interface	2-15
Urban Conflagration	2-17
Climate and Weather Patterns	2-18
Wind	2-19
Fire History	2-20
Fire Response Capabilities.....	2-25
Emergency Preparedness	2-26

Chapter 3 – Wildfire Risk Assessment

Assessment Framework and Methods.....	3-2
Identification of Hazard and Vulnerability.....	3-3
Hazard	3-3
Vulnerability	3-9
Quantitative Wildfire Risk Assessment	3-10
Landscape Integrated Wildfire Hazard	3-10
Qualitative Risk Considerations	3-15
Field-Based Community Assessment Results	3-15
Ember Transport and Urban Configuration	3-18
Water Resources	3-19
Riparian Vegetation	3-20

Chapter 4 – Wildfire Mitigation Strategies

Action Plan	4-1
How to Use the Tables	4-1

Implementation Capacity Considerations	4-1
Recommendations and the Cohesive Strategy.....	4-1
Cohesive Strategy Goal 1: Restore and Maintain Landscapes	4-2
Areas of Concern.....	4-2
Cohesive Strategy Goal 2: Fire-Adapted Communities	4-13
Recommendations for Fire-Adapted Communities	4-13
Cohesive Strategy Goal 3: Wildfire Response.....	4-18
Recommendations for Safe and Effective Wildfire Response.....	4-18
Chapter 5 – Monitoring and Evaluation Strategy	
Monitoring and Evaluation	5-1
Timeline for Updating the CWPP	5-3
Acronyms and Abbreviations.....	Acronyms and Abbreviations-1
References	References-1

List of Appendices

Appendix A. CWPP Planning Process and Background
Appendix B. Community Background
Appendix C. Community Field Assessments
Appendix D. Interagency Fuel Treatment Decision Support System
Appendix E. Fuel Treatment Types and Methods
Appendix F. Homeowner Resources
Appendix G. Post-fire Response and Restoration
Appendix H. Public Outreach
Appendix I. Additional Mapping
Appendix J. Funding Resources

List of Figures

Figure 1.1. The CWPP Update incorporates the three primary goals of the Cohesive Strategy and post-fire recovery, serving as a holistic plan for fire prevention and resilience.	1-3
Figure 1.2. Sheridan County CWPP planning area.....	1-10
Figure 1.3. Land ownership in Sheridan County.	1-12
Figure 1.4. Previously completed fuel treatments in Sheridan County.	1-15
Figure 2.1. Vegetation types throughout Sheridan County.	2-2
Figure 2.2. Critical municipal watersheds.....	2-3
Figure 2.3. Fire behavior fuel models present throughout Sheridan County.....	2-6
Figure 2.4. Spruce-fir forest vegetation community.....	2-8
Figure 2.5. Lodgepole pine forest vegetation community.	2-9
Figure 2.6. Douglas-fir/mixed conifer vegetation community.	2-10
Figure 2.7. Ponderosa pine woodland and savanna vegetation community.....	2-11
Figure 2.8. Sagebrush and basin shrublands vegetation community.	2-12
Figure 2.9. Mixedgrass prairie and grasslands vegetation community.	2-13
Figure 2.10. Riparian vegetation community.....	2-14
Figure 2.11. Sheridan County WUI map.....	2-16
Figure 2.12. Example of the WUI in Burgess Junction within Sheridan County.	2-17

Figure 2.13. Fire size statistics per decade for Sheridan County based on fire history data from 1970 through 2025.....	2-22
Figure 2.14. Number of wildfire events per month in Sheridan County from 1920 to 2025.	2-23
Figure 2.15. Fire ignition history in Sheridan County	2-24
Figure 2.16. Ready, Set, Go, Stay information for Sheridan County Emergency Preparedness.....	2-26
Figure 3.1. Quantitative Wildfire Risk Assessment (QWRA) framework.....	3-3
Figure 3.2. Conditional flame length classes modeled for Sheridan County under extreme fire weather (97th percentile).	3-6
Figure 3.3. Burn probability across the Sheridan County, representing the likelihood that a given location will experience wildfire under modeled conditions.	3-8
Figure 3.4. Map of modeled integrated wildfire hazard for Sheridan County, Wyoming.	3-12
Figure 3.5. Relative wildfire risk across Sheridan County, integrating modeled burn probability, modeled fire intensity, and HVRA vulnerability.	3-14
Figure 3.6. Community polygons created for community-level assessments.	3-16
Figure 3.7. Community disaster sequence.	3-19
Figure 4.1. Sheridan County areas of concern delineated by the CWPP Core Team.	4-3

List of Tables

Table 1.1. Guide to Sheridan County CWPP Chapters and Appendices.....	1-2
Table 1.2. Opportunities for Alignment Between the Sheridan County CWPP and Existing Plans and Agreements	1-5
Table 1.3. Land Ownership in Sheridan County.....	1-11
Table 1.4. Wildfire Mitigation Accomplishment.....	1-13
Table 1.5. Summary of Core Team Engagement for the 2026 Sheridan County CWPP	1-16
Table 1.6. Public Involvement Activities for the 2026 Sheridan County CWPP Update	1-17
Table 2.1. Most Common Fuel Types in the Planning Area.....	2-5
Table 2.2. Mean Annual Temperature and Precipitation by Station in the Planning Area	2-18
Table 2.3. Monthly and Annual Wind and Relative Humidity Statistics for the Burgess RAWS, 2000–2025	2-19
Table 2.4. Monthly and Annual Wind and Relative Humidity Statistics for the Echeta RAWS, 2000–2025	2-20
Table 2.5. Major Wildfires (over 1,000 acres) in Sheridan County Since 2000.....	2-21
Table 2.6. Fire Response Resources in Sheridan County	2-25
Table 3.1. Modeled Conditional Flame Length Summarized for Sheridan County Under Extreme Fire Weather (97th percentile)	3-5
Table 3.2. Burn Probability Across Sheridan County	3-7
Table 3.3. HVRA Geospatial Features, Buffer Distances, and Data Sources Used for the QWRA.....	3-10
Table 3.4. Integrated Wildfire Hazard Matrix	3-11
Table 3.5. Portion of Integrated Wildfire Hazard Classes Within Sheridan County, Wyoming	3-11
Table 3.6. Communities-at-Risk Ratings with Community Hazard Assessment Summary	3-17
Table 3.7. Modeled Integrated Wildfire Hazard Descriptions for Subwatersheds From Which Municipal Water is Sourced for the Populations of Dayton and Sheridan, Wyoming.....	3-19
Table 4.1. Areas of Concern and Proposed Treatment Management Units (to be viewed in association with Figure 4.1)	4-4
Table 4.2. Fuel Treatment Modification – Treatment Types	4-6
Table 4.3. Recommendations for Creating Resilient Landscapes (Fuel Treatments)	4-10
Table 4.4. Recommendations for Creating Fire Adapted Communities (public education and structural ignitability).....	4-15
Table 4.5. Recommendations to Support Safe and Effective Wildfire Response Recommendations.....	4-19



CHAPTER 1 – INTRODUCTION

CHAPTER CONTENTS

Introduction

Goal of a Community Wildfire Protection Plan

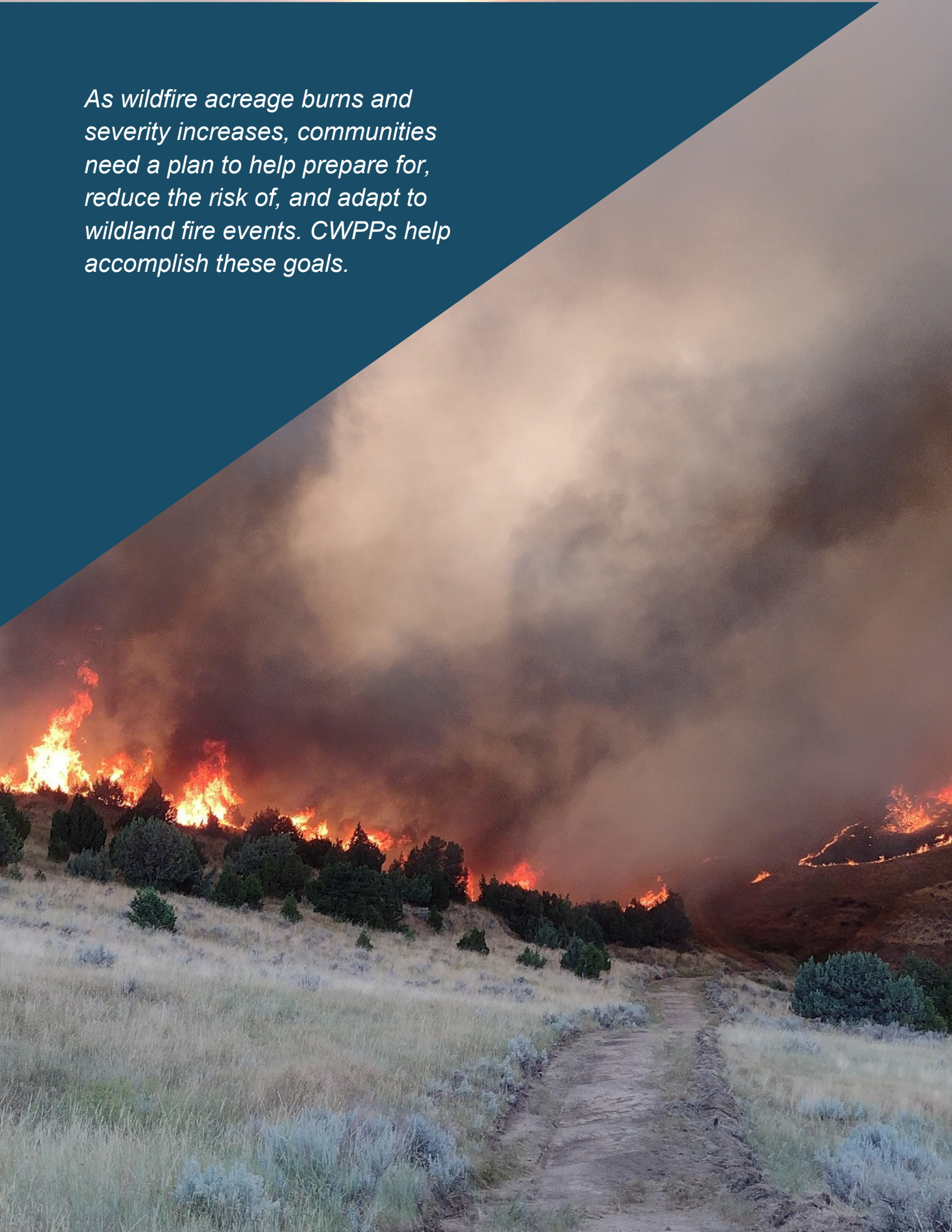
What the CWPP Does

What the CWPP Does *Not* Do

Navigation/How to Use this Plan

Alignment with the National Cohesive Wildland Fire Management
Strategy

As wildfire acreage burns and severity increases, communities need a plan to help prepare for, reduce the risk of, and adapt to wildland fire events. CWPPs help accomplish these goals.



SUMMARY BOX: SHERIDAN COUNTY CWPP (2026 UPDATE) AT A GLANCE

Purpose

The Sheridan County Community Wildfire Protection Plan (CWPP) provides an updated countywide assessment of wildfire risk and identifies strategies to reduce risk to life, property, and critical infrastructure. The CWPP serves as a strategic planning and coordination tool to support wildfire mitigation, preparedness, and response across Sheridan County.

Why This Chapter Matters

Chapter 1 introduces the CWPP, explains its purpose and limitations, and describes how the plan was developed and how it should be used. This chapter establishes the planning context for the wildfire risk assessment and mitigation strategies presented in subsequent chapters.

2026 Update Highlights

- Builds on prior CWPP effort completed in 2018
- Reviews and validates existing information while identifying new or emerging wildfire-related priorities
- Aligns with the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) and the 2023 Addendum
- Emphasizes four interconnected focus areas: resilient landscapes, fire-adapted communities, safe and effective wildfire response, and post-fire recovery
- Reflects changes in community conditions, landownership patterns, and wildfire risk since the 2018 CWPP was published, with additional detail provided in Chapters 2 and 3

Navigation/How to Use This Plan

The Sheridan County CWPP is intended for use by county residents, land managers, fire and emergency response agencies, and other stakeholders. The plan provides background information, a wildfire risk assessment, and recommended mitigation strategies. An accompanying online hub site summarizes key findings and allows users to interact with map products developed through the planning process.

Alignment with Cohesive Strategy, State Plans, and Agreements:

- Builds on existing federal, state, county, and community planning efforts related to wildfire risk, mitigation, and emergency response
- Aligns CWPP priorities with statewide wildfire preparedness, forest restoration, and hazard mitigation frameworks
- Supports coordination between wildfire mitigation, infrastructure planning, water resource protection, and land use decision-making
- Identifies opportunities to strengthen consistency between countywide and community-scale wildfire planning efforts

Collaboration

The Sheridan County CWPP was developed through coordination with a Core Team representing local, state, federal, and community stakeholders with roles in wildfire management, emergency response, land management, and community planning. This collaborative process ensures that the CWPP reflects local knowledge, operational realities, and shared priorities across jurisdictions.

Project Area

The CWPP project area includes all of Sheridan County, Wyoming, defined by its official political boundaries. It encompasses incorporated municipalities, unincorporated communities, and diverse landscapes ranging from mountains to high plains (Sheridan County 2024).

New Community Developments

Sheridan County is experiencing a low, steady population growth rate, with greater growth in the incorporated, urban areas of the county than in rural areas. Tourism has also increased as the region's natural resources draw more people to the County. The *Sheridan County Multi-Hazard Mitigation Plan 2024* notes that modest development and population increases in unincorporated areas of Sheridan County could expand buildings at risk in the wildland-urban interface (WUI) (Sheridan County 2024).

Key Takeaways

- The Sheridan County CWPP is a strategic planning and coordination document, not a regulatory or implementation mandate.
- Recommendations are intended to inform future mitigation, preparedness, and funding efforts.
- Wildfire risk and mitigation priorities are evaluated at a countywide scale, with community-level detail provided in later chapters and appendices.
- The CWPP is designed to be adaptable and updated as conditions, risks, and priorities change.

INTRODUCTION

Wildfire poses an increasing risk to communities, forests, and watersheds across Wyoming (Wyoming State Forestry Division [WSFD] 2020). CWPPs provide a framework to assess wildfire risk and identify strategies to reduce potential impacts.

Sheridan County completed its first CWPP update in 2018 through collaboration with agencies, stakeholders, and community members. The 2026 Update of the Sheridan County CWPP builds on this work by reviewing existing information, reassessing wildfire risk, and identifying updated priority areas for wildfire mitigation. **The CWPP is a strategic planning and coordination document and does not regulate or mandate projects or establish binding priorities.**

GOAL OF A COMMUNITY WILDFIRE PROTECTION PLAN

The goal of a CWPP is to enable local communities to improve their wildfire mitigation capacity while working with government agencies to identify high-fire-risk areas and prioritize areas for mitigation, fire suppression, and emergency preparedness. Another goal of the CWPP is to enhance public awareness by helping residents better understand the natural- and human-caused risk of wildland fires that threaten lives, safety, and the local economy. A CWPP builds on past wildfire occurrence, treatment accomplishments, and professional fire management expertise to identify current wildfire risks and needs across the planning area. The minimum requirements for a CWPP, as stated in the Healthy Forests Restoration Act of 2003 (HFRA), are:

- **Collaboration:** Local and state government representatives, in consultation with federal agencies or other interested groups, must collaboratively develop a CWPP (Society of American Foresters [SAF] 2004).
- **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuels reduction and treatments and recommend the types and methods of treatment that will protect one or more communities at risk and their essential infrastructures (SAF 2004).
- **Treatments 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 (SAF 2004).

WHAT THE CWPP DOES

- Evaluates wildfire risk across Sheridan County
- Identifies priority areas for potential mitigation
- Recommends strategies for fuels reduction, fire-adapted communities (public education), and wildfire response
- Supports collaboration among local, state, federal, tribal, and private partners

WHAT THE CWPP DOES NOT DO

- Does not require implementation or mandate projects
- Does not establish binding treatment priorities
- Does not replace site-specific planning or landowner decision-making

NAVIGATION/HOW TO USE THIS PLAN

This plan provides background information, a wildfire risk assessment, and recommendations to reduce wildfire risk across Sheridan County. It is intended for use by Sheridan County residents and stakeholders involved in forest management, fire management, and emergency response, and includes technical detail where needed to support planning and project implementation. Table 1.1 below summarizes how the CWPP is organized and where key information can be found within the chapters and appendices.

Table 1.1. Guide to Sheridan County CWPP Chapters and Appendices

Plan Section	Description
Chapter 1. Introduction	Overview of CWPPs, the purpose of the CWPP, planning context, alignment with other plans, and how to use this document.
Chapter 2. Wildfire Environment	Description of the fire environment in Sheridan County, including fire history, fire occurrence, and wildfire response context.
Chapter 3. Wildfire Risk Assessment	Interpretation and discussion of wildfire risk across Sheridan County, including community exposure, priority areas, and wildfire risk products and maps.
Chapter 4. Wildfire Mitigation Strategies	Recommended strategies to reduce wildfire risk, including fuels reduction, public education and outreach, structural ignitability reduction, and wildfire response improvements.
Chapter 5. Monitoring and Evaluation Strategies	Suggested approaches for tracking progress, evaluating mitigation efforts, and updating the CWPP over time.
Appendix A. CWPP Planning Process and Background	Description of planning process details; fire management policies at local, state, federal, and tribal levels; and public land management in the county.
Appendix B. Community Background	Description of the planning area and its geography, environmental challenges facing the area, capabilities to respond to wildfires in the county, and public outreach and education programs related to wildfire.
Appendix C. Community Risk-Hazard Assessment /On-the-Ground Assessment Results	Results of on-the-ground community assessments of wildfire risk and National Fire Protection Association Wildfire Risk Assessment Form 1144.
Appendix D. Fire Behavior Modeling/GIS Background and Methodology	Technical details and data used in the wildfire risk assessment.
Appendix E. Fuel Treatment Types and Methods	Description of fuel treatment options applicable to different scales and situations.
Appendix F. Homeowner Resources	Resources for residents on reducing wildfire risk at the property/homeowner-level.
Appendix G. Post-Fire Response and Restoration	Resources for after a wildfire, including information on returning to communities, stabilizing burned areas, and restoring landscapes.
Appendix H. Public Outreach	Outreach materials and Public Survey results developed to support public engagement during the CWPP process.
Appendix I. Additional Mapping	CWPP maps, including wildfire risk, priority areas, and supporting spatial data.
Appendix J. Funding Sources	Potential funding sources to support wildfire mitigation, preparedness, and planning.

ALIGNMENT WITH THE NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY

The Sheridan County CWPP is aligned with the Cohesive Strategy (Western Regional Strategy Committee [WRSC] 2024) 2014) and the 2023 Addendum Update, which together provide the national framework for

coordinated wildfire management (Forest and Rangelands 2023). The Cohesive Strategy is organized around three core goals:

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

The Sheridan County CWPP reflects these goals through its wildfire risk assessment and mitigation strategies and also incorporates post-fire recovery as a locally relevant focus area (Figure 1.1).

For more information on the Cohesive Strategy, please visit:

<https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPPhaseIIINationalStrategyApr2014.pdf>



Figure 1.1. The CWPP Update incorporates the three primary goals of the Cohesive Strategy and post-fire recovery, serving as a holistic plan for fire prevention and resilience.

Alignment with Plans and Agreements

Relevant state, county, municipal, and community planning documents were reviewed to understand how wildfire mitigation, preparedness, and response are currently addressed across Sheridan County. These plans establish standards, priorities, and implementation frameworks that influence wildfire risk reduction efforts.

The Sheridan County CWPP builds on this existing planning context by identifying countywide wildfire risk patterns and priority areas that support coordinated implementation across jurisdictions.

Table 1.2 summarizes where wildfire-related concepts are already present in existing plans and identifies opportunities for alignment and coordination. Additional wildfire planning and policy information is available in Appendix A.

DRAFT

Table 1.2. Opportunities for Alignment Between the Sheridan County CWPP and Existing Plans and Agreements

Plan or Agreement	Lead Agency	Wildfire Relevance	Opportunities for Alignment
Local Level			
Sheridan County Emergency Operations Plan (2026)	Sheridan County	- Assesses risks to the county and procedures for handling incidents in a wildfire incident annex. - Describes wildfire incident triggers with levels of activation to be taken. - Lays out the roles and responsibilities during wildfire incidents.	- Wildfire response procedures, roles, and responsibilities - Countywide agency responsibilities during wildfire events
Region 1 Hazard Mitigation Plan Sheridan County Annex (2024)	Sheridan County	- Identifies wildfire significance as medium to high depending on location in the County. - Rates the overall significance of a coal seam fire as low. - Describes past wildfire events and vulnerability. - Provides mitigation actions to reduce risk.	- Results of wildfire risk assessment - Relevant wildfire mitigation actions to be integrated into the CWPP
Long-Range Master Plan: Sheridan Fire-Rescue, Wyoming (2024)	Sheridan Fire-Rescue	- Evaluates fire and emergency services in the county and opportunities for enhancement. - Assesses past Sheridan Fire-Rescue system performance and effectiveness. - Analyses community risk and makes recommendations for improvement.	- Results of wildfire risk assessment and system performance analysis - Improvement recommendations to be aligned with mitigation recommendations
Upper Big Goose Creek Watershed Management Plan	City of Sheridan	- Management strategy to reduce pollution in Upper Big Goose Creek, which supplies drinking water to the City of Sheridan. - Concerns relevant to wildfire are the outbreak of water-borne disease, which could increase widespread sickness, interrupt emergency service, and raise incidence of post-fire watershed contamination.	Description of water supply source and threats from post-fire runoff
Story, Wyoming Emergency Action Plan (2022)	Story Fire Department	- Framework for emergency response to disasters affecting the town, such as wildfires. - EAP describes five zones for the town with specific evacuation procedures for each and designates evacuation areas to shelter in place if evacuation is not possible. - Describes the responsibilities of residents and the fire department in preparing for and mitigating the effects of disasters.	- Responsibilities in preparing for and mitigating disaster impacts - Emergency response strategies during wildfires

Plan or Agreement	Lead Agency	Wildfire Relevance	Opportunities for Alignment
Powder River Energy Wildfire Risk Mitigation Plan (2025)	Powder River Energy Corporation (PRECorp)	- Assessment of PRECorp's wildfire risk across their service area. - Describes PRECorp's management strategy to proactively reduce wildfire risk and shift their operational response during wildfire risk conditions. - Discusses the use of fuels management and system hardening to reduce risk.	- Wildfire risk in PRECorp's service area - Mitigation strategies that can lower wildfire risk related to utilities - Alignment with CWPP monitoring strategies
Rocky Mountain Power Wildfire Mitigation Plan (2026–2028)	Rocky Mountain Power	- Identifies wildfire mitigation strategies across the company's service territories in Wyoming. - Provides wildfire risk modeling analysis, mitigation strategies, vegetation management, system hardening, and wildfire response plans across service territories.	- Wildfire risk across Rocky Mountain Power's service areas within Sheridan County - Alignment with CWPP monitoring and implementation strategies - Opportunity to collaborate with a local utility company and integrate proposed projects into CWPP mitigation recommendations
Montana-Dakota Utilities Company Wildfire Mitigation Plan (2025)	Montana-Dakota Utilities Company	- Provides overview of the company's efforts to mitigate wildfire risk across operations and electric systems within service areas throughout Wyoming, Montana, North Dakota, and South Dakota. - Identifies strategies to reduce wildfire risk, improve system reliability and resiliency, and comply with state, federal, and local regulations. - Discusses system hardening initiatives, wildfire event response, and restoration procedures.	- Wildfire risk across Montana-Dakota Utilities Company's service areas within Sheridan County - Integrating current and proposed projects into CWPP monitoring and implementation strategies
Sheridan Municipal Watershed Environmental Assessment (EA) (2022)	U.S. Forest Service (USFS); Bighorn National Forest	- Examination of potential project impacts within the Sheridan Municipal Watershed. - Proposed projects included efforts to decrease wildfire risk, improve watershed and forest health, and improve management outcomes in the Bighorn National Forest. - EA found that no significant impact would result from the projects.	Integrating proposed projects into CWPP mitigation recommendations where applicable
Elk Fire Burned Area Emergency Response (BAER) Assessment (2024)	USFS; Bighorn National Forest	- Describes watershed concerns within and below the Elk Fire burn area. - Finds variable risk of geologic hazards, including rockfalls, debris flow, and sediment-heavy flooding, throughout the burn area. - Identifies potential for negative impacts to people, property, facilities, and natural and cultural resources.	Identifies areas of concern for post-fire flooding

Plan or Agreement	Lead Agency	Wildfire Relevance	Opportunities for Alignment
Bighorn National Forest: Revised Land and Resource Management Plan (2005)	USFS; Bighorn National Forest	- Describes forest conditions, management areas, prescribed management conditions and standards, and geographic areas in the national forest. - Includes a monitoring and evaluation strategy. - Emphasizes the need for wildfire management and the use of prescribed burns to do so in certain areas of the forest.	- Details on forest conditions within the county - Wildfire mitigation strategies tailored to vegetative communities
State-Level			
Wyoming State Forest Action Plan (2020)	Wyoming State Forestry Division (WSFD)	- Lays out management strategy for all forests in the state and emphasizes the need for wildfire in the state's fire-adapted ecosystems. - Describes forest health and wildfire risk factors, such as bark beetle infestation, accumulation of fuels, and departure from fire regime classes. - Part of this plan includes the <i>Wyoming Statewide Forest Resource Strategy</i>, which describes strategies to protect the state's forests.	- Details on forest health conditions and potential threats that may increase wildfire risk - Opportunity to align CWPP mitigation actions with strategies to protect state forests detailed in plan
WY Statute Title 37 Public Utilities (2025)	State of Wyoming	- Establishes requirements for electric utilities to develop wildfire mitigation plans to proactively mitigate risks associated with their infrastructure. - Requires that plans include descriptions of at-risk areas, inspection and management procedures, infrastructure upgrades, de-energization protocols, restoration of service procedures, and coordination with other agencies and the community.	Consider requirements in wildfire mitigation strategy
Final Report: Governor's Task Force on Forests (2015)	Wyoming Governor's Office	- Describe how shifts in the state's fire regimes increase the risk of severe fires and have also raised fire suppression costs. - Recommendations from the Task Force include local working groups to coordinate about wildfire management concerns, support of the state Forest Action Plan, efforts to proactively address wildfire risk through fuel management, and allocation of increased funding for invasive species prevention and removal.	- Include details regarding forest health issues and actions to address them - Align CWPP mitigation actions with the Task Force's recommendations

Plan or Agreement	Lead Agency	Wildfire Relevance	Opportunities for Alignment
WSFD Wildland Fire Management Operating Plan – Sub-Geographic Operating Plan (2026)	WSFD	- Lays out procedures for how entities within the state, including the state itself, coordinate related to wildfire. - Describes agencies' responsibilities and provides procedures for cooperation, relationships, protocols, finances, and joint activities between entities. - Sheridan County, which falls within District 5, fills specific roles in wildfire response and coordination as it relates to other entities in the county.	Incorporate details related to wildfire response coordination
Federal-Level			
National Fire Plan (2000)	USFS, U.S. Department of the Interior	- Addresses hazardous fuels reduction, forest restoration, preparedness, community assistance, and fire research. - Developed in response to the increasing severity of wildfires in the western United States; applicable nationwide.	- Address hazardous fuel accumulation in WUI areas - Support community fire planning and preparedness initiatives - Restoration and research guidance to inform local practices
A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A 10-year Implementation Strategy (2006)	Wildland Fire Leadership	- Provides collaborative framework for restoring fire-adapted ecosystems and reducing fire risks to communities. - Highlights long-term restoration, economic benefits, and community fire planning.	- Incorporate long-term ecosystem restoration goals - Promote collaborative mitigation efforts with multiple partners - Use framework to structure fire-adapted community planning in Sheridan County
The National Cohesive Wildland Fire Management Strategy (2014–2021)	USFS, U.S. Department of the Interior, state and tribal partners	Defines the three goals: Restore Landscapes, Fire-Adapted Communities, Safe Fire Response.	- Align CWPP goals with the three national strategy pillars - Emphasize integrated vegetation management and emergency response coordination - Reference Cohesive Strategy in public messaging and planning documents to support integration and potential funding opportunities

Planning Area

The planning area encompasses Sheridan County as delineated by its geographic and political boundaries (Figure 1.2). The countywide planning area encompasses approximately 150 square miles and is bordered to the east by Campbell County, to the south by Johnson County, to the west and southwest by Big Horn County, Wyoming, and to the north by Big Horn and Powder River Counties, Montana. This planning area was used to analyze and describe the wildland fire environment of Sheridan County and its associated risks to the communities within the county. See more detailed descriptions and imagery of the planning area in Appendix B, Community Background.

DRAFT

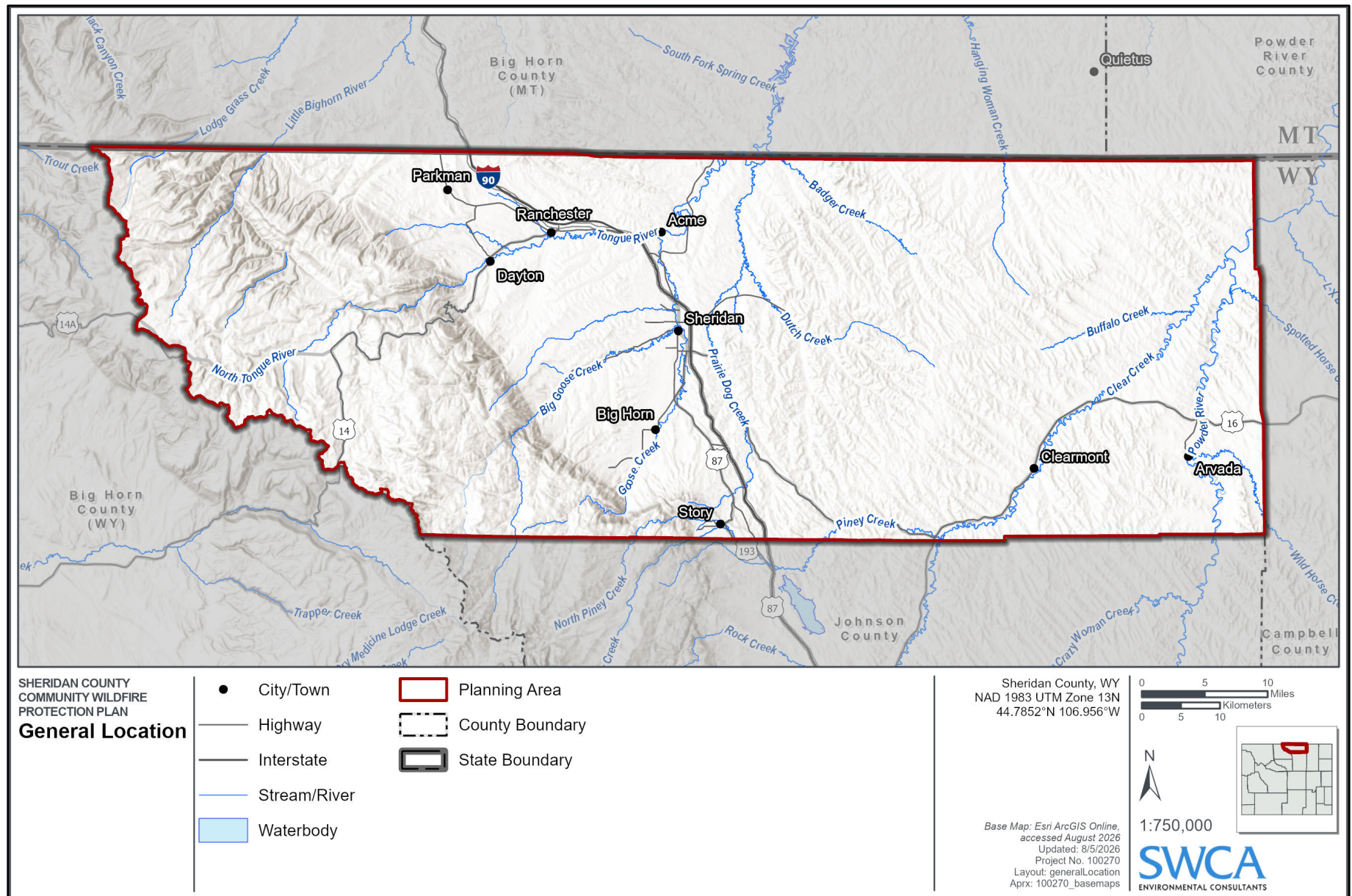


Figure 1.2. Sheridan County CWPP planning area.

Land Ownership

Sheridan County features a diverse distribution of land ownership across various entities, summarized below (Table 1.3; Figure 1.3).

The county's distribution of ownership highlights the varied land management responsibilities, influencing its approach to land use and wildfire mitigation. Additional details regarding land in Sheridan County, such as topography and land management direction, can be found in Appendix B.

Table 1.3. Land Ownership in Sheridan County

Land Ownership	Acres	Percentage
Private	1,046,165	64.7%
U.S. Forest Service	389,477	24.1%
State	112,509	7.0%
Bureau of Land Management	50,798	3.1%
Wyoming Game and Fish Department	8,339	0.5%
Local Government	3,974	0.3%
U.S. Department of Defense	3,937	0.2%
U.S. Fish and Wildlife Service	694	<0.1%
State of Wyoming Parks and Historic Sites	502	<0.1%
U.S. Department of Veterans Affairs	286	<0.1%
Department of Agriculture	227	<0.1%
Bureau of Indian Affairs	16	<0.1%
Total	1,616,924	100%

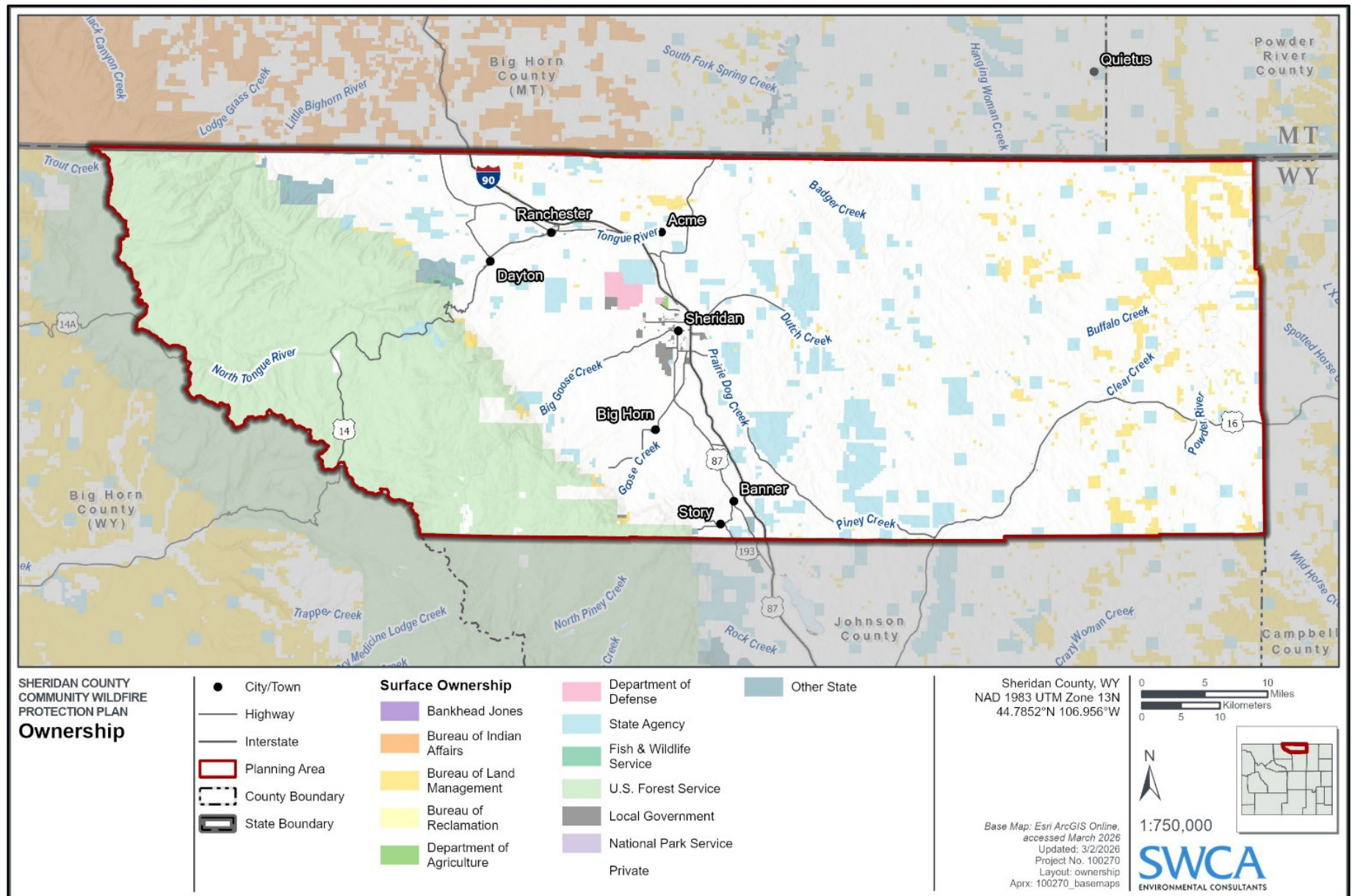


Figure 1.3. Land ownership in Sheridan County.

Population

The population estimate of Sheridan County in 2025 was 32,978 people, an increase of approximately 6.7% since 2020. There are also approximately 16,000 housing units in the county, with approximately 62.1% of them being owner-occupied. The county has a population density of 12.3 people per square mile (U.S. Census Bureau 2025a). The majority of the residents live within the City of Sheridan, which has a population of approximately 19,813 people (U.S. Census Bureau 2025b).

Past and Ongoing Accomplishments and Mitigation Actions

Table 1.4. Wildfire Mitigation Accomplishment

Fire Protection Area / Jurisdiction	Project Area	Project Details	Status
Big Horn Fire District	Red Grade area	Creation of defensible space; landowner education.	In progress
Big Horn Fire District	Little Goose Creek	Creation of defensible space; vegetative fuel removal; fuel break development; landowner education	In progress
Big Horn Fire District	Big Goose area	Creation of defensible space; landowner education	In progress
Big Horn Fire District	TePee area, Blacktooth and Stumpy Ridge subdivisions	Creation of defensible space; landowner education; maintenance and clearing of hazardous fuels from main powerline	In progress
Big Horn National Forest (USFS)	Red Grade Road	Fuels removal along Red Grade Road corridor (up to 200 feet in width); improves evacuation routes for surrounding communities including TePee, Blacktooth, and Stumpy Ridge subdivisions	Ongoing
Big Horn National Forest (USFS)	Red Grade Road	Phased implementation of fuels work in support of the developing operational delineation and pre-planning; planned phases include 1,500–2,000 additional acres of fuels treatment	Ongoing
Clearmont Fire District	Clearmont area	Vegetative fuels removal along ditches in early fall or spring	Ongoing
Clearmont Fire District	Arvada area	Creation of defensible space	In progress
Dayton Fire District	Town of Dayton (including Tongue River) and the surrounding area	Creation of defensible space (100–200 feet); public education; creation and maintenance of fuel breaks; fuels treatment	In progress
Dayton Fire District	Eaton Guest Ranch	Creation of defensible space (100–200 feet); public education; creation and maintenance of fuel breaks	Fuel treatment complete; maintenance and education ongoing
Dayton Fire District	Little Horn and other subdivisions along the face of the Bighorn Mountains southwest of Dayton and west of U.S. Highway 14	Creation of defensible space (100–300 feet); public education; examination of road system and water sources	Maintenance and education in progress; area impacted by Elk Fire
Sheridan Area Rural Fire District	Creek Bottoms	Creation of defensible space (100 feet); removal of hazardous fuels around driveways	In progress

Fire Protection Area / Jurisdiction	Project Area	Project Details	Status
Sheridan Area Rural Fire District	SAWS water	Suppression efforts and vegetative fuels removal to reduce wildfire size	In progress; area impacted by Elk Fire
Story Fire District	Story area	Landowner education for year-round and seasonal population; hazardous fuels removal, particularly in the northeast and southeast; creation of defensible space (100 feet), especially in ungrazed areas	In progress
Story Fire District	Moncrieffe Ridge	Combined approach of education and fuels removal in Story, along with hazardous fuels reduction on Moncrieffe Ridge in collaboration with landowners; removal of hazardous vegetation around Wyolink radio tower	In progress
Story Fire District	Primrose Tailhead to Thorne Rider Camp	Established shaded fuel breaks along Wyoming Game and Fish Department fish hatchery and adjacent private and USFS properties	Completed
Tongue River Fire District, Areas outside of fire districts	Little Bighorn Canyon subdivision	Hazardous fuels removal and creation of defensible space in collaboration with cabin owners inside and outside of the fire district	In progress
Areas outside of fire districts	Bighorn National Forest	Creation of defensible space, particularly around Bear Lodge, the trailer park, Elk View, Arrowheads Camp Bethel, and other cabins throughout the forest; road clearances to create fuel break along Red Grade Road.	In progress
Clearmont Fire District	Coal seams in the Clearmont District	Coordination with the state and the Bureau of Land Management in mining areas to remove hazardous fuels	In progress
Clearmont Fire District	General	Landowner education to clear vegetation around structures after vegetation has cured to reduce wildfire ignition and spread from lightning strikes	Ongoing
Tongue River Fire District	General	Creation of fire breaks for large areas of ungrazed grass in collaboration with area ranchers; research regarding implementation of fuel breaks in these areas	In progress
Clearmont Fire District, Sheridan Area Rural Fire District, Tongue River Fire District	Railways	Maintenance of trains, equipment, rail rights-of-way, and fire guards	Ongoing
USFS Bighorn National Forest	Big Goose Watershed and structure groups	Mechanical and hand fuels reduction projects	Ongoing

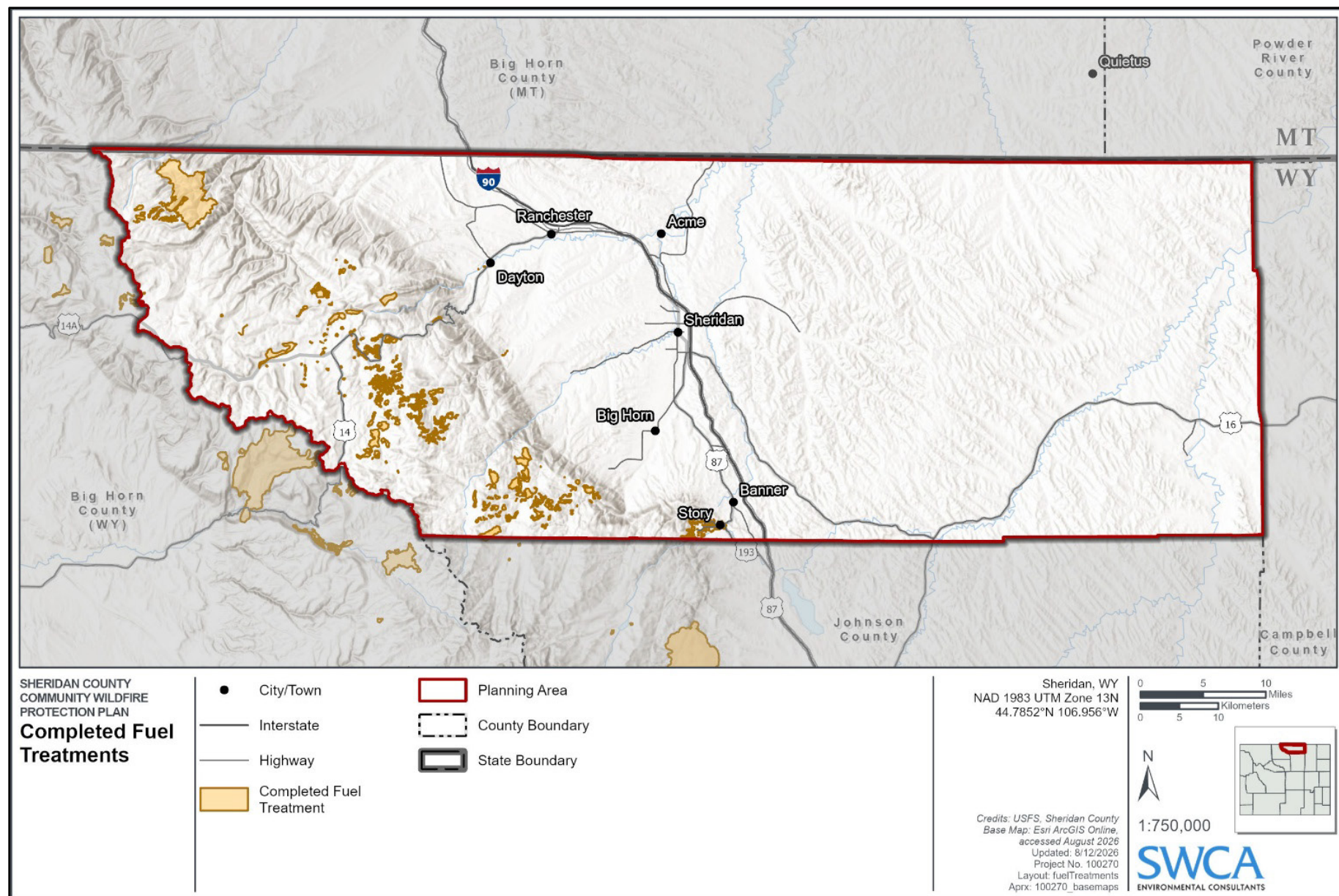


Figure 1.4. Previously completed fuel treatments in Sheridan County.

Collaboration

The Sheridan County CWPP was developed through a collaborative process involving a Core Team of agency and fire service partners, supported by targeted public engagement.

Core Team

A Core Team consisting of representatives from local, state, and federal agencies; fire departments; and other key stakeholders guided development of the Sheridan County CWPP. Core Team involvement is critical to ensuring the CWPP reflects local conditions, shared priorities, and operational realities across Sheridan County.

For the Sheridan County CWPP, a variety of stakeholders, including representatives from Sheridan County, fire departments/districts within the county, the WSFD, and the Bureau of Land Management (BLM), were invited to contribute local knowledge and technical expertise on the Core Team. The Core Team List is provided in Appendix A. Core Team engagement activities conducted for this update are summarized in Table 1.5.

Table 1.5. Summary of Core Team Engagement for the 2026 Sheridan County CWPP

Meeting / Engagement Activity	Format	Date	Purpose and Key Outcomes
Project Kickoff Meeting	Virtual	October 14, 2025	Introduced the CWPP update process, goals, scope, and schedule; confirmed roles, responsibilities, and data needs
Core Team Meeting 1	Virtual	November 17, 2025	Reviewed CWPP goals and approach; discussed wildfire risk patterns, priority landscapes, and data inputs
Core Team Meeting 2 (Workshop)	In-Person	March 31, 2026	Facilitated workshop focused on interpreting wildfire risk and hazard mapping; identifying priority areas and areas of concern; developing preliminary CWPP recommendations across the three Cohesive Strategy goals
WUI Meetings	Virtual	December 10, 2025, May 20 2026	Discussed definition of the WUI for the CWPP and methodology for delineation
Core Team Meeting 3	Virtual	July 21, 2026	Reviewed draft CWPP materials; discussed refinements based on Core Team feedback

Public Involvement

Public involvement is a core component of the CWPP process and is designed to gather local knowledge, improve understanding of wildfire risk, and provide opportunities for residents and stakeholders to review and comment on the Sheridan County CWPP. Public involvement activities conducted for this CWPP update are summarized in Table 1.6.

Table 1.6. Public Involvement Activities for the 2026 Sheridan County CWPP Update

Public Involvement Activity	Format	Date(s)	Purpose and Key Outcomes
Community Feedback Survey	Online	March–August 2026	Gather input from community members on wildfire perception, concerns, understanding of defensible space, and desire for mitigation opportunities.
Tabling Events	In-Person	June 18, 2026 July 4, 2026	Set up a booth at community events to provide an overview of CWPP process, wildfire risk, and mitigation strategies. Tabling events held at: • Sheridan Third Thursdays (June 18) • Ranchester FD Pancake Breakfast (July 4)
Community Gathering Events	In-Person	June–August 2026	Multiple community gathering events where information regarding the CWPP process was disseminated: • Story Yard Sale Day (June 7) • Big Horn Pancake Breakfast (June 20) • Big Horn FD Pancake Breakfast (June 21) • Clearmont Days (June 27) • Ranchester Pancake Breakfast (July 4) • Dayton Days BBQ (July 26) • Story Days (August 29)
Public Review and Comment Period	Online	August 13–August 31, 2026	Public comments collected via an online platform; feedback summarized and considered during CWPP finalization

Input received through public engagement activities informed the development of the Sheridan County CWPP and helped refine recommendations to better reflect community priorities and local conditions.

Recommendations for continued community engagement and outreach during CWPP implementation and future updates are provided in Table 4.4.

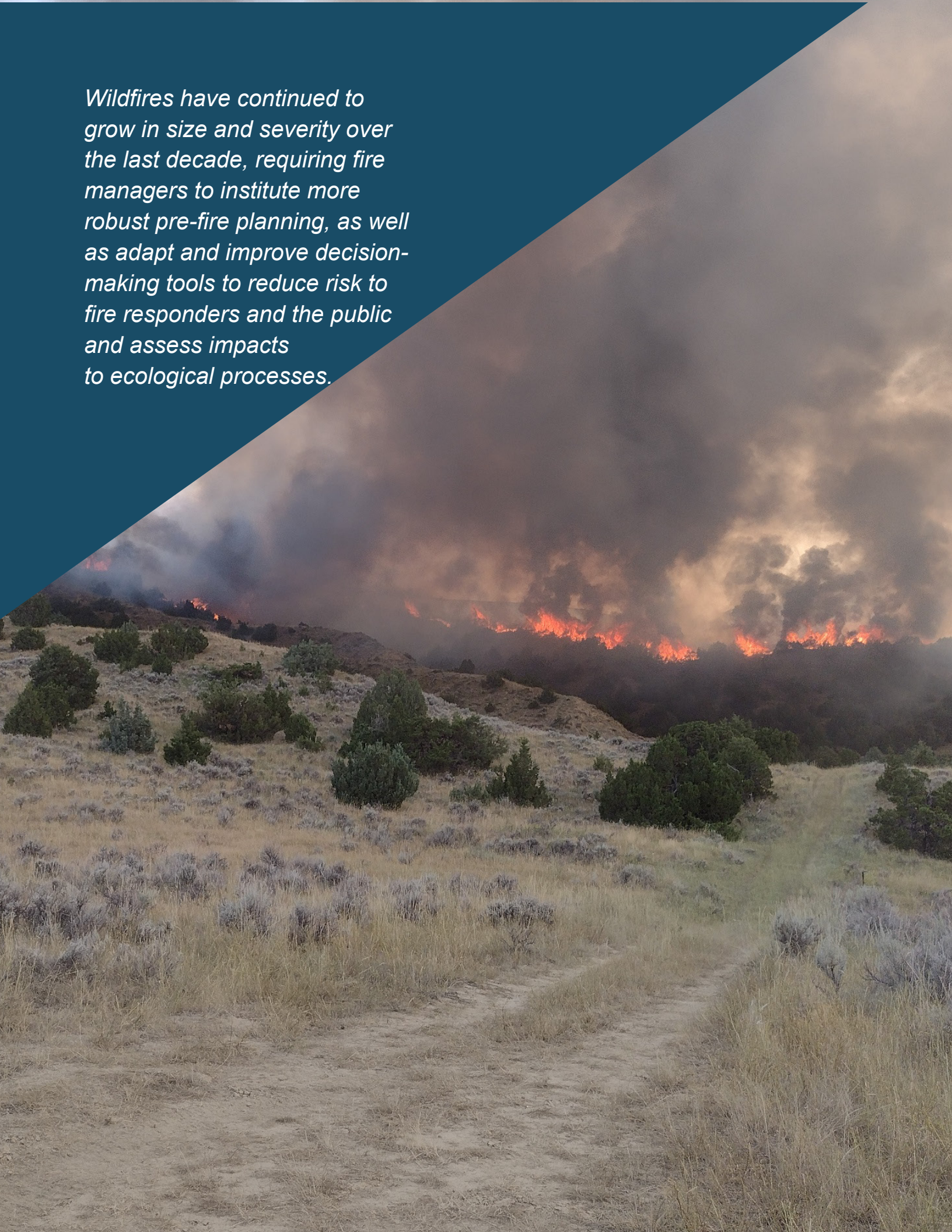


CHAPTER 2 – WILDFIRE ENVIRONMENT

CHAPTER CONTENTS

Wildland Fire Environment

Wildfires have continued to grow in size and severity over the last decade, requiring fire managers to institute more robust pre-fire planning, as well as adapt and improve decision-making tools to reduce risk to fire responders and the public and assess impacts to ecological processes.



SUMMARY BOX: CHAPTER 2 COMMUNITIES AND THE WILDLAND-URBAN INTERFACE

Why This Chapter Matters

Sheridan County includes a mix of incorporated communities, rural subdivisions, state and federal lands, and dispersed development set within fire-adapted forest and prairie ecosystems. Most communities are located in or adjacent to fire-prone landscapes, where vegetation, topography, climate, and development patterns combine to influence wildfire risk and response.

This chapter provides the foundation for the wildfire risk assessment and mitigation strategies presented in later chapters.

What Is the Wildland-Urban Interface?

The wildland-urban interface (WUI) describes areas where human development meets or intermixes with wildland vegetation, creating conditions in which wildfire can affect structures and communities (U.S. Department of the Interior and U.S. Department of Agriculture [USDA] 2001).

Why the WUI Matters

- Fire can spread between vegetation and structures.
- Human activity increases the likelihood of ignition.
- Development in fire-prone areas increases potential impacts.
- WUI areas require targeted mitigation, preparedness, and planning.

Wildland Fire Environment

Sheridan County covers a large, diverse landscape ranging from high-alpine timber to rolling hill grasslands. The county also includes unique topographic features that contribute to fire behavior along with vegetation communities. Communities in the county are present within all vegetation communities with the highest presence in the foothills transitional zone between grassland and mainly coniferous forests. Wildfires have the potential to occur across all landscapes in the county with varying levels of probability and severity.

Vegetation and Fuels



- Dominant vegetation types include grasslands, shrublands, riparian woodlands, and ponderosa pine woodland, as well as Douglas-fir, mixed-conifer, lodgepole pine, and spruce-fir forests.
- Grass and grass-shrub fuel models are most prevalent in the eastern, high plains portion of the county. Timber-understory and timber-liter fuel models are most common in the Bighorn Mountains and their foothills in the western portion of the county.
- Non-burnable areas correspond to developed land, infrastructure, and other surfaces that interrupt wildland fuels.
- Invasive grasses such as Ventenata grass (*Ventenata dubia*), medusahead (*Taeniatherum caput-medusae*), and cheatgrass (*Bromus tectorum*) are commonly found across rangelands and grasslands, altering the fire return intervals. See Appendix B for more information.

Fire Regimes



- There is significant variation in fire regimes across the county, with fire return intervals ranging from 5 to over 600 years depending on the vegetation community.
- Short-interval regimes occur mainly in grass-dominated systems. Longer intervals are associated with forested and higher-elevation landscapes. These regimes reflect the historical role of fire across different vegetation types.

Climate and Weather Patterns



- Variation in elevation, terrain, and vegetation directly influences wildfire potential throughout the county.
- The western portion of the county, consisting of the Bighorn Mountains and their foothills, tends to receive more annual precipitation and experience less severe winds.
- The eastern portion of the county, dominated by grassland and shrubland, generally receives less annual precipitation and more regularly experiences high wind events, amplifying wildfire risk.
- The Chinook winds produce generally strong, downslope winds along the eastern slopes of the Bighorn Mountains between November and March. See Appendix B, Community Background for more information on Climate and Weather Patterns.

Fire History

- The vegetation communities present within the county are largely fire-adapted.
- However, environmental factors such as fuel accumulation, drought, and forest health deterioration are causing deviation from existing conditions that increases wildfire risk across the landscape.
- Most fires are small and are contained during initial attack, but larger fires occur periodically under favorable conditions.
- Fire occurrences generally occur between April to November and peak between July and August, when there are lower relative humidity levels and higher temperatures.
- Human-caused ignitions have increased within the planning area likely attributed to increased human activity in the WUI.

Between 2020 to 2025 the county has experienced over 351,282 acres burned, largely in part by the Remington (over 130,000 acres in Wyoming) and Elk Fires that occurred in 2024 that collectively burned over 300,000 acres.

Fire Response and Preparedness Capability

- Fire response resources are available across federal (U.S. Forest Service [USFS], Bureau of Land Management [BLM]), state, and local fire districts, supporting cross-jurisdictional emergency response through mutual aid agreements.
- The Sheridan County Emergency Management Office is responsible for the coordination of wildfire response countywide during major events.
- Residents in the county can sign up for Sheridan County's AlertSense System to receive emergency alerts about wildfire events.

Key Takeaways

- Many communities in Sheridan County rely on volunteer response resources and are located within fire-prone landscapes where development patterns influence wildfire exposure.
- Conditions in the WUI increase the likelihood of structure loss and complex fire response.
- Vegetation, fuels, fire history, and climate contribute to ongoing wildfire risk across the county.
- Continued development in the WUI requires coordinated mitigation, preparedness, and planning efforts.

DRAFT

WILDLAND FIRE ENVIRONMENT

Vegetation and Landscape

Vegetation zones within Sheridan County are primarily a function of elevation, slope, aspect, substrate, and associated climatic regimes. Since a broad range in elevation, climate, and topography exists across the county, characteristics in vegetative communities are variable (Figure 2.1). The county is characterized by high plains consisting of prairies to the east and the Bighorn Mountains consisting of forests and woodlands to the west (Sheridan County 2024).

A variety of different vegetation types can be found throughout Sheridan County. The western forests, found predominantly in the Bighorn Mountains and their foothills at an elevation between 4,500 and over 11,000 feet, feature landscapes that include sagebrush and basin shrublands, ponderosa pine woodland and savanna, mixed-conifer forests, lodgepole pine forests, and spruce-fir forests at the highest elevations. The central and eastern portions of the county consist of plains, basins, and valley bottoms at an elevation between 3,500 and 5,000 feet, featuring mixed prairie and grasslands as well as sagebrush and basin shrublands and riparian woodlands.

Critical Watersheds

Six HUC-12 subwatersheds were identified as essential municipal water source areas by the Core Team: West Fork Big Goose Creek (100901010102), Lower East Fork Big Goose Creek (100901010103), Upper Big Goose Creek (100901010104), Lower Big Goose Creek (100901010108), Upper North Tongue River (100901010201), and Lower North Tongue River (100901010202). Within Sheridan County, multiple communities are solely reliant on these watersheds for their municipal water. There are no backup water sources for the City of Sheridan if the Goose Creek watersheds are heavily impacted by post-fire hazards such as sediment and debris flows, which may result in significant expense to and resources strain on the county and communities that rely on these watersheds. Following the Elk Fire, the town of Dayton has continued to experience water quality and treatment impacts including the need to seek out alternative water sources. All critical watersheds are shown below in Figure 2.2.

All or large portions of these subwatersheds occur on lands managed by the Bighorn National Forest, including designated Wilderness and Inventoried Roadless Areas. Within the Bighorn National Forest, approximately 1.1 million acres are designated Wilderness or Roadless Areas, which restricts any road construction or timber harvest activities (USFS 2000). Portions of this restricted area falls along both the Big Goose Creek and Tongue River and their tributaries. High-severity burns in these watersheds have the potential to negatively impact water quality and water delivery efficiency for years after a fire. Based on feedback from the Core Team, these critical watersheds have experienced significant fuel loading, increasing the risk of high-severity wildfires that would result in significant loss of timber and slope stability. Fuel treatment action in these areas is essential to providing continued service to downstream communities and to the health of the watersheds.

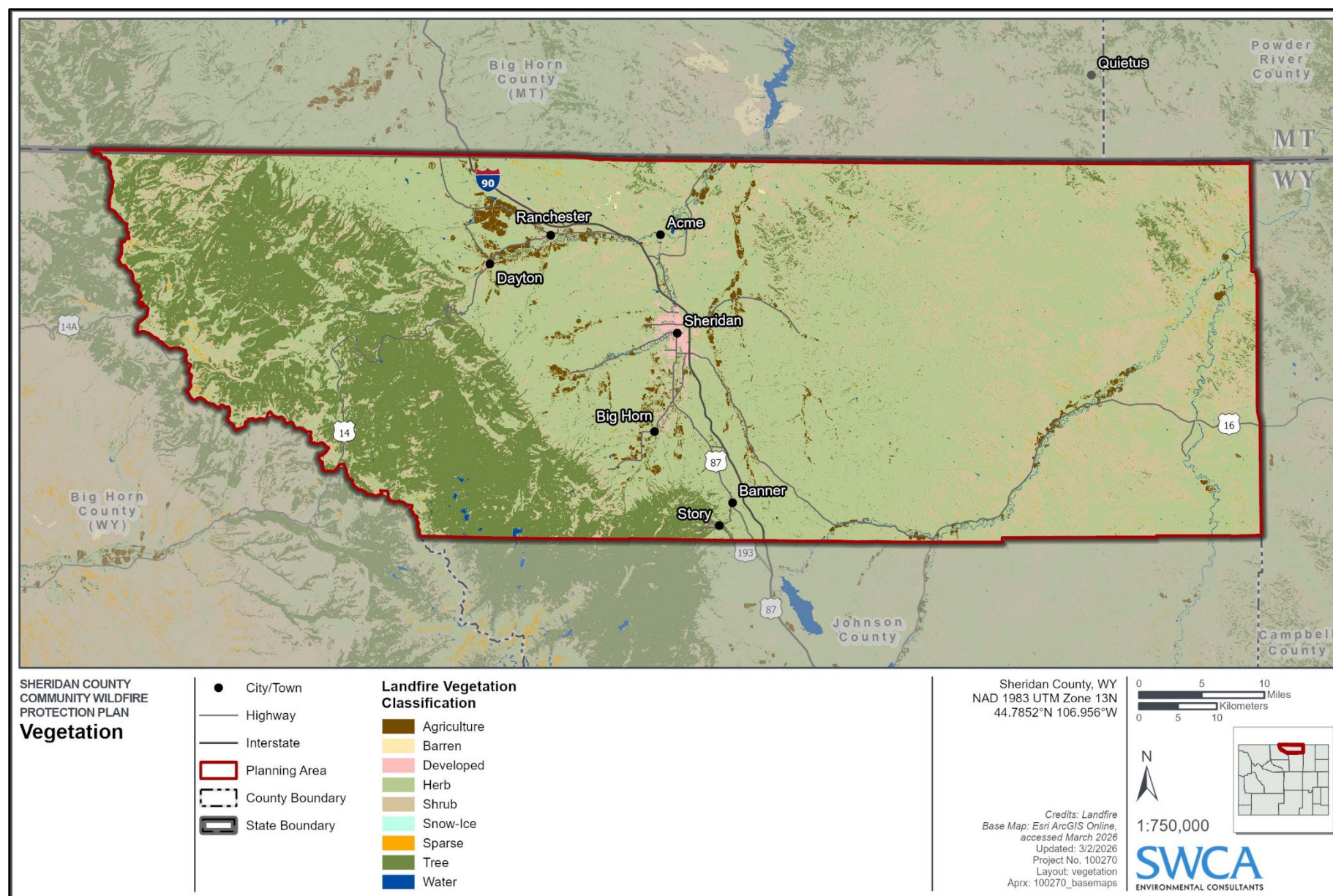


Figure 2.1. Vegetation types throughout Sheridan County.

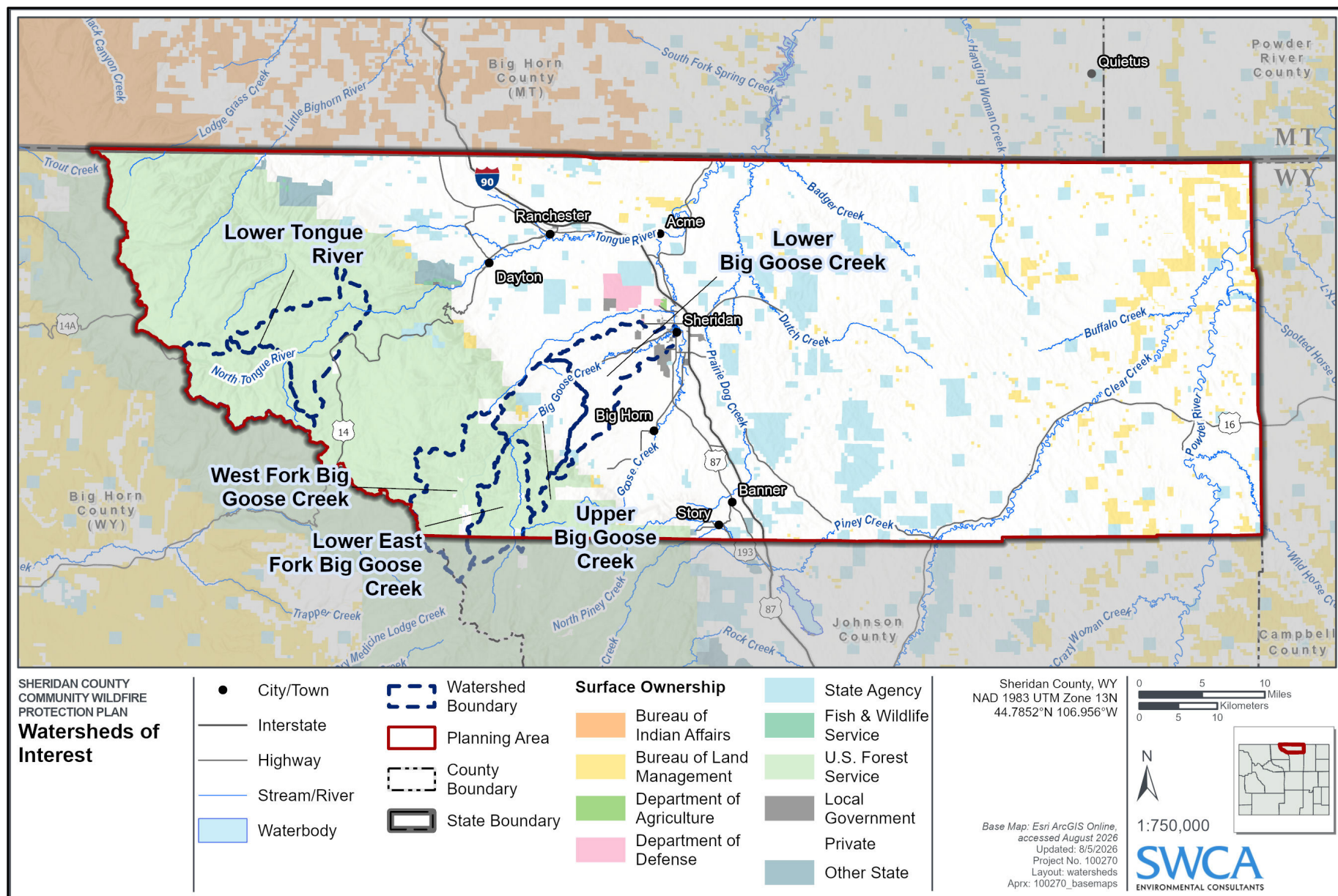


Figure 2.2. Critical municipal watersheds.

Fuels and Fire Ecology

Many communities in the planning area are surrounded by fire-adapted grasslands and montane forests that have historically experienced natural wildfire. Additionally, the varied and complex topography combined with localized weather patterns (e.g., Chinook winds, downslope winds) of Sheridan County influences wildfire spread and intensity differently, which is exemplified by wildfire behavior across the county's grasslands, shrublands, woodlands, savannas, and forests.

Variation in terrain can also influence the rate of wildfire spread depending on factors such as slope steepness, aspect, and time of day. Steep slopes combined with high fuel loads can significantly increase wildfire risk in the county's mountainous areas to the west. Alternatively, continuous grasslands paired with high winds increase wildfire risk for the central and eastern plains.

Understanding the composition and distribution of surface fuels is essential to describing the fire environment of Sheridan County. Total fuel load (e.g., grasses, shrubs, forbs, leaf litter, needle cast and woody debris) largely determines how a fire behaves under different weather and topographic conditions.

Fuel models refer to groups of vegetation with similar physical burning characteristics that affect the spread, intensity, and severity of wildland fires. These characteristics include the loading (how vegetation accumulates), size, and bulk density of the vegetation. The fuel models are broadly described by the following acronyms, which have specified fuel codes (e.g., GR1, GR2, etc.) to represent more specific fuel types (Scott and Burgan 2005):

- **NB – Non-burnable:** Areas with insufficient wildland fuel to carry fire (e.g., urban, water, bare ground).
- **GR – Grass:** Areas where grass is the primary carrier of fire.
- **GS – Grass-Shrub:** Areas with a mix of grass and shrubs, both contributing to fire spread.
- **SH – Shrub:** Areas dominated by shrub vegetation as the main fuel.
- **TU – Timber-Understory:** Forested areas where surface fuels include a mix of litter, forbs, grass, and/or shrubs beneath trees.
- **TL – Timber Litter:** Forested areas where dead and down woody material (litter) is the primary surface fuel.
- **SB – Slash-Blowdown:** Areas with heavy dead and down woody debris, often from logging (slash) or wind events (blowdown).

Table 2.1 summarizes acreages and percentages by fuel model (Scott and Burgan 2005), and Figure 2.3 maps fuel model distributions countywide.

The CWPP uses the Scott and Burgan fuel model, which predicts wildfire behavior based on vegetation types and fuel conditions present in the planning area. The model provides a set of fuel types that are based on factors such as fine fuel load, fuel bed depth, and the moisture content of dead fuel to estimate likely fire behavior, including rate of spread and flame length.

For wildfire modeling outputs that use these fuel models (burn probability, flame length/conditional flame length, and rate of spread), see Chapter 3 – Quantitative Wildfire Risk Assessment. Additional information on fuels within the planning area is available in Appendix B, Community Background. Additional modeling background is available in Appendix D Interagency Fuel Treatment Decision Support System

Table 2.1. Most Common Fuel Types in the Planning Area

Sheridan County Most Common Fuel Types	Acres of Planning Area	Percent of Planning Area
GR2 – Grass, moderately coarse continuous grass, average depth about 1 foot. Spread rate high (20–50 chains/hour); flame length moderate (4–8 feet); fine fuel load (1.10 tons/acre).	864,494	53.5%
GS2 – Grass-shrub, shrubs are 1 to 3 feet high, moderate grass load. Spread rate high (20–50 chains/hour); flame length moderate (4–8 feet); fine fuel load (2.1 tons/acre).	249,139	15.4%
TU5 – Timber-understory, fuel bed high load conifer with shrub understory. Spread rate moderate (5–20 chains/hour); flame length moderate (4–8 feet); fine fuel load (7.0 tons/acre).	169,558	10.5%
GR1 – Grass, short, patchy, and possibly heavily grazed. Spread rate moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (0.4 tons/acre).	84,053	5.2%
GS1 – Grass-shrub, shrubs are about 1 foot high, low grass load. Spread rate moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (1.35 tons/acre).	51,435	3.2%
TL3 – Timber litter, fuel bed lacks coarse fuels. Moderate amount of conifer litter. Spread rate very low (0–2 chains/hour); flame length low (1–4 feet); fine fuel load (0.5 tons/acre).	47,889	2.9%
TL6 – Timber litter, fuel bed not burned recently. Moderate, less compact load. Spread rate moderate (5–20 chains/hour); flame length low (1–4 feet); fine fuel load (2.4 tons/acre).	28,849	1.8%
TU1 – Timber-understory, low load dry climate timber/grass/shrub, low load of grass and/or shrub with litter. Spread rate low (2–5 chains/hour); flame length low (1–4 feet); fine fuel load (1.3 tons/acre).	27,981	1.7%
NB3 – Non-burnable, agricultural field that has been maintained to be non-burnable.	27,121	1.7%
GS3 – Grass-shrub, moderate grass/shrub load, average grass/shrub depth is less than 2 feet. Spread rate high (20–50 chains per hour); flame length moderate (4–8 feet); fine fuel load (3.0 tons/acre).	15,651	1.0%
NB1 – Non-burnable, urban or suburban area without fuel to carry a wildland fire.	14,318	0.9%
Other* – Various fuel types.	36,436	2.2%

* Other fuel types present in the planning area, but comprising a small acreage

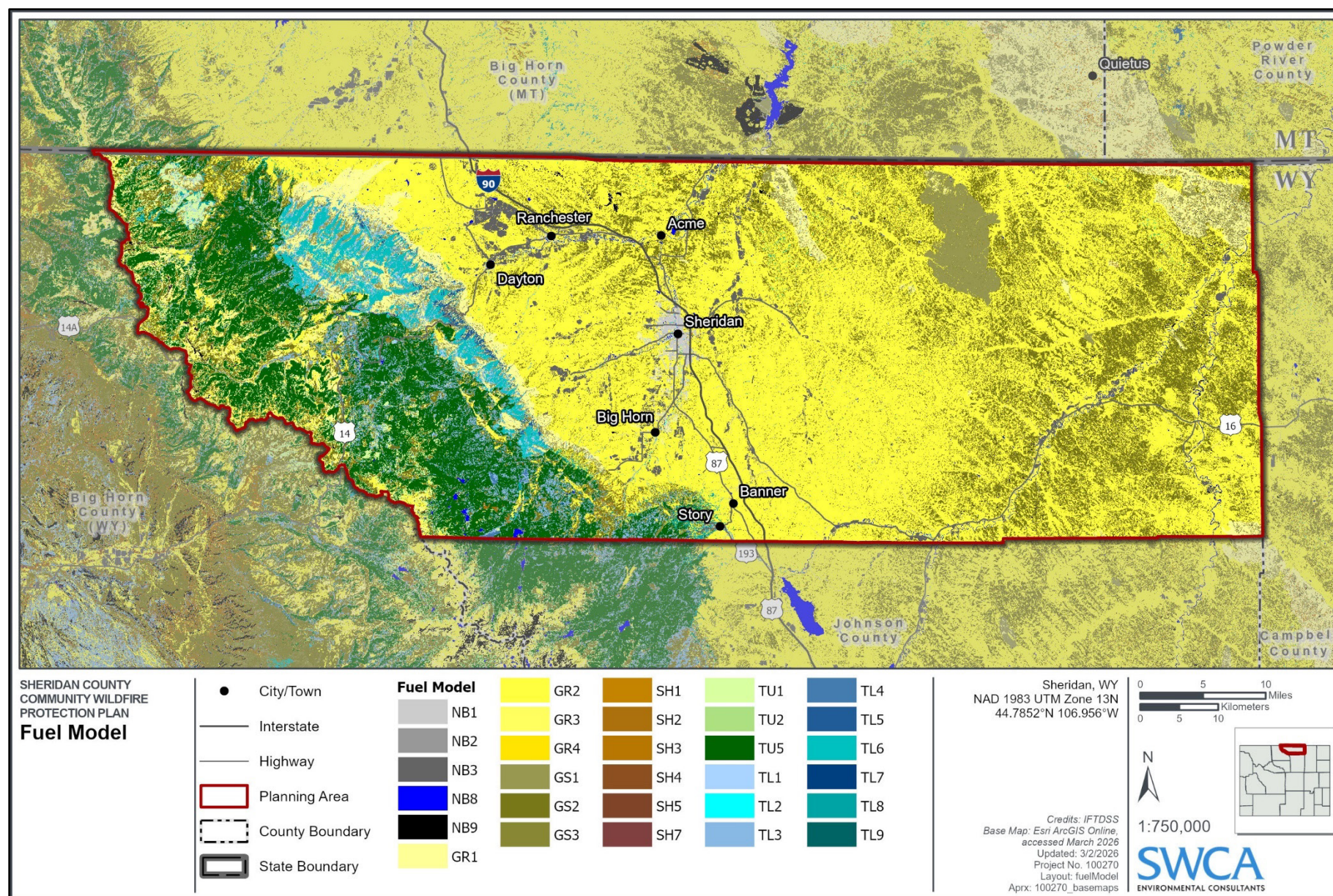


Figure 2.3. Fire behavior fuel models present throughout Sheridan County.

Fire Regime

Fire regimes describe the historical patterns of wildfire within vegetation communities, including typical fire severity and frequency. They are commonly characterized using the mean fire return interval (MFRI), which represents the average time between wildfires in a given area.

Vegetation communities have evolved to their unique fire regimes, which are driven by the vegetation composition (i.e., fuels) in those communities. Assessing vegetation community compositions, MFRI, historic fire regimes, and other factors shaping wildfire behavior helps determine whether current fire frequencies align with historical patterns that supported ecosystem structure and function. Variation from historic fire regimes can be an indication of growing wildfire risk and the need for mitigation.

Dominant Vegetation Communities

Vegetation type is a broad term that describes the different categories of plant communities, such as grasslands, shrubs, or forests, without specifically accounting for their fire behavior characteristics. This differs from **fuel models**, which refer to the burning characteristics of each vegetation type. The composition of vegetation in a vegetative community interacts with other factors influencing fire behavior to shape the fire regime and fire return interval for that community.

Dominant vegetation types are described based on a large spatial scale and represent the overall community structure that will play a general role in fire occurrence and behavior. Although the vegetation types are outlined for the county, site-specific evaluations of the vegetative composition and structure in each area of focus should be taken into consideration when planning fuels treatments.

Figures 2.4 through 2.10 describe the county's vegetation communities, including dominant species, historic fire regimes, fire return intervals, and factors shaping fire behavior. These classifications help provide insights into how different types of vegetation influence fire dynamics, which is essential to understand effective wildfire management and prevention strategies.

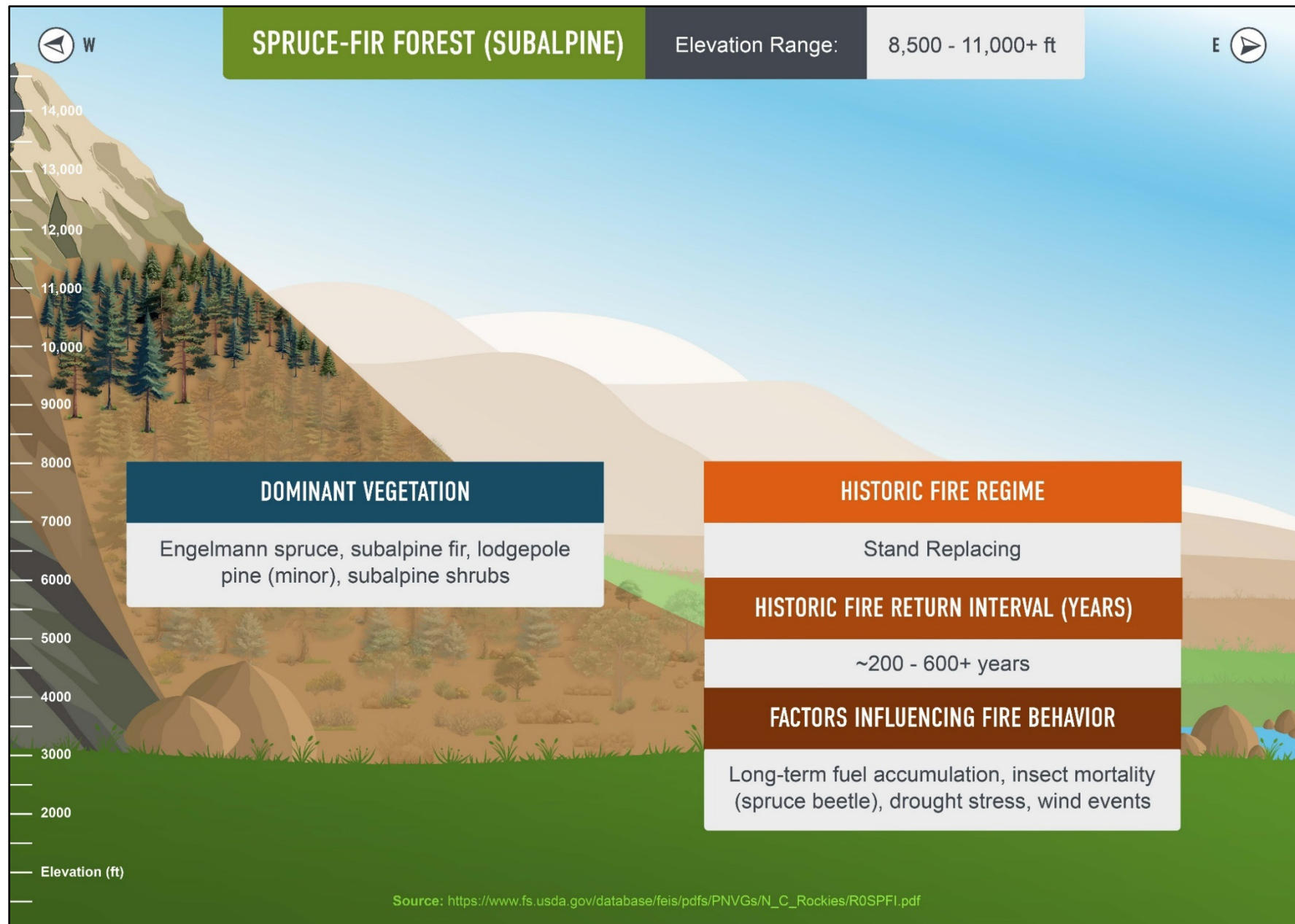


Figure 2.4. Spruce-fir forest vegetation community.

Graphic developed by SWCA

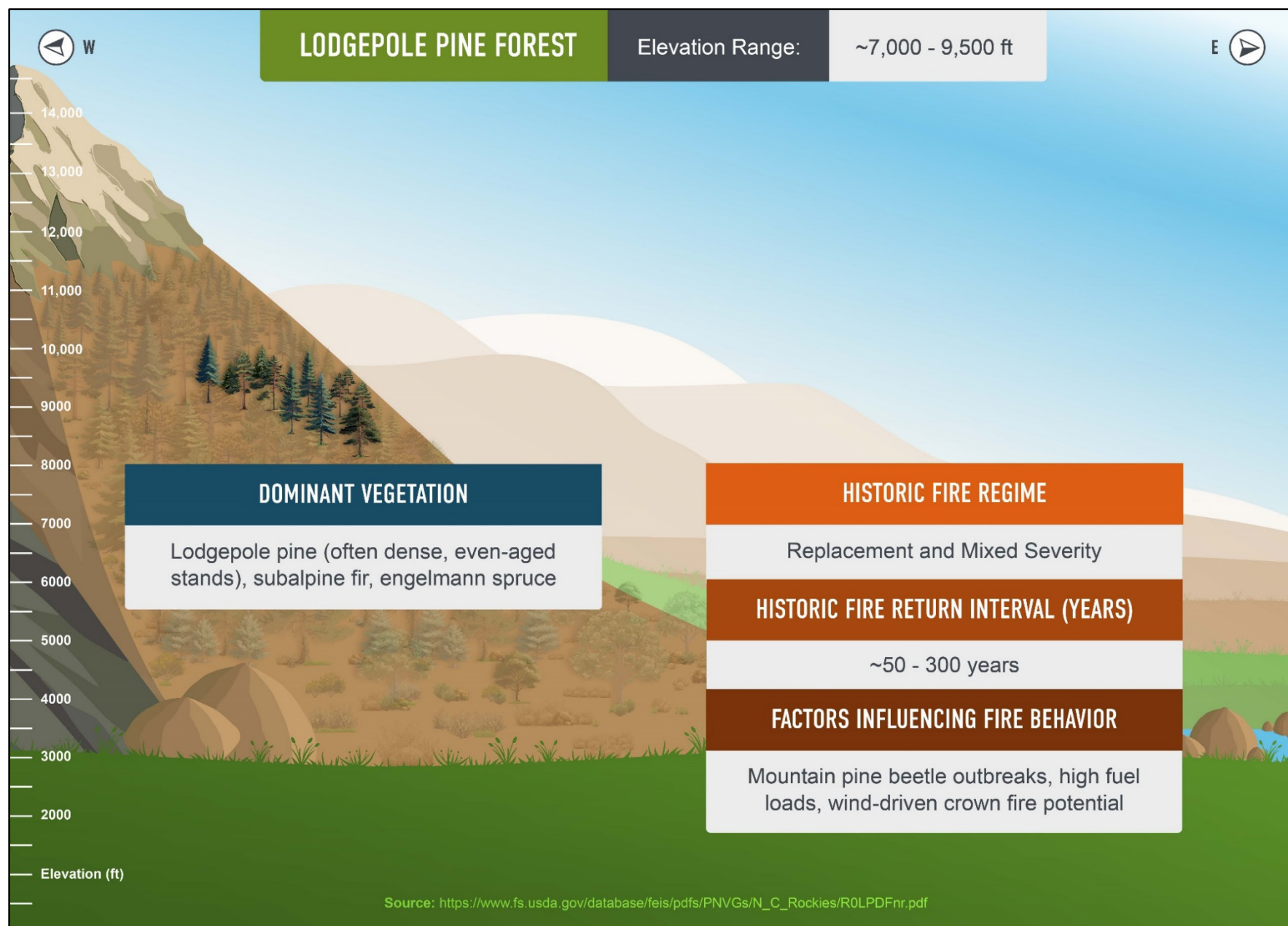


Figure 2.5. Lodgepole pine forest vegetation community.

Graphic developed by SWCA



Figure 2.6. Douglas-fir/mixed conifer vegetation community.

Graphic developed by SWCA



Figure 2.7. Ponderosa pine woodland and savanna vegetation community.

Graphic developed by SWCA



Figure 2.8. Sagebrush and basin shrublands vegetation community.

Graphic developed by SWCA

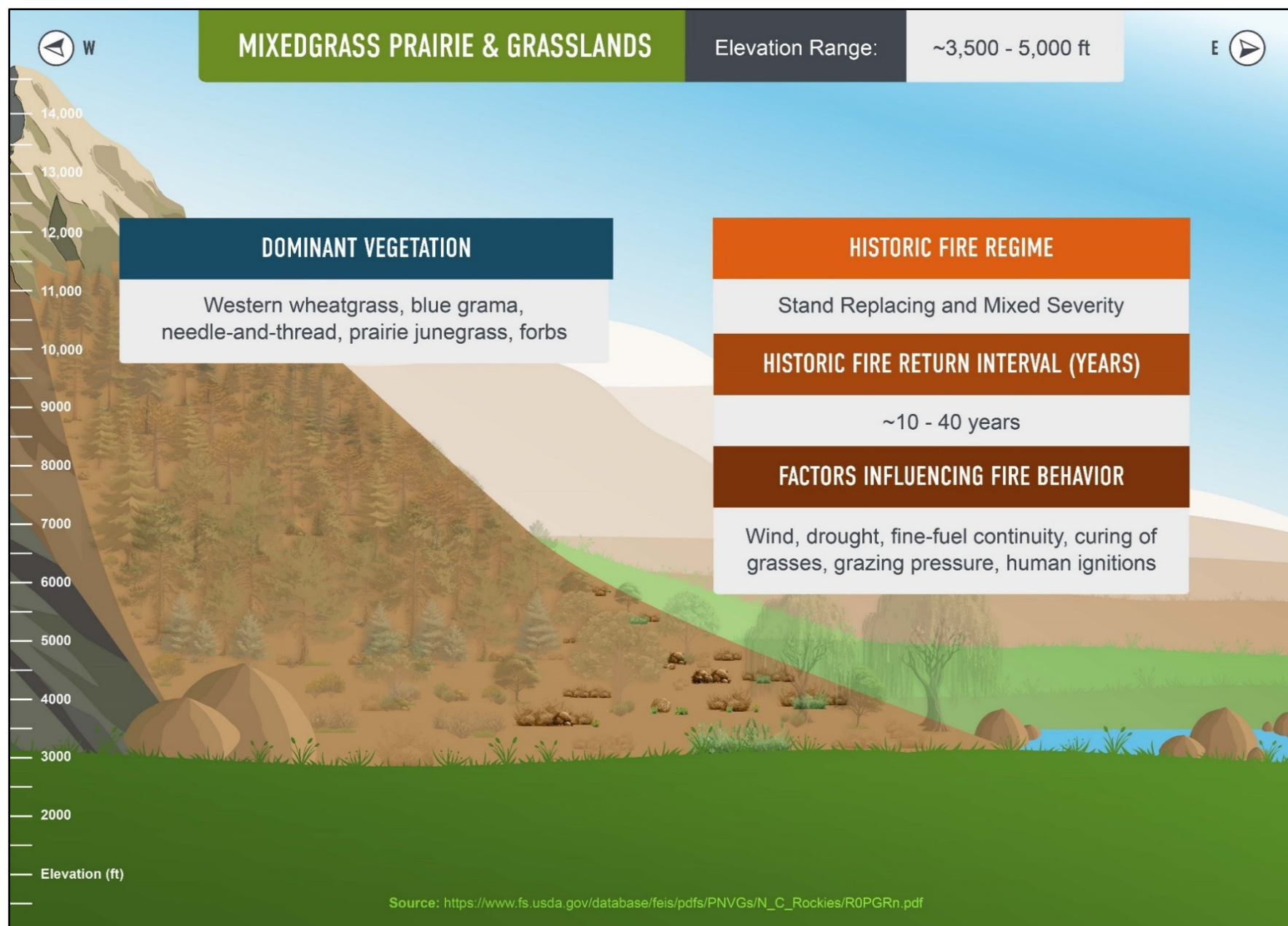


Figure 2.9. Mixedgrass prairie and grasslands vegetation community.

Graphic developed by SWCA

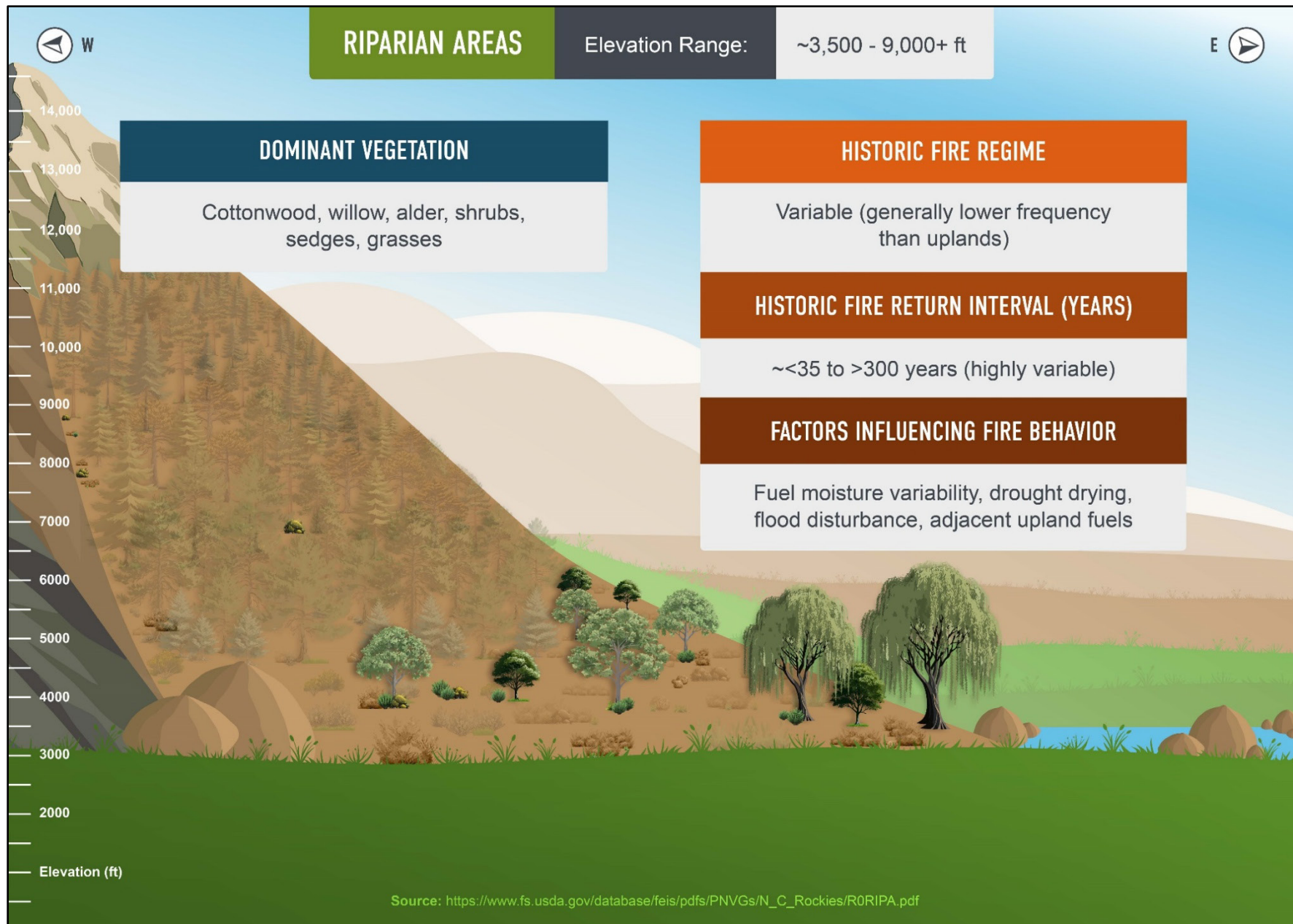


Figure 2.10. Riparian vegetation community.

Graphic developed by SWCA

Western Sheridan County

Western Sheridan County exhibits a variable topography, characterized by the Bighorn Mountains and their foothills. This region is predominantly occupied by timber-understory (TU) fuels and timber-litter (TL) fuels. Within Sheridan County, these fuels are associated with conifer forests and a higher risk of fire spread due to dense vegetation and significant fuel loads. These variations in terrain, including slope steepness and aspect, significantly influence the rate of wildfire spread and behavior. The diverse topography in this part of the county results in significant variations in climate, weather, and vegetation, impacting local communities by promoting hazardous fire conditions.

Eastern Sheridan County

Eastern Sheridan County is characterized by relatively flat, high plains topography (Sheridan County 2024). The area's vegetation is composed of mixed grass prairie and sagebrush. The region also includes most of the incorporated areas within the county, the largest of which is the City of Sheridan. Grass (GR) and grass-shrub (GS) fuels dominate the area. Grass fuels are found predominantly in flat, open areas and can lead to rapid fire spread, especially under windy conditions. These high plains ecosystems, while generally flat, have rolling hills and plateaus (Wyoming Rangelands 2026), which are where most of the grass-shrub fuels are found.

The mix of fuels present in Sheridan County can result in more complex fire behavior, with fires spreading quickly across grasslands and potentially gaining intensity as they move into areas with denser vegetation in the western portion of the county. There is additional risk of fuels ignition throughout the county due to coal seam fires. These fires are caused when underground seams of coal ignite. The fires then burn underground and can spark wildfires in the county's grasslands, shrublands, and forests (Sheridan County 2024).

WILDLAND-URBAN INTERFACE

The WUI is the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (USFA 2022). This creates an environment in which wildland fire can move readily between structural and vegetative fuels, increasing the potential for fire ignitions and the corresponding potential loss of life and property.

The WUI boundary is defined within this plan under the HFRA guidelines, capturing undeveloped wildland areas within 1.5 miles of a developed areas boundary, including land that consists of a sustained steep slope and any geographic features that create an effective fire break, such as a road or ridge top 16 USC 6511(16)(B)(ii)). (Figure 2.11).

The WUI can be broadly categorized into interface areas and intermix areas. According to the National Institute of Standards and Technology (2023), these are defined as follows:

Interface: include housing developments that meet or are in the vicinity of continuous vegetation.

Intermix: includes lower-density housing mingled with undeveloped wildland vegetation.

For this CWPP, the WUI was delineated by identifying all locations with a building density of between 3 and 300 structures per square mile. All areas with this building density were then buffered by 0.5 mile to create the WUI. For reservoirs, Park, Dome, Twin, and Sawmill, were also included in the WUI with a buffer of 0.5 mile to represent the value they provide as essential shared community resources.

Development in the WUI has expanded alongside U.S. population growth, increasing wildfire exposure for homes and communities. A substantial number of Sheridan County's communities and infrastructure is already located in the WUI, with continued development expected, particularly in unincorporated areas (Sheridan County 2024). The WUI and associated community buffer identify areas where fuels treatments, home hardening, defensible space, evacuation planning, and other wildfire risk reduction actions should be prioritized.

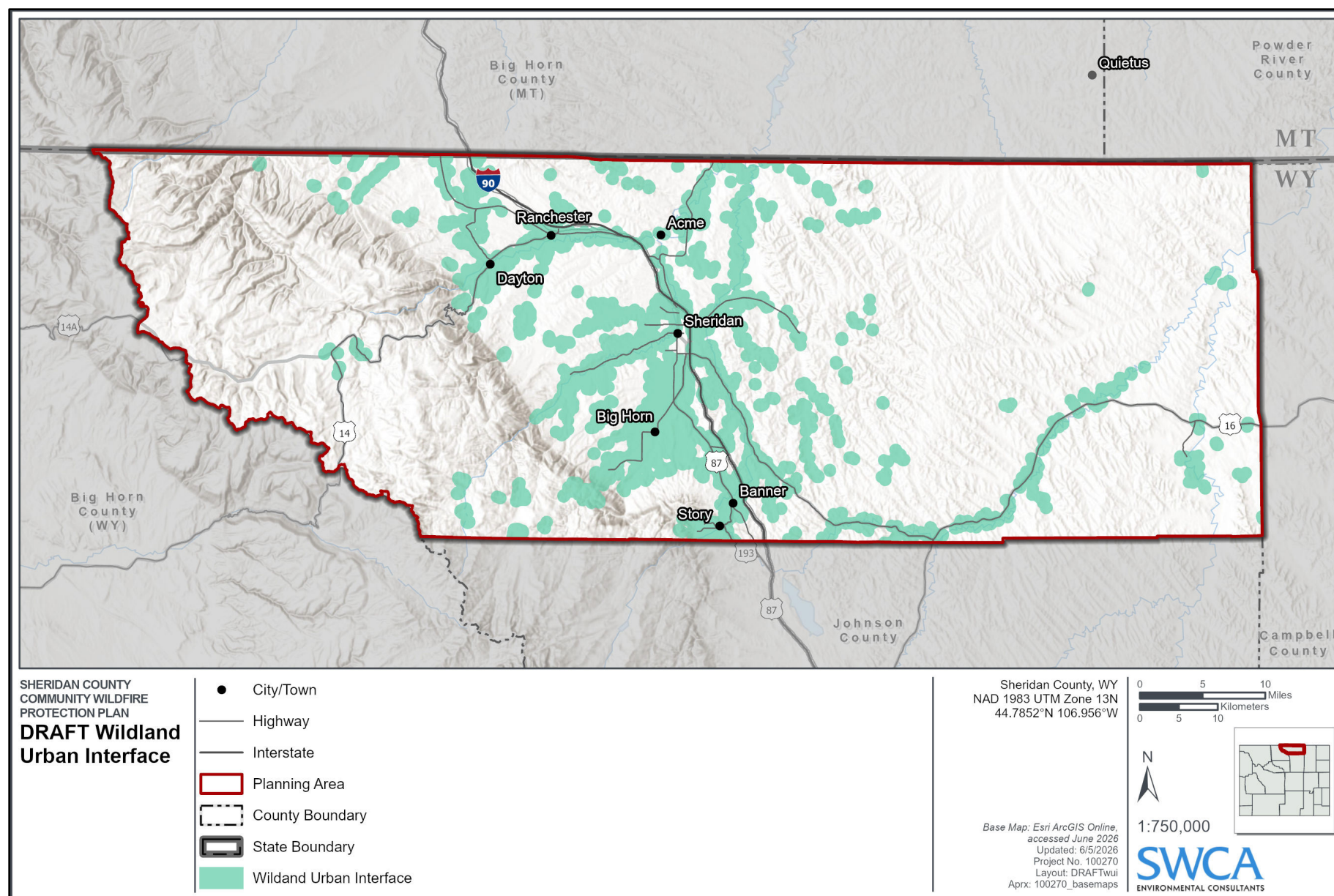


Figure 2.11. Sheridan County WUI map.



Figure 2.12. Example of the WUI in Burgess Junction within Sheridan County.

Urban Conflagration

Urban conflagration refers to the rapid and widespread ignition and combustion of structures within developed areas, often initiated by wildfire and exacerbated by structure proximity and the presence of combustible materials (Calkin et al. 2023; IBHS 2023). In WUI environments, under certain conditions, ember-driven ignitions can result in structure-to-structure fire spread that continues independently of the original wildland fire front.

Urban conflagrations have been observed in recent wildfire events across the United States, including the Camp Fire (2018), Marshall Fire (2021), and Lahaina Fire (2023), where, during periods of extreme winds, coupled with prolonged drought that caused extremely dry vegetation, structure-to-structure fire spread resulted in widespread losses. These events demonstrate the potential for fire to rapidly propagate through developed areas once multiple structures become involved.

Causes of Urban Conflagration

Urban conflagration is driven by a combination of wildland and built environment factors. Ignition often begins at vulnerable locations on or near structures where embers accumulate. Key contributing factors include:

- **Wildland fuels:** Continuous vegetation adjacent to developed areas can generate ember showers that expose structures to ignition. A higher concentration of embers can make multiple simultaneous ignitions more likely.
- **Built environment characteristics:** Closely spaced structures, combustible materials, and vegetation near buildings increase the likelihood of fire spread through ember transfer, radiant heat, and direct flame contact.
- **Weather conditions:** High winds, low humidity, and drought increase both ember production and fire spread potential.
- **Fire suppression limitations:** Access constraints, limited water supply, and coordination challenges during fast-moving incidents can reduce the effectiveness of firefighting operations.

Impacts of Urban Conflagration

- **Loss of life:** fatalities and injuries may occur among residents, firefighters, and wildlife.
- **Property damage:** homes, businesses, infrastructure, and natural resources may be destroyed or severely damaged, resulting in substantial economic losses.
- **Environmental degradation:** fires can disrupt ecosystems, damage habitats, and release pollutants into the air and water.
- **Social disruption:** displacement, evacuation, and psychological impacts can strain communities and emergency response systems.

Climate and Weather Patterns

Sheridan County consists of substantial variation in elevation, terrain, and vegetation that directly influences wildfire potential. The county transitions from western forested mountain landscapes in the Bighorn Mountains to open grassland plains in the east, with the City of Sheridan located in between these settings. This east-west elevation gradient shapes temperature, precipitation, humidity, and wind patterns that affect fuel moisture and fire behavior.

The western portion of the county experiences a cooler mountain climate where higher elevation moderates temperature and supports forest vegetation. Temperatures in the Bighorn Mountains are lower throughout the year relative to the rest of the county, as well as in their foothills to a lesser extent. Cold winter temperatures in these areas result in subfreezing temperatures and seasonal snowpack.

The eastern and central portions of the county experience warmer and drier temperatures with significantly less snowfall and precipitation. Summer temperatures can exceed 100°F, increasing evaporation and accelerating the curing of grasses and other fine fuels. The combination of high summer temperatures, low precipitation, and curing fuels contributes to a landscape where wildfire can spread quickly once ignited. These climatic differences influence fuel types, drying rates, and the likelihood of fire spread across the county.

Table 2.2. Mean Annual Temperature and Precipitation by Station in the Planning Area

General Area	Station	Period of Record	Mean Annual Snowfall (inches)	Mean Annual Precipitation (inches)	Mean Annual Temperature (°F)		
					Max	Min	Mean Annual
Burgess Junction / Bighorn Mountains	Burgess Junction	1999–2026	221	20	82	-26	31
Dayton / Bighorn Mountain Foothills	Dayton	1999–2026	75	17	98	-22	42
Story / Bighorn Mountain Foothills	Story	1999–2026	126	26	94	-20	43
City of Sheridan/ Central Sheridan County	Sheridan Airport	2000–2026	55.5 (data for 1999–2001 only)	15	102	-21	46
Northeastern Sheridan County	Leiter 9N	1999–2026	54	16	102	-18	47
Southeastern Sheridan County	Clearmont 5 SW	2000–2026	23 (data for 2000–2010 only)	12	100	-25	45

Source: NOAA (2026a).

Wind

Wind is a persistent and influential climatic factor in Sheridan County, shaped by elevation gradients, open terrain, and frequent passage of weather systems. Wind not only affects fire behavior directly, by increasing rates of spread and spotting potential, but also indirectly influences wildfire risk by accelerating fuel drying, lowering effective relative humidity, and promoting rapid curing of fine fuels (NWCG 2021). Additionally, high wind events such as Chinook winds or Red Flag Warning conditions, often contribute to rapid wildfire growth and may impact fire response resources—particularly aircraft resources—from engaging in fire suppression activities.

Western Mountains

Wind conditions in the western mountains are influenced by complex terrain and elevation, resulting in generally lower average wind speeds but occasional strong wind events. Data summarized in Table 2.3 show mean annual wind speeds at the Burgess, Wyoming, remote automated weather station (RAWS) of approximately 9 miles per hour (mph), reflecting the sheltering effect of forest cover and mountainous topography. Despite these lower averages, wind conditions are highly variable and strong storm systems periodically produce gusts exceeding 50 mph, with some events surpassing 100 mph (Western Regional Climate Center [WRCC] 2025)

Prevailing winds generally blow from the west to west-southwest throughout the year. Periods of stronger winds often occur during winter and fall, accompanied by moderate relative humidity levels. Higher relative humidity levels during periods of high winds can lower risks associated with wildfire ignition and spread. However, the values presented in Table 2.3 are averages, and when low minimum relative humidity combines with higher wind speeds, it accelerates fuel drying. This increases the likelihood of crown fire, spotting, and rapid upslope fire spread in forest and woodland fuels.

Table 2.3. Monthly and Annual Wind and Relative Humidity Statistics for the Burgess RAWS, 2000–2025

Month	Average Wind Speed (mph)	Max Wind Gust (mph)	Prevailing Wind Direction*	Avg RH (%)	Min RH (%)
Jan	11.6	59.6	WSW	58.6	14.8
Feb	11.0	54.5	WSW	59.6	15.8
Mar	10.2	50.4	WSW	59.6	15.3
Apr	9.2	47.5	W	63.2	15.3
May	8.5	44.2	W	66.8	16.0
Jun	8.5	48.2	WSW	62.0	14.5
Jul	8.1	46.5	WSW	54.7	12.2
Aug	8.2	43.3	WSW	53.0	10.6
Sep	8.6	44.6	WSW	55.0	10.5
Oct	9.1	48.4	WSW	60.9	12.4
Nov	10.3	52.6	WSW	56.8	11.6
Dec	11.0	53.1	WSW	58.6	15.8
Annual	9.5	49.4	WSW	59.1	13.7

Source: WRCC (2025)

Eastern High Plains

Wind conditions across the eastern plains are similar on average to the western portion of the county, but experience more consistent maximum with gusts due to more open terrain and limited surface friction (National Weather Service 2026; WRCC 2025). Data summarized in Table 2.4 show mean wind speeds of about 10 mph annually. Prevailing winds typically come from the west-southwest year-round. The data in Table 2.4 are drawn from Echeta, Wyoming, which, while not located in Sheridan County, provides the nearest weather data in the state reflective of the high plains conditions found in eastern Sheridan County.

Maximum gusts commonly exceed 55 to 60 mph, with highest recorded wind gusts at times exceeding 150 mph. These wind events can coincide with periods when relative humidity is very low, particularly in July through September when values often fall below 10%. Under these conditions, wind rapidly removes surface moisture and accelerates the curing of grasses and other fine fuels. Sustained winds combined with dry fuels can produce fast-moving, wind-driven grassfires capable of spreading quickly across the plains and threatening rural communities, infrastructure, and transportation corridors.

Table 2.4. Monthly and Annual Wind and Relative Humidity Statistics for the Echeta RAWS, 2000–2025

Month	Mean Wind Speed (mph)	Max Wind Gust (mph)	Prevailing Wind Direction*	Avg RH (%)	Min RH (%)
Jan	9.5	61.5	WSW	63.0	23.9
Feb	9.6	54.7	WSW	64.4	21.8
Mar	10.3	61.0	WSW	60.7	12.8
Apr	11.2	59.6	WSW	59.5	11.6
May	10.4	62.9	WSW	61.2	13.8
Jun	9.8	62.2	WSW	55.4	11.9
Jul	9.4	70.5	WSW	45.7	9.3
Aug	9.2	59.0	WSW	42.9	8.3
Sep	9.2	61.5	WSW	47.3	7.8
Oct	9.6	59.4	WSW	58.0	11.1
Nov	9.8	56.3	WSW	57.1	14.3
Dec	9.6	54.9	WSW	63.0	23.5
Annual	9.8	62.1	WSW	63.2	24.0

Source: WRCC (2025)

Fire History

Fire is a natural part of Wyoming's diverse landscapes and is essential to many ecosystems across the state. The county's ecosystems are fire-adapted, meaning wildfire is an important component of maintaining ecosystem health. There are various fire regimes present throughout the planning area, some of which would have historically experienced wildfires much more frequently than others. The divergence from historic fire regimes, thus differs throughout the county depending on the ecosystem. For instance, some spruce-fir and lodgepole pine communities may still fall within their historic fire return intervals. However, other vegetation communities are outside their historic fire regimes, resulting in significant deviation from historic conditions that amplifies wildfire risk. Deviation from historic fire patterns combined with drought, extensive bark beetle damage, and fuel accumulation are contributing to rising wildfire activity across the state (WSFD 2020).

Recent Fire Occurrence

Wildfire is a recurring disturbance within Sheridan County, shaped by climate, fuels, topography, and human activity. Analysis of fire records derived from the National Interagency Fire Center (NIFC) indicates there has been an increase in wildfire occurrence and size in the past several decades. Major wildfire events in Sheridan County since 2000 are shown in Table 2.5.

Table 2.5. Major Wildfires (over 1,000 acres) in Sheridan County Since 2000

Year	Fire	Cause	Acres Burned
2001	Thunder CX	Unknown	4,792
2002	Cabin Creek	Unknown	2,589
2002	Watt Fire	Unknown	1,527
2003	Little Horn II	Unknown	7,418
2006	Buffalo Creek Ranch	Unknown	72,652
2006	Buffalo Creek Complex	Unknown	37,416
2006	Buffalo Creek - Dooley	Unknown	11,981
2006	Buffalo Creek - North Buffalo Creek	Unknown	11,002
2006	Buffalo Creek - Little Jacobs	Unknown	5,171
2006	Buffalo Creek - Moore	Unknown	1,707
2007	Bone Creek	Unknown	13,450
2007	Trail Creek	Unknown	9,843
2007	Little Goose Creek	Unknown	4,742
2012	Cato	Unknown	27,693
2012	Border	Unknown	5,779
2012	Whitmeyer Creek	Unknown	2,033
2012	Mull Draw	Unknown	1,806
2015	Bales	Unknown	5,723
2015	Sheep Creek	Unknown	1,656
2017	Deer Creek	Unknown	90,956
2017	Brush Flat	Unknown	3,938
2017	Cottonwood One	Unknown	4,153
2020	Waddle Creek	Unknown	25,589
2020	Seventy-Six	Natural	1,008
2021	Crater Ridge	Unknown	7,682
2021	Deer Creek 2	Natural	5,291
2024	Remington	Natural	196,368
2024	Elk	Natural	98,352
2024	Badger	Human	7,972
2024	Deer Creek	Natural	6,699

Source: NIFC (2026a)

Sheridan County has seen an increase in both fire ignitions and acres burned over the past decades. Acres burned in the county per decade remained relatively stable throughout the twentieth century before rising dramatically between 2000 and 2009, and has increased with each subsequent decade. Since 2020, the county has already seen 351,282 acres burned, exceeding the maximum burned acreage of any past decade in only 5 years. The high acreage burned between 2020 and 2025 was fueled in large part by the Remington and Elk Fires in 2024, which burned nearly 200,000 and 100,000 acres, respectively.

Size class data show that increases in wildfire ignitions and acreage burned correspond with a rise in wildfires of varying sizes. Sheridan County has regularly experienced wildfires ranging from a couple of acres to over 20,000. The presence of wildfire across the landscape in part reflects the natural fire regime of the area. However, increases in the number of very large wildfires result from the persistence of conditions capable of supporting significant fire growth, such as fuel accumulation and drought.

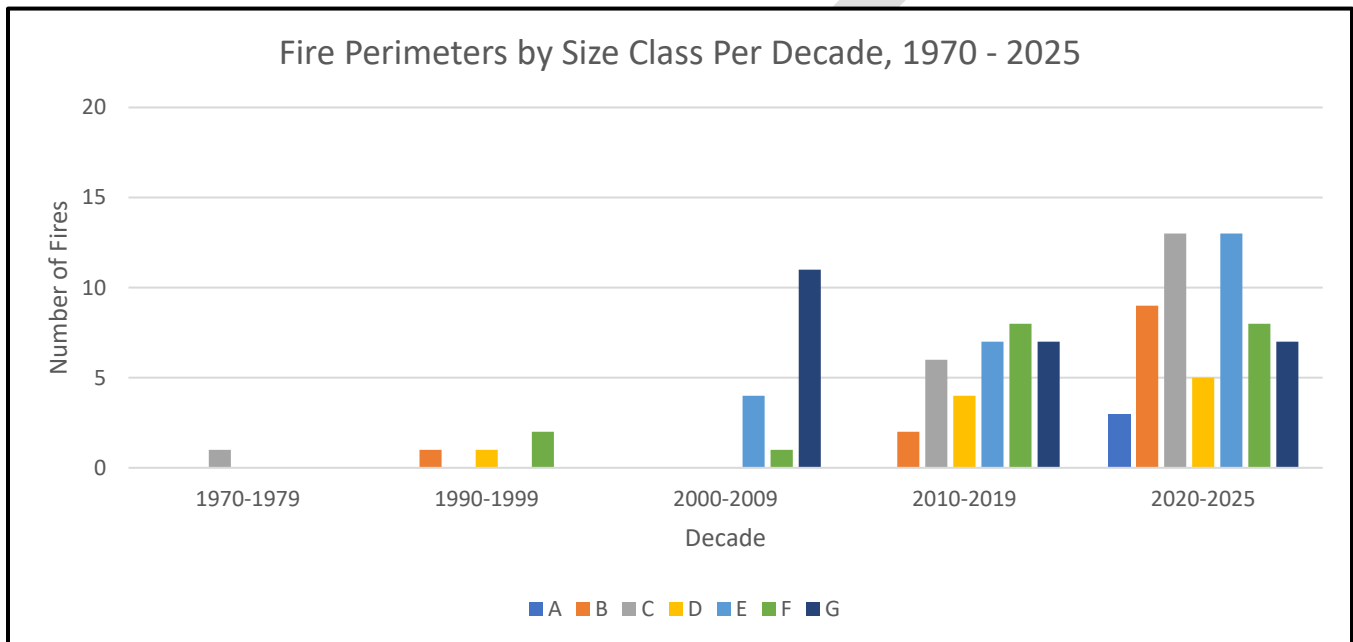


Figure 2.13. Fire size statistics per decade for Sheridan County based on fire history data from 1970 through 2025.

Source: NIFC 2026a

Size Class: A = 0.25 acre or less; B = greater than 0.25 to 10 acres; C = 10 to 100 acres; D = 100 to 300 acres; E = 300 to 1,000 acres; F = 1,000 to 5,000, G = 5,000 acres or greater.

Fire occurrence in the county has seasonal trends. Most fires occur between April and November, with a pronounced peak in July and August (Figure 2.14). This period corresponds with lower relative humidity levels and higher temperatures (Western Regional Climate Center 2025). These conditions cause vegetation to dry and increase the risk of wildfire ignition and spread. Fire activity decreases in December through March during wetter periods and rises again in the summer months as fuels dry.

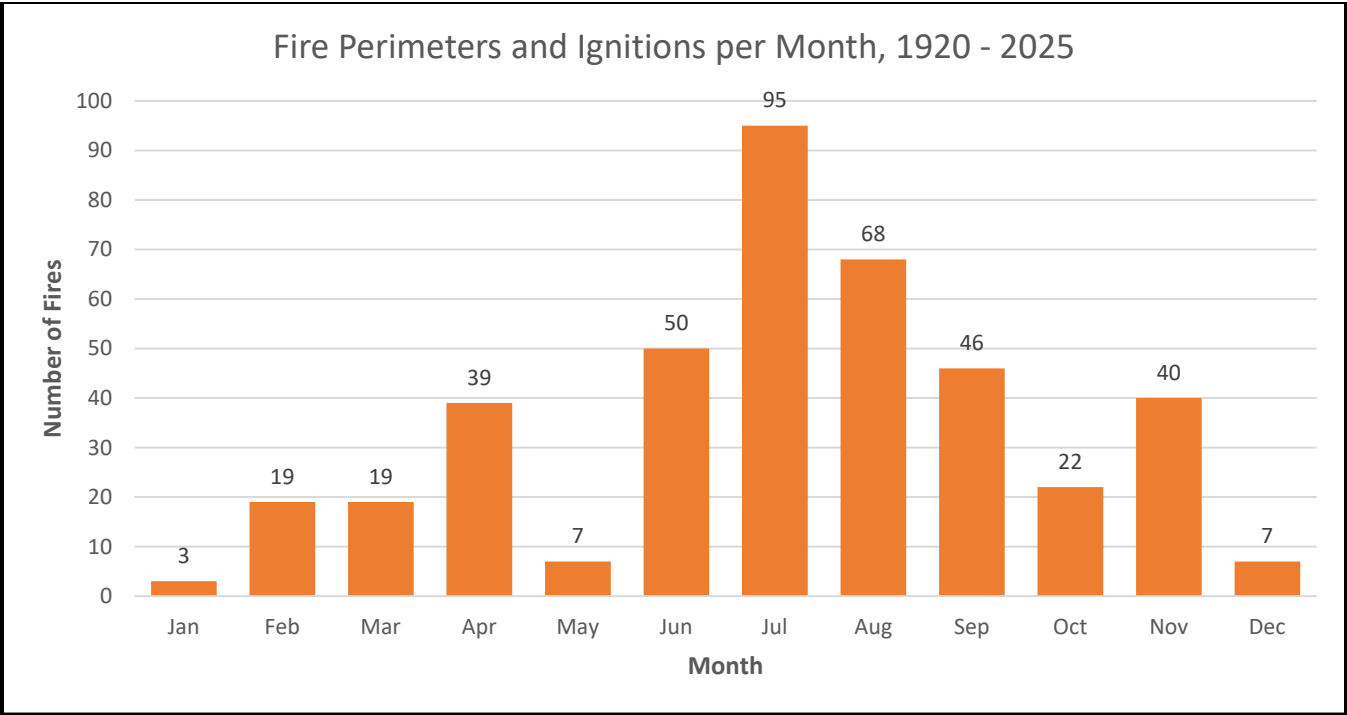


Figure 2.14. Number of wildfire events per month in Sheridan County from 1920 to 2025.

Source: NIFC 2026a

Both human and natural causes contribute to wildfire ignitions within the planning area, but since 2000, there has been a significant increase in the number of human-caused ignitions. These ignitions may result from increased human activity in the WUI and represent an opportunity for increased wildfire education efforts to lower associated ignition risks. Ignitions of undetermined cause also represent a large portion of events, and increases in natural and human-caused ignitions could partially result from improved data collection.

Figure 2.15 displays ignition locations, representing the point of origin for recorded fire starts. Not all ignitions result in a large wildfire, as many fires are contained during initial attack or remain small. However, the few large events that occur can cause considerable damage to property and infrastructure as well as threaten people's lives.

Overall, Sheridan County's recent fire history is characterized by a range of wildfire sizes, seasonal wildfire patterns, and a growing human influence on ignition occurrence. Many fires are contained during initial attack before they become larger events. However, under favorable weather and fuel conditions, fires can escape suppression and grow large enough to threaten communities and natural resources, as evidenced by recent fires.

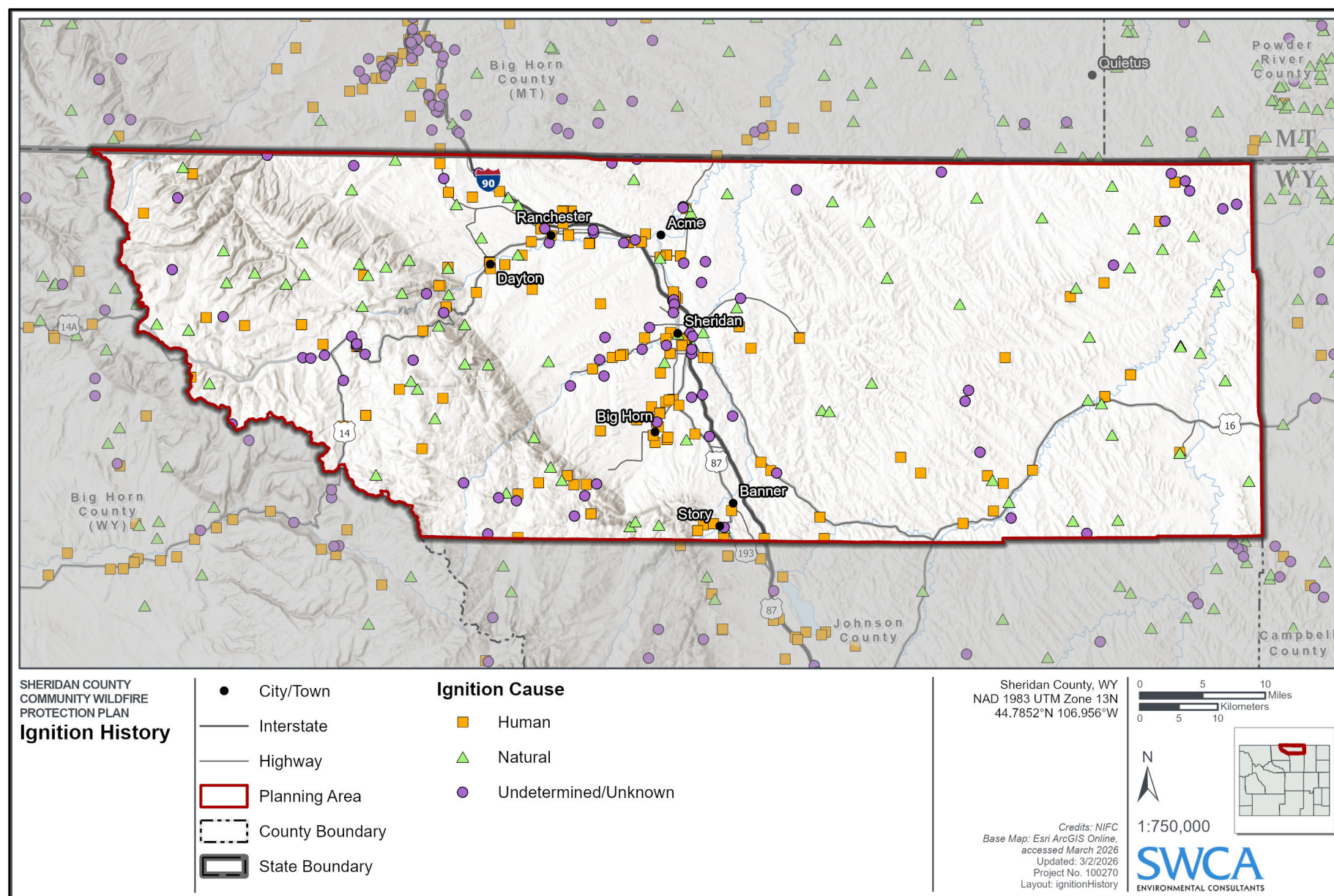


Figure 2.15. Fire ignition history in Sheridan County .

Fire Response Capabilities

Wildfire response in Sheridan County is cooperatively managed and implemented through interagency partnerships between federal, state, and local entities. These resources include support from the USFS, BLM, WSFD, Sheridan County Office Emergency Management, multiple local fire protection departments and districts, and municipal agencies. Resource coordination and mobilization for large wildfire events across jurisdictions throughout Wyoming are primarily coordinated by the regional interagency dispatch centers through the Rocky Mountain Area Coordination Center (RMACC). At the county level, the 2022 *Sheridan County Emergency Operations Plan* (SCEOP) highlights agency response annexes specific to wildfire response emergencies (Sheridan County 2026a).

During large wildfire events, the Sheridan County Office of Emergency Management plays a central role in overall coordination, serving as the county's lead entity in the coordination of mutual aid, requesting support from state and local partners as needed, providing emergency notifications to the public, and establishing an Emergency Operations Center. Evacuations are primarily led by the Sheridan County Sheriff's Office with support from fire districts and departments when necessary (Sheridan County 2026a). Table 2.6 lists the wildfire response resources across all jurisdictions throughout Sheridan County.

For more information on local, state, and federal fire response responsibilities and capabilities within Sheridan County, please see **Appendix B, Community Background**.

Table 2.6. Fire Response Resources in Sheridan County

Fire Response Resource	Resource Type	Primary Service Areas
Big Horn Fire Department and Fire District	Local	Big Horn
Big Horn National Forest (USFS)	Federal	Big Horn National Forest
Buffalo Field Office (BLM)	Federal	Sheridan County and other areas across the state
Clearmont Fire District	Local	Clearmont, WYarno, Arvada, Ucross, and surrounding areas
Dayton Fire Department	Local	Town of Dayton and Dayton Fire District
Goose Valley Fire Department	Local	Unincorporated communities across Sheridan County within Sheridan Area Rural Fire Protection District boundaries
Sheridan Area Rural Fire Protection District	Local	Unincorporated communities of Sheridan County within fire protection district boundaries
Sheridan Fire-Rescue	Local	City of Sheridan
Story Fire Department and Fire District	Local	Story, Banner, and areas between Meade Creek to Piney Creek
Tongue River Fire Protection District	Local	Town of Ranchester and surrounding areas
Wyoming State Forestry Division – Fire and Aviation Management	State	State Trust lands within District 5

Emergency Preparedness

Emergency preparedness in Sheridan County is operated through the County's Office of Emergency Management, providing residents with emergency preparedness resources and information, evacuation plans, and emergency notification methods. Emergency notifications in Sheridan County follow the "Ready, Set, Go" model as illustrated in Figure 2.16.

All emergency preparedness resources information in Sheridan County can be accessed through the County's website at:

https://www.sheridancountywy.gov/departments/emergency_management/emergency_preparedness/index.php



Figure 2.16. Ready, Set, Go, Stay information for Sheridan County Emergency Preparedness.

Source: Sheridan County 2026c.

Emergency and evacuation information systems that are accessible to Sheridan County residents include:

- **AlertSense** – An automated emergency notification system that provides real-time notifications to residents during emergencies including evacuation orders, significant wildfire activities, and severe weather warnings. Notifications are available through text messages, email, pager, or voice call. To sign up for emergency alerts, visit: https://www.sheridancountywy.gov/departments/emergency_management/alert_sense.php
- **Perimeter** – Provides real-time public safety information during emergencies by showing evacuation zones, evacuation orders, shelter-in-place areas, road closures, resource locations, and other emergency instructions. Evacuation maps can be viewed at: <https://perimetermap.com/>

More information on evacuation resources and notification methods in Sheridan County is provided in **Appendix B, Community Background**.



CHAPTER 3 – WILDFIRE RISK ASSESSMENT

CHAPTER CONTENTS

Risk Assessment Purposes
Assessment Framework and Methods
Identification of Hazard and Vulnerability
Quantitative Wildfire Risk Assessment
Qualitative Risk Considerations

*Uncontrollable extreme wildfires
are inevitable, however, by
reducing home ignition potential,
we can create ignition resistant
homes and communities.”*
- Jack Cohen



SUMMARY BOX: CHAPTER 3 WILDFIRE RISK ASSESSMENT

Purpose

The purpose of the wildfire risk assessment is to provide a planning-level evaluation of wildfire hazard and the risk wildfires pose to community values within the planning area and provide a framework for decision making across jurisdictions and land ownerships.

Wildfire is considered a high-significance hazard for Sheridan County (State of Wyoming 2024). The likelihood, geographic extent, and potential impacts to communities and resources from wildfire present variable risks across the county. This risk assessment provides a detailed spatially explicit representation of wildfire conditions to identify wildfire risk and mitigation opportunities.

The results of this assessment are intended to support:

- Prioritization of fuels reduction and defensible space treatments
- Strategic planning by fire departments and land managers
- Public education and preparedness efforts
- Coordination across jurisdictions and land ownerships
- Alignment of local planning with county, state, and federal hazard mitigation efforts
- Risk-informed prioritization of mitigation and preparedness actions

The results of this assessment are intended to support land managers, fire officials, planners, and community members in reducing wildfire risk through targeted mitigation, preparedness, and outreach efforts.

The identification of higher-risk areas also informs prioritization of fuel treatments and other risk reduction strategies across both public and private lands.

Detailed information on the modeling process is provided in Appendix D. See Chapter 4 for wildfire mitigation strategies and fuel treatment recommendations. Appendix E provides fuel treatment methodologies, Appendix F contains resources for homeowners, and Appendix J includes funding sources.

Risk Assessment

The CWPP uses a two-part approach to evaluate wildfire risk:

- Landscape-scale fire behavior modeling and quantitative wildfire risk assessment protocols conducted using a statewide framework that evaluates wildfire likelihood, intensity, and potential effects on values at risk
- Community-level evaluation by the SWCA wildfire experts and the Sheridan County CWPP Core Team to identify on-the-ground conditions that influence vulnerability, including access, defensibility, infrastructure, and local values at risk.

Community Risk Assessment Results

Community risk ratings were developed based on the results of the wildfire risk assessment and targeted assessment of defined communities. Assessment results are based on fuels, topography, home construction and defensible space, response resources, and road conditions.

How Results are Used

- Prioritization of fuels reduction and defensible space efforts.
- Targeted education and outreach to residents.
- Mitigation planning on public and private lands.
- Identification of wildfire response needs and constraints.
- Evaluation of evacuation access, road risk, and critical lifeline vulnerabilities.
- Identification of areas where wildfire impacts could affect people, property, infrastructure, transportation, communications, water systems, and other essential services.

Key Takeaways

- Wildfire risk is concentrated in WUI areas where homes, infrastructure, and access routes overlap continuous vegetation.
- Risk is spread throughout the county and across multiple fuel types, with areas of high risk occurring in timber and grassland regions.
- Critical lifelines may remain vulnerable even when mapped in lower-risk areas because transportation corridors, communication assets, and water systems support evacuation, response, and continuity of services.

ASSESSMENT FRAMEWORK AND METHODS

A Quantitative Wildfire Risk Assessment (QWRA) framework was used to classify wildfire risk by combining landscape wildfire hazards and vulnerability of community values (Scott et al. 2013). Fire intensity and probability were modeled across the planning area to characterize wildfire hazard. Mapped structures, infrastructure, and essential municipal water supply values identified by the Core Team were evaluated for their exposure to wildfire hazard and their susceptibility to fire damage as a measure of vulnerability. Resulting mapped wildfire hazard and vulnerability of community values were overlayed to identify and classify wildfire risk. Figure 3.1 shows the general QWRA process used for this CWPP.



Figure 3.1. Quantitative Wildfire Risk Assessment (QWRA) framework.

Derived from Scott et al. (2013).

Hazard, vulnerability, and resulting risk models used in this CWPP analyze Sheridan County as a whole. These tools are not intended to predict risk at specific locations but rather to provide an overall understanding of where risk is greatest to focus mitigation and preparedness actions. One community within the planning area is identified as under classified by fire intensity, probability, and risk model outputs: Story, in the southwestern portion of the county, consistently rates lower than expected in all model outcomes. To address this model output anomaly, the conditions within and around Story are used to explain potential wildfire hazard, vulnerability, and risk based on local observations. No other portion of the analysis area was identified to be over or underrepresented by modeling results.

IDENTIFICATION OF HAZARD AND VULNERABILITY

To identify where wildfires potentially threaten community values, wildfire hazard was modeled across the entire Sheridan County planning area. Wildfire risk was identified by mapping community values to identify their vulnerability to wildfire in the context of modeled hazards.

Hazard

Hazard is the intensity of wildfire and the probability of wildfire occurring (see Figure 3.1). *Intensity* is measured by heat output as represented by flame length, where higher flame lengths represent more heat output and greater challenges to wildfire control. *Probability* is the likelihood of wildfire occurring at any given location within the analysis area. These fire hazard factors vary across time and space based on climate trends that affect past wildfires and current fuel conditions and patterns, seasonal conditions, terrain features such as canyons and wide-open expanses that influence wind and moisture availability, weather during wildfire ignition and spread, and the likelihood of human and natural fire ignitions. National fuel and terrain models were used in combination with local weather models for the analysis area to map wildfire hazard. Modeling was conducted using tools available through the Interagency Fuel Treatment Decision Support System (IFTDSS) (2025). Fire intensity and burn probability were modeled based on 97th percentile weather, representative of extreme fire weather conditions.

Conditional Flame Length

Fire intensity was represented using modeled flame length, which describes the potential height of flames produced during wildfire. Flame length is widely used in wildfire modeling as an indicator of fire intensity and suppression difficulty because it reflects the rate of energy release during combustion. Conditional flame length represents the average flame length of all simulated fires that burn a given location, calculated from the probability distribution of flame length intensity classes (IFTDSS 2025).

Modeled flame length varies across Sheridan County due to differences in vegetation type and fuel continuity, topography, weather, and recent wildfire activity (Table 3.1; Figure 3.2). Moderate flame lengths are most common across the county, while both lower and higher intensity classes occur in more limited areas.

Bighorn Mountains

Within the Bighorn Mountains, flame length varies considerably with vegetation type, elevation, and disturbance history. Shorter flame lengths are scattered across foothill grasslands, open forests, and riparian or drainage areas where fuels are less dense or discontinuous. The most extensive areas of lower modeled flame length occur within the Crater Ridge and Elk Fire burn scars, portions of the Lower North Tongue River subwatershed, and along mountainous ridgelines and drainages. Recently burned areas and foothill vegetation types such as grasslands and ponderosa pine forests generally have less continuous fuel than adjacent higher-elevation forests, resulting in lower fire intensity.

Areas near the community of Story also show lower modeled flame lengths than those of dense, higher-elevation forests, consistent with the modeled fire behavior typically associated with fuel inputs from conifer litter in the higher-elevation tree understory versus grass understory surface fuel types common to this community. Local observations indicate areas of high fuel density and connectivity within ponderosa pine and Douglas-fir stands adjacent to and within Story. Under extreme fire weather, these locations may support higher flame lengths and transition from surface to crown fire.

Upper Bighorn Mountain elevations are modeled to support high, very high, and extreme flame lengths. These areas are dominated by dense conifer forests, including spruce-fir and lodgepole pine, which naturally support greater fuel loading and vertical fuel continuity. These fuel conditions can promote the transition of wildfire from surface to crown fire. Similar conditions may occur in mid-elevation Douglas-fir and mixed-conifer forests on south-facing slopes, where stand densification and the accumulation of ladder fuels increase the potential for higher-intensity fire.

Eastern Sheridan County

The rolling plains of eastern Sheridan County are generally modeled to support moderate flame lengths, with localized areas of higher intensity where grass fuels are continuous and aligned with wind and slope. Very low to low flame lengths are concentrated near towns and developed areas and in scattered patches where fuels are sparse or recently disturbed. With increasing distance from developed areas, flame lengths commonly increase to moderate levels with occasional patches of higher intensity. As in the Bighorn Mountains, recently burned areas and vegetation associated with drainages and lower slopes tend to support lower flame lengths due to reduced fuel continuity. Notable areas of lower predicted flame length in the eastern portion of the county include the Remington burned area and several overlapping past fires in the north-central part of the county.

Table 3.1. Modeled Conditional Flame Length Summarized for Sheridan County Under Extreme Fire Weather (97th percentile)

Classification	Flame Length Range (feet)	Portion of County (percent)
Unburnable	NA	3
Very Low	0–1	2
Low	1–4	12
Moderate	4–8	47
High	8–12	18
Very High	12–25	9
Extreme	>25	9

Note: NA = not applicable.

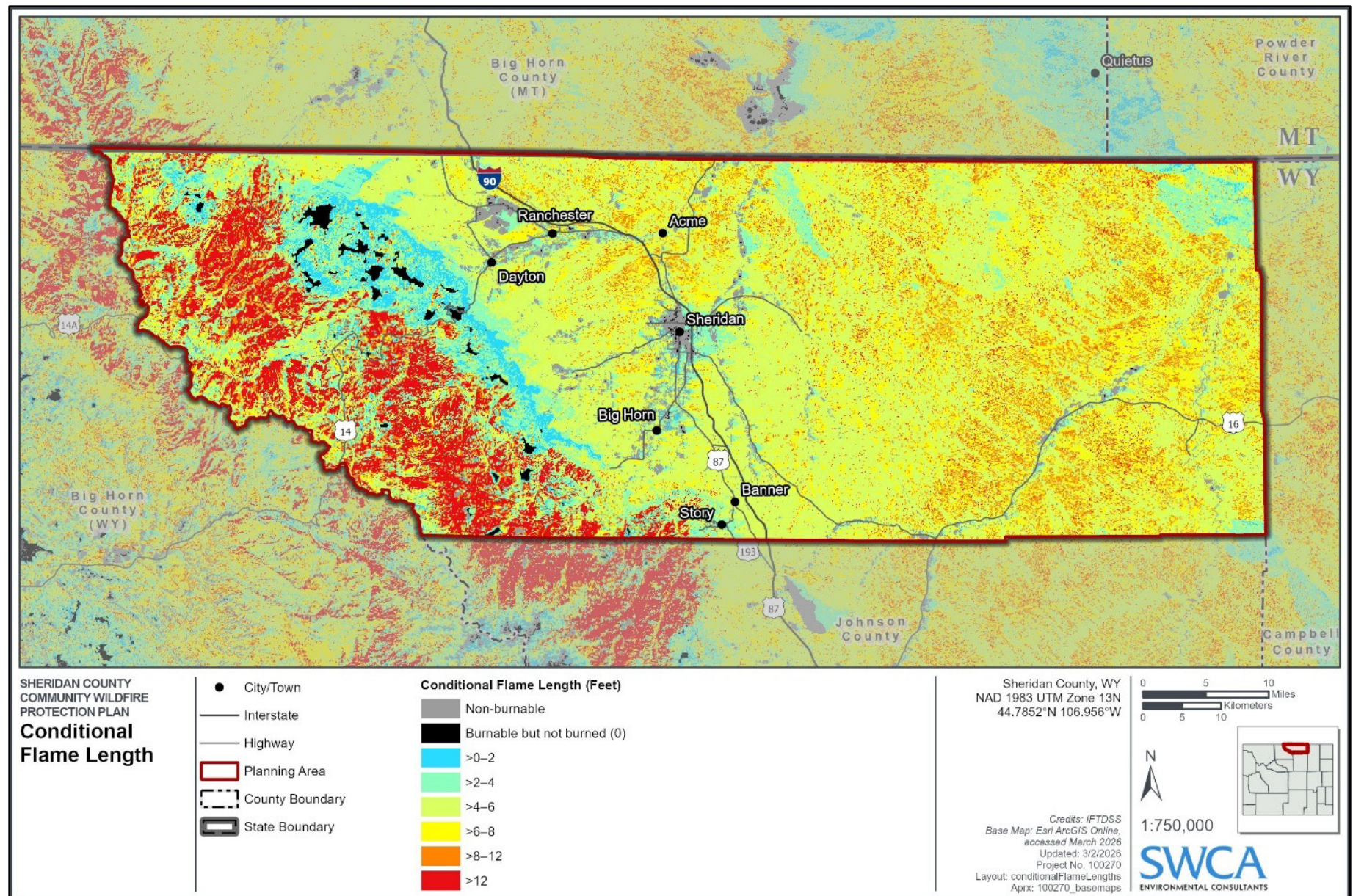


Figure 3.2. Conditional flame length classes modeled for Sheridan County under extreme fire weather (97th percentile).

Burn Probability

Modeled burn probability represents the likelihood that a wildfire will occur at a given location across the landscape. It is estimated by simulating thousands of potential wildfire ignitions distributed, randomly, across the study area and modeling fire progression under very high fire danger conditions in a single day. The models do not incorporate suppression actions. The final size and shape of the modeled fire perimeters, and whether they reach a particular location, are a function of the rate and direction of spread based on the alignment of fuels, topography, and weather.

Low burn probability does not mean zero probability. For example, a burn probability of 20% indicates that one in five simulated ignitions under very high fire danger conditions would be expected to reach and burn that location.

Across Sheridan County, modeled burn probability varies with vegetation continuity, topography, and the distribution of ignition sources. Burn probability is highest for portions of the county where extensive grass fuels are dominant (e.g., 1-hour fuels). In these flashy fuel types, rapid and large fire growth is expected under extreme fire weather (in the absence of fire suppression), increasing the likelihood of burning in these prairie settings. With increasing conifer forest presence and density, burn probability decreases. Although fire intensity is higher in forested fuel types, due to greater surface fuel loads, fire spread and progression is often slower than in grass fuels. Table 3.2 summarizes burn probability results, and Figure 3.3 illustrates the spatial distribution of burn probability across the county.

Table 3.2. Burn Probability Across Sheridan County

Classification	Probability Range (%)	Portion of County (%)	Location Within Sheridan County
Highest	80 to 100	1	South-central county; north of Highway 16 and east of Banner
Higher	60 to 80	15	Central, west of Sheridan, northwest of Ranchester, east of Banner, central and southeast county
Middle	40 to 60	33	East of the Bighorn Mountains
Lower	20 to 40	26	Bighorn Mountains foothills, Dayton, Ranchester, east and southeast of Sheridan, portions of north-central and northeast county
Lowest	0 to 20	21	Bighorn Mountains, east of Sheridan and Big Horn, Story, northeast and north-central county

Wildfire ignitions incorporated in the burn probability modeling are randomly assigned and allowed to burn for 1 day, with new ignitions added until 98% of the analysis area has experienced at least one modeled fire. Developed areas where human density is highest within the county may experience more wildfire ignitions than the models assumed with more random ignitions. The models allow for an “all things equal” comparison to aid in fuel mitigation prioritization at the countywide scale. When a particular local area is known or anticipated to experience an abundance of accidental or intentional human-caused ignitions, this increases the probability, and those areas may need to be prioritized higher. Note that the past is not always an analog to the future. Areas that have seen frequent fire may have lower fire spread and intensity. Additionally, socioeconomic factors, development, and land use patterns can change rapidly, altering the probable location of human-caused ignitions.

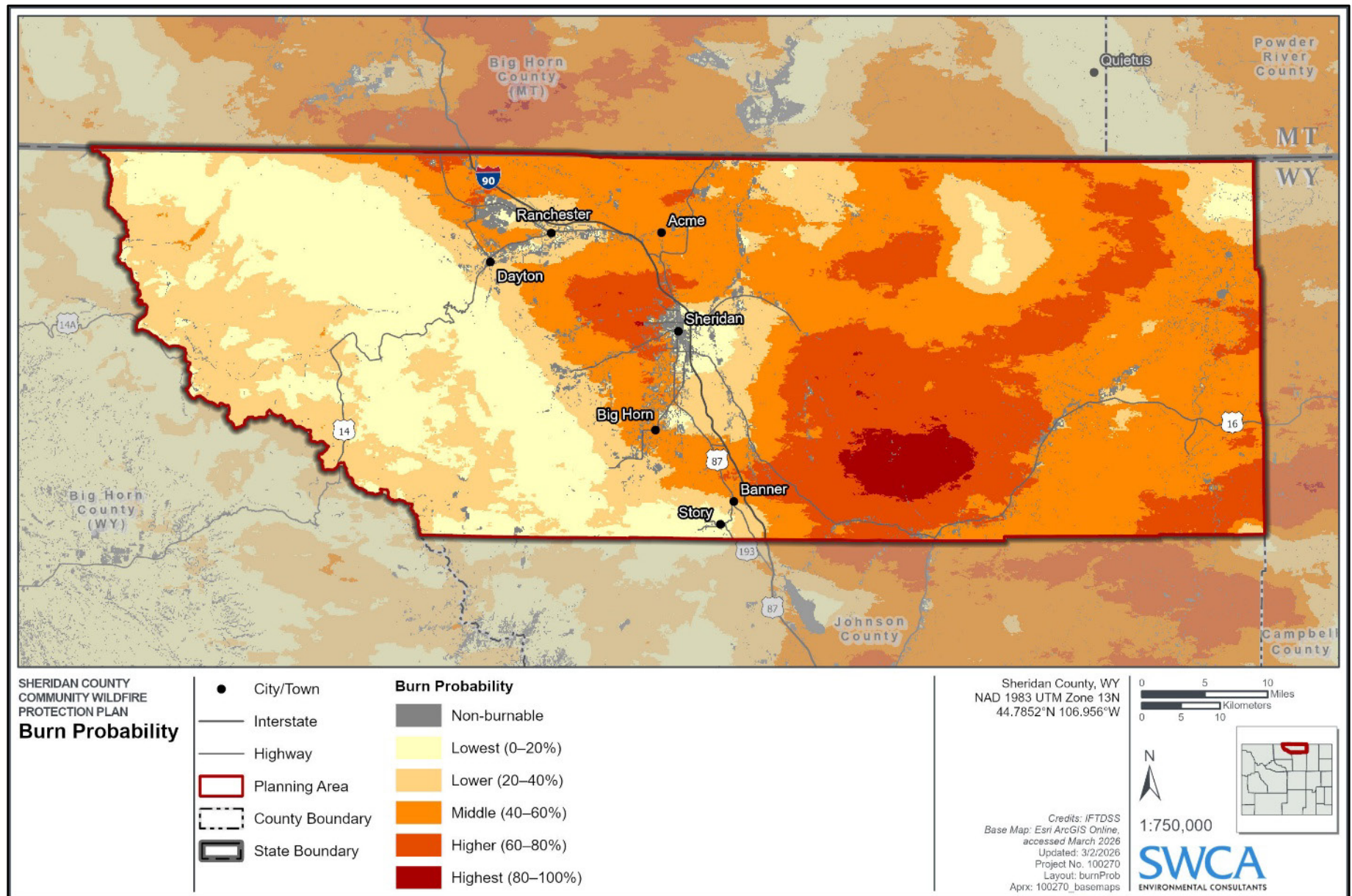


Figure 3.3. Burn probability across the Sheridan County, representing the likelihood that a given location will experience wildfire under modeled conditions.

Vulnerability

Vulnerability describes the people, property, infrastructure, and natural resources that could be harmed by wildfire. Understanding what assets are exposed across Sheridan County helps identify where wildfire could result in the greatest impacts to communities, infrastructure, and natural resources.

Highly Valued Resources and Assets

Some areas of the landscape contain resources or assets that are particularly important to communities, economies, or ecosystems and may be adversely affected by wildfire. Highly Valued Resources and Assets (HVRAs) are features in the built and natural environment that are considered important in wildfire risk assessment and that influence land, resource, and fire management decisions. These include human assets such as buildings and critical infrastructure, as well as natural resources that could experience significant impacts from wildfire (USFS 2026a).

Table 3.3 outlines the HVRAs included in this risk assessment along with the analysis buffer distances and data sources used to evaluate wildfire exposure.

Buildings

Building locations across the planning area were represented using address point data for residential and commercial structures. This dataset provides a spatial representation of where structures are concentrated and supports evaluation of potential wildfire exposure to the built environment.

Because LANDFIRE fuel models typically classify developed areas immediately surrounding structures as non-burnable, a buffer of 0.25 mile was applied around building locations to ensure that adjacent burnable vegetation was included in the analysis. This approach allows wildfire behavior and hazard to be evaluated in areas where structures are located near burnable fuels.

Infrastructure

Critical infrastructure supports essential services and daily community functions and may be vulnerable to wildfire impacts. Infrastructure datasets used in this assessment represent a range of facility types, including mines, natural gas and petroleum pipelines, cell towers, power plants, and powerlines.

These infrastructure features represent important locations across the landscape that support public safety, transportation, communication, energy delivery, and other essential services. Damage or disruption to these facilities during wildfire could affect continuity of community operations, emergency response, and regional connectivity.

Water Resources

Watersheds originating in the Bighorn Mountains provide essential municipal water supplies for the City of Sheridan, area surrounding Sheridan, and the Town of Dayton. Several headwater subwatersheds in the western portion of Sheridan County capture snowmelt and precipitation that feed surface water systems used for municipal supply. Irrigation allotments for surrounding agricultural lands are also sourced from these watersheds.

Municipal water infrastructure was included in the QWRA because of its importance in providing reliable drinking water and supporting post-fire community resilience. Water resources included in the analysis include diversion points, reservoirs, and primary flow lines.

Table 3.3. HVRA Geospatial Features, Buffer Distances, and Data Sources Used for the QWRA

Asset Class	Asset	Buffer Distance	Data Source
Buildings	Buildings	0.25 mile	FEMA
Infrastructure	Cell Towers	0.25 mile	Esri
Infrastructure	Mines	0.25 mile	Esri
Infrastructure	Natural Gas Pipeline	60 meters	Esri
Infrastructure	Petroleum Pipeline	60 meters	Esri
Infrastructure	Powerline	60 meters	Esri
Infrastructure	Power Plant	0.25 mile	Esri
Infrastructure	Wastewater Treatment Plant	0.25 mile	Esri
Water Resource	Diversion Points	0.25 mile	USGS National Hydrologic Dataset
Water Resource	Reservoirs	0.25 mile	USGS National Hydrologic Dataset
Water Resource	Primary Flowlines	60 meters	USGS National Hydrologic Dataset

QUANTITATIVE WILDFIRE RISK ASSESSMENT

Wildfire risk across Sheridan County was evaluated by integrating the wildfire hazard and vulnerability components described in the previous sections using a QWRA framework. Modeled burn probability and conditional flame length were combined to represent integrated wildfire hazard across the landscape. HVRAs identified by the Core Team, including buildings, critical infrastructure, and municipal water infrastructure, were weighted based on their relative importance and evaluated for their exposure to wildfire hazard. Municipal watershed values derived from six essential subwatersheds identified by the Core Team were qualitatively evaluated in the next section to consider potential wildfire impacts to community water supplies. Overlaying these datasets identifies locations where wildfire hazard coincides with important community assets and where potential impacts may be greatest.

The absence of mapped relative wildfire risk does not indicate the absence of wildfire hazard. Instead, it indicates that no HVRAs were mapped in those locations at the time of analysis.

Landscape Integrated Wildfire Hazard

Integrated wildfire hazard combines modeled burn probability and conditional flame length to represent the potential for wildfire occurrence and intensity at a given location. Burn probability reflects the likelihood that a wildfire will reach a location, while conditional flame length represents the expected fire intensity if a fire occurs. These two metrics are combined to classify areas into relative wildfire hazard categories ranging from lowest to highest (Table 3.4). Across Sheridan County, only a small portion of the landscape is classified within the highest wildfire hazard class (Table 3.5).

Table 3.4. Integrated Wildfire Hazard Matrix

		Burn Probability Classes				
		Lowest 0–20% of max	Lower 20–40% of max	Middle 40–60% of max	Higher 60–80% of max	Highest 80–100% of max
Conditional Flame Length	>12 feet					
	>8–12 feet					
	>6–8 feet					
	>4–6 feet					
	>2–4 feet					
	>0–2 feet					

Table 3.5. Portion of Integrated Wildfire Hazard Classes Within Sheridan County, Wyoming

Class	Portion of County (percent)
Non-burnable	3
Lowest Hazard	13
Lower Hazard	20
Middle Hazard	45
Higher Hazard	18
Highest Hazard	1

Bighorn Mountains

Much of the Bighorn Mountains is modeled to have lowest to lower wildfire hazard, with hazard increasing to middle and higher classes at higher elevations where forest density and fuel continuity increase (Figure 3.4). Lower hazard in the foothills is largely associated with relatively low burn probability and the presence of several recent wildfire burn scars that have reduced fuel continuity. Based on Core Team input, integrated wildfire hazard is likely higher in the community of Story due to fuel conditions and potential for higher fire intensity than modeled. Middle hazard areas occur primarily adjacent to higher hazard zones where modeled flame lengths are greater. Higher hazard conditions are most commonly associated with dense conifer forests typical of upper elevations, including lodgepole pine and spruce-fir forests that historically experienced infrequent, high-severity fire. Mid-elevation Douglas-fir and mixed-conifer forests may also exhibit higher hazard where dense, late-successional stands and ladder fuels increase the potential for crown fire and greater canopy loss.

Eastern Sheridan County

The highest modeled wildfire hazard class is uncommon within Sheridan County (see Table 3.5; see Figure 3.4) and is concentrated primarily south-central portions of the county where burn probability is greatest. Smaller, scattered areas of higher hazard also occur within prairie and sagebrush vegetation types across eastern Sheridan County. The middle hazard class is the most widespread and occurs across much of the county, including areas surrounding Ranchester, west of Sheridan, and north and south of developed areas along U.S. Highway 14 (US 14). Big Horn and Banner are surrounded by middle wildfire hazard. In general, wildfire hazard increases eastward across the county, except in recently burned areas where both burn probability and modeled flame length are lower. Higher hazard areas in eastern Sheridan County are commonly associated with sagebrush shrublands where fuel continuity can support higher intensity fire, while mixed-grass prairie areas more often fall within the middle hazard class.

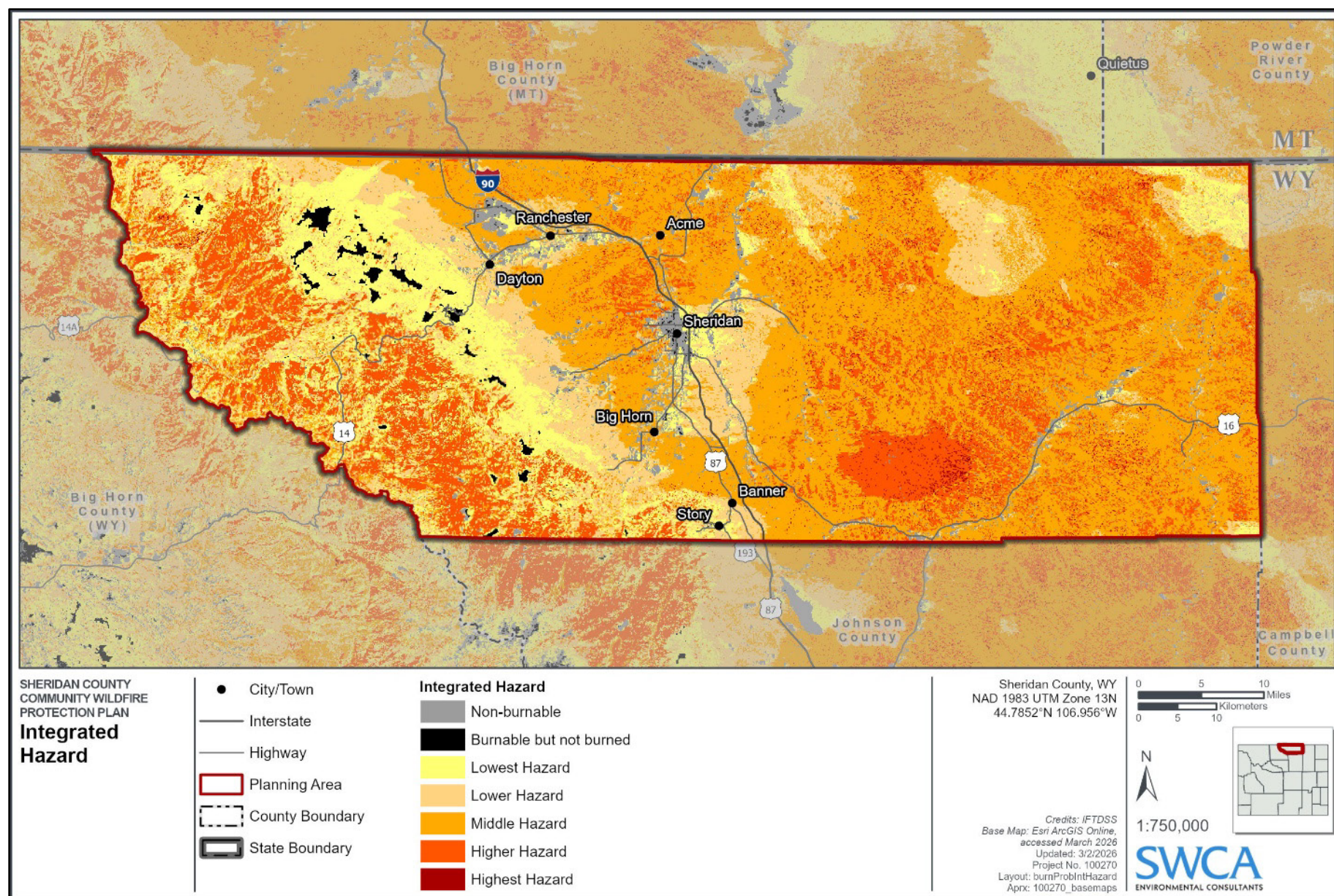


Figure 3.4. Map of modeled integrated wildfire hazard for Sheridan County, Wyoming.

Weighting and Relative Importance

To better understand where wildfire hazard could result in the greatest impacts, HVRAs were weighted based on their relative importance to Sheridan County communities. Weighting allows the assessment to account for differences in the consequences of wildfire across asset types by assigning greater influence to those resources whose loss or damage would have the greatest community impact.

Buildings were assigned the highest weight (0.6) because they represent the primary locations where people live and work and where wildfire impacts can directly affect property and community stability and long-term community resilience. Infrastructure assets, including energy, transportation, and communication systems, were assigned a weight of 0.2 to reflect their importance in maintaining essential services and emergency response capabilities. Municipal water infrastructure was also assigned a weight of 0.2 due to its importance in providing essential, reliable drinking water and supporting Dayton and Sheridan post-fire community resilience.

Applying these weights allows the assessment to highlight areas where wildfire hazard overlaps with the most critical community assets. **Locations where high wildfire hazard coincides with highly weighted HVRAs represent areas where wildfire could pose greatest potential risk and where mitigation actions may provide the greatest benefit.**

QWRA Results

Figure 3.5 illustrates the spatial distribution of relative wildfire risk across Sheridan County based on the QWRA.

Relative wildfire risk in Sheridan County is highest in areas where concentrations of buildings and infrastructure overlap with elevated wildfire hazard. These conditions occur primarily near towns, small communities, and residential areas along major transportation corridors, particularly along US 14 in the southern portion of the county and Interstate 90. The spatial extent of highest risk varies from small clusters of structures within broader areas of moderate risk to larger groupings of homes and community assets classified as very high risk.

Several areas contain concentrated pockets of the highest relative wildfire risk. These include the communities of Ulm and Clearmont and residential areas associated with Lone Tree Creek, Black Stump Draw, Coal Creek Road, and areas east of the City of Sheridan. Additional areas of high to very high risk occur west of the City of Sheridan near Owl Creek and Soldier Creek extending toward Interstate 90. Elevated risk is also present along Jim Creek and Interstate 90 northeast of Banner and near the community of Big Horn. Smaller communities and residential groupings from Monarch along Interstate 90 north to the county boundary and east toward Coutant Creek also contain areas of high to very high risk. In these locations, concentrations of buildings overlap with areas of elevated wildfire hazard characterized by relatively high burn probability and moderate to high modeled flame lengths. Core Team input indicates Story is also at higher risk than modeled results indicate.

Moderate wildfire risk is common around the communities of Dayton, Ranchester, Parkman, and in areas east of the City of Sheridan. These areas typically occur between lower and higher risk zones and reflect locations where wildfire hazard is present but either asset density or fire behavior potential is somewhat lower than in the highest-risk areas.

Fewer community assets occur within the Bighorn Mountains; however, those that are present can still be exposed to wildfire hazard. Assets located in or near Burgess Junction, Lamburger Rock, Babione Creek, East Fork Big Goose Creek, and along Red Grade and Evans Roads are generally classified as moderate to high risk, with some localized areas of very high risk. These scattered assets are located within forested landscapes that support moderate to high wildfire hazard driven primarily by high potential flame lengths associated with dense conifer forests. Although burn probability is generally lower in these areas, the potential for high-intensity fire highlights the importance of ignition prevention and defensible space around structures.

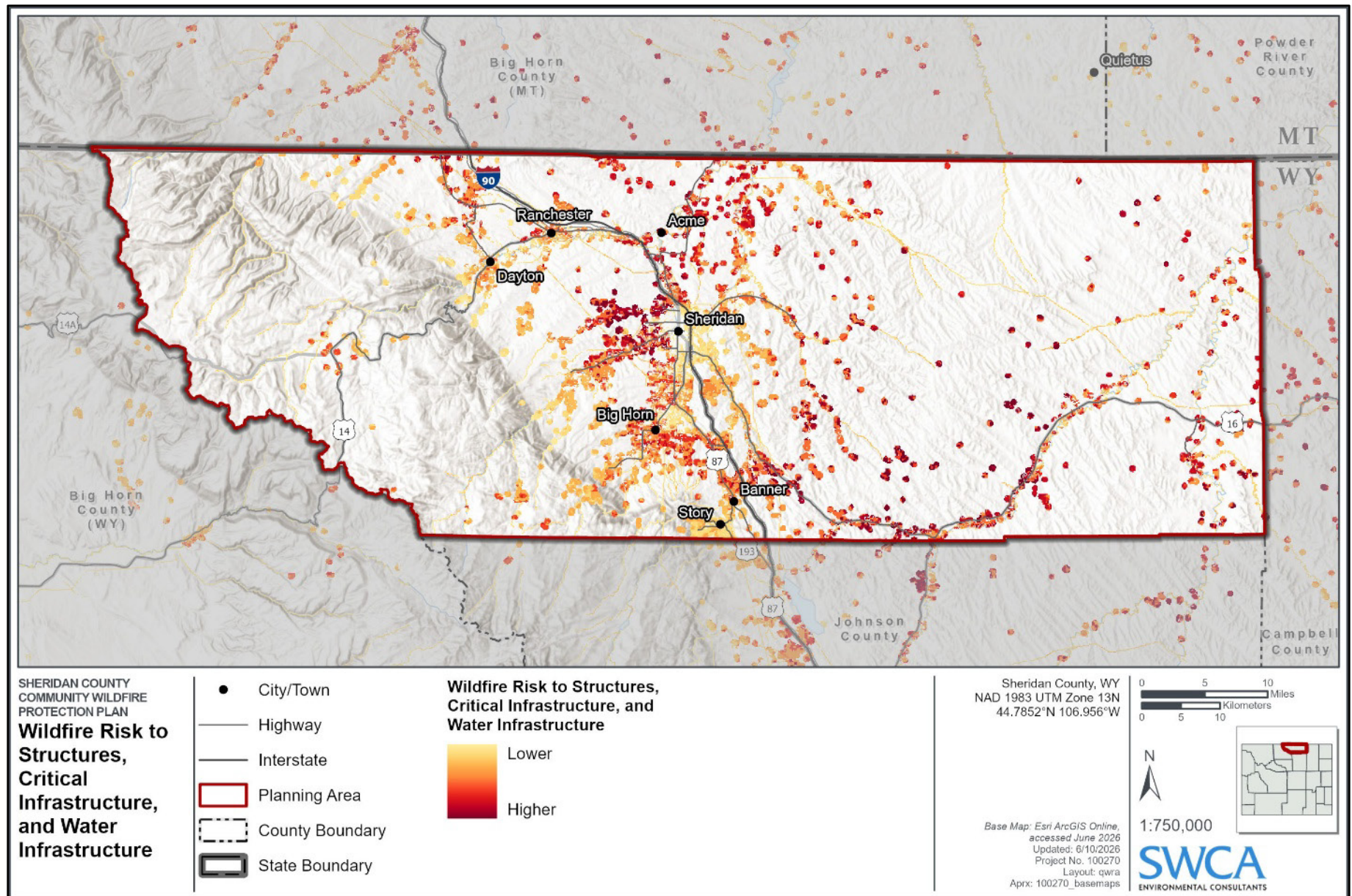


Figure 3.5. Relative wildfire risk across Sheridan County, integrating modeled burn probability, modeled fire intensity, and HVRA vulnerability.

Lower wildfire risk occurs where wildfire hazards are lower or where relatively few HVRAs are present. These areas include portions of critical watershed drainages, scattered assets adjacent to the Elk burned area, the community of Story, central areas of the City of Sheridan, Beckton, and portions of the outskirts of Dayton and Ranchester. The results from the QWRA for the community of Story generally underrepresent expected risk to that community according to Core Team input and on-the-ground assessment. Areas classified as low risk are limited in extent and occur primarily along creeks, electric infrastructure, and transportation corridors in the eastern portion of the county.

The community of Story is also modeled as low wildfire risk. However, this community is potentially at moderate or higher risk of wildfire. Story has unique weather patterns due to topography as it sits at the base of two canyons with potential for wind confluences to increase fire behavior. The QWRA assumed prevailing westerly winds, but winds from other directions, particularly easterly, would change the risk profile at Story. Forested areas with heavy understory fuel loading could create conditions for crown fire during extreme wildfire conditions. Subdivision density and structure characteristics may also increase the built environment's vulnerability if exposed to wildfire. These Core Team observations indicate Story is at higher risk than QWRA classifications indicate. Timbered areas in the WUI and urban environment with high surface fuel loads and low limbs, in and around Story, may be higher priority than the risk outputs indicate, as modeled conditions did not produce crown fire in those locations.

Large portions of Sheridan County show no mapped relative wildfire risk. This pattern reflects the absence of mapped assets or resources in those locations rather than the absence of wildfire hazards.

QUALITATIVE RISK CONSIDERATIONS

In addition to the QWRA results described above, several additional factors influence wildfire risk to Sheridan County communities that are not fully represented in landscape-scale modeling. These include site-specific conditions observed during field assessments, the potential for ember transport and structure-to-structure fire spread, and the vulnerability of municipal water resources to wildfire effects. The following sections provide additional context on these considerations to help inform wildfire mitigation planning and community preparedness efforts

Field-Based Community Assessment Results

Seventeen field-based community assessments were completed in June 2026 to better understand local conditions that influence wildfire risk at the neighborhood and community scales. These assessments evaluated communities as a whole based on factors such as defensible space, access and evacuation considerations, water sources, fire truck access, and the arrangement and characteristics of structures within developed areas. Assessed communities are shown below in Figure 3.6.

Most communities were rated moderate for neighborhood-scale community risk; two were rated slightly higher and classified as high. Across the county, risk related to decking and fencing and structure siding materials was rated extreme. Risk arising from lack of fire truck access and defensible space was commonly rated extreme, with some communities currently lacking organized response and adequate defensible space. A summary of the assessment results are provided below in Table 3.6, with detailed results provided in Appendix C. Observations from these field visits provide additional insight to help identify opportunities for mitigation actions that may not be evident from landscape-scale modeling alone.

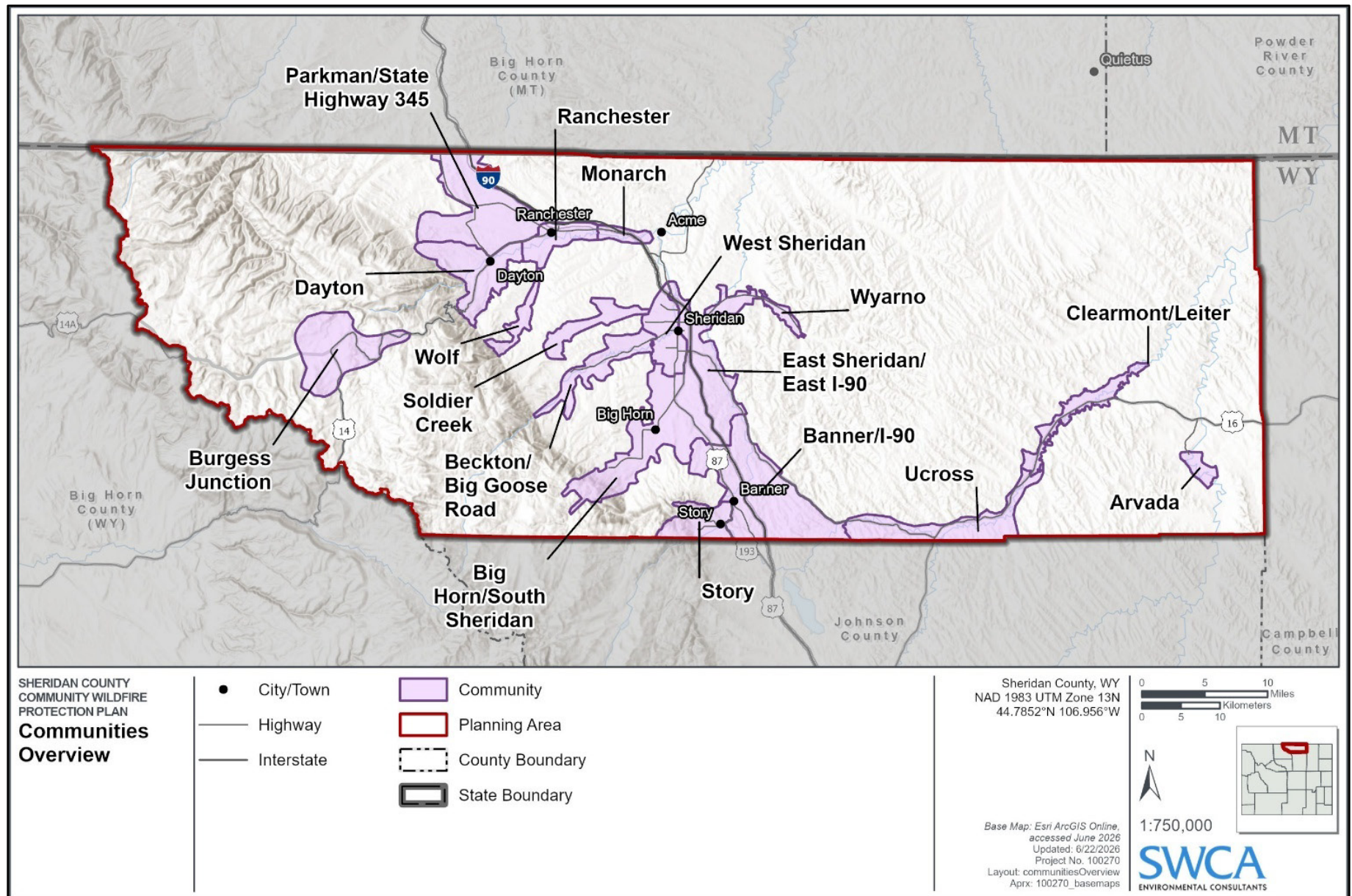


Figure 3.6. Community polygons created for community-level assessments.

Table 3.6. Communities-at-Risk Ratings with Community Hazard Assessment Summary

Community	Risk Rating	Positives	Negatives
Arvada	Moderate	- Multiple ingress and egress routes - Proximity to organized response - Separation of adjacent structures	- Combustible siding, deck, and fencing materials - Proximity to hazardous fuels - Poor defensible space
Banner/ I-90	Moderate	- Non-combustible roofing materials - Available water supply - Separation of adjacent structures	- Narrow access roads and long driveways - Proximity to hazardous fuels - Distance to organized response
Beckton/ Big Goose Road	Moderate	- Separation of adjacent structures - Access for responders - Multiple ingress and egress routes	- Combustible siding, deck, and fencing materials - Poor defensible space - Dense riparian fuels
Big Horn/ South Sheridan	Moderate	- Proximity to organized response - Separation of structures - Multiple ingress and egress routes	- Combustible siding, deck, and fencing materials - Long, narrow driveways to many homes - Poor defensible space - Dense riparian fuels
Burgess Junction	High	- Separation of structures - Water resources	- Far from organized response - Proximity to hazardous fuels - Poor defensible space - High ignition hazard
Clearmont/ Leiter	Moderate	- Two or more roads in/out of community - Good road conditions and signage - Separation of structures	- Combustible siding, deck, and fencing materials - Proximity to organized response - Long access roads for responders
Dayton	Moderate	- Multiple ingress and egress routes - good access for responders - Non-combustible roofing - Reflective signage present	- History of fire occurrences - Dense riparian vegetation - Combustible siding, deck, and fencing materials
East Sheridan/ East I-90	Moderate	- Available water supply - Proximity to organized response - Reflective signage present	- Combustible building materials - Above ground utilities - Proximity of structures
Monarch	Moderate	- Separation of adjacent structures - Multiple ingress and egress routes - Mild topography - Proximity to organized response	- Combustible siding, deck, and fencing materials - Poor defensible space
Parkman/ State Highway 345	Moderate	- Multiple ingress and egress routes - Separation of adjacent structures - Available water supply	- Poor defensible space - Combustible siding, deck, and fencing materials - Distance from organized response

Community	Risk Rating	Positives	Negatives
Ranchester	Moderate	- Multiple ingress and egress routes - Available water supply - Reflective signage present	- Proximity to dense riparian fuels - Limited separation of structures - Above ground utilities
Soldier Creek	Moderate	- Multiple ingress and egress routes - Separation of adjacent structures - Mild topography	- Combustible siding, deck, and fencing materials - Long driveways with few turnarounds - Distance from organized response
Story	High	- Two or more roads in/out of communities - Proximity to organized response - Evacuation planning in place	- Limited separation of structures - Poor defensible space - Combustible building materials - Proximity to high-hazard fuels
Ucross	Moderate	- Multiple ingress and egress routes - Separation of adjacent structures - Mild topography	- Combustible siding, deck, and fencing materials - Fire response >5 miles away - Narrow roads
West Sheridan	Moderate	- Paved and marked roads - Proximity to organized response - Available water sources	- Narrow, steep roadways - Accumulated hazardous fuels - Poor defensible space and separation of structures
Wolf	Moderate	- Separation of structures - More than one entrance/exit in/out of community - Mild topography	- Combustible siding, deck, and fencing materials - Poor defensible space - Distance from organized response
Wyarno	Moderate	- Two or more roads in/out of communities - Low severe fire weather potential - Good road conditions	- Combustible siding, deck, and fencing materials - Limited water availability

Note: See Appendix C for additional information.

Ember Transport and Urban Configuration

Most structures damaged or lost during wildfires are ignited by wind-driven embers rather than direct flame contact from the main fire front. Embers can be transported ahead of an advancing wildfire and ignite combustible materials in close proximity to structures, resulting in spot fires within developed areas. The distance embers travel depends on factors such as wind speed, fire intensity, rate of fire spread, and the size and type of burning material produced by the fire.

When embers land in receptive fuels near or on structures, such as dry vegetation, combustible building materials, or accumulated debris, they can ignite structures or surrounding fuels. In areas where buildings are closely spaced, these ignitions can lead to structure-to-structure fire spread and, under extreme conditions, urban conflagration. Understanding the role of ember transport and the arrangement and condition of structures helps identify situations where wildfire could rapidly spread through developed areas even when surrounding vegetation hazard is moderate.

Under extreme fire weather conditions, wildfires can transition from wildland fire to structure-to-structure fire within developed areas. This potential exists in very-high-risk areas of Sheridan County, such as west and north of Sheridan, as well as in communities where overall modeled wildfire risk may be lower but structural vulnerabilities are present, such as the community of Story. During severe wildfire events, suppression resources can quickly become overwhelmed, and the condition of the built environment, including defensible space and structure hardening, often determines whether homes survive (Figure 3.7) (Calkin et al. 2023).

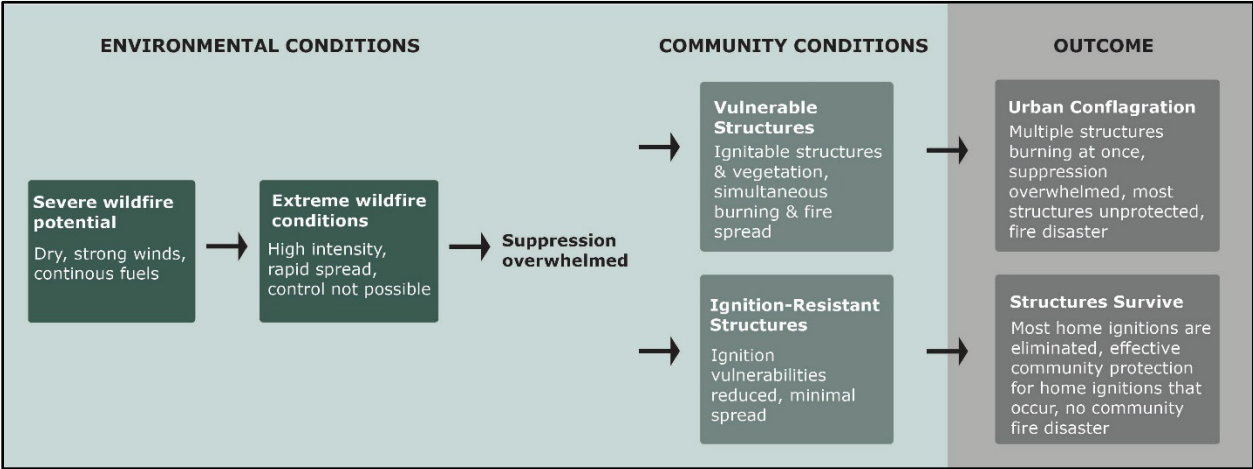


Figure 3.7. Community disaster sequence.

Water Resources

The six essential municipal source HUC-12 subwatersheds identified by the Core Team in Chapter 2 support varying levels of wildfire hazard. Portions of these watersheds contain forested vegetation types and steep topography that contribute to middle to higher modeled wildfire hazard, though large expanses of several subwatersheds are classified as lowest to middle hazard as shown in Table 3.7. If a high-intensity wildfire were to occur within these municipal source watersheds, post-fire effects could include increased sediment delivery to streams, reduced water quality, damage to municipal water infrastructure, and long-term changes in vegetation and watershed function.

Table 3.7. Modeled Integrated Wildfire Hazard Descriptions for Subwatersheds From Which Municipal Water is Sourced for the Populations of Dayton and Sheridan, Wyoming

Subwatershed	Integrated Wildfire Hazard Condition
Lower North Tongue River	Lowest to middle hazard in extensive valley and creek bottoms; middle to higher on north facing slopes where vegetation is dense and capable of supporting high flame lengths; no highest hazard.
Upper North Tongue River	Lowest to middle hazard in creek bottoms and upper watershed slopes; middle to higher on north facing slopes; no highest hazard.
Lower Big Goose Creek	Lowest hazard characteristic of the Elk Fire burned area in upper Beaver Creek headwaters, just downslope from a relatively small area of high hazard on the watershed boundary; lower hazard is common west of Beaver Creek and south of Beckton on Big Goose Creek; middle hazard dominates most of the watershed with high hazard infrequently present; no highest hazard.
Upper Big Goose Creek	Lowest hazard is characteristic of the Elk Fire burned area, transitioning to mixed lowest-lower-middle-high hazard in the remain western watershed boundary; lowest hazard transitions to lower hazard east of the Elk Fire burned area; no highest hazard.

Subwatershed	Integrated Wildfire Hazard Condition
Lower East Fork Big Goose Creek	Lowest and lower hazard occurs in creek bottoms, transitioning from lower to middle and high with topographic complexity; large areas of high hazard are present in the upper watershed, notably surrounding East Fork Big Goose Reservoir on the county line; no highest hazard.
West Fork Big Goose Creek	Headwaters of this watershed overlap designated Wilderness, where hazard transitions from lowest to higher hazard classes with decreasing elevation to the northeast; the middle portion of this watershed is dominated by higher wildfire hazard with inclusions of lowest to middle hazard classes; extensive areas of highest hazard are shown adjacent or in close proximity to Dome Lake and Weston reservoirs and Sawmill Creek Lake, where dense forest is common; wildfire hazard decreases to mixed lowest to higher hazard classes in Prairie and Walker creeks.

Because these watersheds provide shared community water resources, wildfire hazard within them was qualitatively evaluated to understand potential impacts to municipal water. Many of the subwatersheds within the Bighorn National Forest have also been evaluated through the USFS Watershed Condition Framework (USFS 2011). As part of this national program, forests identify priority watersheds for restoration based on water quality, watershed function, and aquatic habitat conditions. Within the planning area, the Lower East Fork Big Goose Creek and West Fork Big Goose Creek subwatersheds have been identified as priority watersheds and have Watershed Restoration Action Plans completed to guide restoration and management activities. Watersheds included in this portion of the analysis were selected because they directly provide water to municipalities. Other watersheds, such as the South Fork Tongue, may also exhibit fuel conditions that could contribute to post-fire effects, but were not assessed at the same level due to their limited direct connection with municipal intakes.

The magnitude of these impacts would depend on the size and severity of wildfire within each watershed. High vegetative burn severity does not always correspond to high soil burn severity. For example, lodgepole pine forests commonly experience moderate to high vegetative burn severity, often with 80% to 100% canopy loss, while soil burn severity may remain one to two classes lower. A large wildfire that burns extensively at high soil burn severity could result in substantial erosion and sediment deposition in downstream channels and water storage reservoirs. Such impacts could disrupt water supply operations and increase water treatment and infrastructure costs for local communities. In contrast, smaller fires or those burning at low to moderate soil burn severity may cause limited erosion and only minor, short-term effects to water quality.

Improving vegetation and fuel conditions within municipal source watersheds can help reduce the likelihood of severe wildfire effects and protect long-term water supply reliability for Sheridan County communities. Pre-fire vegetation condition, the amount of heavy surface fuels (such as 1,000-hour fuels), and soil moisture levels are important factors influencing wildfire effects on soils and watershed processes, and these effects can be exacerbated during periods of drought.

Riparian Vegetation

Although riparian areas are often characterized in wildfire hazard modeling as lower-risk landscape features due to higher assumed fuel moisture and reduced fire spread potential, local observations indicate these areas can support significant fire activity during extended dry periods and drought conditions. Across portions of the county, fire behavior in riparian corridors has included rapid rates of spread, sustained torching, and high flame lengths associated with dense woody vegetation such as willows and cottonwoods, particularly where live and dead fuel loading has accumulated. These conditions are not consistently reflected in modeled wildfire risk outputs for much of the county, which may underestimate the potential for riparian areas to contribute to fire spread and intensity under extreme weather and fuel conditions. As a result, riparian corridors may function as pathways for fire movement across the landscape and increase exposure to adjacent HVRAs, infrastructure, and critical watershed resources.

Disclaimer

The purpose of this risk assessment is solely to provide a community and landscape-level overview of general wildfire risks within the assessment area as of the date hereof, and to provide a potential resource for community pre-fire planning. This risk assessment is premised on various assumptions and models that include and are based on data, software tools, and other information provided by third parties (collectively, "Third-Party Information and Tools"). SWCA, Incorporated, doing business as SWCA Environmental Consultants ("SWCA"), relied on various Third-Party Information and Tools in the preparation of this risk assessment, and SWCA shall have no liability to any party in connection with this risk assessment including, without limitation, as a result of incomplete or inaccurate Third-Party Information and Tools used in the preparation hereof. SWCA hereby expressly disclaims any responsibility for the accuracy or reliability of the Third-Party Information and Tools relied on by SWCA in preparing this risk assessment. SWCA shall have no liability for any damage, loss (including loss of life), injury, property damage, or other damages whatsoever arising from or in connection with this risk assessment, including any person's use or reliance on the information contained in this risk assessment. Any reproduction or dissemination of this risk assessment or any portion hereof shall include the entirety of this plan disclaimer.



CHAPTER 4 – WILDFIRE MITIGATION STRATEGIES

CHAPTER CONTENTS

Action Plan

Recommendations and the Cohesive Strategy

Areas of Concern

As wildfire acreage burns and severity increases, communities need a plan to help prepare for, reduce the risk of, and adapt to wildland fire events. CWPPs help accomplish these goals.



SUMMARY BOX: CHAPTER 4 WILDFIRE MITIGATION STRATEGIES

Why This Chapter Matters

Chapter 4 provides the implementation framework for the Sheridan County CWPP. It translates wildfire risk, Core Team input, areas of concern (AOCs), and priority community values into actionable strategies to reduce risk to communities, landscapes, and emergency response systems across Sheridan County.

The recommendations in this chapter are intended to support implementation by local government, fire protection districts and volunteer fire departments, state and federal agencies, private landowners, landowner associations, nonprofit partners, and community members. The recommendations are organized to help partners identify priority actions, coordinate across ownership boundaries, and pursue funding and implementation opportunities over the life of the CWPP.

Recommendations and Cohesive Strategy

All recommendations are aligned with the Cohesive Strategy and are organized around three goals:

- Restore and maintain resilient landscapes
- Fire-adapted communities
- Safe and effective wildfire response

Recommendations

- Recommendation matrices that function as an action plan
- Strategies informed by the risk analysis and Core Team input
- Actions that can be implemented at the homeowner, community, and landscape scales
- Alignment with the National Cohesive Wildland Fire Management Strategy and other relevant wildfire planning frameworks

Key Takeaways

The Core Team has identified the top three priority project recommendations to align with each Cohesive Strategy goal. These priorities were identified based on the highest need and projects that will provide the largest benefit to risk reduction for communities within the CWPP planning area.

Cohesive Strategy Goal 1: Restore and Maintain Resilient Landscapes

- Prioritize and implement hazardous fuels reduction projects in forested WUI areas, critical watersheds, and AOCs - **Project ID RL1.**
- Implement and maintain roadside management along critical access routes (e.g., utility, highly traveled highways, evacuation roads) to reduce ignition potential, improve access conditions, and support emergency response - **Project ID RL6.**
- Enhance coordination and collaboration with land management agencies, utility companies (e.g., Rocky Mountain Power), and adjacent landowners to mitigate fuel loading and wildfire hazards along transmission and utility corridors to support protection of critical utility infrastructure – **Project ID RL7.**

Cohesive Strategy Goal 2: Fire Adapted Communities

- Implement a public education initiative to increase resident and visitors understanding of wildfire mitigation, response, and recovery efforts focused on neighborhoods adjacent to high risk areas such as Story, Big Horn, Beckton, and Burgess Junction – **Project ID FAC1.**
- Coordinate with local fire departments and fire protection districts, Wyoming State Forestry Department (WSFD), and Sheridan County to implement defensible space education and home assessments – **Project ID FAC5.**
- Develop community mitigation support programs focused on hazardous fuels removal projects, slash disposal, and creating defensible space around homeowner properties – **Project ID FAC7.**

Cohesive Strategy Goal 3: Wildfire Response

- Improve local fire response staffing capacity, equipment, and funding mechanisms to provide adequate coverage and maintain safe, effective response capacity across the Sheridan CWPP planning area – **Project ID WR1.**
- Identify and improve areas where road access limits evacuation and emergency access particularly within WUI neighborhoods – **Project ID WR2.**
- Enhance communications between utility companies and all local, state, and federal jurisdictions to support information sharing, incident readiness, and coordinate response during critical wildfire conditions (e.g., high wind warnings, red flag warnings) – **Project ID WR4.**

ACTION PLAN

How to Use the Tables

The recommendation matrices help users:

1. Identify priority actions in higher-risk areas
2. Understand who can implement each action
3. Consider timing, monitoring, and funding needs
4. Coordinate across public and private land ownerships
5. Align priority projects with available funding

Implementation Capacity Considerations

The recommendations in this chapter identify priority wildfire mitigation actions, but implementation will depend on available staffing, funding, administrative capacity, procurement and contracting timelines, grant management support, partner participation, and seasonal treatment windows. These factors may affect the pace, scale, and sequencing of projects. A high-priority recommendation may not be immediately implementable if contracting, staffing, environmental review, equipment availability, landowner coordination, or funding constraints delay project delivery. Conversely, a lower-priority recommendation may warrant earlier implementation when factors such as landowner access, funding, staffing, or resource availability align.

Sheridan County and partner agencies should use the recommendation tables as a flexible implementation guide rather than a fixed work plan. During annual coordination, partners should consider both wildfire risk and implementation feasibility, including whether a project has an identified lead, available funding, realistic contracting pathway, maintenance responsibility, and staff capacity for project management and reporting. This approach can help align mitigation priorities with the administrative and operational resources needed to complete projects within appropriate fiscal and seasonal windows.

RECOMMENDATIONS AND THE COHESIVE STRATEGY

As part of the 2026 CWPP update, this plan has been aligned with the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) and its Phase III Western Regional Action Plan by adhering to the nationwide goal *“To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire”* (Forests and Rangelands 2014:3).

To accomplish this, the CWPP recommendations have been structured around the three main goals of the Cohesive Strategy: restoring and maintaining landscapes, fire-adapted communities, and wildfire response.

This chapter provides guidance for implementing recommendations under each Cohesive Strategy goal. Many of these community-specific recommendations can be implemented at the homeowner or community level. Projects requiring large-scale support can be prioritized based on the Field-Based Community Risk Assessments and QWRA.

Recommendation matrices are used throughout this chapter to serve as an action plan for implementation.

COHESIVE STRATEGY GOAL 1: RESTORE AND MAINTAIN LANDSCAPES

Areas of Concern

Eighteen areas of concern (AOCs) were delineated by the Core Team during Core Team meeting #2 based on local knowledge and are shown in Figure 4.1.

DRAFT

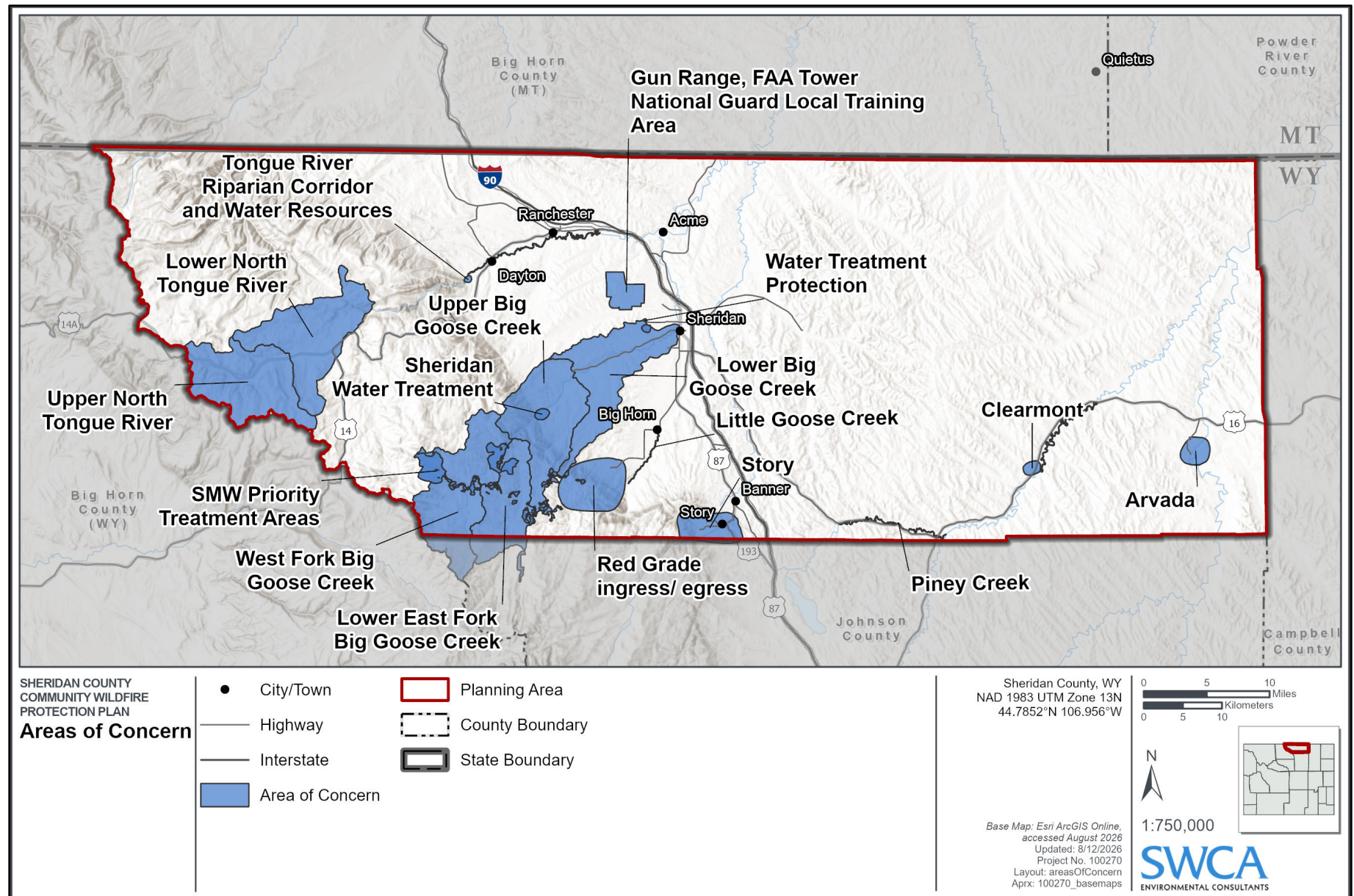


Figure 4.1. Sheridan County areas of concern delineated by the CWPP Core Team.

Table 4.1. Areas of Concern and Proposed Treatment Management Units (to be viewed in association with Figure 4.1)

Community or Area	Location and Description*	Recommended Treatments†	Ownership (Acreage)				Total Acres
			Local Gov	Federal	Private	State	
Arvada AOC	Private and local government lands south of US 14 to county border. Mixture of grass and grass-shrub with some juniper and other woody species in lowlands and on hillsides. Larger ranch properties and individual dwellings	2, 3, 4, 5, 7, 8, 9	1.67	0	2,681.57	0	2,683.24
Clearmont AOC	Private and local government lands primarily along US 14. Mixture of grass and grass-shrub with some juniper and other woody species in lowlands and on hillsides. Larger ranch properties and individual dwellings. Also includes the riparian corridor of Clear Creek adjacent to Clearmont.	1, 2, 3, 4, 5, 6, 7, 8, 9	31.62	12.96	1,108.77	0	1,153.35
Gun Range, FAA Tower, National Guard Local Training Area	Local government, federal, and private lands north of Solider Creek Road. Grass and grass-shrub vegetation. Riparian corridor with woody fuels south of AOC. History of ignitions at gun range with dispersed, individual dwellings adjacent. Critical infrastructure for travel and communication.	2, 3, 6, 8	368.16	7,479.79	38.82	0	7,885.76
Lower Big Goose Creek	Private, state, federal, and government lands west of Sheridan covering the full subwatershed. Primary municipal water source. Individual dwellings and ranches. Primarily grass-shrub with dense riparian corridor	2, 3, 4, 6, 7, 8, 9	982.99	658.48	25,242.91	260.83	27,145.21
Lower East Fork Big Goose Creek	Federal and private lands in headwaters of critical municipal watershed. Minimal development aside from Red Grade Road. Primarily dense timber vegetation.	6, 7, 8, 9, 10, 11		19,117.27	175.57		19,292.84
Lower North Tongue River	Primarily federal lands with key recreation and municipal watershed values. Headwaters area for Dayton municipal water. Mix of timber and grass-meadow vegetation.	3, 6, 7, 8, 10, 11		29,390.96	144.99		29,535.95
Tongue River Riparian Corridor and Water Resources	Private, local, and state lands surrounding key municipal watershed and water intake for Ranchester and Dayton. AOC includes riparian corridor adjacent to main town development and Tongue River. Dense timber-shrub vegetation especially along riparian corridor.	1, 2, 3, 4, 6, 7, 9	4.39		616.28	13.28	633.95
Red Grade ingress/ egress	Federal, private, and state lands along Red Grade Road. Primary access route for communities and recreation values in western portion of county. New development planned in AOC. Mix of timber and grass-shrub fuels.	2, 4, 6, 7, 8, 10, 11		4,888.06	6,920.08	305.26	12,113.40
Sheridan Water Treatment	Private lands surrounding Sheridan municipal water treatment. Critical infrastructure for the city with large ranches adjacent. Primarily grass-shrub vegetation.	2, 3, 4, 5, 7, 8, 9,			501.47		501.47

Community or Area	Location and Description*	Recommended Treatments†	Ownership (Acreage)				Total Acres
			Local Gov	Federal	Private	State	
SMW Priority Treatment Areas	Federal lands identified by the USFS as priority treatment areas for timber harvest and fuels reductions. Timber vegetation. West of major communities in county and overlap with critical municipal-feeding watersheds.	6, 7, 10, 11		7,551.31			7,551.31
Story AOC	Private, federal, and state lands in and around community of Story. Many small-plot single dwellings with minimal separation. Abundant fuels in and around community including dense riparian corridor. Timber and shrub vegetation.	1, 2, 4, 6, 7, 9, 10, 11	1.93	851.27	5,328.87	1,464.34	7,646.42
Upper Big Goose Creek	Private, federal, and state lands in critical municipal-feeding watershed. Contains Sheridan Water Treatment AOC. Dispersed ranches and single dwellings. Watershed health and conveyance is critical to Sheridan water delivery and quality. Eastern portion of AOC is rolling hills with grass-shrub. Western portion is mostly dense timber.	2, 3, 4, 5, 7, 8, 9, 10, 11		9,909.23	16,645.87	2,303.09	28,858.18
Upper North Tongue River	Federal lands in critical headwaters of municipal-feeding watershed. Watershed health and conveyance is essential for Dayton and Ranchester. Minimal development. Primarily timber and shrub vegetation.	6, 7, 8, 10, 11		28,711.54			28,711.54
Water Treatment Infrastructure Protection	Private and local government lands adjacent to key water treatment infrastructure. Single dwellings and golf course adjacent to AOC. Hilly terrain with grass and shrub fuels.	1, 2, 3, 4, 5, 7, 8, 9	21.29		200.88		222.17
Water Treatment Protection	Private and federal lands adjacent to key water treatment infrastructure. Single dwellings and golf course adjacent to AOC. Hilly terrain with grass and shrub fuels.	1, 2, 3, 4, 5, 7, 8, 9		22.30	5.38		27.68
West Fork Big Goose Creek	Federal and private lands in critical headwaters of municipal-feeding watershed. Minimal development but contains multiple water storage reservoirs for the City of Sheridan and Red Grade Road. Dense timber fuels.	2, 6, 7, 10, 11		31,947.41	1,740.42		33,687.84
Little Goose Creek	Private lands west of Big Horn and Powder Horn. Timber with grass and shrub understory fuels. Some timber litter in understory as well. Primarily large ranches or preserved corridors. AOC covers the riparian corridor from the foothills into the community of Powder Horn	4, 6, 7, 9	0.31		145.09		145.40
Piney Creek	Private lands within the riparian corridor of Piney Creek between Sheridan and Ucross. Primarily timber with grass and timber litter understory. Fuel accumulation can be very high.	4, 6, 7, 9			330.19	7.85	338.04

* See Figure 4.1 and Appendix C, Community Hazard Summaries and Recommendations.

† See Table 4.2 for recommended treatment types.

Table 4.2. Fuel Treatment Modification – Treatment Types

Treatment No.	1 Developed Private Parcels <2 acres			2 Undeveloped Private Parcels or Single Structure Parcels >2 acres		
Treatment Category	Zone 1 (0–5 feet from structures)	Zone 2 (5–30 feet from structures)	Zone 3 (30–100 feet from structures)	Zone 4 (100–600 feet from structures)	Slopes <20%	Streambeds, channels, and slopes ≥30%
Vegetation	- Remove all combustible vegetation within 5 feet of structures; maintain this area with nonflammable ground cover such as gravel, rock, pavers, or bare soil rather than organic mulch. - Remove and destroy insect-infested, diseased, and dead trees and shrubs. - Cut grasses and forbs to approximately 2–3 inches in height and maintain them in a green, well-watered condition if retained within Zone 1. - Remove dead plant material from the ground; prune tree limbs overhanging the roof; remove branches within 10 feet of the chimney; and clear flammable debris from gutters and roof surfaces. - Keep areas under decks and stairs clear of vegetation and debris.	- Prune ladder fuels by removing the lower third of tree or shrub branches, up to a maximum height of 10 feet, to reduce vertical fuel continuity. - Increase spacing between trees and shrubs to reduce crown-to-crown fuel continuity, with spacing adjusted based on vegetation type, density, slope, and topography. - Break up continuous brush or dense planting groups to create horizontal separation between fuel patches. - Remove and destroy insect-infested, diseased, dead, or dying trees and shrubs. - Remove standing dead trees (snags) and other dead woody vegetation where they contribute to fuel loading. - Cut grasses and forbs to approximately 2–3 inches in height and maintain them in a green, well-watered condition where feasible. - Remove vegetation that could grow into or contact overhead electrical lines.	- Prune ladder fuels by removing the lower third of tree or shrub branches, up to a maximum height of 10 feet, to reduce vertical fuel continuity. - Maintain tree density at no more than 60 square feet of basal area (approximately 80–100 trees per acre) or an average of 100 trees per acre, whichever results in lower stand density. - Remove and destroy insect-infested, diseased, and dead trees and shrubs. - Cut grasses and forbs to approximately 2–3 inches in height and maintain them in a green, well-watered condition where feasible.	- In natural areas, selectively thin vegetation and remove highly flammable species to reduce overall fuel loading. - Increase spacing between trees and vegetation to reduce horizontal and vertical fuel continuity. - Favor retention or planting of less flammable, fire-resistant vegetation where feasible.	- Prune ladder fuels by removing the lower third of tree or shrub branches, up to a maximum height of 8 feet, to reduce vertical fuel continuity. - Maintain tree density at no more than 60 square feet of basal area (approximately 80–100 trees per acre) or an average of 100 trees per acre, whichever results in lower stand density. - Remove and destroy insect-infested, diseased, and dead trees and shrubs. - Implement the fuel modification treatments described in this section to promote riparian health, reduce fire spread to adjacent properties, and create defensible space while considering wildlife habitat and groundwater protection. - For single structures or structures on parcels larger than 2 acres, apply Treatment 1 in the area immediately surrounding structures and extend additional treatments outward across the parcel as appropriate.	- Remove dead, diseased, and dying trees and shrubs; where trees are down near streams, direct them away from channels with defined beds and banks. - Conduct vegetation treatments using hand crews (e.g., hand thinning and hand piling) to minimize soil disturbance and protect channel stability. - Avoid heavy equipment within stream channels, on steep slopes, or in sensitive riparian areas where it could cause erosion or sediment delivery. - Retain riparian vegetation that stabilizes banks and provides shading, while selectively removing hazardous fuels and ladder fuels that increase fire intensity. - Dispose of cut vegetation through hand piling, chipping, removal, or other low-impact methods; where access is limited, periodic prescribed fire may be used where appropriate and permitted. - Apply treatments with consideration of erosion control, riparian function, and downstream water quality.
Slash	- Remove all vegetation and other flammable plant material within 5 feet of structures and improvements. - Remove and dispose of dead trees, shrubs, and other dead or dying vegetation. - Remove and properly dispose of thinned material from live trees and shrubs (e.g., chipping, hauling). - Reduce leaf litter and other fine vegetative debris to no more than 1 inch in depth.	- Install rock or other noncombustible structures in small drainage paths to slow water flow and reduce soil erosion. - Reduce leaf litter and other fine vegetative debris to no more than 1 inch in depth.	Same as Zones 1 and 2.	- Dispose of slash by pile burning, broadcast burning where appropriate, chipping and removal, or other approved methods. - In grassland areas, treat residual vegetation and slash through burning, removal, mastication, turning, or managed grazing to reduce fine fuel accumulation and continuity.	- Remove or treat all slash, snags, and dead or dying vegetation to reduce surface and ladder fuels. - Dispose of thinning material from live trees and shrubs by chipping, removal, mastication, or pile burning with existing fuels where appropriate. - Remove vegetation that could grow into or contact overhead electrical lines. - Treat residual ground fuels to reduce fuel loading and continuity.	- Remove dead and down woody debris from stream channels where it could be mobilized during floods and contribute to downstream debris jams or channel blockage. - In small or ephemeral streambeds, selectively retain and scatter some slash or woody material where it can help slow runoff, trap sediment, and stabilize headcuts. - Place retained material so that it does not obstruct defined channels or increase the risk of concentrated flow, erosion, or downstream transport.
Approx Acreage Cost	\$6,000–\$8,000			\$1,500–\$2,500		

Treatment No.	3 Grassland Fuel Breaks		4 Hardwoods and Shrublands within the WUI	
Treatment Category	Slopes <20%	Slopes >20%	Landscape treatment outside fuel breaks	Fuel breaks
Vegetation	• Treat grassland vegetation using mechanical methods such as mowing, chopping, cut-and-bale, mastication, or through managed grazing to reduce vegetation height and fine fuel continuity. • Maintain grass fuels at a low stubble height sufficient to reduce fire intensity and spread within designated fuel break areas. • Construct and maintain grassland fuel breaks with a minimum width of approximately 1 chain (66 feet) where needed to protect adjacent federal, state, or private land values. • Use periodic prescribed burning, including multiple-entry burns where appropriate, to maintain grassland structure and reduce accumulated fine fuels. • Thin trees and shrubs greater than 8 inches diameter at root collar (DRC) using spacing consistent with surrounding landscape conditions and treatment objectives, rather than creating a distinct spacing pattern within the fuel break. • Remove trees and shrubs less than 8 inches DRC within designated fuel break areas to reduce ladder fuels and vegetation continuity, using a target stump height of approximately 6 inches where practicable for chainsaw operations. • Use mechanical, chemical, or managed grazing treatments as needed to maintain fuel break effectiveness on private lands. • Implement treatments with consideration for wildlife habitat and groundwater protection.	• Treat grassland vegetation using the same methods applied on slopes less than 20%, including mowing, chopping, mastication, or managed grazing to reduce vegetation height and fine fuel continuity. • On steeper slopes, conduct treatments using hand thinning, hand piling, or managed grazing where mechanical equipment is unsuitable or could increase erosion. • Use prescribed fire where appropriate to reduce accumulated fine fuels and lower fire potential. • Where fuel loads recover rapidly, increase designated fuel break widths up to a maximum of 2 chains (approximately 132 feet) to maintain effectiveness. • Implement treatments with consideration of vegetation health, reducing fire spread to adjacent properties, and maintaining defensible space while considering wildlife habitat and groundwater protection.	• Thin oak, pinyon-juniper, and shrub stands to variable spacing with a minimum of approximately 20–35 feet between trees or shrub clusters to reduce horizontal fuel continuity while retaining structural diversity. • Retain patches of closely spaced trees or shrubs where appropriate to maintain wildlife cover and other habitat components, while creating openings that increase herbaceous forage production, edge habitat, and stand resilience to fire. • Prioritize retention of trees greater than 10 inches DRC as leave trees, unless removal is necessary to achieve desired spacing or reduce hazardous fuel conditions. • Use mechanical thinning, managed grazing, or prescribed fire where appropriate to reduce vegetative fuels and maintain desired stand structure. • Conduct treatments in a manner that promotes movement toward more resilient vegetation conditions consistent with applicable ecological guidance and site conditions.	• Thin woodland and shrub trees less than 8 inches DRC to approximately 15 feet of spacing between individual shrub/tree or apply prescribed fire to achieve comparable fuel reduction conditions. • Cut shrub and small tree stems to within 4 inches of the ground to limit resprouting height and reduce ladder fuels. • Use mechanical treatments such as crushing, chipping, or mastication, or apply prescribed fire, to create more open stand conditions and reduce fuel loads. • Manage vegetation to maintain surface fuel conditions that limit potential flame lengths to approximately 4 feet or less and reduce crown fire potential. • Treat herbaceous and subshrub understory using mowing, chopping, mastication, or managed grazing to reduce fine fuel loading while maintaining soil stability and minimizing erosion from rainfall runoff.
Slash	• Dispose of slash from grassland treatments through burning, removal, mastication, or disking to reduce residual fine fuels and maintain fuel break effectiveness.	• Treat slash from grassland fuel reduction activities using the same methods applied on slopes less than 20%, including burning, removal, mastication, or disking where appropriate. • On steeper slopes, prioritize hand piling and prescribed burning to reduce slash while minimizing soil disturbance and erosion.	• Dispose of slash from pinyon-juniper, oak, and shrub treatments through pile burning, broadcast burning where appropriate, chipping and removal, or other approved methods to reduce residual fuel loading. • Treat associated grassland slash through burning, removal, mastication, or disking to reduce fine fuel accumulation and maintain treated conditions.	• Dispose of slash from pinyon-juniper, oak, and shrub fuel break treatments through pile burning, broadcast burning where appropriate, chipping and removal, or other approved methods to reduce residual fuel loading within the fuel break. • Treat associated grassland slash through burning, removal, mastication, or disking to reduce fine fuel accumulation and maintain fuel break effectiveness.
Approx Acreage Cost	\$50–\$250	\$160–\$2,500	\$1,200–\$5,500	\$1,100–\$4,000

Treatment No.	5 Prescribed Fire	6 Escape and Resource Transportation Corridors and Utility ROW (federal and non-federal lands)	7 Riparian Areas (Federal, non-federal and private lands)	
Treatment Category	Federal, state, or private lands	Federal, state, or local government where designated as escape route	Federal or state lands	Fuel breaks on private lands
Vegetation	- Use prescribed fire to achieve specific vegetation and fuel management objectives in accordance with applicable WSFD and/or BLM, USFS standards and guidance. - Conduct prescribed burning only under an approved burn plan and when all required conditions and authorizations are in place. - For burning on private lands consult Wyoming Department of Environmental Quality for required burn permits and the local fire department for guidance. - Where additional treatment areas are identified within the WUI, prescribed fire may be implemented as a fuel reduction tool when appropriate planning, approvals, and operational conditions are met. - Apply prescribed fire at low to moderate intensity to reduce surface fuels and maintain desired vegetation structure and where appropriate use higher-intensity fire to create openings by removing accumulated aboveground vegetation.	- Utility rights-of-way (ROWs) should follow vegetation management guidelines in applicable approved wildfire mitigation or vegetation management plans. Railroad ROW vegetation management and maintenance should also be implemented consistent with applicable Wyoming Department of Transportation commission requirements, including Wyoming Statute 37-9-303. - Thin trees less than 10 inches DRC to approximately 20–35 feet of spacing at lower elevations, depending on site conditions and windthrow risk, to reduce fuel loading and improve access. - Cut shrub and small tree stems to within 4 inches of the ground to reduce ladder fuels and resprouting height. - Grasses and forbs may be cut with a mower to 4-inch stubble. - Retain variable stand structure where appropriate, including limited bands or clumps of vegetation, to maintain wildlife movement corridors while reducing hazardous fuels. - Prioritize removal of dead, diseased, and dying trees of all sizes; remove additional trees greater than 8 inches DRC where necessary to address safety hazards or achieve desired spacing. - Remove ladder fuels beneath retained tree clumps to reduce vertical fuel continuity. - Use treatments such as chipping, crushing, piling and burning, removal, or prescribed fire where appropriate to treat residual vegetation and slash. - Emphasize removal of nonnative and highly flammable plant species within treatment areas. - Cut grasses and forbs to a low stubble height to reduce fine fuel continuity along roads and ROWs. - Manage vegetation along escape and resource transportation corridors so that these routes can function as fuel breaks and support evacuation and emergency response access. - Implement fuel reduction treatments at appropriate distances from corridor centerlines, consistent with vegetation-specific fuel break guidelines, to promote fire-resilient conditions.	- Limit riparian treatments to areas where vegetation poses a demonstrated fuel hazard; avoid disturbance in intact riparian areas wherever feasible. - Avoid the use of mechanized equipment within 10 feet of stream channels on federal lands where necessary to prevent bank disturbance, erosion, or sediment delivery. - Selectively remove or thin woody vegetation where encroachment has increased heavy fuel loading, with emphasis on controlling Russian Olive and other invasive or nonnative species. - Retain large native riparian trees and presettlement vegetation where possible; snags greater than 8 inches diameter may be retained where they do not present a safety or fuel hazard. - Conduct vegetation treatments using low-impact methods that maintain bank stability, channel function, and riparian shading. - Schedule fuel reduction activities in riparian areas generally between October 15 and March 31, where feasible, with timing adjusted as appropriate based on elevation, species of concern, nesting periods, and fire danger conditions.	- Conduct riparian vegetation treatments on private lands using low-impact methods such as hand tools, chainsaws, or mowers to minimize soil disturbance. - Remove dead vegetation and slash from treated areas to reduce fuel loading. - Remove ladder fuels by pruning limbs and branches up to a maximum height of 8 feet aboveground. - Ensure all mechanized equipment used for treatments meets applicable state and local fire department or fire district standards. - Schedule vegetation treatments between October and March where feasible to reduce impacts to wildlife and lower fire risk; treat annual vegetation when green where this improves treatment effectiveness.
Slash	- Dispose of slash, jack piles, and down woody material through pile burning or prescribed fire where appropriate, considering site conditions and proximity to private property. - Use pile burning or prescribed fire to reduce accumulated fuels on designated private lands where conditions and approvals allow. - Retain selected snags and down woody material where they do not compromise fire resilience or increase hazardous fuel loading.	- Remove snags, slash, and down woody material along roadways in proximity to private lands to reduce hazardous fuel loading. - Dispose of accumulated fuels through pile burning or prescribed fire where appropriate and permitted. - Retain selected snags or down woody material where they do not compromise fire resilience or increase fire hazard. - Incorporate vehicle pullouts at suitable intervals and locations where vegetation, slope, and terrain allow to support safe access, evacuation, and fire response.	- After removal of heavy woody fuels, maintain fine fuels with cool-season, low-intensity prescribed fire where appropriate. - Conduct prescribed burns so fire spreads slowly downslope or into prevailing winds to moderate fire behavior and reduce erosion risk. - Retain large down woody material and snags 12 inches diameter or greater in riparian areas where they do not increase fire hazard or compromise riparian function.	- Conduct fuel treatments and removal of woody material from existing roads or established access routes to minimize disturbance in riparian areas on private lands. - Use cool-season, low-intensity prescribed fire where appropriate to maintain reduced fine fuel conditions. - Do not conduct pile burning or jackpot burning within ephemeral, intermittent, or perennial stream channels.
Approx Acreage Cost	\$200–\$1,600	\$300–\$5,000	\$3,500–\$7,500	

Treatment No.	8 Conditional Suppression Areas (federal and non-federal lands)	9 Russian Olive Removal for Restoration Purposes (federal and non-federal lands)	10 Forested WUI – Ponderosa Pine, Dry Mixed Conifer, Lodgepole Pine, and Spruce-Fir (federal, non-federal, and private lands)	11 Forested Landscapes Outside the WUI – Ponderosa Pine/Dry Mixed Conifer/ Lodgepole Pine, and Spruce-Fir (federal, non-federal and private lands)
Treatment Category	Federal, state, or private lands	Federal, state, or private lands	Hazard fuel reduction / fuel breaks	Forest restoration / landscape treatments
Vegetation	• This prescription applies to areas with shrub or scrub vegetation where fuel modification treatments are not considered necessary for wildfire protection. • In these vegetation types, the potential for large or catastrophic wildfire is generally low, and fire historically occurred at very long return intervals or played little role in ecosystem development. • Monitor wildland fire occurrence in these areas for potential threats to private property, ecological resources, or cultural values before initiating suppression actions. • Recognize that the use of fire as a management tool in these areas may be limited by ecological, social, or policy constraints. • Determine suppression actions in accordance with applicable agency and fire department or fire district policies when fire poses a direct threat to life, property, or sensitive resources.	• Treat monotypic Russian Olive stands or mixed stands with other riparian species using mechanical removal, chemical treatment, or controlled burning to reduce stem density, canopy cover, and hazardous fuel loading. • Prioritize mechanical removal by cutting stems below the root collar during November through January to improve treatment effectiveness. • Consider whole-tree mechanical extraction where appropriate, as this method can achieve high initial mortality and reduce resprouting. • Apply low-volume, oil-based herbicide treatments from late spring through early fall to control small plants (less than 2 inches DRC). • Use low-volume cut-stump herbicide applications in combination with mechanical removal to limit regrowth. • Conduct prescribed burning, where appropriate, during peak summer or post-avian breeding periods, using blacklines and headfire ignition patterns as suited to site-specific vegetation and burn conditions. • Follow treatments with appropriate maintenance, revegetation, restoration, and monitoring to support long-term vegetation management and fuel reduction objectives.	• Fuel management plans on state and federal lands supersede this guidance. • Treat forested stands adjacent to the WUI using mechanical thinning, hand thinning, and prescribed fire (if appropriate) to reduce hazardous fuels and protect life and property while maintaining resilient forest structure. Develop site-specific prescriptions based on stand conditions and the silvics of the species present. • Prioritize thinning from below by removing small-diameter trees and ladder fuels, particularly trees less than approximately 8–10 inches diameter at breast height (DBH), to reduce vertical fuel continuity and crown fire potential, while considering species-specific regeneration needs and desired future stand conditions. • Establish stand-density targets based on species composition, stand structure, site productivity, slope, aspect, windthrow susceptibility, and treatment objectives. Where basal-area targets are used, consider both the desired residual basal area and the percentage of existing basal area removed to reduce the potential for windthrow or blowdown. • Increase spacing between residual tree crowns where appropriate to reduce crown-to-crown fire spread and improve firefighter access. Spacing should reflect species silvics, existing stand structure, windthrow risk, and site conditions rather than a uniform spacing target. • Retain large, fire-resistant, and ecologically important trees appropriate to the species and stand type. In ponderosa pine stands, prioritize retention of dominant and codominant mature “yellow-bark” trees where they do not conflict with safety or treatment objectives. • Plan for regeneration and replacement of the overstory when thinning from below, particularly where treatments remove substantial portions of younger age classes or where existing overstory trees are nearing the end of their expected longevity. • Remove or prune ladder fuels by elevating crown base height through pruning lower branches to approximately 8–12 feet aboveground or up to one-third of total tree height. • Retain limited clumps of trees where appropriate to maintain wildlife habitat and structural diversity, but isolate clumps with surrounding lower-density areas to reduce crown fire potential. • Apply prescribed fire following thinning treatments where appropriate to maintain low surface fuel loads, increase height to live crown and promote fire-adapted understory vegetation. • Conduct maintenance treatments, including periodic prescribed burning or mechanical fuel reduction, at intervals sufficient to maintain desired fuel conditions and reduce re-accumulation of ladder fuels.	• Fuel management plans on state and federal lands supersede this guidance. • Treat ponderosa pine/dry mixed conifer forests outside the WUI using landscape-scale ecological restoration approaches appropriate to the species, stand type, disturbance regime, and site conditions to reduce large-fire risk and improve ecosystem resilience. • Implement variable-density thinning or other appropriate silvicultural treatments that address excessive stand density, ladder fuels, and regeneration while maintaining desired species composition, age-class diversity, and future overstory replacement. • Establish residual stand-density targets based on species silvics, stand structure, site productivity, slope, aspect, treatment objectives, and windthrow susceptibility. Where basal-area targets are used, consider both the desired residual basal area and the percentage of existing basal area removed. • Where consistent with the ecology and historical structure of the forest type, use variable-density or clump-and-gap treatments to create heterogeneous stand conditions. Treatment patterns should reflect the species present and site-specific reference conditions rather than applying a uniform spatial arrangement across all forest types. • Allow tree spacing to vary across the landscape, with lower densities on ridges, south-facing slopes, and drought-prone soils, and moderately higher densities on north-facing slopes or more productive sites. • Retain large ponderosa pine, presettlement trees, wildlife trees, and snags where they do not create unacceptable safety hazards. • Use prescribed fire following mechanical treatments where appropriate for the forest type, site conditions, and treatment objectives to reduce surface fuels and support desired ecological conditions. • Conduct prescribed burns under conditions that promote surface fire behavior and limit crown fire initiation, using ignition patterns appropriate to terrain, fuel conditions, and operational constraints. • Monitor post-treatment forest structure, fuel loading, regeneration patterns, and ecological indicators to guide maintenance burning intervals and future thinning treatments.
Slash	• Response will be full suppression when firefighter and public safety, property, improvements, or natural resources are threatened.	• Created slash will be made available for woody biomass use. If not used for wood-related products, slash will be masticated, piled with preexisting fuels and burned, or otherwise used for soil stabilization. • Disturbed areas should be immediately revegetated with a native plant community that contains no invasive species and meets other land use objectives, such as wildlife habitat enhancements or recreational-use benefits.	• Treat residual slash promptly to prevent hazardous surface fuel accumulation. Slash may be chipped, masticated, removed, or piled and burned under approved conditions. • Concentrated slash piles should be located away from structures, roads, and retained trees to reduce soil heating and residual tree damage. • Large woody material may be removed from the treatment area where necessary to maintain defensible space conditions and reduce ember production near structures.	• Treat residual slash through mastication, chipping, lop-and-scatter, pile burning, broadcast burning, or removal depending on site conditions, access, and fuel loading. • Where slash is scattered, distribute material so that it lies close to the ground and does not exceed approximately 18–24 inches in depth to prevent excessive surface fuel buildup. • Pile burning or broadcast burning may be used to reduce accumulated slash following thinning operations, particularly where future prescribed fire is planned. • Retain selected coarse woody debris where it does not contribute to hazardous fuel loading in order to support soil productivity, nutrient cycling, and wildlife habitat.
Approx Acreage cost	NA	\$1,000–\$6,500	\$1,200–\$5,000	\$150–\$2,500

Table 4.3. Recommendations for Creating Resilient Landscapes (Fuel Treatments)

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
RL1		H	0 to 5 years	Prioritize and implement hazardous fuels reduction and maintenance treatments in forested WUI areas, critical municipal watersheds, and strategic locations where treatments can reduce wildfire hazards to homes, infrastructure, water quality, and other values at risk	WUI, critical municipal watersheds, AOCs	Sheridan County, USFS, BLM, WSFD, City of Sheridan, Town of Dayton, private landowners	• Use CWPP risk assessment results, AOC mapping, Core Team input, Potential Operational Delineations (PODs), existing treatment data, and local wildland fire knowledge to identify priority treatment locations. • Identify appropriate treatment methods based on vegetation type, slope, access, ownership, and implementation feasibility as shown in Tables 4.1 and 4.2. • Prioritize forested WUI areas where heavy fuels, steep slopes, residential development, recreation access, or human ignition potential increase wildfire exposure. • Maintain and establish strategic fire management features for PODs and grass-canyonlands. • Identify appropriate stand density and treatment extent to reduce burn severity in critical municipal watersheds. • Coordinate watershed and infrastructure-focused prioritization and treatments in with Project RL2 • Coordinate cross-boundary treatments where mitigation needs extend across city, county, federal, homeowners association (HOA), utility, and private lands. • Treatment methods may include thinning, pruning, limbing, mowing, slash removal, mastication, chipping, pile burning, prescribed fire, roadside vegetation management, and maintenance of previously treated areas. See Table 4.1 for AOCs and Table 4.2 for more details on treatment types.	Reduce hazardous fuel loading, moderate wildfire intensity near developed areas, support water resource protection, improve treatment continuity across ownerships, and reduce exposure to homes, infrastructure, and access routes. Harden and establish strategic fire management features.	• Track treatment location, acreage, ownership, treatment type, completion date, lead entity, and funding source. Review treated areas periodically for vegetation regrowth, slash accumulation, and maintenance needs.	• USFS Community Wildfire Defense Grant Program (CWDG) • USFS Landscape Scale Restoration Program • USFS and Natural Resources Conservation Service (NRCS) Joint Chiefs' Landscape Restoration Partnership • FEMA Building Resilient Infrastructure and Communities Program (BRIC) • Western States Wildland Urban Interface Grant Program • Community Assistance Funds Adjacent to National Forests and Grasslands (CAFA)
RL2		H	0 to 3 years	Prioritize fuel treatments, treatment maintenance, and watershed protection strategies in and near critical watersheds and water infrastructure to reduce potential wildfire impacts to drinking water resources, water treatment facilities, and related infrastructure.	Key areas of critical watersheds and areas surrounding the water treatment plant, water diversion and intake infrastructure, and other water-related facilities. Ranchester Water Intake, Sheridan Water Treatment, Watershed AOCs.	City of Sheridan and Town of Dayton Public Works and County Fire Districts and Departments and Sheridan Fire-Rescue ; WSFD, USFS; private landowners; and other watershed partners, as applicable.	• Coordinate with public works staff, fire agencies, land managers, and private landowners to identify priority treatment areas. • Use CWPP risk assessment results, AOC mapping, infrastructure data, treatment data compiled for project RL4, and local knowledge to prioritize work. • Prioritize treatments near municipal water supply infrastructure, water treatment facilities, access routes, and forested areas in priority watersheds where severe wildfires could affect water quality or operations. • Coordinate with USFS and private landowners where watershed protection priorities cross ownership boundaries. • Consider appropriate treatment methods based on site conditions, ownership, access, and watershed protection objectives. • Potential treatment methods may include thinning, pruning, prescribed fire, pile burning, mechanical fuels reduction, slash removal, and maintenance of previously treated areas. See Table 4.1 for AOCs and Table 4.2 for more details on treatment types. • Coordinate watershed-focused treatments with broader landscape treatment tracking and maintenance efforts under projects RL1, RL4, RL6, and RL7.	Reduce potential wildfire impacts to the municipal watershed, water quality, water treatment facilities, and related infrastructure, while supporting coordination among land managers, public works staff, fire agencies, and private landowners.	• Review watershed and water infrastructure protection treatments periodically for vegetation regrowth, fuel loading, access conditions, and maintenance needs. Document completed work and revisit priorities during CWPP implementation meetings.	• CWDG • USFS and NRCS Joint Chiefs' Landscape Restoration Partnership • Western States Wildland Urban Interface Grant Program • CAFA
RL3		M	1 to 5 years	Evaluate, maintain, and retreat previously completed fuel reduction projects to ensure they continue to function as effective fire hazard mitigation or wildfire management features	Planning area-wide, with emphasis on previously treated areas within or near AOCs including treatments west of Story.	Sheridan County, USFS, BLM, WSFD, Wyoming Game and Fish Department, private landowners	• Compile available treatment data from federal, state, local, HOA, utility, and private land partners. • Review treatment objectives, age, vegetation regrowth, ladder fuel development, slash accumulation, canopy continuity, and access conditions. • Identify previously treated areas where maintenance or retreatment would enhance fire hazard mitigation or wildfire management benefits. • Prioritize retreatment where past projects protect homes, water infrastructure, access routes, utility corridors, or other community values at risk. • Use appropriate maintenance methods such as mowing, thinning, pruning, slash treatment, chipping, pile burning, prescribed fire, or follow-up mechanical treatment. See Tables 4.1 and 4.2 for more details. • Coordinate maintenance timing across ownership boundaries, including Wyoming Game and Fish Department, USFS, and adjacent private lands west of Story, where adjacent treatments function as part of a larger landscape strategy.	Preserve previous mitigation investments, maintain lower fuel loading in priority areas, improve continuity between completed and planned treatments, and support long-term landscape resilience.	• Create a treatment maintenance schedule and reassess completed treatments on a recurring cycle. Document retreatment needs and completed maintenance actions during CWPP implementation meetings.	• CWDG • NRCS Environmental Quality Incentives Program (EQIP) • HOA, private road association, or landowner cost-share contributions • CAFA grants for eligible lands near U.S. Forest Service lands • Western States Wildland Urban Interface Grant Program

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
RL4		M	1 to 5 years	Develop a cross-boundary wildfire mitigation treatment tracking and gap analysis process to document completed treatments, identify untreated areas, and improve coordination across public, HOA, utility, and private lands.	Planning area-wide, with emphasis on WUI and AOCs	Sheridan County, USFS, BLM, WSFD, City of Sheridan, Town of Dayton, private landowners, utility entities	• Compile past, ongoing, and planned treatment data. • Identify where treatment data are incomplete, especially on private lands. • Develop a voluntary reporting process for private landowners, HOAs, and large landowners to document completed mitigation work. • Consider incentive-based participation, such as recognition programs, technical assistance, or potential insurance documentation support where feasible. • Use treatment data to identify gaps between completed projects, priority AOCs, access routes, utility corridors, and infrastructure protection areas. • Update treatment maps as new projects are completed.	Improve understanding of completed mitigation work, identify treatment gaps, support grant applications and project prioritization, and strengthen coordination among agencies, utilities, HOAs, industrial timber landowners, and residents.	• Update the treatment tracking dataset at least annually. Record treatment location, acreage, ownership, treatment type, and completion date where available, while protecting private landowner information as needed.	• CWDG
RL5		M	1 to 5 years	Develop and support cost-share programs, grant assistance, seasonal wildfire mitigation crews, contractor capacity, and other implementation to reduce financial and logistical barriers for private landowners completing defensible space, forest health, and hazardous fuels reduction projects.	Private lands, HOA-managed areas, and forested WUI neighborhoods throughout the planning area	Sheridan County Fuels Mitigation Coordinator, private landowners; HOAs; County Fire Districts and Departments and Sheridan Fire-Rescue; WSFD, seasonal mitigation crews; contractors; and other implementation partners	• Identify priority private lands where mitigation would improve treatment continuity or reduce wildfire exposure to homes, access routes, water infrastructure, or adjacent public lands. • Develop eligibility criteria for cost-share, grant-supported, or crew-supported private land mitigation work. • Prioritize projects that implement defensible space, reduce ladder fuels, increase canopy separation, treat slash, or improve forest health. • Explore resources to help landowners' complete mitigation work, such as seasonal mitigation crews, contractor support, neighborhood workdays, chipping programs, slash hauling, and other services. • Coordinate with DNRC, NRCS, Flathead Firesafe Council, and other partners to connect landowners with technical assistance, funding, and implementation resources. • Support expansion of local contractor and workforce capacity by identifying recurring project needs, bundling small projects where feasible, and helping connect qualified contractors or crews with priority mitigation work. • Provide technical guidance to landowners before work begins so treatments meet wildfire mitigation, defensible space, and forest health objectives. • Coordinate this recommendation with treatment tracking and gap analysis efforts under RL4.	Reduce financial and logistical barriers to mitigation on private land, increase implementation of defensible space and fuels reduction work, improve treatment continuity, and expand local contractor and workforce capacity.	• Track landowner participation, acres treated, treatment types, funding used, and implementation partners. Document use of contractors, seasonal crews, chipping services, and slash disposal programs to evaluate capacity and future needs.	• CWDG • HOA, landowner, neighborhood, or private road association cost-share contributions • Western States Wildland Urban Interface Grant Program
RL6		H	0 to 3 years	Implement roadside vegetation management along priority access, evacuation, utility, and ignition-prone travel corridors to reduce ignition potential, improve access conditions, and support emergency response.	Priority travel and utility corridors throughout the planning area	Sheridan County, USFS, BLM, WSFD, Wyoming Department of Transportation, City of Sheridan, Sheridan County, County Fire Districts and Departments and Sheridan Fire-Rescue, Town of Dayton, private road and landowners, utility entities, HOAs	• Use Core Team input, fire department knowledge, and local road data to identify priority roadside treatment corridors. • Coordinate with road owners, adjacent landowners, utilities, HOAs, and private road owners before implementation. • Focus on vegetation that may contribute to roadside ignitions, limit emergency access, or reduce visibility and operational safety. • Apply appropriate treatments such as mowing, limbing, brushing, removal of dead and down material, selective thinning, and slash disposal. • Clarify that roadside vegetation management is intended to reduce ignition and fire establishment potential and improve access conditions, not to create a fully defensible firebreak. • Coordinate with evacuation planning and utility corridor mitigation where priorities overlap.	Reduce roadside ignition potential, improve emergency access, support safer ingress and egress, and reduce fuels adjacent to priority roads, utilities, homes, and infrastructure.	• Inspect priority corridors periodically for vegetation regrowth, dead material, and access constraints. Track treatment location, treatment type, responsible entity, and maintenance needs.	• CWDG • BRIC • Western States Wildland Urban Interface Grant Program

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
RL7		H	0 to 1 year	Coordinate with Montana-Dakota Utilities Company, Powder River Energy, Big Horn Electric Coop, City of Hardin, MT, land management agencies, and adjacent landowners to reduce wildfire hazard and strike potential along transmission and utility corridors identified as important HVRAs or potential fire spread pathways.	Utility and transmission corridors throughout the planning area, with emphasis on transmission corridor locations, ROWs, utility and utility corridors near priority access routes, homes, water infrastructure, or forested WUI areas.	Rocky Mountain Power; all cities and towns; USFS; WSFD; Sheridan County, private landowners; and HOAs, as applicable.	• Coordinate annually with energy providers and land management partners to review existing utility wildfire risk mitigation plans, completed vegetation management, and planned mitigation activities. • Identify untreated areas, treatment gaps, or “holes” between utility, agency, and private land treatments. • Prioritize mitigation where utility corridors intersect forested WUI areas, access routes, critical infrastructure, or other HVRAs. • Coordinate treatments with adjacent landowners where utility ROWs cross private, HOA, industrial timber, or public lands. • Align utility corridor mitigation with broader hazardous fuels reduction, roadside vegetation management, and emergency response planning. • Use available utility infrastructure mapping to distinguish electric infrastructure from communication or phone lines where relevant to future coordination. • Coordinate this recommendation with treatment tracking and gap analysis efforts under RL4.	Reduce wildfire hazard along utility corridors, support protection of critical utility infrastructure, improves treatment continuity across utility corridors and adjacent lands, and strengthen coordination among utilities, fire agencies, and land managers.	• Review utility wildfire mitigation plans, vegetation management and treatment maps, and completed or planned mitigation work annually where available. Track treatment gaps and revisit corridor priorities after major wind events, outages, wildfire incidents, vegetation changes, or infrastructure upgrades.	• Utility vegetation management and wildfire mitigation funding • CWDG
RL8		M	1 to 5 years	Develop or expand vegetation disposal, chipping, slash removal, and seasonal cleanup options to help residents, HOAs, and private landowners complete and maintain defensible space and hazardous fuels reduction work.	Planning area-wide, with emphasis on forested residential neighborhoods and HOAs within the WUI	Sheridan Fire-Rescue; Sheridan County; private landowners; HOAs; neighborhood groups; contractors; and seasonal mitigation crews, as applicable.	• Evaluate existing vegetation disposal, slash removal, chipping, and cleanup options available to Sheridan residents and landowners. • Identify gaps that may prevent residents, HOAs, or private landowners from completing defensible space and fuels reduction work. • Explore seasonal or recurring chipping events, neighborhood slash collection days, drop-off sites, contractor-supported hauling, or coordinated cleanup events. • Prioritize service areas where private land mitigation would reduce wildfire exposure to homes, access routes, infrastructure, or adjacent treated lands. • Coordinate with RL4 so cost-share, mitigation crew, and contractor support programs include practical slash disposal options. • Pair disposal opportunities with outreach that explains acceptable materials, timing, eligibility, and maintenance expectations. • Explore opportunities to bundle neighborhood projects to reduce costs and increase participation.	Help residents, HOAs, and private landowners complete and maintain defensible space and fuels reduction work by reducing barriers associated with slash disposal and vegetation removal.	• Track use and maintain records of vegetation disposal, chipping, slash removal, and seasonal cleanup services, including participation, demand, cost, geographic coverage, and other relevant accomplishments. Review participation, demand, cost, and geographic coverage after each operating season.	• CWDG • Western States Wildland Urban Interface Grant Program
RL9		M	1 to 5 years	Improve mitigation surrounding recreation sites	Planning area-wide, prioritize high use recreation sites Kleanburn, 3-Poles, Bear Davis, Story	Sheridan County, USFS, BLM, WSFD, Municipalities, HOAs,	• Use Core Team input, local and federal knowledge, and visitor information to prioritize locations. • Identify treatment types including thinning, grazing, manual removal, and machine removal of fuels based on site type and need. • Identify education opportunities like signage and outreach materials to reduce ignition potential. • Prioritize sites with high risk and high use.	Reduce the risk of fire surrounding recreation areas throughout the county by reducing potential for ignition, fire growth, and frequency.	Track treatment location, acreage, ownership, treatment type, completion date, lead entity, and funding source. Review treated areas periodically for vegetation regrowth, slash accumulation, and maintenance needs.	• Western States Wildland Urban Interface Grant Program • CWDG • BRIC • CAFA
RL10		H	1 to 5 years	Continue to identify and map coal seam fires and develop mitigation strategies.	Countywide wherever found	Sheridan County, BLM, USFS, Municipalities	• Continue to identify the location and extent of coal seam fires throughout the county. • Develop comprehensive mapping of location and extent to inform priority for mitigation and for responder knowledge • Prioritize treatment of seams based on proximity to communities, size, and risk of ignition • Identify appropriate treatment plans and treat priority coal seams	Reduce the risk of coal seam based wildfire ignitions Increase awareness of location and size of coal seams	• Track completion of mapping exercise • Maintain record or data base of location and extent • Track number of coal seams mitigated	• Abandoned Mine Lands grant programs (US DOI office of surface mining)

COHESIVE STRATEGY GOAL 2: FIRE-ADAPTED COMMUNITIES

Goal 2 of the Cohesive Strategy/Western Regional Action Plan is Fire-Adapted Communities: Human populations and infrastructure can withstand a wildfire without loss of life and property. The premise of this goal is:

Preventing or minimizing the loss of life and property due to wildfire requires a combination of thorough pre-fire planning and action, followed by prudent and immediate response during a wildfire event. Post-fire activities can also speed community recovery efforts and help limit the long-term effects and costs of wildfire. CWPPs should identify high-risk areas and actions residents can take to reduce their risk. Fuels treatments in and near communities can provide buffer zones to protect structures, important community values and evacuation routes. Collaboration, self-sufficiency, acceptance of the risks and consequences of actions (or non-action), assisting those who need assistance (such as the elderly), and encouraging cultural and behavioral changes regarding fire and fire protection are important concepts. Attention will be paid to values to be protected in the middle ground (lands between the community and the forest) including watersheds, viewsheds, utility and transportation corridors, cultural and historic values, etc. (Western Regional Strategy Committee 2013:15).

In this CWPP, recommendations for fire-adapted communities focus on public education, defensible space, home hardening, home ignition zone mitigation, resident preparedness, and community-level capacity to reduce wildfire risk before an incident occurs.

Recommendations for Fire-Adapted Communities

Fire-adapted community recommendations focus on actions that help residents, landowners, neighborhoods, ranches, businesses, and local organizations reduce wildfire risk before a wildfire occurs. These recommendations include both education-based actions and implementation-focused actions, such as home ignition zone assessments, defensible space support, chipping and slash disposal, Firewise USA participation, and neighborhood-scale mitigation. Because the recommendation tables combine public education, resident preparedness, home hardening, and structural ignitability actions, these topics are addressed together in this section.

Many Fire-Adapted Communities recommendations are similar across the western, eastern, and urban core landscapes because residents countywide need access to wildfire education, defensible space guidance, home hardening information, evacuation preparedness resources, and mitigation support. These repeated recommendations are intentional. The general action may be similar, but the audience, delivery method, partners, and implementation approach differ by landscape.

Examples of Fire-Adapted Communities recommendations include:

- Developing wildfire education and outreach materials tailored to residents in forested, grassland, and urban core areas.
- Expanding defensible space, home hardening, and home ignition zone education.
- Providing targeted outreach for absentee landowners, seasonal residents, recreational visitors, ranchers, and urban-adjacent neighborhoods.
- Supporting home ignition zone assessments, demonstration projects, Firewise USA participation, and neighborhood-scale mitigation.
- Developing chipping, slash disposal, and volunteer mitigation events to help residents complete defensible space work.

- Creating accessible resident resources, including contractor lists, funding opportunities, and mitigation guidance.
- Increasing local coordination capacity through a mitigation specialist, program coordinator, or similar implementation support role.
- Recommendations for public education and outreach
- Recommendations for reducing structural ignitability

DRAFT

Table 4.4. Recommendations for Creating Fire Adapted Communities (public education and structural ignitability)

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
FAC1		H	0 to 1 year	Implement a coordinated public education initiative to increase residents' understanding of wildfire mitigation, response, and recovery.	Countywide with emphasis on neighborhoods adjacent to high risk fuels such as Story, Big Horn, Beckton, Burgess Junction, and mountain canyons	Sheridan County, County Fire Districts and Departments and Sheridan Fire-Rescue, USFS, BLM, Wyoming State Lands	- Develop and deliver consistent, accessible planning area-wide messaging that establishes a baseline understanding of wildfire preparedness, response, and recovery. - Highlight that wildfire risk varies by neighborhood, and residents should understand their assumed risk based on location. - Emphasize that wildfire risk is community-wide, and lower mapped risk does not mean no risk. - Clarify that fire agencies will respond when conditions allow, but individual structure protection cannot be guaranteed during fast-moving or severe wildfire events. - Reinforce the importance of personal responsibility, clarifying what is within a homeowner's control versus municipal preparedness and response roles. - Clarify the ignition risks associated with the misuse of fire pits or fireworks, particularly in wooded areas. - Assess and implement strategies to communicate wildfire risks and mitigation steps to seasonal residents and tourists - Provide easily accessible community resources regarding post-fire recovery through multiple communication avenues to support community knowledge of steps to take following a wildfire.	Inform residents and visitors about wildfire risk and prevention while providing tools for mitigation and recovery should a wildfire occur.	Annually evaluate whether public education materials and messaging require updates.	- CWDG - FEMA Fire Prevention and Safety (FP&S) Grant - Western States Wildland Urban Interface Grant Program
FAC2		H	0 to 1 year	Increase fire awareness and responsible fire use education and resources at recreation sites	Trail heads, campgrounds, scenic viewpoints, information centers, other recreation sites and strategic high visibility locations throughout the planning area	Sheridan County, County Fire Districts and Departments and Sheridan Fire-Rescue, USFS, BLM, Wyoming State Lands	- Develop and implement a recreation focused sign plan and fire prevention education efforts. - Acquire and post fire prevention signage at established recreation sites and strategic high visibility locations. - Provide water buckets with educational information at campground water sources. - Coordinate with campground hosts to distribute fire prevention messaging consistent with project FAC1. - Integrate Smokey Wildfire Prevention programs in local schools. - Establish "no campfires" pin flags in disbursed campsite established fire rings when fire restrictions are in effect.	Inform local and out-of-area recreators to use fire with care and ensure full extinguishment upon departure. Reduce human-caused ignitions.	Evaluate and adapt sign locations based on theft, visibility, and	- CWDG - FP&S
FAC3		H	0 to 4 years	Pursue wildfire mitigation funding for implementation at the community and individual scale, including establishment of funding pathway for underserved homeowners and vulnerable populations.	Planning area-wide, with emphasis on neighborhoods in AOCs, mountain canyons, the Red Grade area, remote-access subdivisions, and homes in moderate- to high-risk areas	City and town Fire and Public Works Departments, Sheridan County	- Offer financial assistance to underserved homeowners who may require additional support to mitigate home hazards and evacuate during a wildfire. - Identify vulnerable populations (e.g. elderly, disabled individuals, low-income households). - Pursue grant opportunities to secure funding for assistance programs. - Offer incentives, such as financial rewards or discounts on mitigation materials, to homeowners who attend public education events and workshops on wildfire preparedness and evacuation. - Organize a structured rewards program that provides financial assistance or other incentives. - Collaborate with local organizations and stakeholders to identify opportunities and secure funding for the incentives. - Collaborate with local organizations and stakeholders to identify funding opportunities. - Use funding opportunities to remediate risks associated with buildings that are uninhabited, abandoned, or blighted in coordination with property owners. - Support coordination between cities and towns within Sheridan County, Sheridan County, and WSFD to ensure emergency declarations are made, when applicable, to allow for associated federal funding to be released.	Encourage greater participation in public education events and workshops on wildfire preparedness and evacuation among homeowners. Protect life and property of the underserved and at-risk populations. Protect lives and property within the Sheridan County planning area.	- Complete an annual review of the number of actions taken to address vulnerable populations and underserved homeowners. - Regularly assess any shortfall between homeowners who received assistance and those still requiring assistance. - Track attendance and participation rates at public education events and workshops to assess the effectiveness of the incentives program. - Gather feedback from homeowners to evaluate the impact of incentives on their engagement. - Track funding, whether obtained through grants or allocated from the city budget, was used for homeowner assistance.	- CWDG - BRIC - FP&S - Wyoming State Forestry Division Hazardous Fuels Mitigation Program/state sponsored fuels mitigation grants - Western States Wildland Urban Interface Grant Program - Community Assistance Funds Adjacent to National Forests and Grasslands (CAFA)

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
FAC4		M	0 to 4 years	Implement evacuation planning and preparedness.	Planning area-wide, with emphasis on AOC neighborhood, isolated small buildings clustered in high-risk areas, such as Ulm, Lone Tree Creek, Black Stump Draw, Coal Creek Road	Sheridan County, County Fire Districts and Departments and Sheridan Fire-Rescue, and Sheridan County Sherriff's Office	• Develop coordinated evacuation planning along with public education and outreach that extends beyond identification of evacuation routes to support increased awareness of preparedness and procedures to ensure safe community evacuation. • Incorporate Ready, Set, Go! principles into evacuation preparedness education and outreach to help residents understand actions to take before a wildfire, when conditions indicate increased readiness, and when evacuation is necessary. • Assess and map potential primary and alternative evacuation routes in the planning area to be shared with the public. • Incorporate areas of temporary refuge in addition to evacuation routes for use by the public if limited ingress/egress makes evacuation unsafe, and sheltering in place is necessary. • Identify and communicate locations of clean air centers and how they may be used by the public • Organize emergency evacuation drills to walk members of the public through the evacuation process • Assess evacuation procedures under various wildfire scenarios to analyze preparedness • Involve the County Fire Warden, local fire departments, law enforcement, emergency management, and other response partners in the development of evacuation procedures. • Hold an annual public workshop or meeting to discuss evacuation procedures, emergency response, and community concerns related to safe evacuation. • Analyze effective strategies to inform seasonal residents and tourists of evacuation procedures.	Ensure residents know evacuation procedures and are ready to act in the event. Increase safety for first responders and residents by creating more efficient evacuations.	• Adapt evacuation outreach materials as needed based on feedback and as new evacuation strategies, procedures, or other information becomes available.	• CWDG • FP&S
FAC5		M	0 to 4 years	Conduct defensible space education and home assessments	Planning area-wide, with emphasis on neighborhoods in AOCs and homes in moderate- to high-risk areas	County Fire Districts and Departments and Sheridan Fire-Rescue, Sheridan County	• Create an educational campaign to promote wildfire risk assessments for homeowners through multiple modes of communication. • Target implementation of the campaign prior to wildfire season, approximately February–May. • Establish an example Firewise property to demonstrate ideal Firewise practices and strategies for implementation, including before and after examples. • Host a list of recommendations for mitigation measures and resources for implementation on the city website, including Firewise landscaping guidance for lower-flammability trees, shrubs, vegetation, and mulch. • Coordinate with the WSFD to support community-wide risk assessments in addition to home risk assessments. • Host an annual public outreach event, such as an open house, to provide information on home wildfire risk assessments and Firewise principles. • Identify and support Firewise Community recognition with interested neighborhoods and HOAs.	Reduce wildfire risk at the individual property level by leveraging home assessments as public education opportunities.	• Track the number of home assessments conducted. • Adapt community education efforts as needed based on feedback.	• CWDG • FP&S • NFPA Firewise USA Program • Fire mitigation grants administrated by Wyoming State Forestry • Western States Wildland Urban Interface Grant Program
FAC6	New	M	1 to 5 years	Develop targeted wildfire outreach materials for absentee landowners, seasonal residents, and recreational visitors.	Western Sheridan County; recreational corridors; seasonal homes, short-term rentals, ranch properties, Forest Service summer homes, and visitor-use areas	Sheridan County; USFS; tourism/recreation partners; property managers	• Develop targeted materials that explain local wildfire risk, fire restrictions, defensible space responsibilities, safe campfire and equipment use, evacuation preparedness, and where to find emergency information. • Provide absentee landowners with clear steps for arranging defensible space work, slash disposal, contractor support, and routine property maintenance when they are not present. • Coordinate with Landlord Owner Agents (LOAs)/HOAs, property managers, short-term rental hosts, recreation sites, local businesses, and visitor information outlets to distribute materials. • Use mailers, posted signs, rental information packets, QR codes, websites, and printed handouts to reach people who may not receive regular county or fire district messaging. • Update materials before peak recreation and fire seasons and when fire restrictions or local contact information changes.	Reduces human-caused ignitions and improves wildfire preparedness among landowners and visitors who may be less connected to local emergency messaging.	• Track distribution locations, number of materials shared, and partner participation. • Review materials annually for accuracy and update after changes to fire restrictions, emergency contacts, or mitigation programs. • Use feedback from fire districts, LOAs/HOAs, and landowners to identify outreach gaps.	• Community Wildfire Defense Grant Program • FEMA FP&S Grants • NFPA Firewise USA Program • Western States Wildland Urban Interface Grant Program

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
FAC7	New	H	1 to 5 years	Develop community mitigation support programs such as chipper days, slash disposal, and volunteer mitigation events.	Western WUI communities, subdivisions, ranch clusters, and LOA/HOA areas where defensible space work generates slash; Story; Red Grade; Clearmont; Banner	Sheridan County; County Fire Districts and Departments and Sheridan Fire-Rescue; LOAs/HOAs; Wyoming State Lands; contractors; volunteer groups	- Identify communities where slash disposal is a barrier to defensible space and home ignition zone (HIZ) implementation. - Organize chipping days, slash drop-off events, neighborhood cleanups, temporary roll-off dumpsters for vegetative debris, or volunteer mitigation workdays before and during appropriate seasonal treatment windows, building on successful approaches already used in Story. - Establish clear participation guidelines for acceptable material, pile placement, scheduling, traffic control, safety, and post-event cleanup. - Coordinate with contractors, county road staff, fire districts, and LOAs/HOAs to manage logistics, equipment, staffing, and disposal methods. - Pair events with HIZ education so residents understand how to maintain defensible space after slash is removed.	Reduces hazardous vegetation and slash near homes while making private-property mitigation more feasible for residents.	- Track number of events, participating households, slash volume treated, and communities served. - Evaluate whether events should recur annually or seasonally based on participation and fuel accumulation. - Monitor common issues such as unacceptable materials, access constraints, contractor availability, and follow-up maintenance needs.	- Community Wildfire Defense Grant Program - Urban and Community Forestry Program - Firewise USA - National Fire Plan - Wyoming State Forestry Division fire mitigation grants - Western States Wildland Urban Interface Grant Program - CAFA
FAC8	New	M	Immediate to 3 years	Create and maintain accessible wildfire mitigation resources for residents, including contractor lists, funding opportunities, and implementation guidance.	Countywide, with western-specific resources for WUI communities, LOAs/HOAs, ranches, seasonal properties, and private lands adjacent to public lands	Sheridan County; Wyoming State Lands; FPDs/VFDs; LOAs/HOAs; local contractors	- Develop a centralized resource list with mitigation contractors, arborists, chipping/slash disposal options, available cost-share programs, Firewise resources, HIZ guidance, and local fire district contacts. - Include western-specific guidance for large parcels, steep slopes, forested lots, private roads, ranch infrastructure, and properties near federal or state lands. - Make resources available online and in printed format for residents with limited internet access. - Update funding and contractor information regularly and coordinate with WSFD and local fire districts to verify technical guidance. - Link resource materials to outreach campaigns, community meetings, HIZ assessments, and demonstration events.	Improves access to mitigation services and helps residents move from awareness to implementation.	- Review and update resource lists at least annually. - Track common resident questions and requests for assistance to identify gaps in available resources. - Remove outdated contractor, funding, or program information as needed.	- Community Wildfire Defense Grant Program - FEMA FMAG - Urban and Community Forestry Program - National Fire Plan - Western States Wildland Urban Interface Grant Program
FAC9	New	M	1 to 3 years	Host insurance and insurability education meetings for residents and community leaders.	Countywide	Sheridan County; Wyoming State Lands; insurance representatives/underwriters; LOAs/HOAs; FPDs/VFDs	- Coordinate one or more public meetings with insurance representatives, mitigation specialists, WSFD, and fire district partners to discuss wildfire risk, mitigation, and insurability concerns. - Provide residents with clear information on defensible space, home hardening, documentation of mitigation work, and questions to ask insurance providers. - Invite LOA/HOA leaders and Firewise candidate communities to participate so information can be shared at the neighborhood scale. - Connect insurance education to practical next steps, including HIZ assessments, chipping/slash programs, contractor resources, and Firewise participation. - Provide printed follow-up materials for residents who cannot attend or who have limited internet access.	Reduces community vulnerability by helping residents understand how mitigation actions may relate to insurance access, documentation, and risk reduction.	- Track meeting attendance, communities represented, common insurance concerns, and follow-up requests. - Update materials as insurance conditions, mitigation documentation expectations, or state guidance changes. - Use meeting feedback to refine HIZ outreach and resident resource materials.	- Community Wildfire Defense Grant Program - FEMA FP&S Grants - Western States Wildland Urban Interface Grant Program

COHESIVE STRATEGY GOAL 3: WILDFIRE RESPONSE

Goal 3 of the Cohesive Strategy/Western Regional Action Plan is Wildfire Response: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions:

A balanced wildfire response requires integrated pre-fire planning with effective, efficient, and coordinated emergency response. Pre-fire planning helps tailor responses to wildfires across jurisdictions and landscape units that have different uses and management objectives. Improved prediction and understanding of weather, burning conditions, and various contingencies during wildfire events can improve firefighting effectiveness, thereby reducing losses and minimizing risks to firefighter and public health and safety. Wildfire response capability will consider the responsibilities identified in the Federal Response Framework. Local fire districts and municipalities with statutory responsibility for wildland fire response are not fully represented throughout the existing wildland fire governance structure, particularly at the NWCG, National Multi-Agency Coordinating Group (NMAC), and Geographic Area Coordination Center (GACC) levels. (Western Regional Strategy Committee 2013:15)

In this CWPP, recommendations for safe and effective wildfire response focus on evacuation readiness, responder safety, interagency coordination, communications, access, water availability, pre-incident planning, and response capacity.

Recommendations for Safe and Effective Wildfire Response

Safe and effective wildfire response recommendations focus on improving the systems, infrastructure, planning, and coordination needed before and during wildfire incidents. These actions are not limited to fire suppression; they also include evacuation planning, emergency communications, water source identification, responder equipment, training, route maintenance, signage, livestock evacuation planning, tactical pre-planning, and post-fire recovery preparedness.

Examples of safe and effective wildfire response recommendations include:

- Developing evacuation planning and mapping for western, eastern, and urban core communities.
- Mapping entrapment hazards, pinch points, road constraints, and access limitations.
- Identifying and improving water sources for wildfire suppression, including hydrants, ponds, stock tanks, cisterns, drafting sites, and temporary water storage options.
- Acquiring wildland personal protective equipment (PPE), communications equipment, EMT gear, and other response equipment for fire protection districts and volunteer fire departments.
- Increasing interdepartmental pre-planning, training, tabletop exercises, and field drills.
- Improving emergency alert enrollment, redundant notification systems, and evacuation communication tools.
- Identifying livestock and pet evacuation options.
- Improving reflective signage, route maintenance, communications infrastructure, and tactical suppression pre-planning.
- Recommendations for improving fire response capabilities
- Supporting post-fire recovery planning for communities, watersheds, access corridors, and infrastructure.

Table 4.5. Recommendations to Support Safe and Effective Wildfire Response Recommendations

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
WR1		H	0 to 3 years	Evaluate and support long-term fire service staffing, funding, equipment, and coverage needs to maintain safe and effective response capacity	Sheridan County	County, County Fire Districts and Departments and Sheridan Fire-Rescue, FPDs	- Conduct a comprehensive assessment of the current staffing levels and allocate resources strategically, ensuring that staffing levels are a proper reflection of the scale of wildfire risk and current wildfire season. - Maintain and strengthen cooperation and mutual aid with neighboring jurisdictions and firefighting agencies through existing agreements, annual operating plans, and regular cross-border coordination meetings between Wyoming and Montana responders. - Increase the number of firefighting jobs and volunteer firefighting opportunities. - Improve collaboration/cooperation capabilities between firefighting agencies. - Train physically capable workers from other departments to fight fire on fire lines (e.g., roads, train workers from vegetation, wildlife, and weed crews). - Achieve funding through fundraising/grant applications (e.g., federal, state, local, and independent grants and private donations).	Improve local ability and self-reliance of Sheridan County fire managers to address its wildfire concerns, effectively leaning on partnerships where necessary. Reduce risk of loss of life and property from wildfire. Provide career growth opportunities for personnel and support succession planning.	Establish a regular review process to assess the effectiveness of staffing solutions and wildfire management strategies. Adapt staffing levels and approaches based on evolving wildfire risk. Provide annual online and in-person wildfire training classes/refreshers courses.	- SAFER - FEMA Assistance to Firefighters Grant Program (AFG)
WR2		H	0 to 3 years	Identify and map ingress, egress, evacuation, and emergency access constraints in WUI neighborhoods and other areas where limited road connectivity may affect wildfire response or evacuation.	Planning area-wide, WUI and AOCs	County Fire Districts and Departments and Sheridan Fire-Rescue; cities and towns; Sheridan County Sherriff's Office, FPDs; Sheridan County Emergency Management; Sheridan County GIS or Road Department; Public Works; local fire districts; HOAs; private road associations; and other response partners, as applicable.	- Use GIS road data, Core Team input, local fire department knowledge, and field or desktop review to identify access limitations. - Use GIS or ground survey to identify one-way-in/one-way-out roads, dead-end roads, narrow roads, steep roads, limited turnarounds, bridge constraints, private roads, seasonal access issues, and areas with limited alternative routes. - Prioritize WUI neighborhoods where forested terrain, slope, residential density, recreation access, or seasonal visitor use may complicate evacuation or emergency response. - Coordinate with HOAs, private road associations, neighborhood groups, and road owners to verify access constraints and identify potential improvements. - Use the resulting map or inventory to inform evacuation planning, public education, grant applications, prioritization of access or roadside mitigation projects, and development of public-facing evacuation information. - Evaluate commercial evacuation mapping and public information platforms, including Perimeter, for disseminating evacuation zones, road closures, access constraints, and other incident information to the public.	Improve understanding of evacuation and emergency access limitations, support safer ingress for responders and egress for residents, and identify priority locations for access improvements, roadside vegetation management, signage, or outreach.	Review and update the access constraints inventory as road networks, development patterns, vegetation conditions, and response needs change. Track completed access improvements, roadside mitigation projects, signage updates, and related outreach actions.	- CWDG - BRIC - FEMA Hazard Mitigation Grant Program
WR3		M	1 to 5 years	Develop a pre-incident wildfire response atlas that identifies operational features needed to support wildfire response, evacuation, public safety, and incident management.	Planning area-wide, with emphasis on utility corridors, AOCs, and remote high-risk areas	County Fire Districts and Departments and Sheridan Fire-Rescue; cities and towns; FPDs; Sheridan County Emergency Management; Police Departments; Sheridan County Sheriff's Office; local fire districts; USFS; WSFD; EMS; utility providers; public works; and Interagency Dispatch.	- Map potential incident command post locations, staging areas, safety zones, EMS staging areas, helispots, water sources, draft sites, standpipes, radio repeaters, and communication considerations. - Include traffic control points, road constraints, evacuation considerations, bridge limitations, gates, turnarounds, and access limitations identified through. - Identify water supply needs within the Sheridan Area Rural Fire Protection District and other areas where water access may be limited. - Coordinate with public works, utility providers, landowners, and response agencies to verify operational data. - Develop map products that can support pre-incident planning, tabletop exercises, and incident response. - Update the response atlas as infrastructure, access, water sources, bridge limitations, and operational needs change. - Coordinate and execute POD) workshops.	Improve situational awareness, support pre-incident planning, identify operational resource needs, and help response agencies coordinate staging, access, water supply, communications, and public safety needs.	Review and update the response atlas annually or after major infrastructure, road, development, staffing, or communication system changes. Verify mapped features with response partners before each fire season.	- FEMA Homeland Security Grant Program - AFG - CWDG

Project ID	Status	Priority (H,M,L)	Timeline for Action	Project Description	Location	Land Ownership/ Lead Agency	Methodology/Approach	Serves To:	Monitoring/Maintenance Requirements	Funding Sources
WR4		H	0 to 1 year	Improve high wind, red flag fire weather, and utility-related wildfire response coordination to support information sharing, incident readiness, and coordinated response during conditions when downed lines, outages, or wind-driven fire could affect public safety.	Planning area-wide, with emphasis on utility corridors, AOCs, and remote high-risk areas.	Montana-Dakota Utilities Company, Powder River Energy, Big Horn Electric Coop, City of Hardin, MT; County Fire Districts and Departments and Sheridan Fire-Rescue; cities and towns; FPDs; Sheridan County Emergency Management; Interagency Dispatch; WSFD; USFS; Police Departments; Sheridan County Sheriff's Office; and local fire districts.	• Maintain current utility liaison contacts for wildfire, high-wind, outage, and downed-line incidents. • Coordinate annually with electric utilities to review relevant provisions of their wildfire mitigation plans, including red flag conditions, high-wind response, operational trigger points, de-energization procedures, and emergency communication protocols. • Establish procedures for two-way information sharing between utilities, fire agencies, emergency management, law enforcement, dispatch, and municipal staff during elevated fire weather and utility-related incidents.. • Coordinate geocoded notifications and public messaging during utility-related incidents where appropriate. • Include windstorm-followed-by-wildfire and utility-outage scenarios in tabletop exercises. • Coordinate this recommendation with utility corridor mitigation under RL7.	Improve coordination during high wind and utility-related wildfire conditions, support faster information sharing, reduce response uncertainty, and help agencies prepare for simultaneous outage, access, and wildfire concerns.	Review utility coordination contacts and procedures annually before fire season. Conduct after-action reviews and update protocols after major wind events, outages, wildfire incidents, utility infrastructure changes, or tabletop exercises.	• FEMA Homeland Security Grant Program • AFG • Utility wildfire mitigation or vegetation management funding
WR5	New	M	1 to 3 years	Increase inter-department and interagency pre-event coordination and planning	Countywide	County Fire Districts and Departments and Sheridan Fire-Rescue; FPDs; WSFD, USFS, BLM	• Establish annual pre-season planning meeting or event to bring together all response resource leaders prior to summer fire season • Collaboratively discuss response resources, needs, overlap of response, and jurisdictional planning • Establish protocols for resource and information sharing between departments and agencies • Identify high-concern areas prior to season • Identify collaborative treatment priorities and timing for the year	Improves collaboration and understanding of capacity between agencies. Improves trust in mutual aid. Identifies potential hazard areas prior to fire season	Complete annual meeting and report out discussion topics, updates, hazard ID	• FEMA Homeland Security Grant Program • AFG



CHAPTER 5 – MONITORING AND EVALUATION STRATEGY

CHAPTER CONTENTS

CWPP Evaluation

Timeline for Updating the CWPP

Wildfires have continued to grow in size and severity over the last decade, requiring fire managers to institute more robust pre-fire planning, as well as adapt and improve decision-making tools to reduce risk to fire responders and the public and assess impacts to ecological processes.



SUMMARY BOX: CHAPTER 5 MONITORING AND EVALUATION STRATEGY

Why This Chapter Matters

Chapter 5 ensures the CWPP remains effective, accountable, and adaptable over time. Monitoring helps determine whether mitigation actions are meeting plan goals and informs future decisions.

Purpose of Monitoring

Monitoring is used to:

- Track progress toward CWPP goals and priorities
- Evaluate whether treatments are achieving intended outcomes
- Identify unintended ecological or community impacts
- Inform adaptive management by adjusting actions based on results
- Track implementation of mitigation actions and preparedness efforts

Monitoring Strategies

- Fuel treatment effectiveness and maintenance needs
- Vegetation recovery and regrowth over time
- Ecological effects, such as invasive species composition, soil movement, or wildlife impacts
- Changes in policy, preparedness, and implementation capacity
- Community engagement and education outcomes

Community Wildfire Protection Plan Update Evaluation

Evaluation is used to:

- Assess whether CWPP goals and actions are achieving desired outcomes
- Identify changes in wildfire risk, community conditions, and priorities
- Determine whether modifications to strategies or actions are needed
- Inform future plan updates and revisions

Timeline for Updating the CWPP

- Annual Core Team check-ins are encouraged
- A full CWPP update is recommended every 5 years
- Updates should align with the County's Annex to the Region 1 Hazard Mitigation Plan when possible

Key Takeaways

Monitoring is not one-size-fits-all. It is a scalable tool that supports learning, accountability, and continuous improvement of wildfire mitigation efforts.

Monitoring and Evaluation

All stakeholders and signatories to this CWPP desire worthwhile outcomes. It is also known that risk reduction work on the ground is often not attainable in a few months—or even years. The amount of money and effort invested in implementing a plan such as this requires a means to describe, quantitatively and/or qualitatively, if the goals and objectives in this plan are being accomplished according to expectations.

Monitoring and reporting contribute to the long-term evaluation of ecosystem change and increase knowledge about how natural resource management decisions affect the environment and the people who live in it. It is important that monitoring protocols are developed with specific regions and project types in mind to maintain the accuracy and effectiveness of monitoring data. Although the HFRA does not include specified requirements for CWPP project tracking, it is important that project outcomes are monitored and evaluated regularly. Furthermore, as the CWPP evolves over time, there may be a need to track changes in policy, requirements, stakeholder changes, and levels of preparedness. This information can be significant for any future revisions and/or addendums to the CWPP.

CWPP Evaluation

CWPPs are intended to provide information, guidance, and recommendations to reduce the risk of wildfire damaging a community and the environment. However, as communities change through development and vegetation, so does the risk of wildfire. The recommendations and methods to reduce risk must be dynamic to keep pace with changes in the WUI and the fire environment; therefore, consistent evaluations of the CWPP are imperative. Additionally, recently published research and case studies regarding wildfire risk should be considered when evaluating the CWPP.

STEPS TO EVALUATE A CWPP

1

IDENTIFY OBJECTIVES:

What are the goals identified in the plan?
How are they reached? Is the plan performing as intended?



- Structural ignitability
- Fuel treatments (landscape and home ignition zone)
- Public education and outreach
- Multi-agency collaboration
- Emergency notifications/response

2

ASSESS THE CHANGING ENVIRONMENT:

How have population characteristics and the wildfire environment changed?



Population change

- Increase or decrease
- Visitor levels
- Demographics

Population settlement patterns

- Distribution
- Expansion into the WUI

Vegetation

- Fuel quantity and type
- Drought and disease impacts

3

REVIEW ACTION ITEMS:

Are actions consistent with the plan's objectives?



- Check for status, i.e., completed/started/not started
- Identify completed work and accomplishments
- Identify lessons learned, challenges, and best practices
- Identify next steps congruent with other hazard mitigation planning efforts

4

ASSESS RESULTS:

What are the outcomes of the action items?



Multi-agency collaboration

- Who was involved in the development of the CWPP?
- Have partners involved in the development process remained involved in the implementation?
- How has the planning process promoted implementation of the CWPP?
- Have CWPP partnerships and collaboration had a beneficial impact to the community?

Risk-hazard assessment

- How is the risk-hazard assessment utilized to make decisions about fuel treatment priorities?
- Have there been new wildfire-related regulations?
- Are at-risk communities involved in mitigating wildfire risk?

Hazardous fuels

- How many acres have been treated?
- How many projects are cross-boundary?
- How many residents have participated in creating defensible space?

Structural ignitability

- Have there been updates to fire codes and ordinances?
- How many structures have been lost to wildfire?
- Has the CWPP increased public implementation of structural ignitability and hazard reduction strategies?

Public education and outreach

- Has public awareness of wildfire and mitigation strategies increased?
- Have residents, visitors, and second homeowners been involved in wildfire mitigation activities?
- Has there been public involvement?
- Have vulnerable populations been involved?

Emergency response

- Has the CWPP been integrated into relevant plans (e.g., hazard mitigation or emergency operations)?
- Is the CWPP congruent with other hazard mitigation planning efforts?
- Has availability and capacity of local fire departments changed since the CWPP was developed?
- Have egress routes been publicized and mitigated?

TIMELINE FOR UPDATING THE CWPP

The HFRA allows for maximum flexibility in the CWPP planning process, permitting the Core Team to determine the time frame for updating the CWPP. However, it is suggested that a formal revision be made on the fifth anniversary of signing and every 5 years following. Furthermore, due to the dynamic nature of wildfire mitigation and the natural landscape, several triggers may warrant a CWPP update before the 5-year mark. Among these triggers are an extensive wildfire or another disaster event, changes to the local planning outlook (e.g., significant update to the hazard mitigation plan), and local adoption of new wildfire-related codes and ordinances. The Fuels Mitigation Committee, a subsect of the planning Core Team, is encouraged to meet annually to review the project list, discuss project successes, strategize regarding project implementation funding, and determine whether a plan revision is needed.

DRAFT

ACRONYMS AND ABBREVIATIONS

AFG	Assistance to Firefighters Grant Program
AHJ	Authority Having Jurisdiction
AOC	area of concern
ATV	all-terrain vehicle
BAER	Burned Area Emergency Response
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BRIC	Building Resilient Infrastructure and Communities
CAFA	Community Assistance Funds Adjacent
CAS	Casualty Actuarial Society
CMAT	Community Mitigation Assistance Team
CWDG	Community Wildfire Defense Grant
CWPP	community wildfire protection plan
DBH	diameter at breast height
DEM	Department of Emergency Management
DEQ	Department of Environmental Quality
DOI	U.S. Department of the Interior
DRC	diameter at root collar
EA	environmental assessment
ECP	Emergency Conservation Program
EFRP	Emergency Forest Restoration Program
EMPG	Emergency Management Performance Grant
EMS	emergency medical services
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FMA	Flood Mitigation Assistance
FMAG	Fire Management Assistance Grant
FPD	fire protection district
FP&S	Fire Prevention and Safety
GIS	geographic information system
HFRA	Healthy Forests Restoration Act of 2003
HIZ	home ignition zone
HMGP	Hazard Mitigation Grant Program
HOA	homeowners association
HUC	hydrologic unit code
HVRAs	Highly Valued Resources and Assets

IBHS	Insurance Institute for Business & Home Safety
IFTDSS	Interagency Fuel Treatment Decision Support System
ICS	Incident Command System
ISO	Insurance Services Office
LOA	Land Owner Agent
LSR	Landscape Scale Restoration
MFRI	mean fire return interval
NAFSR	National Association of Forest Service Retirees
NCEI	National Centers for Environmental Information
NFP	National Fire Plan
NFPA	National Fire Protection Association
NIFC	National Interagency Fire Center
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NWCG	National Wildfire Coordinating Group
OHV	off-highway vehicle
OSLI	Office of State Lands and Investments
PFCG	Post-Fire Coordination Group
POD	Potential Operational Delineation
PPE	personal protective equipment
PRECorp	Powder River Energy Corporation
QWRA	Quantitative Wildfire Risk Assessment
RAWS	remote automated weather station
RCP	Regional Catastrophic Preparedness
RFD	rural fire department
RMACC	Rocky Mountain Area Coordination Center
RMP	resource management plan
ROW	right-of-way
SAF	Society of American Foresters
SAFER	Staffing for Adequate Fire and Emergency Response
SCEOP	Sheridan County Emergency Operations Plan
SCLT	Sheridan Community Land Trust
USDA	U.S. Department of Agriculture
USFA	U.S. Fire Administration
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VFD	volunteer fire department
WFCFA	Western Fire Chiefs Association

WGFD	Wyoming Game and Fish Department
WiRē	Wildfire Research Center
WRCC	Western Regional Climate Center
WSFD	Wyoming State Forestry Division
WUI	wildland-urban interface
WYNDD	Wyoming Natural Diversity Database

DRAFT

REFERENCES

- After Wildfire New Mexico (NM). N.d. Available at: <https://afterwildfirenm.org/post-fire-treatments/treatment-descriptions/channel-treatments>. Accessed July 2026.
- Beal, D., A. Titterton, and J. Lee. 2024. Burned Area Emergency Response (BAER) Assessment. Final Specialist Report – Geologic Hazards Elk Fire. Accessed June 2026.
- Bureau of Land Management (BLM). 2015. *Buffalo Field Office Approved Resource Management Plan*. Available at: https://dn790006.ca.archive.org/0/items/buffalofieldoffi00unse/BufferaloFieldOffice_Aproved_RMP_2015.pdf. Accessed March 2026.
- . 2026a. BLM public safety notice: Coal seam fires in northern Campbell and Sheridan Counties. Available at: <https://www.blm.gov/announcement/blm-public-safety-notice-coal-seam-fires-northern-campbell-and-sheridan-counties>. Accessed June 2026.
- . 2026b. BLM Wyoming Fire Information. Available at: <https://www.blm.gov/programs/fire/regional-info/wyoming>. Accessed June 2026.
- Calkin, D. E., Barrett, K., Cohen, J. D., Finney, M. A., Pyne, S. J., & Quarles, S. L. 2023. Wildland-urban fire disasters aren't actually a wildfire problem. *Proceedings of the National Academy of Sciences*, 120(51). Available at: <https://doi.org/10.1073/pnas.2315797120>. Accessed April 2026.
- Cambria Conservation District. 2025. Stream Restoration. Available at: <https://cambriacconservationdistrict.org/stream-restoration>. Accessed July 2026.
- Casualty Actuarial Society (CAS). 2023. Mitigation That Matters: A Wildfire Case Study. Available at: <https://ar.casact.org/mitigation-that-matters-a-wildfire-case-study/#:~:text=Key%20findings%20include%3A,the%20next%20most%20impactful%20action>. Accessed June 2026.
- City of Sheridan. 2025. Chapter 11 - Fire Protection. Available at: https://library.municode.com/wy/sheridan/codes/city_code?nodeId=CH11FIPR. Accessed March 2026.
- Clark, P.E., B.A. Porter, M. Pellant, K. Dyer, and T.P. Norton. 2023. Evaluating the efficacy of targeted cattle grazing for fuel break creation and maintenance. *Rangeland Ecology and Management* 89(1):69–86. Available at: https://www.researchgate.net/profile/Mike-Pellant-2/publication/369430573_Evaluating_the_Efficacy_of_Targeted_Cattle_Grazing_for_Fuel_Break_Creation_and_Maintenance/links/6a263f73acb3fc46368bd822/Evaluating-the-Efficacy-of-Targeted-Cattle-Grazing-for-Fuel-Break-Creation-and-Maintenance.pdf. Accessed April 2026.
- Coalition for the Upper South Platte (CUSP). 2016. *Strategic Plan 2016 – 2026*. Available at: <https://cusp.ws/wp-content/uploads/2018/04/Strategic-Plan-2016WEB.pdf>. Accessed August 2026.
- Colorado Forest Service. 2021. The Home Ignition Zone: A guide to preparing your home for wildfire and creating defensible space. Available at: https://csfs.colostate.edu/wp-content/uploads/2021/04/2021_CSFS_HIZGuide_Web.pdf. Accessed July 2026.
- Cowboy State Daily. 2024. After 7 Weeks And 100,000 Acres Burned, Elk Fire Is 100% Contained. Available at: <https://cowboystatedaily.com/2024/11/15/elk-fire-100-contained-but-locals-will-talk-about-it-for-generations/>. Accessed June 2026.

- Evans, A., S. Auerbach, L.W. Miller, R. Wood, K. Nystrom, J. Loevner, A. Argon, M. Piccarello, and E. Krasilovsky. 2015. Evaluating the Effectiveness of Wildfire Mitigation Activities in the Wildland Urban Interface. Forest Guild, October 2015. Available at: https://www.researchgate.net/publication/283327378_Evaluating_the_Effectiveness_of_Wildfire_Mitigation_Activities_in_the_Wildland-Urban_Interface. Accessed June 2026.
- Federal Emergency Management Agency (FEMA). 2023. *National Disaster Recovery Framework*. Available at: <https://www.fema.gov/emergency-managers/national-preparedness/frameworks/recovery>. Accessed June 2026.
- . 2025. National Incident Management System. Available at: <https://www.fema.gov/emergency-managers/nims>. Accessed June 2026.
- Forests and Rangelands. 2023. *National Cohesive Wildland Fire Management Strategy Addendum Update*. Available at: <https://www.forestsandrangelands.gov/documents/strategy/natl-cohesive-wildland-fire-mgmt-strategy-addendum-update-2023.pdf>. Accessed March 2026.
- Graham, R., S. McCaffrey, and T. Jain. 2004. Science Basis for Changing Forest Structure to Modify Wildfire Behavior and Severity. Gen. Tech Rep. RMRS-GTR-120. Fort Collins, Colorado: U.S. Department of Agriculture Forest Service, Rocky Mountain Research Station. Available at: https://www.researchgate.net/publication/299656490_Science_basis_for_changing_forest_structure_to_modify_wildfire_behavior_and_severity. Accessed June 2026.
- Groundforce. 2022. Riprap Soil Stabilization San Diego. Available at: <https://groundforcecrew.com/riprap-san-diego/>. Accessed July 2026.
- Insurance Institute for Business & Home Safety (IBHS). 2023. The Return of Conflagration in Our Built Environment. Available at: <https://ibhs.org/wildfire/returnconflagration/>. Accessed June 2026.
- Interagency Fuel Treatment Decision Support System (IFTDSS). 2025. The Interagency Fuel Treatment Decision Support System. Available at: <https://iftdss.firenet.gov/iftdss2/#!/landing>. Accessed January 2026.
- International Association of Fire Chiefs (IAFC). 2025. Ready, Set, Go! Available at: https://www.wildlandfirersg.org/s/are-you-wildfire-ready?language=en_US. Accessed July 2026.
- Jain, T., P. Sikkink, R. Keefe, and J. Byrne. 2018. To masticate or not: Useful tips for treating forest, woodland, and shrubland vegetation. Gen. Tech. Rep. RMRS-GTR-381. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 55 p. Available at: <https://doi.org/10.2737/RMRS-GTR-381>. Accessed June 2026.
- Keyes, C.R., T.E. Perry, E.K. Sutherland, D.K. Wright, and J.M. Egan. 2014. Variable-retention harvesting as a silvicultural option for lodgepole pine. *Journal of Forestry* 112(5):440–445. Available at: <https://doi.org/10.5849/jof.13-100>. Accessed June 2026.
- Leverkus, A. B., Gustafsson, L., Lindenmayer, D. B., Castro, J., Benayas, J. M. R., Ranius, T., & Thorn, S. 2020. Salvage logging effects on regulating ecosystem services and fuel loads. *Frontiers in Ecology and the Environment*, 18(7), 391–400. <https://www.jstor.org/stable/26986287>.
- Moore, A., K.T. Davis, J. Peeler, and J. Fargione. 2024. Rocky Mountain Research Station Science you Can Use, Burning Questions Answered: New Review Examines 30 years of Fuel Treatment Effects on Wildfire Severity. Available at: https://www.fs.usda.gov/rm/pubs_journals/rmrs/sycu/2024/sycu5_2024_06_burning_questions.pdf. Accessed July 2026.
- Napper, C. 2006. *Burned Area Emergency Response Treatments Catalog*. Available at: https://www.fs.usda.gov/eng/pubs/pdf/BAERCAT/lo_res/06251801L.pdf. Accessed July 2026.

- National Association of Forest Service Retirees (NAFSR). 2021. Forest thinning and prescribed fire. Available at: <https://nafsr.org/docs/2021/Forest%20Thinning%20and%20Prescribed%20Fire%20121221.pdf>. Accessed June 2026.
- National Centers for Environmental Information (NCEI). 2026. Climate at a Glance: County Time Series, Sheridan County, Wyoming. Available at: <https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series/WY-033/tavg/48/0/2006-2025>. Accessed June 2026.
- National Fire Protection Association (NFPA). 2013. Standard for Reducing Structure Ignition Hazards from Wildland Fire. Available at: <https://www.nfpa.org/codes-and-standards/nfpa-1144-standard-development/1144?l=214>. Accessed May 2026.
- . 2023. *Get Ready - Wildfires*. Preparing Your Community for a Disaster. https://www.nfpa.org/-/media/Files/Public-Education/Resources/Community-tool-kits/Get-Ready/fact/e/Get_Ready_Wildfires.ashx. Accessed June 2026.
- . 2025. What is the Home Ignition Zone? Available at: <https://www.nfpa.org/news-blogs-and-articles/blogs/2025/01/06/what-is-the-wildfire-home-ignition-zone>. Accessed June 2026.
- National Interagency Fire Center (NIFC). 2026a. NIFC Open Data Site. Available at: <https://data-nifc.opendata.arcgis.com/>. Accessed June 2026.
- . 2026b. Post Fire Recovery. Available at: <https://www.nifc.gov/programs/post-fire-recovery>. Accessed June 2026.
- National Integrated Drought Information System (NIDIS). 2026. Drought Conditions for Sheridan County. Available at: <https://www.drought.gov/states/wyoming/county/sheridan>. Accessed June 2026.
- National Institute of Standards and Technology (NIST). 2023. WUI Definitions. Available at: <https://www.nist.gov/el/fire/resources/hazard-mitigation-methodology-hmm/why-implement-hmm-your-community/wui-definitions>. Accessed June 2026.
- National Oceanic and Atmospheric Administration (NOAA). 2026a. NowData. Available at: <https://www.weather.gov/wrh/Climate?wfo=byz>. Accessed April 2026.
- . 2026b. Mountain and Valley Winds. Available at: <https://www.weather.gov/safety/wind-mountain-valley>. Accessed June 2026.
- National Weather Service. 2026. Flight Environment: Prevailing Winds. Available at: https://www.weather.gov/source/zhu/ZHU_Training_Page/winds/Wx_Terms/Flight_Environment.htm. Accessed June 2026.
- National Wildfire Coordinating Group (NWCG). 2021. Fire Weather: 3. Atmospheric Moisture. PMS 425-1. Available at: <https://www.nwcg.gov/publications/pms425-1/3-atmospheric-moisture>. Accessed June 2026.
- . 2020. Smoke Management Guide for Prescribed Fire. Available at: <https://www.nwcg.gov/publications/420-3>. Accessed June 2026.
- Natural Resources Conservation Service (NRCS). 2012. Hydromulching. Available at: <https://co-co.org/wp-content/uploads/2018/07/2012-Hydromulching-Fact-Sheet.pdf>. Accessed July 2026.
- Northern Wyoming News. 2023. Bighorn National Forest plans fall prescribed burns. Available at: <https://www.wyodaily.com/story/2023/09/14/news/bighorn-national-forest-plans-fall-prescribed-burns/14791.html>. Accessed June 2026.
- Office of State Lands and Investments (OSLI). 2024a. Frequently asked questions. Available at: <https://lands.wyo.gov/resources/frequently-asked-questions>. Accessed March 2026.

- . 2024b. Trust land management. Available at: <https://lands.wyo.gov/trust-land-management>. Accessed March 2026.
- Oil City News. 2024. BLM to burn slash piles in Bighorn Mountains. Available at: <https://oilcity.news/wyoming/2024/11/24/blm-to-burn-slash-piles-in-the-bighorn-mountains/>. Accessed June 2026.
- Ouellet, N. 2018. After Wildfires, Burned Area Rehab Means More Than Tree Planting. Available at: <https://www.mtpr.org/montana-news/2018-08-08/after-wildfires-burned-area-rehab-means-more-than-tree-planting>. Accessed July 2026.
- Quivira Coalition. 2013. Erosion Control Field Guide. Available at: <https://www.watershedartisans.com/wp-content/uploads/2016/03/Erosion-Control-Field-Guide.pdf>. Accessed July 2026.
- Ready.gov. 2024. Incident Management. Available at: <https://www.ready.gov/business/resources/incident-management>. Accessed June 2026.
- Scott, J.H., and R.E. Burgan. 2005. *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model*. USDA Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-153. Available at: https://www.fs.usda.gov/rm/pubs/rmrs_gtr153.pdf. Accessed April 2026.
- Scott, J.H. Thompson, M. P. Calkin, D.E. 2013. A Wildfire Risk assessment Framework for Land and Resource Management. Available at: https://www.researchgate.net/publication/286186231_A_Wildfire_Risk_Assessment_Framework_for_Land_and_Resource_Management. Accessed December 2025.
- Sheridan Community Land Trust (SCLT). 2026. SCLT Big Goose Natural Area. Available at: <https://sheridanc.lt/org/sclt-big-goose-natural-area/>. Accessed June 2026.
- Slashbuster. 2026. Forestry Equipment for a Slash Building Alternative. Available at: <http://www.slashbuster.com/forestry.htm>. Accessed July 2026.
- Sheridan County. 2020. Sheridan County Comprehensive Plan. Available at: <https://cms2.revize.com/revize/sheridan/Document%20Center/Departments/Planning/2020%20Comprehensive%20Plan/Appendix%20A.pdf>. Accessed March 2026.
- . 2024. *Sheridan County Multi-Hazard Mitigation Plan 2024*. Available at: https://www.sheridancountywy.gov/departments/emergency_management/sheridan_county_multi_hazard_mitigation_plan_2024.php. Accessed April 2026.
- . 2025a. Media Release - Partial Fire Restrictions July 2025. Available at: https://www.sheridancountywy.gov/news_detail_T10_R119.php. Accessed March 2026.
- . 2025b. Sheridan County Fuels Mitigation Program: Wildfire Awareness Newsletter. Available at: <https://cms2.revize.com/revize/sheridan/News%20Items/2025/Wildfire%20Newsletter/2025%20SHX%20Wildfire%20Awareness%20Newsletter.pdf>. Accessed March 2026.
- . 2025c. Sheridan County Travel and Tourism Local Industry Update, July 2025. Available at: <https://www.sheridanwyoming.org/wp-content/uploads/2025/07/2025-Q3-Summer-Industry-Update.pdf>. Accessed June 2026.
- . 2026a. Emergency Operations Plan (SCEOP). Available at: <https://cms2.revize.com/revize/sheridan/Document%20Center/Departments/Emergency%20Management/Sheridan%20County%20EOP%20Final%202026.pdf?t=202605191224250&t=202605191224250>. Accessed June 2026.

- . 2026b. Sheridan County Parks. Available at: <https://storymaps.arcgis.com/stories/85a0883b535040d89b597393bec00330>. Accessed June 2026.
- . 2026c. Evacuations and READY, SET, GO. Available at: https://www.sheridancountywy.gov/departments/emergency_management/evacuation.php. Accessed July 2026.
- Sheridan Fire-Rescue. 2024. 2024 Long-Range Master Plan. Available at: https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_14895975/File/%20Government/Fire-Rescue/2024%20Long-Range%20Master%20Plan%20Approved.pdf. Accessed July 2026.
- Society of American Foresters (SAF). 2004. Preparing a Community Wildfire Protection Plan: A Handbook for Wildland Urban Interface Communities. Sponsored by Communities Committee, National Association of Counties, National Association of State Foresters, Society of American Foresters, and Western Governors' Association. Available at: <https://www.forestsandrangelands.gov/documents/resources/communities/cwpphandbook.pdf>. Accessed February 2026.
- Sponholtz, C. and A.C. Anderson. 2010. Erosion Control Field Guide. Available at: <http://www.watershedartisans.com/wp-content/uploads/2016/03/Erosion-Control-Field-Guide.pdf>. Accessed July 2026.
- State of Wyoming. 2024. *Region 1: Regional Hazard Mitigation Plan 2024-2029*. Available at: <https://cms2.revize.com/revize/sheridan/Document%20Center/Departments/Emergency%20Management/Multi-Hazard%20Mitigation/Wyoming%20Region%201%20Hazard%20Mitigation%20Plan%202024-2029.pdf?t=202407261002100&t=202407261002100>. Accessed June 2026.
- Storror, K. 2013. Effectiveness of Straw Bale Check Dams at Reducing Post-Fire Sediment Yields from Ephemeral Channel Catchments. Available at: <https://www.semanticscholar.org/paper/EFFECTIVENESS-OF-STRAW-BALE-CHECK-DAMS-AT-REDUCING-Storror/af77ebd4295576de658fd18c6582a058abf19f40>. Accessed July 2026.
- U.S. Census Bureau. 2025a. QuickFacts: Sheridan County, Wyoming; United States. Available at: <https://www.census.gov/quickfacts/fact/table/sheridancountywyoming,US/PST045224#qf-flag-NA>. Accessed February 2026.
- . 2025b. QuickFacts: Sheridan City, Wyoming; United States. Available at: <https://www.census.gov/quickfacts/fact/table/sheridancitywyoming,US/PST045225#qf-flag-X>. Accessed February 2026.
- U.S. Department of Agriculture (USDA). 2022. Plants Database. Available at: <https://plants.usda.gov/>. Accessed June 2026.
- U.S. Department of the Interior (DOI) and U.S. Department of Agriculture (USDA). 2001. Urban Wildland Interface Communities within Vicinity of Federal Lands that are at High Risk from Wildfire. *Federal Register* 66(3):751–777.
- U.S. Fire Administration (USFA). 2022. What is the WUI? Available at: <https://www.usfa.fema.gov/wui/what-is-the-wui/>. Accessed April 2026.
- U.S. Forest Service (USFS). 2000. Bighorn National forest Inventories Roadless Areas. Available at: <https://www.fs.usda.gov/sites/default/files/roadless-map-inventoried-areas-wyoming-bighorn-fsmrs-072267.pdf>. Accessed June 2026.
- . 2005. Bighorn National Forest Revised Land and Resource Management Plan. Available at: <https://www.fs.usda.gov/r02/bighorn/planning>. Accessed March 2026.

- . 2006. BAER Burned Area Emergency Response Treatments Catalog. Available at: https://www.fs.usda.gov/eng/pubs/pdf/BAERCAT/lo_res/06251801L.pdf. Accessed July 2026.
- . 2011. Watershed Condition Framework. Available at: https://www.fs.usda.gov/sites/default/files/Watershed_Condition_Framework.pdf. Accessed June 2026.
- . 2018. Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy. Available at: <https://www.nwfirescience.org/sites/default/files/publications/toward-shared-stewardship.pdf>. Accessed March 2026.
- . 2021. Shared Stewardship Overview. Available at: <https://www.fs.usda.gov/managing-land/shared-stewardship>. Accessed March 2026.
- . 2025. Bighorn National Forest Firefighting Resources. Available at: <https://www.fs.usda.gov/r02/bighorn/fire/resources>. Accessed June 2026.
- . 2026a. Forest Management – Bighorn National Forest. Available at: <https://www.fs.usda.gov/r02/bighorn/natural-resources/forest-management>. Accessed March 2026.
- . 2026b. Bighorn Recreation. Available at: <https://www.fs.usda.gov/r02/bighorn/recreation>. Accessed June 2026.
- . 2026c. Fire Effects Information System. Available at: <https://research.fs.usda.gov/feis>. Accessed November 2025.
- University of Wyoming. 2020. A Homeowners Guide: Understanding Defensible Space and Wildfire Preparedness. Available at: https://www.uwyo.edu/barnbackyard/_files/documents/magazine/2020/summer/0720defensiblespace.pdf. Accessed June 2026.
- University of Wyoming Extension. 2017. Living with Wildfire in Wyoming Guide. Available at: <https://drive.google.com/file/d/0BxgGvgRMOUrUWmptenIIZXJYeI/view?resourcekey=0-LCjVYTDCCP0V9xPxIZytEg>. Accessed June 2026.
- . 2020. *Wyoming Prescribed Burning Regulations*. Available at: <https://wyoextension.org/publications/html/B1354/>. Accessed June 2026.
- Western Fire Chiefs Association (WFCA). 2024. How do wildfires affect communities? Available at: <https://wfca.com/wildfire-articles/how-do-wildfires-affect-the-community/>. Accessed June 2026.
- Western Regional Climate Center (WRCC). 2025. RAWS USA Climate Archive. Available at: <https://raws.dri.edu/index.html>. Accessed June 2026.
- Western Regional Strategy Committee. 2013. *The National Cohesive Wildland Fire Management Strategy: Phase III, Western Regional Action Plan*. Available at: https://www.forestsandrangelands.gov/documents/strategy/rsc/west/WestRAP_Final20130416.pdf. Accessed June 2026.
- Wheeler, Catherine. 2020. *In Grasslands Plagued by Invasives and Drought, Wildfires Fuel Calls for New Solutions*. Available at: <https://www.kunc.org/2020-10-21/in-grasslands-plagued-by-invasives-and-drought-wildfires-fuel-calls-for-new-solutions>. Accessed June 2026.
- Wyoming Department of Environmental Quality (DEQ). 2026a. *Smoke Management and Open Burning*. Available at: <https://deq.wyoming.gov/aqd/smoke-management-and-open-burning/>. Accessed June 2026.
- . 2026b. *Open Burning Program*. Available at: <https://deq.wyoming.gov/aqd/smoke-management-and-open-burning/open-burning/>. Accessed June 2026.

- Wyoming Game and Fish Department (WGFD). 2025. Grazing Management. Available at: <https://wgfd.wyo.gov/habitat/habitat-information>. Accessed June 2026.
- . 2026. Wildlife Habitat Management Area. Available at: <https://wgfd.wyo.gov/Public-Access/WHMA>. Accessed June 2026.
- Wyoming Natural Diversity Database (WYNDD). 2026. Wyoming Species List. Available at: https://wyndd.org/species_list/?columns=sciname%2Ccomname%2Csynonyms%2Ctaxgroup%2Ctaxgroup%2Cblm_wy%2Cg_rank%2Cs_rank%2Cusfws_esa%2Cusfs_sens%2Cusfs_solc%2Cwgfd_sgc%2Cwy_contrib%2Cwyndd_soc%2Cwy_occur%2Cwy_origin. Accessed June 2026.
- Wyoming Office of Homeland Security. 2026.
- Wyoming Rangelands. 2026. Wyoming Ecoregions. Available at: <https://uwyoextension.org/uwrange/rangeland-resources/wyoming-ecoregions/>. Accessed June 2026.
- Wyoming State Forestry Division (WSFD). 2020. Wyoming Forest Action Plan. Available at: <https://wsfd.wyo.gov/forest-management/Forest-Action-Plan>. Accessed February 2026.
- . 2022. Wyoming Cooperative Wildland Fire Management and Stafford Act Response Agreement. Available at: <https://wsfd.wyo.gov/fire-management/fire-business>. Accessed June 2026.
- . 2024. 2024 Wyoming Forest Health Highlights. Available at: https://www.fs.usda.gov/foresthealth/docs/fhh/WY_FHH_2024.pdf. Accessed June 2026.
- . 2025. *Wyoming State Forestry Division Strategic Plan 2025-2030*. Available at: <https://wyoleg.gov/InterimCommittee/2025/SFR-202506196-04WyomingStateForestryDivisionStrategicPlan2025-2030.pdf>. Accessed March 2026.
- . 2026. *County Fire Wardens*. Available at: <https://wsfd.wyo.gov/fire-management/county-fire-wardens>. Accessed June 2026.
- . 2019. Wyoming Smokebusters & Forestry Conservation Program. Available at: <https://wsfd.wyo.gov/fire-management/forestry-conservation-program>. Accessed June 2026.
- Yochum, S., and J. Norman. 2015. Wildfire-Induced Flooding and Erosion-Potential Modeling: Examples from Colorado, 2012 And 2013. Available at: https://www.fs.usda.gov/biology/nsaec/assets/yochum_sedhyd-2015_proceedings_wildfirehydrologyco2012-2013.pdf. Accessed June 2026.
- Zeltwanger, J.J., S. Springer, and M.H. Strobins. 2001. Climate of Sheridan, Wyoming. Available at: <https://repository.library.noaa.gov/view/noaa/6407>. Accessed June 2026.
- Zimmerman, G.T, and P.N. Omi. 1998. Fire restoration options in lodgepole pine ecosystems. In *Fire in Ecosystem Management: Shifting the Paradigm from Suppression to Prescription*, edited by T.L. Pruden and L.A. Brennan. Tall Timbers Fire Ecology Conference Proceedings, No. 20. Tallahassee, Florida: Tall Timbers Research Station. Available at: https://talltimbers.org/wp-content/uploads/2018/09/285-ZimmermanandOmi1998_op.pdf. Accessed June 2026.

APPENDIX A: CWPP PLANNING PROCESS AND BACKGROUND



PLANNING PROCESS

The Society of American Foresters (SAF), in collaboration with the National Association of Counties, the National Association of State Foresters, and the Western Governors Association, developed a guide entitled *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities* to provide communities with a clear process for developing a community wildfire protection plan (CWPP). While this guide is now dated, the eight steps for developing a CWPP are still relevant and have been followed in preparing the Sheridan County CWPP:

A detailed list of these steps in the SAF guide can be found here:

<https://www.forestsandrangelands.gov/documents/resources/communities/cwpphandbook.pdf>

CORE TEAM

Table A.1 lists the Core Team Members who participated in the Sheridan County CWPP planning process.

Table A.1. Sheridan County CWPP Core Team Members

Name	Agency	Position
Jeff Crocker	Goose Valley Fire Department	Fire Chief
Amy Ormseth	Bighorn National Forest	Tongue River District Ranger
Andrew Cassiday	Natural Resources Conservation District	District Conservationist
Andy Fried	Sheridan County Fire and Rescue	Division Chief of Operations
Bob Miller	Town of Ranchester and Tongue River Fire Department	Parks and Recreation Manager and Fire Department Captain
Cameron Duff	Sheridan County	County Administrator
Carrie Rogaczewski	Sheridan County Conservation District	District Manager
Chris Bernard	Dayton Fire Department	Chief
Chris Thomas	Sheridan County	Fire Warden
Cody Tully	Wyoming State Forestry Division	Fuels Forester
Craig Short	Wyoming Unit, US Wildland Fire Service	Fire Program
Curtis Rasmuson	Wyoming Unit, US Wildland Fire Service	Fire Program
Daniel Tomlinson	Wyoming State Forestry Division	District 5 Assistant District Forester
Dustin Shorma	Wyoming Game and Fish Department	Game Warden
Heather Watt	Story Volunteer Fire Department	Fire Chief
Isaac Bayer	Wyoming Unit, US Wildland Fire Service	Fire Program, Fuels
Jacob McCarthy	Wyoming State Forestry Division	District 5 District Forester
Jacob McClure	Wyoming Unit, US Wildland Fire Service	Fire Program, Fuels
Jeff Barron	Tongue River Fire Department	Chief
Jeff Crocker	Goose Valley Fire Department	Assistant Chief
Jerod Delay	Wyoming State Forestry Division	Fire Management Officer
Jesse Ludikhuize	Sheridan County	Emergency Management Coordinator
Jon Warder	Bighorn National Forest	Forest Fire Management Officer
Jon Warder	Big Horn Fire Department, Chief	Fire Management Officer

Name	Agency	Position
Jonathan Stonelake	Bighorn National Forest	Tongue District Fire Management Officer
Jordan Friedrich	Bureau of Land Management	Forester
Josh McKinley	Clearmont Fire District	Chief
Lonnie Wright	Sheridan County	County Commissioner
Matthew Heinz	Bighorn National Forest	
Paul Wright	Sheridan County	Fuels Mitigation Coordinator
Rochelle Plocek	Bighorn National Forest	Forest Fuel Specialist

FIRE MANAGEMENT POLICY

The responsibility for wildland-urban interface (WUI) fire prevention and protection lies with property owners and state, county, and municipal governments. Property owners must comply with existing state statutes and local regulations. The current federal fire policy states that protection priorities are 1) life, 2) property, and 3) natural resources. These priorities often limit flexibility in the decision-making process, especially when a wildland fire occurs within the WUI.

Legislative Direction

Local/Municipal Direction and Codes

County Direction

FIRE AND BUILDING CODES

Sheridan County development and construction standards incorporate international building and fire codes adopted by the State of Wyoming. These codes provide minimum standards for fire safety, structural design, and fire protection systems in buildings and infrastructure.

Wyoming adopted the 2024 International Code Council code family, including the International Fire Code and International Building Code, which guide fire prevention, building safety, and fire protection system requirements across the state. These codes establish requirements for fire protection systems, emergency access, building materials, and other fire safety provisions that help reduce structural fire risk and improve community resilience (City of Sheridan 2025).

FIRE RESTRICTIONS

The Sheridan County Board of Commissioners has the authority to enact and rescind fire restrictions when wildfire risk conditions warrant. Fire restrictions are typically implemented during periods of drought, high temperatures, and elevated wind conditions to reduce human-caused wildfire ignitions. Restrictions may prohibit or limit activities such as open burning, fireworks, and the use of exploding targets or other ignition sources.

For example, the county has periodically implemented partial fire restrictions during high fire danger periods and later rescinded them when conditions improved. During these restriction periods, certain activities, including fireworks, may be prohibited unless authorized through a supervised public display permit. County fire restrictions are implemented consistently with rules established by the Wyoming State Board of Land Commissioners, which allows counties to enact fire restrictions during periods of elevated wildfire risk (Sheridan County 2025a).

State Direction

CWPPs are developed in accordance with the requirements of the Healthy Forests Restoration Act of 2003 (HFRA). Under HFRA, CWPPs must be collaboratively developed with local governments, fire departments, and state and federal land management agencies; identify and prioritize hazardous fuel reduction areas; and recommend strategies to reduce structural ignitability within the WUI.

WYOMING STATE FORESTRY DIVISION STRATEGIC PLAN 2025-2030

The *Wyoming State Forestry Division Strategic Plan 2025-2030*, developed by the Wyoming State Forestry Division (WSFD), outlines the agency's priorities for wildfire management, forest health, and cooperative forestry programs across Wyoming. The plan emphasizes strengthening wildfire preparedness and suppression capacity, supporting fuels reduction and forest management projects, and enhancing collaboration with local governments, fire districts, and federal partners.

The strategic plan also guides the division's efforts to provide technical assistance, training, and resources to communities and landowners to reduce wildfire risk and improve the resilience of forests and rangelands throughout the state (WSFD 2025).

WYOMING FOREST ACTION PLAN

The 2020 *Wyoming Forest Action Plan*, developed by the WSFD, provides a statewide strategy for addressing forest health, wildfire risk, and sustainable forest management across Wyoming. The plan identifies priority landscapes where forest management and wildfire mitigation efforts can be focused on reducing hazardous fuels, improving forest resilience, and protecting communities and infrastructure.

The Forest Action Plan emphasizes collaborative management among state agencies, federal land managers, local governments, and private landowners to address wildfire risk and forest health challenges. The plan also guides funding priorities and supports programs that promote fuel reduction, forest restoration, and community wildfire preparedness (WSFD 2020).

Federal Direction

Federal wildfire planning has historically been guided by the U.S. Department of the Interior (DOI), which stated in its 2017 Department Manual for the Office of Wildland Fire (DOI 2017) that all public lands with burnable vegetation must have a fire management plan. Subsequent efforts, including the National Fire Plan (NFP) in 2000 and the HFRA, which further incentivized the development and highlighted the importance of CWPPs, emphasized collaboration, and expedited hazardous fuels reduction projects (Public Law 108–148, 2003; H.R. 4233 - Healthy Forest Restoration Amendments Act of 2009). CWPPs are an effort to enhance collaborative wildfire management approaches between federal agencies and communities, prioritize treatment areas, and secure grant funding priority to communities with an established CWPP.

In 2023, the Wildfire Leadership Council sought to update and enhance the strategic direction of the 2014 National Cohesive Wildland Fire Management Strategy framework. This was done through the 2023 *National Cohesive Wildland Fire Management Strategy Addendum Update* (Forests and Rangelands 2023). The updated strategy highlights critical emphasis areas that were not identified in the previous framework.

Included among these emphasis areas are:

1. Climate change
2. Workforce capacity, health, and well-being
3. Community resilience (preparation, response, and recovery)
4. Diversity, equity, inclusion, and environmental justice

A thorough analysis of these emphasis areas is provided within the addendum update report, along with new management options to address them.

PUBLIC LAND MANAGEMENT

Land Management Strategies

State Land

State trust lands in Wyoming are managed by the Office of State Lands and Investments (OSLI) under the direction of the State Board of Land Commissioners. Unlike federal public lands, which are generally managed under multiple-use mandates, Wyoming state trust lands are managed for long-term growth in value and optimum, sustainable revenue production for public beneficiaries such as schools and other institutions. In Sheridan County, this means state land management decisions must balance land stewardship with the trust mandate while still accounting for wildfire risk where state lands interface with communities, transportation corridors, and other vulnerable assets (OSLI 2024a; Sheridan County 2020).

From a wildfire perspective, the WSFD plays a key role on state lands through fire response, fuels mitigation, forestry assistance, and Good Neighbor Authority coordination. Sheridan County lies within WSFD District 5, and a 2025 county wildfire newsletter notes that the district contains approximately 12,250 acres of forested state lands. The same source states that WSFD has responsibility for fire response on 3.6 million acres of state lands statewide and provides technical assistance on fuels mitigation and stewardship. In addition, OS LI public-use rules prohibit open fires on state trust lands, which is directly relevant to wildfire prevention on state-managed lands in and around the county (OSLI 2024b; Sheridan County 2025b).

Federal Land

Bighorn National Forest

A significant portion of western Sheridan County is adjacent to or encompass federal lands managed by the U.S. Forest Service (USFS) Bighorn National Forest. These lands are managed according to the *Bighorn National Forest Revised Land and Resource Management Plan*, developed as directed by the National Forest Management Act, which establishes desired conditions, goals, guidelines, and standards for the protection, use, and long-term sustainability of forest resources and provides direction for vegetation management, wildfire mitigation, watershed protection, wildlife habitat management, and recreational use across the forest landscape (USFS 2005).

Land management strategies in the Bighorn National Forest include actions designed to maintain forest health and reduce hazardous fuels. These practices may include timber harvest, mechanical thinning, and prescribed burning to manage vegetation structure and reduce wildfire risk while supporting ecosystem resilience and resource use (USFS 2026).

Because the Bighorn National Forest borders communities in Sheridan County, federal land management activities, particularly fuels reduction, vegetation treatments, and wildfire response coordination, play an important role in reducing wildfire risk across jurisdictional boundaries and supporting CWPP mitigation priorities.

Bureau of Land Management – Buffalo Field Office Resource Management Plan

Portions of federal lands in and around Sheridan County are administered by the Bureau of Land Management (BLM) through the BLM Buffalo Field Office. Management of these lands is guided by a resource management plan (RMP), which is the BLM's primary land-use planning document that establishes long-term decisions for

managing public lands and resources, including grazing, wildlife habitat, recreation, energy development, and wildfire management (BLM 2015).

RMPs provide the framework for how BLM lands are allocated and managed and are implemented through project-level decisions and environmental reviews. In November 2024, the BLM issued a Record of Decision and Approved RMP Amendment for the Buffalo Field Office, which established updated management direction for certain resources and land uses within the planning area (BLM 2015). The Buffalo Field Office RMP guides land management decisions affecting vegetation treatments, land use allocations, and resource protection measures on BLM-administered lands. These decisions influence wildfire risk management, fuels treatments, and interagency coordination with state and local partners across northern Wyoming.

Stewardship Agreements

Shared Stewardship is a national USFS program to improve land management collaboration across federal, state, tribal, and local jurisdictions. This agreement expands capacity in Sheridan County to address wildfire risk, forest health, and other landscape-scale natural resource challenges. The strategy emphasizes cross-boundary partnerships and coordinated investments to ensure that forest management and wildfire mitigation activities occur at the appropriate scale and location to achieve the greatest benefit (USFS 2018).

In Wyoming, Shared Stewardship is implemented through collaboration between the WSFD, federal land management agencies, and local partners to identify priority landscapes for forest health treatments and wildfire risk reduction. The Wyoming Shared Stewardship framework focuses on coordinated fuels reduction, forest restoration, and wildfire mitigation across jurisdictional boundaries, particularly in areas where federal lands interface with state, private, and community lands (WSFD 2020).

Sheridan County is influenced by this cooperative management approach due to the presence of the Bighorn National Forest and other nearby public lands. Cross-boundary collaboration between federal agencies, the State of Wyoming, and local jurisdictions helps support fuels reduction projects, wildfire preparedness, and forest management activities that reduce wildfire risk and improve landscape resilience in and around the county (USFS 2021; WSFD 2020).

APPENDIX B: COMMUNITY BACKGROUND



LOCATION AND GEOGRAPHY

Sheridan County covers approximately 2,527 miles across north-central Wyoming, with elevations ranging from 3,500 to over 11,000 feet above sea level. The western portion of the county consists of the Bighorn Mountains and foothills characterized by forests and woodlands, while the central and eastern portions mostly consist of prairies and high plains (Sheridan County 2020). The Bighorn Mountains contain the headwaters of both the Tongue River, flowing northeast into Montana and approximately 265 miles long, and the Little Big Horn River, flowing north into Montana and approximately 138 miles long (Sheridan County 2024).

Land use across Sheridan County varies between agricultural, public, residential, and non-residential uses (e.g., commercial/multi-use, industrial). Table B.1 summarizes land use across the planning area.

Table B.1. Land Use Across Sheridan County

Land Use	Acres	Percentage
Agricultural (Private)	1,009,619.20	62.66%
Public and special use	566,432.25	35.15%
Residential	21,949.35	1.36%
Vacant	11,283.23	0.70%
Commercial/multi-use	2,028.91	0.13%
Industrial	68.92	0%
Total	1,611,381.86	100%

Source: Sheridan County 2020.

Land ownership in the planning area is predominantly privately owned while the remaining portions are public lands owned and managed by the federal, state, and county agencies. Federal lands in the planning area are managed by agencies including the USFS, BLM, Department of Defense, National Park Service (NPS), Bureau of Indian Affairs (BIA), and the U.S. Fish and Wildlife Service (USFWS). The state of Wyoming manages the majority of the state-owned land throughout the county while other public lands are managed by local government agencies such as Sheridan County, individual cities/towns, schools, and airports (Sheridan County 2020). Table 1.3 in Chapter 1 specifies land ownership by acreage and percentage across the planning area. Figure B.1 illustrates land ownership by agency across the planning area.

Variation of land use and ownership across the planning area can influence wildfire mitigation efforts, therefore it is important for land managers to consider these factors when planning any fuels mitigation projects.

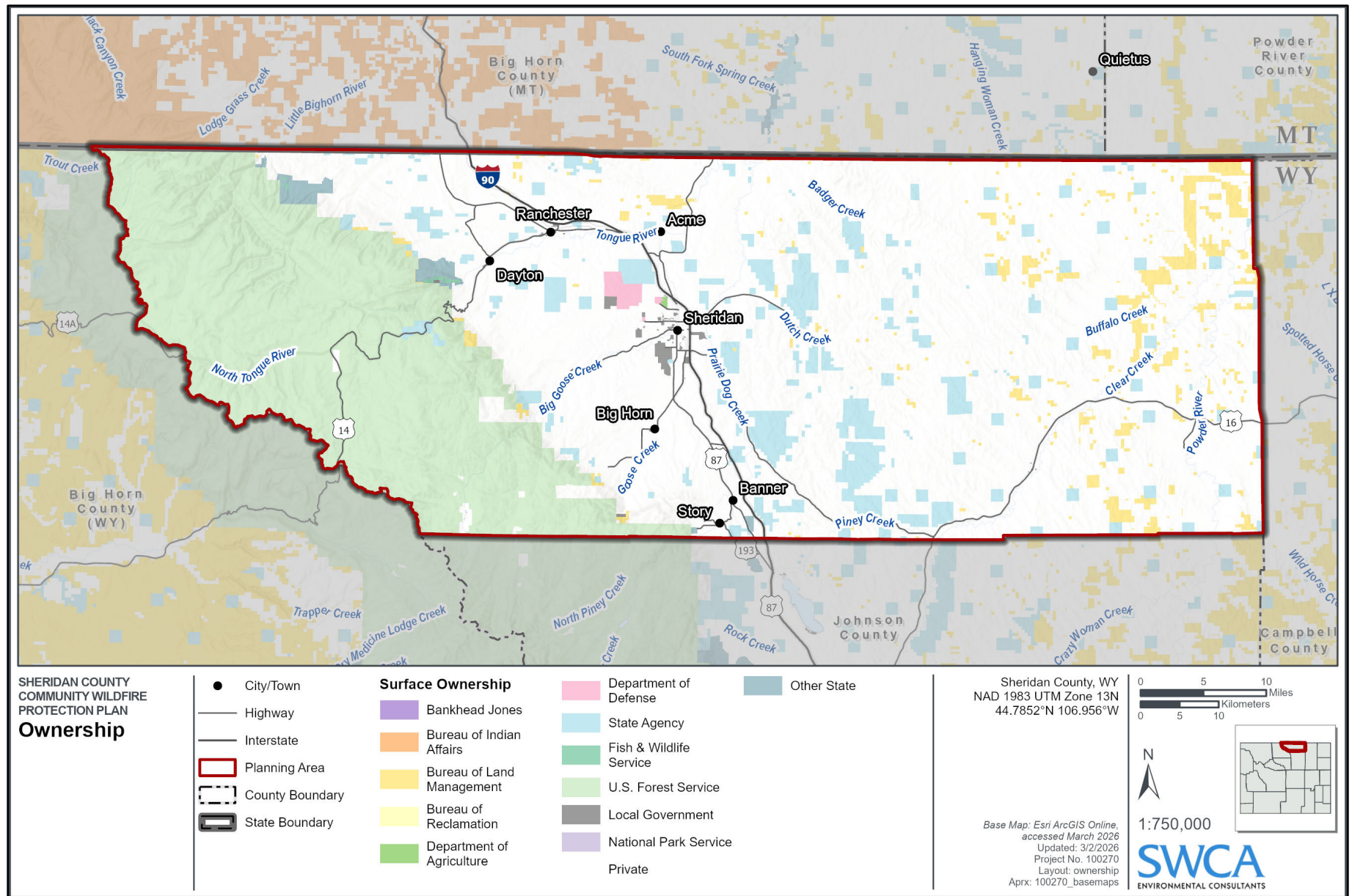


Figure B.1. Land ownership across the Sheridan County CWPP planning area.

Roads and Transportation

Sheridan County is responsible for approximately 530 miles of roads: 28 miles of paved roads, 70 miles of dirt roads, and the remainder are gravel. Four major highways, Interstate 90, Highway 87, and State Highways 14-16 and 14A, cross the county and connect the incorporated and unincorporated communities throughout the county. Road improvements and construction projects are primarily funded through a Capital Facilities Tax and state matching funds, as specified in the Capital Improvements Plan. The plan is updated annually every 5 years and consists of countywide infrastructure maintenance projects (Sheridan County 2020).

Population

In 2025, Sheridan County's population estimate was approximately 32,978 persons with a total of 16,311 housing units and 13,845 households. The county experienced an estimated 7.5% population increase between 2020 and 2025 and is projected to continue growing over the next 20 years (U.S. Census Bureau 2025a). Chapter 1 also discusses more about the population density in the planning area.

Sheridan County encompasses four incorporated cities and towns, the most populated of which is the City of Sheridan, located in central Sheridan County, followed by the towns of Clearmont, Dayton, and Ranchester. The county also contains several unincorporated communities including Arvada, Banner, Big Horn, Leiter, Parkman, Story, Ucross, Wolf, and Wyarno. Big Horn and Story are the most populated unincorporated communities in the county (Sheridan County 2020).

This scattered population and diverse landscape can bring challenges, particularly in the context of natural disasters like wildfires. As these communities continue to grow and develop, it will remain crucial to implement effective wildfire prevention and response strategies to safeguard both lives and property in Sheridan County.

Recreation

Sheridan County offers many outdoor recreation opportunities centered around its lakes, parks, and public lands. Most popular recreation areas are in the western portion of the county and are managed by various entities including federal, state, local governments, and private owners, with some areas managed by more than one entity. Common recreation activities include boating, fishing, camping, hiking, and wildlife viewing. The county has several local city parks that provide picnic areas, playgrounds, and other family-friendly recreation opportunities. There are also several state-owned designated wildfire areas that allow recreational activities and provides hunting access throughout the county (Sheridan County 2020). Table B.2 outlines the popular recreation areas across the planning area.

Table B.2. Popular Outdoor Recreation Areas in Sheridan County

Recreation Area	Ownership	Management Agency	Recreation Use	Location
Amsden Creek Wildlife Habitat Management Area	State	Wyoming Game and Fish Department	Fishing, hunting, camping, hiking, and trapping	Sheridan
Bear Davis County Park	County	Sheridan County	Hiking and picnicking	Base of Bighorn Mountains (at the end of Little Goose Canyon Road)
Big Goose Natural Area	Private	Sheridan Community Land Trust	Fishing, hiking, horseback riding, and swimming	Sheridan
Bighorn National Forest	Federal	USFS	Camping, fishing, hiking, hunting, and other outdoor activities	Western Sheridan County

Recreation Area	Ownership	Management Agency	Recreation Use	Location
Kerns Wildlife Habitat Management Area	State	Wyoming Game and Fish Department	Fishing, hunting, trapping	Sheridan
Kleenburn Recreation Area	County	Sheridan County	Fishing, hiking, and picnics	Acme
Recreation Complex (Keystone Road)	County and Private	Sheridan County, Sheridan County Sportsman Association, and Flying Cowboys	Fire arms, archery, outdoor trap and skeet ranges, remote control airplane flying, and indoor pistol range	Sheridan and Ranchester
Red Grade Trails System	Federal and Private	Sheridan Community Land Trust and BLM	Hiking, biking, and equestrian	Foothills of Bighorn Mountains
Story Centennial Park	County	Sheridan County	Picnics, sports, community events, and hiking	Sheridan
Three Poles Recreation Area	County	Sheridan County and Sheridan Recreation District	Off-roading highway vehicles (dirt bikes, ATVs)	Sheridan
Tongue River Canyon	Federal and State	USFS and Wyoming Game and Fish Department	Hiking, caving, fishing, rock climbing, and swimming	Dayton
Welch Ranch	Federal	BLM	Hiking, hunting, river floating, and wildlife viewing	Sheridan

Sources: Sheridan County (2020, 2026b); WGFD (2026).

Federal Recreation Lands

Federal recreation lands in Sheridan County are primarily in the western portion of the county and managed by the USFS and BLM. Bighorn National Forest, managed by the USFS, is in the western portion of the county within the Bighorn Mountain range and encompasses over 1.1 million acres of diverse terrain. The forest receives approximately 430,000 visitors per year and offers year-round outdoor recreation activities including backpacking, camping, fishing, hiking, hunting, off-highway vehicle (OHV) riding, and many winter sport activities (USFS 2026b). BLM managed recreation areas include Welch Ranch and Red Grade Trails Systems, primarily utilized for hiking, hunting, mountain biking, horseback riding, river floating, and wildlife viewing (Sheridan County 2020).

State Recreation Lands

The state of Wyoming manages two recreation sites and assists with other parcels of federal lands throughout western Sheridan County. One of the recreation sites that the State of Wyoming manages is a registered state historic site known as the Fetterman Battlefield site. The Wyoming State Parks system manages two historic sites, Trail End and Connor Battlefield, both offering hiking, picnicking, fishing, and wildlife viewing (Sheridan County 2020). The Wyoming Game and Fish Department (WGFD) primarily manages wildlife habitat management areas, which are primarily designated for fishing, hunting, and trapping along with some other recreational outdoor activities (WGFD 2026).

County-Managed Recreation Lands

Sheridan County and the Sheridan Recreation District co-manage county-owned recreational lands. Sheridan County-managed areas are primarily designated for outdoor recreational activities including hiking, fishing, swimming, and rock climbing. Sheridan Recreation District is independently funded through property taxes and corporate sponsorship and primarily manages recreational sports facilities and activities for all residents in Sheridan County (Sheridan County 2020).

City and Town Recreation Lands

Sheridan County's incorporated towns and cities have their own recreation management departments including Tongue River Valley Recreation District (serving Dayton and Ranchester), City of Sheridan Parks and Trails (serving the City of Sheridan), and the Town of Dayton Parks (serving Dayton). Each district manages a few parks and community centers primarily used for sports and other community events (Sheridan County 2020).

Privately Managed Recreation Sites

Sheridan County consists of several privately owned recreational sites, open spaces, and facilities in Western Sheridan County. Multi-sport and community event facilities include the Powder Horn Golf Club, Big Horn Events Center, Flying H-Solo, and the Sheridan YMCA (Sheridan County 2020). Outdoor natural areas are managed by the Sheridan Community Land Trust (SCLT), responsible for the Big Goose Natural Area and Red Grade Trail Systems. Areas managed by SCLT are primarily used for recreational activities including hiking, biking, fishing, swimming, horseback riding, and other water-related activities (SCLT 2026).

Wildfire Considerations for Recreational Areas

June and July are typically peak visitation months in Sheridan County due to ideal weather conditions and popular community events occurring. In 2024, Sheridan County received over 460,000 visitors with more than 80% from out of state and 10% from outside the United States (Sheridan County 2025c). The high volume of visitors to Sheridan County's natural areas poses a heightened risk of wildfire ignition. During times of peak visitation, large crowds tend to gather in relatively limited spaces, exacerbating the potential harm to human life during an emergency where evacuation may become necessary, such as a wildfire.

Threatened and Endangered Species

Sheridan County supports a range of plant and wildlife species that are subject to federal and state conservation frameworks and are an important consideration for wildfire mitigation planning. Wildfire mitigation activities proposed within federally designated critical habitat are subject to Endangered Species Act (ESA) requirements and coordination with federal wildlife agencies.

State-Listed Species

While the state of Wyoming does not classify species as threatened or endangered, the WGFD tracks and prioritizes species based on their conservation needs, habitat health, and population vulnerability through the State Wildlife Action Plan (WSFD 2020). WGFD provides information available to the public through the Wyoming Natural Diversity Database (WYNDD) for all wildlife species across the state (WYNDD 2026). This information is available at: https://wyndd.org/portal/apps/data_explorer/map.

Federally Listed Species

Sheridan County currently contains a total of five species federally listed under the ESA as threatened or endangered (Table B.3; WYNDD 2026). While there are no species that have designated critical habitats within the planning area, consultation with USFWS may be required if proposed fuels treatment plans have potential to impact ESA-listed species.

Recommendations for fuels treatments should be developed following all wildlife and bird best management practices to comply with the ESA. Treatment approaches should be aligned with actions that provide for habitat enhancement for threatened and endangered species. Refer to guidance from local, regional, or state natural

resource agencies before conducting fuels treatments, during active fire response, and during post-fire recovery efforts.

Table B.3. Listed Threatened and Endangered Species within Sheridan County

Common Name	Scientific Name	ESA Status
Mammals		
Canada lynx	<i>Lynx canadensis</i>	Threatened
Wolverine	<i>Gulo gulo</i>	Threatened
Birds		
Piping plover	<i>Charadrius melodus</i>	Threatened
Whooping crane	<i>Grus americana</i>	Endangered
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Threatened

Source: WYNDD (2026)

Status Definitions:

Endangered: Any species that are in danger of extinction throughout all or a significant portion of its range.

Threatened: Animal or plant species that are likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

ENVIRONMENTAL CHALLENGES

Frequent drought, tree mortality, high fuel loading, and climate change have all coincided to increase the likelihood of wildfire and community vulnerability in Wyoming. The shifting climate—particularly rising temperatures, changing wind patterns, and increasing temporal and spatial variability of water availability—is causing a notable escalation in wildfire risk across the state.

Climate and Drought

The climate in Sheridan County is generally categorized as a semi-arid climate with long, cold winters and short summers, receiving most of its precipitation in the spring and early summer, particularly during the months of March and April. During the summer months, thunderstorms will build up along the Big Horn Mountains and shift east, often producing lightning and increasing ignition risk throughout the County (Zeltwanger et al. 2001).

Historically, the average temperature across the planning area was approximately 42°F (National Centers for Environmental Information [NCEI] 2026). Elevated seasonal temperatures contribute to overall drier conditions, reducing soil moisture and increasing the likelihood of vegetation drying out.

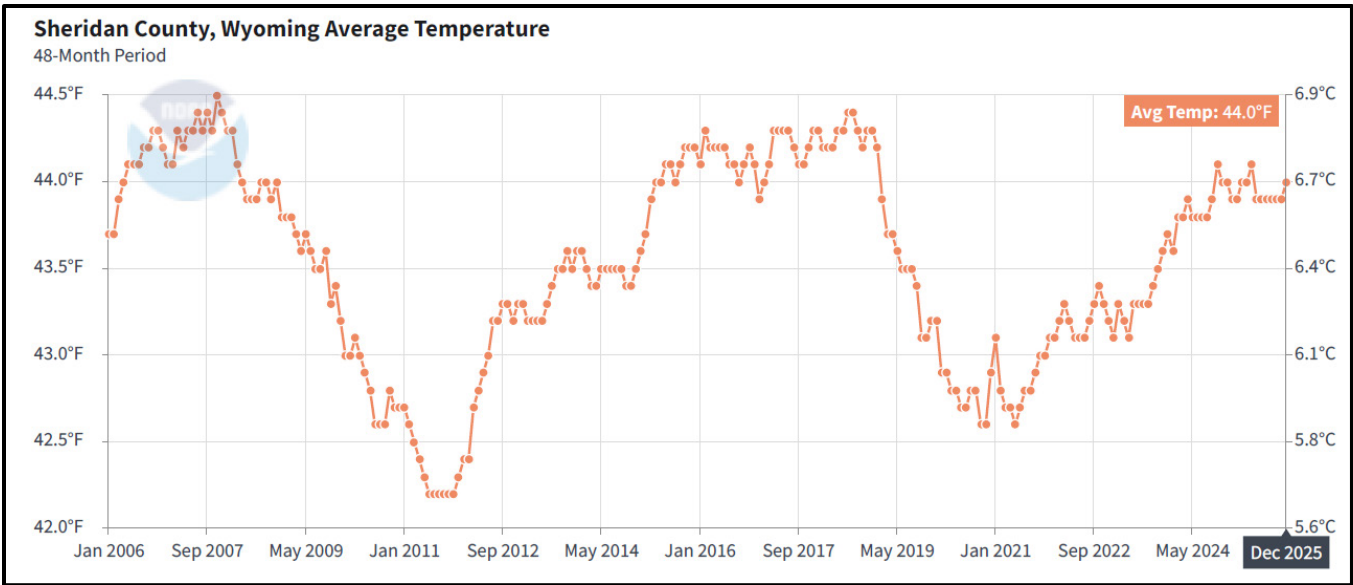


Figure B.2. Average temperatures in Sheridan County between January 2006 and December 2025.

Source: NCEI (2026)

Figure B.3 shows drought condition and precipitation trends across Sheridan County between 2000 and 2026. The darker red areas depict drier conditions while the blue hues indicate wetter conditions. Periods of prolonged dryness combined with high temperatures create an environment conducive to the ignition and rapid spread of wildfires.

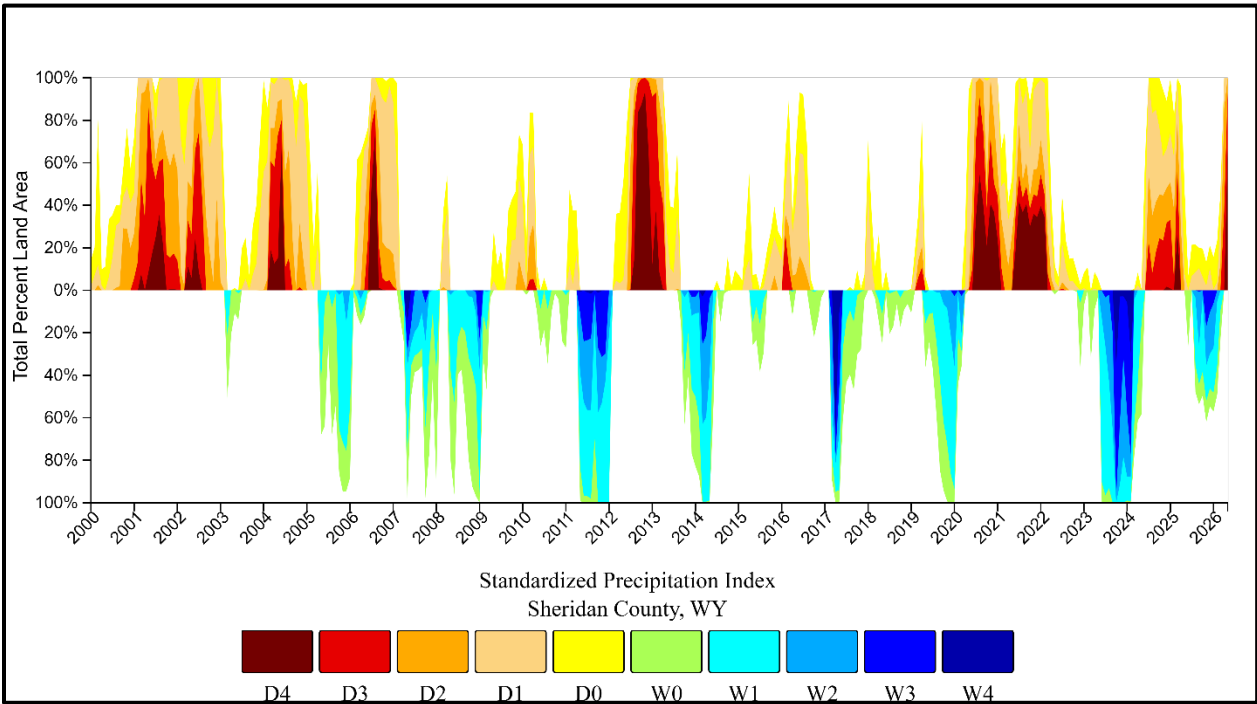


Figure B.3. Historical drought and precipitation trends between 2000 and 2026 in Sheridan County.

Source: National Integrated Drought Information System (2026)

Chinook Winds

Chinook Winds are generally strong, downslope winds that are common along the eastern slopes of the Bighorn Mountains in western Sheridan County between the months of November and March. These winds often raise

temperatures by 20 to 30 degrees and increase average wind speeds by 60 to over 100 miles per hour (National Oceanic and Atmospheric Administration [NOAA] 2026b). Wildfire risk is often elevated during these wind events due to the rapid increase in temperature, high winds, and the resulting drying of vegetation.

Forest and Woodland Health Considerations

Sheridan County is home to many species of deciduous and coniferous trees spread throughout an urban and wildland environment. The county's forest and woodland health is greatly influenced by factors such as increased tree mortality, drought conditions, insects and diseases, and invasive species all contribute to increased wildfire risk across the planning area.

In 2024, Wyoming recorded a well-above-average year for wildfires, with over 850,650 acres burned. These wildfires were likely exacerbated by a combination of tree mortality from insect infestations and persistent drought conditions, which ultimately increased the risk of canopy fires. Based on a study conducted by the WSFD across two 2024 wildfires, the areas that experienced low- to moderate-severity fires are likely to see increases in beetle-killed trees, whereas high-severity areas will be less impacted (WSFD 2024).

Tree Mortality

In recent years, tree mortality has increased due to various forests pests and diseases detected in Sheridan County, particularly in the Bighorn Mountain range. These outbreaks have been directly associated with drought conditions, impacting trees' ability to produce defensive compounds or develop resistance and resilience to insects and diseases (WSFD 2024).

Tree mortality in Sheridan County was most notable along the Bighorn Mountain range from various pests and environmental factors (e.g., drought, flooding). Lodgepole pines (*Pinus contorta*), ponderosa pines (*Pinus ponderosa*), Englemann spruce (*Picea engelmannii*), Douglas-fir (*Pseudotsuga menziesii*), and subalpine firs (*Abies lasiocarpa*) are the species with the most damage and mortality across the county. Increased tree mortality across the landscape ultimately creates more fuels receptive to high-severity wildfires (WSFD 2024).

Insects and Diseases

Many native and nonnative insects have led to various diseases and damage to forests within the planning area, as presented in Table B.4. Each species are known to cause damage to roots, foliage, or all parts of trees, depending on the species (WSFD 2024). This presents unique challenges for land managers and urban foresters who must contend with a multitude of native and introduced insects and diseases.

Mountain pine beetle (*Dendroctonus ponderosae*) caused the most damage and tree mortality in Sheridan County, totaling up to approximately 4,735 acres in 2024 (WSFD 2024). Figure B.4 highlights an example of tree damage near Story, Wyoming.

Table B.4. Major Forest Pests and Diseases in Sheridan County

Common Name	Scientific Name	Impacts
Bark Damage		
Bronze Birch Borer*	<i>Agrilus anxius</i>	Damage cambium layer of birch trees (<i>Betula</i> spp.)
Emerald Ash Borer*	<i>Agrilus planipennis</i>	Damages bark of ash trees (<i>Fraxinus</i> spp.)
Mountain pine beetle	<i>Dendroctonus ponderosae</i>	Damages bark to various pine tree species
Root Rots		
Armillaria Root Disease	<i>Armillaria</i> spp.	Causes root rot in Douglas-fir (<i>Pseudotsuga menziesii</i>), Aspen (<i>Populus</i> spp.), Spruce (<i>Picea</i> spp.), and other pines (<i>Pinus</i> spp.)
Heterobasidion Root Disease S-Type	<i>Heterobasidion occidentale</i>	Causes root rot to Spruce and Douglas-fir trees
Tomentosus Root Rot	<i>Omnia tomentosa</i>	Root rot to spruce forests
Foliage Diseases		
Japanese beetle*	<i>Popillia japonica</i>	Feed on leaves of various plant species
Diplodia Blight	<i>Sphaeropsis sapinea</i>	Kills current year Ponderosa Pine (<i>Pinus ponderosa</i>) shoots
Lophodremella	<i>Lophodermella</i> spp.	Contributes to browning and premature dropping of needles
Marssonina Blight	<i>Drepanopeziza</i> spp.	Leaf damage in Aspen resulting in premature defoliation
Spongy Moth*	<i>Lymantria dispar</i>	Feeds on foliage of various trees and shrubs
Other Forest Pathogens		
Comandra Blister Rust	<i>Cronartium comandrae</i>	Causes tree top kill in lodgepole (<i>Pinus contorta</i>) and Ponderosa pines.
Cytospora Canker of Fir	<i>Cytospora abietis</i>	Damages subalpine fir trees
Dwarf Mistletoe	<i>Arceuthobium</i> spp.	Native parasitic plant causing branch die back, top kill, and occasional mortality primarily affecting all pine species and Douglas-fir trees
Thousand Cankers Disease*	N/A	Caused by a Walnut twig beetle (<i>Pityophthorus juglandis</i>) most impacting Black walnut trees (<i>Juglas nigra</i>)

Source: WSFD (2024).

* Indicates an invasive species.



Figure B.4. Example of mountain pine beetle damage near Story, Wyoming.

Source: WSFD (2024).

Invasive Species

In portions of Sheridan County, invasive grasses such as Ventenata grass (*Ventenata dubia*), medusahead (*Taeniatherum caput-medusae*), and cheatgrass (*Bromus tectorum*) dominate the rangelands and grasslands and outcompete native grasses and shrubs (e.g., sagebrush) particularly after wildfires. In areas where invasive grasses are present, fire return intervals have been drastically altered, resulting in wildfires occurring more frequently and burning at higher intensities (Wheeler 2020).

Burning Coal Seams

Burning coal seams are present on BLM lands in eastern Sheridan County and typically smolder at or below the surface with little to no open flame and spread very slowly. Burning coal seams pose increased potential for wildfires as surface ignitions are possible during dry and windy conditions (BLM 2026a). Figure B.5 shows an example of a coal seam fire in eastern Sheridan County.



Figure B.5. Example of an active coal seam fire in eastern Sheridan County.

Source: BLM (2026a).

Fire Response Capabilities

Fire response and management in Sheridan County relies on a cooperative, interagency partnership among federal, state, and local entities. Local fire districts and state and federal crews are available for fire response across jurisdictions due to establishment of mutual aid agreements. Each agency varies based on water availability, equipment, and staffing. This section further discusses all levels of resources throughout Sheridan County including water availability and supply, mutual aid agreements, evacuation resources, and emergency notification methods.

Incident Management

Wildland fire response for large fires is typically supported and coordinated by regional interagency dispatch centers in Wyoming through the Rocky Mountain Area Coordination Center (RMACC). At the county level, the 2022 *Sheridan County Emergency Operations Plan* (SCEOP) highlights agency annexes that activate specific resources to respond to incidents relevant to wildfire related emergencies, including the Emergency Management Department Complex, Firefighting Agencies, and Joint Dispatch Center Agencies (Sheridan County 2022). Table B.5 describes the agency annexes related to wildfire emergencies and responses.

More details on local fire resources and response are covered in the Local Response section.

Table B.5. SCEOP Agency Annexes Related to Wildfire Emergencies and Response

Annex Name	Purpose	Primary Functions	Key Support Staff
Sheridan County Emergency Management Department	- Coordinate resources for disaster and emergency response operations - Activate management of the Sheridan County emergency operations center	- Inter-agency coordination - Situational awareness - Incident documentation - Alert/warning notification tools management	Emergency Management Coordinator, Sheridan County Administrator
Firefighting Agencies	- Coordinate firefight resources for structure and wildland fires or specialized operational needs - Respond to all-risk incidents including wildland fires, structural fires, medical, and hazardous materials	- Firefighting activities (e.g., fire suppression) - Mobilizing firefighting resources - Hazardous materials incident response and containment	Rural Volunteer Fire Departments: Big Horn, Clearmont, Dayton, Goose Valley, Ranchester, and Story; Sheridan Fire-Rescue; Sheridan County Fire Warden
Joint Dispatch Center Agencies	Coordinate support and resources of dispatch centers serving Sheridan County	Coordinate interagency resource coordination, communications, and alert/warning notifications for incidents within the county	Sheridan County Joint Dispatch Center, Cody Interagency Dispatch Center, Casper Interagency Dispatch Center

Sources: Sheridan County (2022).

Rocky Mountain Area Coordination Center (RMACC)

The RMACC is part of the National Interagency Fire Center, in charge of coordination and mobilization of resources for wildland fire incidents throughout the designated geographic area, primarily for large wildfire incidents across multiple jurisdictions. In Sheridan County, there are two interagency dispatch centers that cover the county between the Cody Interagency Dispatch Center and the Casper Interagency Center.

Local Response

Fire resources in Sheridan County include a mix of rural fire departments and fire districts, totaling eight local fire response resources. Rural fire response is funded by six fire districts with elected boards that are funded by property taxes that support a fire department. The fire departments respond to incidents within their district, primarily serving unincorporated and rural areas of the county. The towns of Clearmont and Ranchester have agreements with those departments to respond within those municipalities, and the Dayton Fire Department is a city department with an agreement to respond to the fire district. The city of Sheridan has a paid fire department: Sheridan Fire-Rescue. Figure B.6 displays the fire district boundaries and resources available throughout the planning area.

All fire departments and districts are fully volunteer, except for Sheridan Fire-Rescue. Due to the majority of the fire districts relying on volunteers, response times for each fire district varies, with most response times ranging between 25 and 35 minutes on average. Figure B.7 displays the fire district response times throughout the planning area.

Tables B.6 to B.12 list the local county fire response entities and resources available.

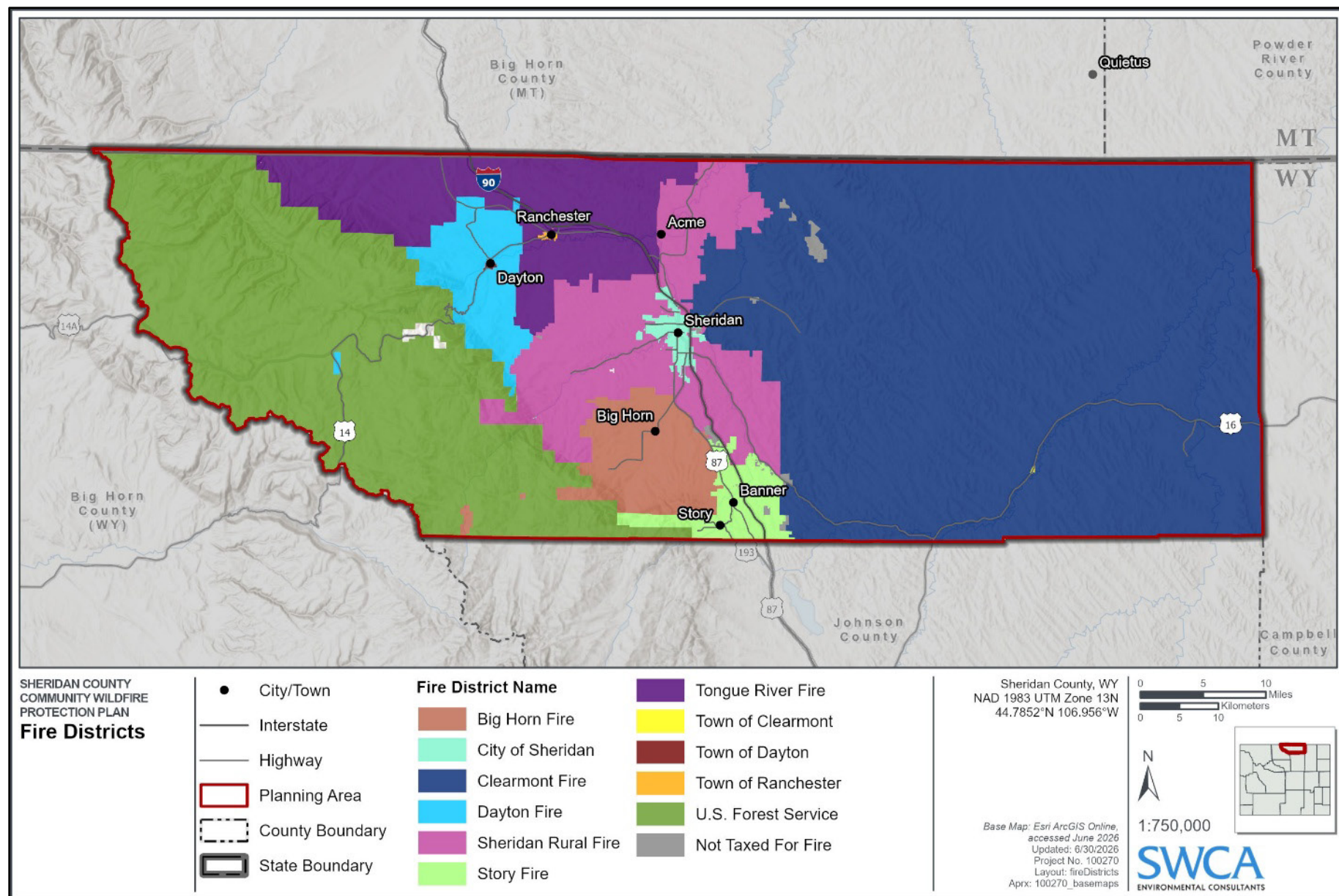


Figure B.6. Fire district response areas in Sheridan County.

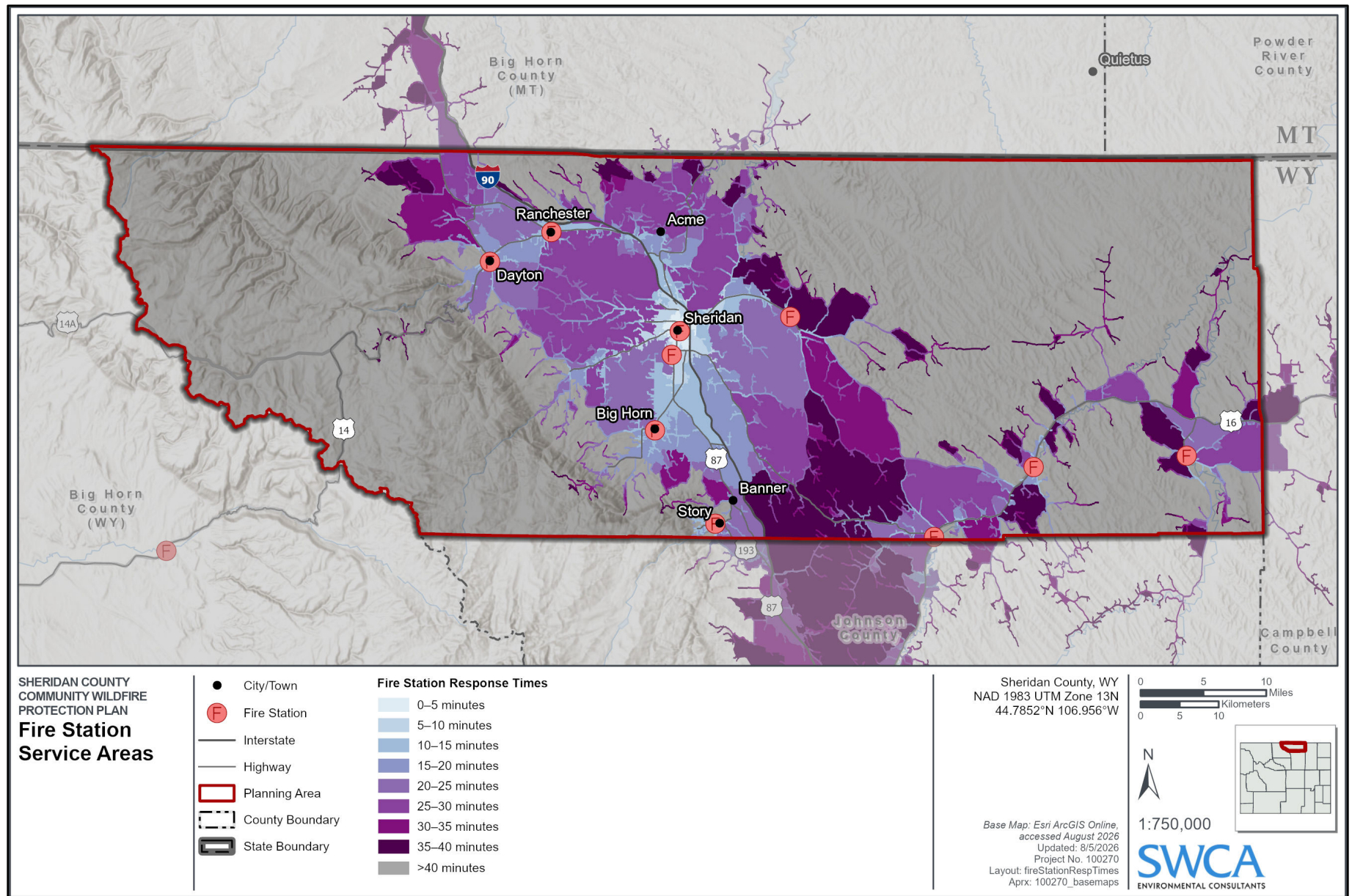


Figure B.7. Fire station response times across Sheridan County.

Big Horn Volunteer Fire Department and Big Horn Fire District

The Bighorn Volunteer Fire Department (VFD) and Big Horn Fire District is staffed by volunteers, serving the town of Bighorn and the Bighorn Fire District. Table B.6 lists the resources the department has available for wildfire response. According to fire district survey results, available water resources include hydrant systems, irrigation ditches, and creeks.

For more information about the fire district, visit: <https://www.bighornfd.com/>

Table B.6. Fire Department Resource Statistics for Bighorn Volunteer Fire Department and Fire District

Bighorn VFD Statistics:		
Fire Protection District: Bighorn		
Communities Served: Town of Bighorn, Bighorn Fire District		
Full-time Firefighters: 0	Red-Carded Firefighters: 6	Volunteer Firefighters: 18
Rating: ISO 5/5x		
<u>NWCG Qualification</u>		
Firefighter Type 1: 3	Incident Commanders	
Certified Sawyers (FAL 1, 2, 3): 2	Type 1–3: 1	
	Type 4–5: 2	
Port-A-Tanks: 3	Portable Pumps: 6	Fire Shelters: 18
<u>Water Tender:</u>		
Type 1: 1	<u>Wildland Engines:</u>	
Type 2: 0	Type 3: 1	
Type 3: 0	Type 4: 0	
<u>Wildland Engines:</u>	Type 5: 0	
Type 1: 1	Type 6: 2	
Type 2: 0	Type 7: 1	

Note: NWCG = National Wildfire Coordinating Group.

Clearmont Fire District

The Clearmont Fire District is a fully volunteer response district serving Clearmont, Arvada, Ucross, Wyarno, and Leiter. Table B.7 lists the resources the department has available for wildfire response. Hydrants supported by cisterns are available in Clearmont, Wyarno, and Arvada. The rest of the response district is reliant on shuttling and drafting. Primary concerns in the district include coal seams, dense riparian vegetation, and fast-moving grass fires. Additional training for responders is needed to improve response capabilities and efficiency.

For more information about the fire district visit: <https://clearmontfd.com/>

Table B.7. Fire Department Resource Statistics for Clearmont Fire District

Dayton Fire and Rescue Statistics:		
Fire Protection District:		
Communities Served:		
Clearmont, Arvada, Ucross, Wyarno, Leiter		
Full-time Firefighters: 0	Red-Carded Firefighters: 20	Volunteer Firefighters: 52
Rating:		
<u>NWCG Qualification</u>		
Firefighter Type 1: 0	Incident Commanders: 0	
Certified Sawyers (FAL 1, 2, 3): 0	Type 1–3: 0	
	Type 4–5: 0	
Port-A-Tanks: 5	Portable Pumps: 8	Fire Shelters: 52
<u>Water Tender:</u>		
Type 1: 0	<u>Wildland Engines:</u>	
Type 2: 0	Type 3: 0	
Type 3: 3	Type 4: 13	
<u>Wildland Engines:</u>	Type 5: 0	
Type 1: 2	Type 6: 15	
Type 2: 1	Type 7: 20	

Dayton Fire District

The Dayton Volunteer Fire and Rescue is staffed by volunteers and serves the town of Dayton and the Dayton Fire District. Table B.8 lists the resources the department has available for wildfire response. According to fire district survey results, available water resources include hydrant systems that can draft and shuttle water. However, the town could use improvements to the local hydrant systems and ways to utilize local rivers and reservoirs in the area.

For more information about the fire district, visit: <https://www.daytonwyoming.org/fire-rescue>

Table B.8. Fire Department Resource Statistics for Dayton Fire and Rescue

Dayton Fire and Rescue Statistics:		
Fire Protection District: Dayton		
Communities Served: Town of Dayton, Dayton Fire District		
Full-time Firefighters: 0	Red-Carded Firefighters: 12	Volunteer Firefighters: 17
Rating:		
<u>NWCG Qualification</u>		
Firefighter Type 1: 12	Incident Commanders: 0	
Certified Sawyers (FAL 1, 2, 3): 0	Type 1–3: 0	
	Type 4–5: 0	

Dayton Fire and Rescue Statistics:		
Port-A-Tanks: 1	Portable Pumps: 2	Fire Shelters: 20
<u>Water Tender:</u>		
Type 1: 1	<u>Wildland Engines:</u>	
Type 2: 0	Type 3: 0	
Type 3: 0	Type 4: 0	
<u>Wildland Engines:</u>	Type 5: 0	
Type 1: 1	Type 6: 1	
Type 2: 1	Type 7: 1	

Tongue River Fire Department

The Tongue River Fire Department is staffed by volunteers and serves the town of Ranchester and the surrounding area. The response area for the department covers 300 miles of northern Sheridan County. Table B.9 lists the resources the department has available for wildfire response. According to fire district survey results, available water resources include hydrant systems that can draft and shuttle water. There are also streams and reservoirs that the department can draft water from. Needs for the department include additional PPE, equipment, and training for volunteers.

Table B.9. Fire Department Resource Statistics for Tongue River Fire Protection District and Fire Department

Tongue River Fire Department Statistics:		
Fire Protection District:		
Communities Served: Ranchester, Parkman, Northern Sheridan County		
Full-time Firefighters: 0	Red-Carded Firefighters: 3	Volunteer Firefighters: 23
Firefighter Type 1: 4	Incident Commanders:	
Certified Sawyers	Type 1–3: 0	
(FAL 1, 2, 3): 3 FAL 3; 2 FAL 2	Type 4–5: 5	
Port-A-Tanks: 1	Portable Pumps: 4	Fire Shelters: 25
<u>Water Tender:</u>		
Type 1: 0	<u>Wildland Engines:</u>	
Type 2: 1	Type 3: 0	
Type 3: 0	Type 4: 0	
<u>Wildland Engines:</u>	Type 5: 1	
Type 1: 1	Type 6: 1	
Type 2: 0	Type 7: 0	

Sheridan Area Rural Fire Protection District, Goose Valley Fire Department

The Sheridan Area Rural Fire Protection District (RFPD) and Goose Valley Fire Department serve the unincorporated communities across Sheridan County that fall within the Sheridan Area RFPD boundaries.

Table B.10 lists the resources the department has available for wildfire response. According to fire district survey results, available water resources consists of limited hydrant systems and primarily relies on shuttling.

For more information about the fire district visit: <https://goosevalleyfire.com/>

Table B.10. Fire Department Resource Statistics for Sheridan Area Rural Fire Protection District and Goose Valley Fire Department

Sheridan RFD Statistics:		
Fire Protection District: Sheridan Area RFPD		
Communities Served: Unincorporated areas within Sheridan Area RFPD boundaries		
Full-time Firefighters: 0	Red-Carded Firefighters: 19	Volunteer Firefighters: 22
Rating: PC 10		
NWCG Qualification		
Firefighter Type 1: 13	Incident Commanders	
Certified Sawyers (FAL 1, 2, 3): 2	Type 1–3: 2	
	Type 4–5: 2	
Port-A-Tanks: 3	Portable Pumps: 5	Fire Shelters: 22
Water Tender:		
Type 1: 1	Wildland Engines:	
Type 2: 1	Type 3: 3	
Type 3: 2	Type 4: 3	
Wildland Engines:	Type 5: 1	
Type 1: 2	Type 6: 1	
Type 2: 2	Type 7: 3	

Sheridan Fire-Rescue

Sheridan Fire-Rescue is the only fire response resource in Sheridan County that is not volunteer-based. It primarily serves the City of Sheridan but also provides aid to other communities throughout the county. The department consists entirely of full-time firefighters and includes a Division Chief of Operations, a Fire Marshal, a Chief, and an administrative assistant. Table B.11 lists the resources the department has available for wildfire response. According to fire district survey results, hydrants are the primary source of water throughout the City of Sheridan. Sheridan Fire-Rescue also has access to tanks and can draft and shuttle water if necessary.

For more information about the district visit: https://www.sheridanwy.gov/government/sheridan_fire-rescue

Table B.11. Fire Department Resource Statistics for Sheridan Fire-Rescue

Sheridan Fire-Rescue Statistics:		
Fire Protection District:		
Communities Served: City of Sheridan		
Full-time Firefighters: 21	Red-Carded Firefighters: 17	Volunteer Firefighters: 0

Sheridan Fire-Rescue Statistics:		
Rating: ISO 3 NWCG Qualification		
Firefighter Type 1: 17	Incident Commanders	
Certified Sawyers (FAL 1, 2, 3): 0	Type 1–3: 0 Type 4–5: 0	
Port-A-Tanks: 0	Portable Pumps: 1	Fire Shelters: 17
<u>Water Tender:</u>		
Type 1: 0	<u>Wildland Engines:</u>	
Type 2: 0	Type 3: 0	
Type 3: 0	Type 4: 0	
<u>Wildland Engines:</u>	Type 5: 0	
Type 1: 2	Type 6: 1	
Type 2: 0	Type 7: 0	

Story Fire District, Story Fire Department

The Story Volunteer Fire District and Story Fire Department is a volunteer-based department and primarily serves the communities of Story, Banner, and areas between Meade Creek to Piney Creek. Table B.12 lists the resources the department has available for wildfire response. According to fire district survey results, the areas served lack hydrant systems, in which the department primarily drafts water from nearby streams or shuttles water from remote locations or irrigation waterways on private property.

Table B.12. Fire Department Resource Statistics for Story Fire District and Story Fire Department

Story Volunteer Fire and Rescue Statistics:		
Fire Protection District: Story Communities Served: Story, Banner, Mead Creek to Piney Creek		
Full-time Firefighters: 0	Red-Carded Firefighters: 13	Volunteer Firefighters: 13
Rating: ISO 8 NWCG Qualification		
Firefighter Type 1: 13	Incident Commanders	
Certified Sawyers (FAL 1, 2, 3): 2	Type 1–3: 2 Type 4–5: 2	
Port-A-Tanks: 8	Portable Pumps: 3	Fire Shelters: 15
<u>Water Tender:</u>		
Type 1: 0	<u>Wildland Engines:</u>	
Type 2: 1	Type 3: 0	
Type 3: 0	Type 4: 2	
<u>Wildland Engines:</u>	Type 5: 0	
Type 1: 1	Type 6: 2	
Type 2: 0	Type 7: 0	

State Response

Wyoming State Forestry Division – Fire and Aviation Management

The WSFD Fire and Aviation Management branch manages fire resources, coordinates with local rural fire districts, and assists with hazardous fuels reduction projects. In Sheridan County, District 5 Buffalo Field Office supports fire management and response primarily on state trust lands within the district. WSFD consists of multiple resources available to help with fire management activities including initial attack, extended attack, conducting prescribed burns, pre-/post-commercial thinning, and hazardous fuels reduction projects (WSFD 2019). These resources include:

- Type 2 hand crew (the Wyoming Smokebusters)
- Two 10-person modules
- One seasonal Helitak crew (Type 3 helicopter)
- One Type 2 restricted helicopter
- Four Single Engine Air Tankers (SEAT), primarily based in Casper or Gillette

Federal Response

Bighorn National Forest (USFS)

Fire response for the national forest is a multiagency effort with primary response being the responsibility of local ranger districts. The Bighorn National Forest, managed by the USFS, consists of multiple fire response resources including Type 6 engines, the Black Tooth Wildland Fire Module, the Cloud Peak Fuels Module, and the Wyoming Interagency Hotshot Crew. All resources are typically available nationally and primarily dispatched through the Cody Interagency Dispatch Center (USFS 2025).

Buffalo Field Office (BLM)

The BLM Wyoming Wildland Fire and Aviation Program has about 180 employees and consists of multiple firefighting assets available across the state including 16 engines, the Devil's Canyon Veteran hand crew, one water tender, and one helitack crew with a type 3 helicopter. The Buffalo Field Office services Sheridan County and often deploys resources across the state. Most fire suppression efforts conducted by the BLM are in partnership and collaboration with state agencies and local cooperators, including the Wyoming Rural Firefighter Association and the Sheridan County Fire Warden (BLM 2026b).

Planning Decision and Support

Wildfires have continued to grow in size and severity over the last decade, requiring fire managers to institute more robust pre-fire planning, as well as adapt and improve decision-making tools to reduce risk to fire responders and the public and assess impacts to ecological processes.

A primary emergency management tool utilized by all levels of government, nongovernmental organizations, and private sectors, is the National Incident Management System (NIMS). NIMS, established by the Federal Emergency Management Agency (FEMA), is a standard that works to prevent, respond, mitigate, and recover from incidents (FEMA 2025). In the context of incident response, the NIMS Incident Command System (ICS) plays a pivotal role in ensuring a coordinated effort. It enables effective collaboration between businesses and public agencies involved in activities such as firefighting and property conservation (Ready.gov 2024).

To ensure seamless integration with NIMS and the Authority Having Jurisdiction (AHJ) of an ongoing incident, local departments and protection districts should ensure that all available responders are up to date on qualifications, certifications, and credentials as required by the AHJ (FEMA 2025). The level of qualification

needed will depend on the task required of the responding personnel. For additional information on NIMS components and qualifications, please visit the FEMA site here: <https://www.fema.gov/emergency-managers/nims/components>

In the event of an incident, activities such as firefighting and property conservation may be ongoing at the scene, while others involved in incident stabilization, or crisis communications report to an Emergency Operations Center (EOC). The EOC serves as a critical component triggered in response to major incidents that cause significant property damage or disruption to local businesses or that pose potential impacts to the community (Ready.gov 2024). It provides a space for decision makers to gather, receive up-to-date information, and make informed decisions. The EOC, whether physical or virtual, serves as the central hub for coordinating and supporting incident management activities.

Mutual Aid

A critical component of Sheridan County's wildfire response is the mutual aid agreements among fire response agencies. Developed in 2022, the Wyoming Cooperative Wildland Fire Management and Stafford Act Response Agreement establishes a 5-year master agreement for fire response across multiple jurisdictions (WSFD 2022). The WSFD coordinates the agreement between federal agencies, Sheridan County, and local fire protection districts within Sheridan County. The primary purpose is to improve efficiency in coordinating personnel, equipment, and services for wildland fire management under the Stafford Act.

The agreement is available at: <https://wsfd.wyo.gov/fire-management/fire-business>

Developed in 2024, the Sheridan Fire-Rescue Long-Range Master Plan highlights established mutual aid agreements across local fire response resources throughout the county. These mutual aid agreements establish a framework that allows fire resources across the county to be efficiently mobilized and operated during wildfire and other emergency incidents. This agreement enables seamless cooperation and resource sharing across different jurisdictions, regardless of land ownership. This collaborative approach ensures that all available resources are used effectively, enhancing the county's ability to manage wildfires and minimizing their impact to communities and natural resources (Sheridan Fire-Rescue 2024).

Wildfires have continued to grow in size and severity over the last decade, requiring fire managers to institute more robust pre-fire planning as well as adaptive and improved decision-making tools in order to reduce risk to fire responders and the public.

Note: There is no formal mutual aid agreement between the fire districts and counties in Montana. The states rely on the Western States Fire Compacts between the states for sharing firefighting personnel, equipment, and technology. Sheridan County and Campbell County have hosted biannual coordination meetings between responders along the border of Wyoming and Montana.

Water Availability and Supply

Based on survey results and input from each fire protection district and department fire chiefs, the available water resources for fire suppression operations within Sheridan County include a combination of municipal hydrants, tanks, water shuttling, streams, rivers, and irrigation waterways. Some jurisdictions reported access to adequate hydrant systems, while others relied on drafting and shuttling water from other sources.

Evacuation Resources

Evacuation relies on both cooperative planning and the capability of residents to effectively comprehend and execute planned evacuation procedures. Most of Sheridan County does not have evacuation plans related to wildfires or hazardous materials incidents, except for the town of Story, which has its own evacuation plan for the town developed by the Story VFD.

Sheridan County

Sheridan County Department of Emergency Management's (DEM's) *Multi-Hazard Mitigation Plan 2024* highlights the need for evacuation planning for wildfire (Sheridan County 2024).

The Sheridan County *Multi-Hazard Mitigation Plan 2024* is available at:

https://www.sheridancountywy.gov/departments/emergency_management/sheridan_county_multi_hazard_mitigation_plan_2024.php

DEM has developed [Emergency Preparedness Resources](#) to support residents in planning for emergencies and other events. The resource contains the following among others:

- Family Emergency Plan
- Evacuation Checklist
- Emergency Readiness Checklist
- Daily Functioning Needs Checklist
- Two Weeks Ready Checklist

The public should follow the latest guidance from trusted sources, such as official government agencies, regarding evacuation orders. Additionally, if you feel unsafe you should evacuate immediately even if you have not received an emergency alert, and individuals who need extra time to mobilize should leave when they receive an evacuation warning. Current evacuation orders should always be adhered to and supersede all information presented in the Sheridan County CWPP.

Road Systems

The majority of communities in the eastern portion of the planning area consist of urban and rural roadways with few hazardous features or obstructions for emergency response vehicles and personnel. The primary concern arises in communities with limited road systems, posing challenges for wildfire evacuations due to steep slopes that limit access for emergency responders and egress routes. Fuel treatments may be needed along some roads where vegetation is overhanging and could prevent safe evacuation of residents or safe access by emergency responders.

People

The safe and efficient evacuation of people from wildfire requires emergency notification systems, preplanning of evacuation routes, and effective public education and outreach on emergency preparedness. The following sections detail these elements within the county.

Animals and Livestock

In the event of a wildfire, it is important that residents and fire responders within Sheridan County have a plan for evacuation of pets and livestock. For example, loading horses during a fire and smoke situation and transporting stock vehicles down narrow roads under stressful situations can be very difficult.

The University of Wyoming Extension and Wyoming Department of Agriculture provide resources for livestock owners, including guidance on emergency preparedness, animal health, and post-fire recovery, which can be used to support evacuation planning and decision-making. For evacuation resources, please visit:

<https://www.uwyo.edu/uwe/programs/wyo-disaster/wildfire.html>

However, while Sheridan County and local partners may coordinate emergency sheltering or relocation efforts during wildfire incidents, residents are encouraged to make arrangements ahead of time, such as identifying locations with friends, neighbors, fairgrounds, or other facilities, to ensure that a lack of planning does not delay evacuation or put responders and animals at risk.

Emergency Notification Methods

Alert Sense

Sheridan County utilizes the Alert Sense system, which enables residents that subscribe to receive emergency alerts via text message, email, pager, or voicemail based on personal preferences. The alert notification subscription is free of cost and available at: <https://public.alertsense.com/SignUp/?RegionId=2379>

Ready.Gov

Ready.Gov is a program developed by the Department of Homeland Security intended to provide disaster and emergency information and preparation resources. Similar to FEMA resources, documents and information are categorized by before, during, and after an emergency. The site provides guides, educational documents, and other resources to help citizens harden their homes and foster defensible space, plan for a wildfire, stay safe during an event, and safely return home or rebuild following a wildfire. The full list of resources is available here: <https://www.ready.gov/wildfires>.

Fire Watch Duty

Fire Watch Duty is a program that provides a map of emerging and existing wildfire incidents, evacuations, local shelters, and critical fire weather alerts, updated on a regular basis. The program is available for free through the website and the mobile app at: <https://app.watchduty.org/>.

APPENDIX C: COMMUNITY FIELD ASSESSMENTS



CONTENTS

CWPP Field Assessments	C-1
Community Boundary Delineation	C-1
Understanding the Community Field Assessments	C-1
Community Wildfire Risk Ratings Overview.....	C-5
Arvada	C-6
Banner/I-90	C-8
Beckton/Big Goose Road.....	C-10
Big Horn/South Sheridan	C-12
Burgess Junction.....	C-14
Clearmont/Leiter.....	C-16
Dayton	C-18
East Sheridan/East I-90	C-20
Monarch	C-22
Parkman/State Highway 345	C-24
Ranchester.....	C-26
Soldier Creek	C-28
Story	C-30
Ucross	C-32
West Sheridan.....	C-34
Wolf	C-36
Wyarno	C-38
Community Survey Results Forms.....	C-40
East Sheridan/East I-90	C-40

CWPP FIELD ASSESSMENTS

Field assessments were conducted in April 2026 for 17 communities in Sheridan County. This appendix summarizes community-specific wildfire hazard assessments and tailored project recommendations developed by SWCA fire planners in collaboration with local Fire Chiefs and with input from community members. Although the communities listed here have distinct recommendations, the countywide project recommendations described in Chapter 4 apply to all communities. Additionally, these community-specific recommendations are not limited to a single entity and may be implemented wherever they are most needed. It is important to note that the community-level recommendations serve as a roadmap for each community over the next 5 years; however, implementation timelines are highly dependent on the availability of resources.

Community Boundary Delineation

CWPP communities were delineated based on county subdivisions, proximity to fire districts, topography and vegetation characteristics, and development patterns (e.g., analyzing landscape features and the built environment to provide more tailored and actionable information). The Core Team also provided input on community boundary delineations based on local knowledge of development trends, subdivisions, and connected travel routes. It should be noted that community boundaries evolve and are only current as of the date this document was published.

The community wildfire hazard assessment summaries below capture average conditions within each community boundary; therefore, the provided ratings (e.g., moderate, extreme, etc.) may not universally apply to every parcel or lot within the community. It is important to note that these ratings reflect the collective evaluation of the community as an entity and may be used to guide strategies for informed mitigation actions. Additionally, some homes and parcels may fall just outside the delineated boundaries of a community. In these instances, it can be assumed that the factors and ratings identified for nearby delineated communities also applies to homes and parcels falling outside of the boundaries.

Understanding the Community Field Assessments

Community assessments were completed using a modified methodology described by the National Fire Protection Association (NFPA) Code 1144: *Standard for Reducing Structure Ignition Hazard for Wildland Fire* (<https://www.nfpa.org/codes-and-standards/nfpa-1144-standard-development/1144>). The modified NFPA 1144 field survey evaluates the physical features that influence how likely homes and neighborhoods are to ignite during a wildfire and is carried out at a community scale and not parcel level. Each feature is scored based on average on-the-ground conditions such as access, vegetation, slope, building materials, and available fire protection resources. Higher scores are assigned to features that increase exposure and vulnerability (for example, combustible construction materials), while lower scores reflect features that reduce risk (such as maintained defensible space). Scores for each feature are added together to produce a final, combined score. The combined score determines a community's overall hazard class: Low, Moderate, High, or Extreme.

Each combined hazard score was assigned a color to demonstrate hazard ranging from low to high as described below.

1. A **green score** corresponds with low hazard (25 – 43.75%).
2. A **yellow score** corresponds to a moderate hazard (43.75 – 62.5%).
3. An **orange score** corresponds to a high hazard (62.5 – 81.25%).
4. A **red score** indicates extreme hazard (81.25 – 100%).

Table C.1 shows a simplified breakdown of the evaluated features and their importance in determining community wildfire hazards. The full assessment forms used to evaluate each community are available toward the end of this Appendix.

Table C.1. Key Factors Evaluated in the Community Field Assessments

Feature	Explanation	Vulnerability Examples (higher scores)	Resiliency Examples (lower scores)
Means of Access  (Number of roads in and out, road width and grade, road type [paved/unpaved] turnarounds, street signage)	Narrow, steep, or dead-end roads can delay fire-engine access and make evacuation more difficult. Wide, well-marked roads with clear addresses and turnarounds allow firefighters to reach homes quickly and help residents leave safely.	- Narrow, steep roads - Non-reflective or missing street signage - Unpaved/uneven roads - Lack of turnarounds	- Wide, flat roads - Reflective street signage - Paved, well-maintained roads - Sufficient turnarounds
Vegetation  (Type and amount of vegetation [trees, brush, grass] and the level of defensible space around homes)	Vegetation is fuel for wildfire. Dense or continuous vegetation close to structures allows flames and embers to reach buildings. Maintaining a lean, green, and clean zone within 100 feet of structures greatly reduces ignition potential.	- Thick, dense, and continuous vegetation - Dead and dry vegetation - Lack of defensible space - Yard debris	- Good defensible space - Healthy, well-watered and maintained vegetation - Good clearance and separation from the home
Topography  (Slope steepness, position on ridge or canyon, local wind exposure, and fire history)	Fire travels faster uphill and can funnel through canyons or drainages. Homes on slopes or ridges often face higher radiant heat and ember exposure. Knowing the lay of the land helps prioritize fuel reduction on the most vulnerable slopes.	- Properties in proximity to steep terrain - Properties in or adjacent to canyons, ridges, and drainages	- Properties situated in flat areas - Properties situated away from ridges, canyons, and drainages
Construction Materials  (Roofing, siding, decks, fences, and proximity of structures to slopes or vegetation)	The materials used on and around your home determine how easily it can ignite. Non-combustible roofing, enclosed eaves, screened vents, and ignition-resistant decks significantly improve survival chances during a wildfire.	Combustible roofing, siding, decks, and fences	- Hardened construction materials (metal roofs, fire-resistive decks, fences, and siding) - Tempered, double-pane windows
Available Fire Protection  (Distance to the nearest fire station, availability of hydrants, tanks, or static water sources)	Access to water and quick response times can make a critical difference. Communities farther from organized response or lacking reliable water sources face higher risk and may require additional mitigation such as community water tanks.	- Poor or non-existent water resources (e.g., lack of hydrants) - Properties that are located more than 5 miles away from a fire station	- Communities that are served by a network of hydrants and water tanks - Properties that are located less than 5 miles away from a fire station

Feature	Explanation	Vulnerability Examples (higher scores)	Resiliency Examples (lower scores)
 Gas and Electric Utilities (Whether powerlines and gas lines are above or below ground and how well they're maintained)	Overhead lines and nearby vegetation can cause sparks during wind events, while underground utilities are less vulnerable. Propane tanks and gas meters should be placed at safe distances from structures and kept clear of brush.	• Above ground propane tanks in proximity to homes • Exposed propane tanks (e.g. close to wood piles or wood fences) • Power distribution poles with poor clearance from surrounding vegetation	• Underground propane tanks • Above ground propane tanks covered in a metal or stone covering and away from combustible materials • Underground electric lines • Fire-hardened power poles with good clearance from surrounding vegetation

In addition to the community wildfire hazard and risk ratings, each community profile in the sections below contains maps illustrating the results of the Quantitative Wildfire Risk Assessment (QWRA) as well as proposed projects for each community.

Community Recommendations

Each community profile includes recommendations for reducing wildfire risk and improving home ignition conditions that will improve the likelihood of a home surviving a fire. These recommendations are provided based on the conditions observed during the risk assessment. Recommendations are best practices for individual homeowners and communities based on researched materials and home defensible space methods. Each property owner’s ability to implement the suggested measures vary based on physical capabilities, funding and income, and individual property characteristics. Homeowners are advised to undertake measures within their capabilities and means. It is understood that additional capacity, funding, and assistance from local government, county, or state agencies is needed in the county to make substantial progress on suggested measures. Homeowners are encouraged to review Appendix E for additional information on tiered home improvement and defensible space measures that can be undertaken within each homeowner’s financial and physical means.

The Quantitative Wildfire Risk Assessment map described in Chapter 3 does not integrate findings from the field assessments since each assessment is focused on very different parameters (field observations vs. quantitative [computational] modeling) and completed at a different scale (countywide versus community). Due to the differing focus and resolutions associated with these two assessment methodologies, there may be deviations between the resulting risk rating outputs. Though important to note, this is expected when analyzing wildfire risk and hazard across scales.

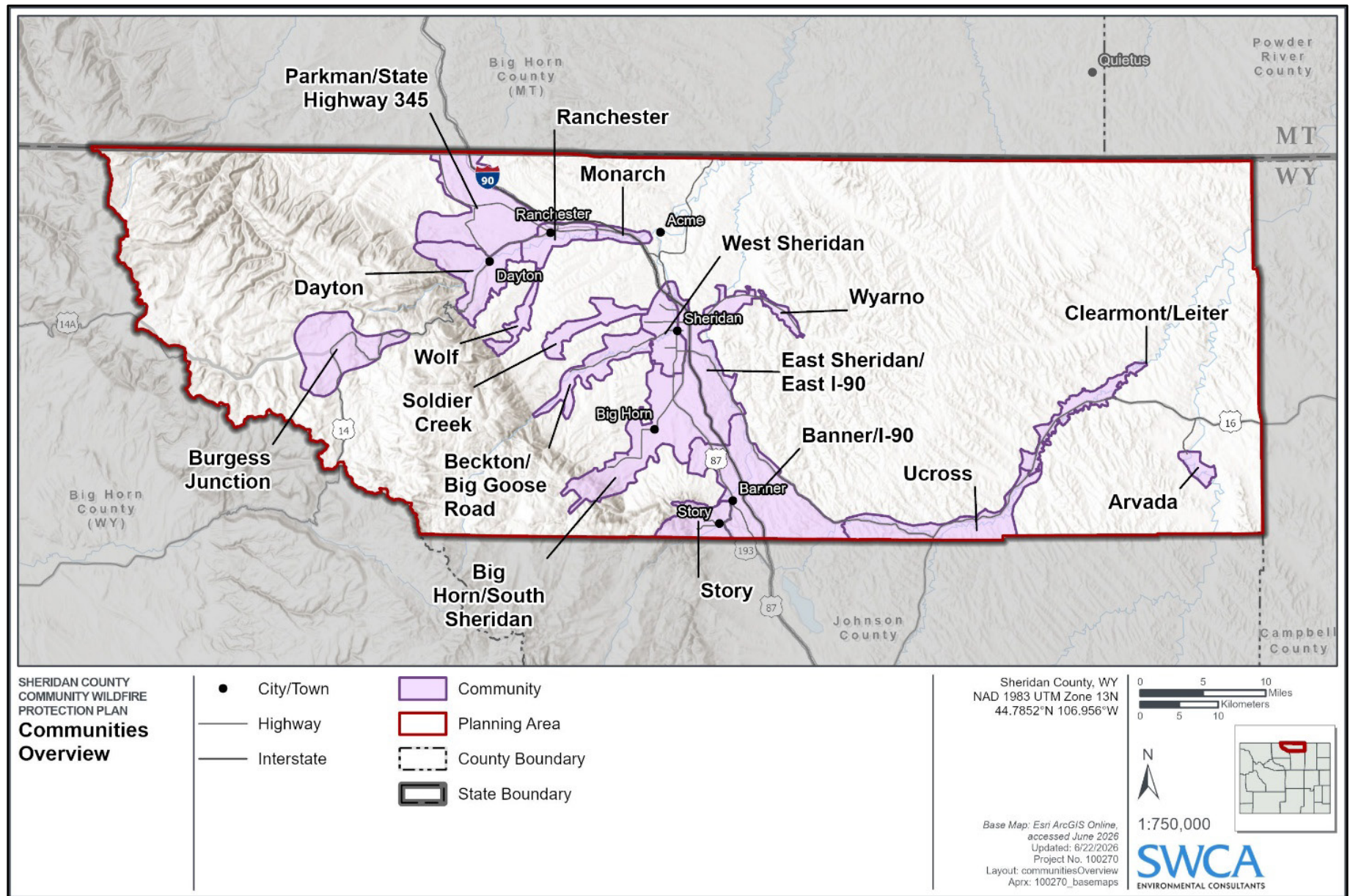


Figure C.1. Assessed communities within Sheridan County.

Community Wildfire Risk Ratings Overview

In Sheridan County, many of the communities that were evaluated rated from moderate to high risk. Table C.2 provides a summary of the results based on the NFPA 1144 assessments conducted throughout each community.

Table C.2. Overall community wildfire risk ratings in Sheridan County

Community	Community Wildfire Hazard Rating (Lowest Possible is 25%)
Burgess Junction	69% High
Story	63% High
West Sheridan	61% Moderate
Banner/I-90	61% Moderate
Big Horn/South Sheridan	59% Moderate
Wolf	56% Moderate
Beckton/Big Goose Road	55% Moderate
Arvada	54% Moderate
Parkman/State Highway 345	54% Moderate
Monarch	53% Moderate
Clearmont/Leiter	51% Moderate
Dayton	51% Moderate
East Sheridan/East I-90	49% Moderate
Wyarno	49% Moderate
Ranchester	48% Moderate
Soldier Creek	48% Moderate
Ucross	48% Moderate

Arvada

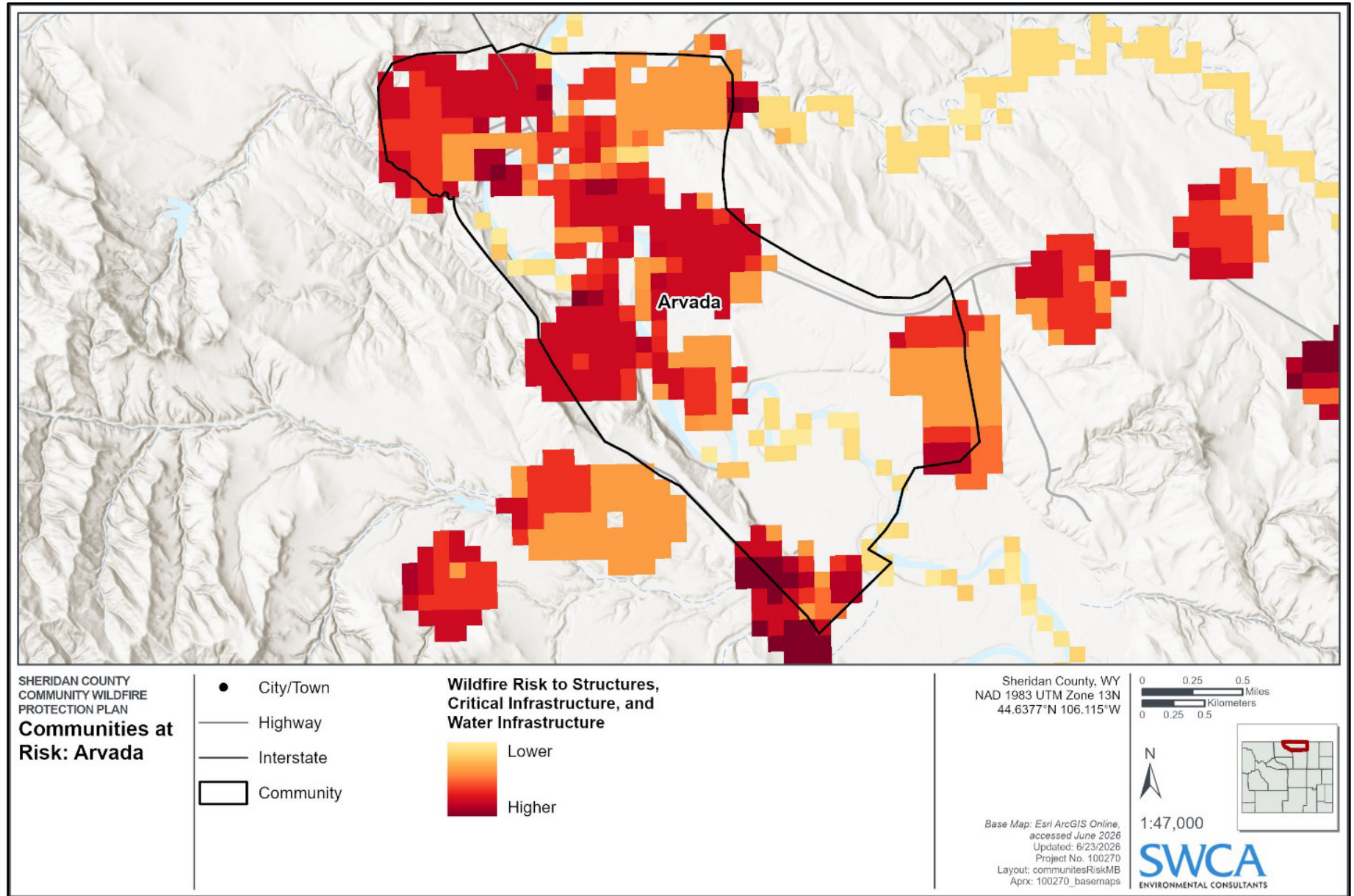


Figure C.2. Wildfire risk to structures and infrastructure around Arvada.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	54% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Moderate
Fire Truck Access	Extreme
Street Signs	Extreme
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	High
Organized Response	Low
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Moderate

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install reflective signage on homes to increase fire response efficiency and access.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Banner/I-90

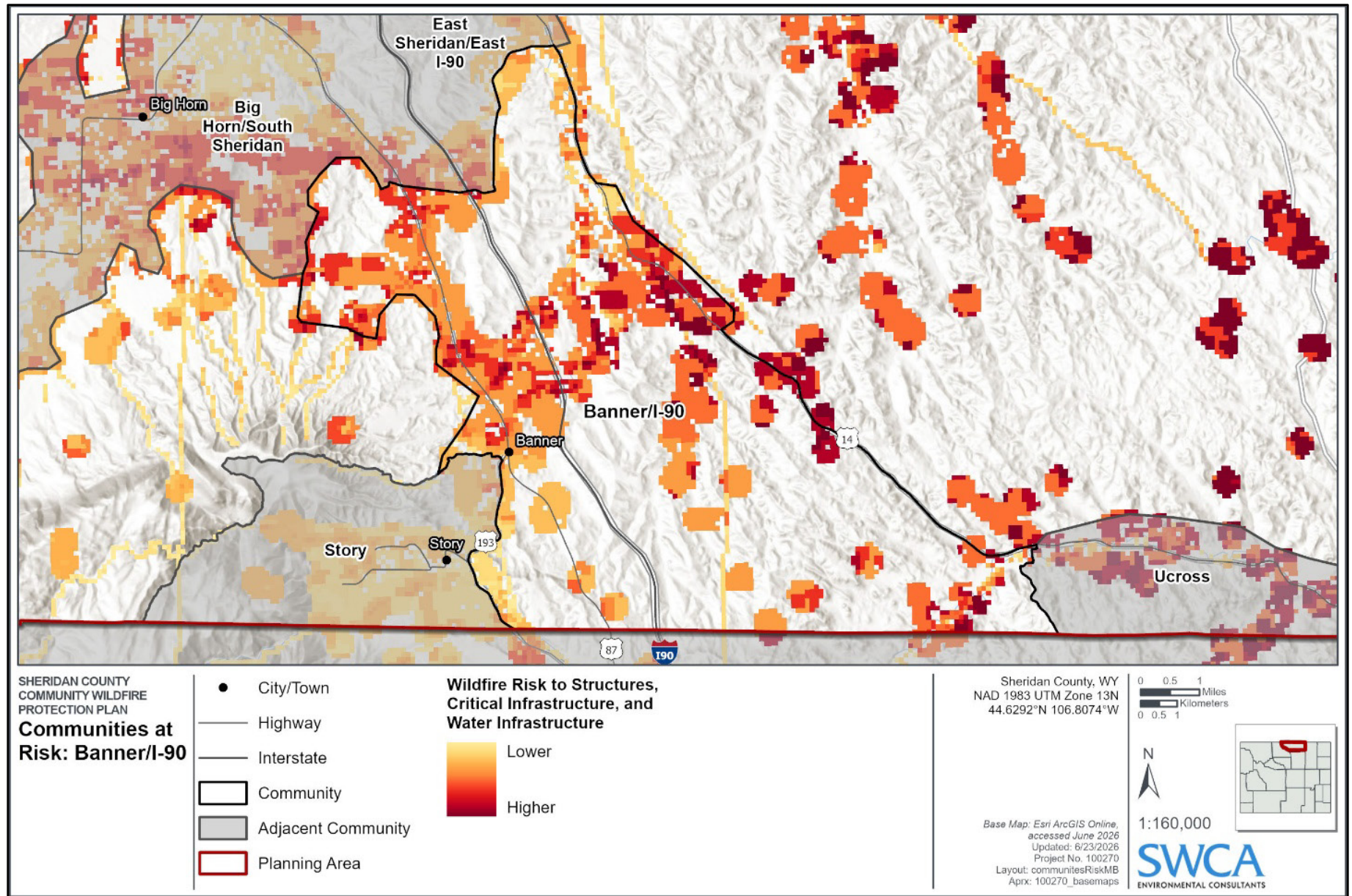


Figure C.3. Wildfire risk to structures and infrastructure around Banner/I-90.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	61% Moderate
Risk Variable	Risk Rating
Entrance/Exit	High
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Extreme
Hazardous Fuels	Moderate
Defensible Space	Extreme
Slope	Moderate
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Moderate
Water Sources	Low
Organized Response	Extreme
Utility Placement	Low
Topographic Features	Moderate
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and riparian areas.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Install hydrants, water tanks, and other water infrastructure to bolster water sources.
- Identify opportunities to improve evacuation options or emergency access routes and response in areas far from emergency response.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Beckton/Big Goose Road

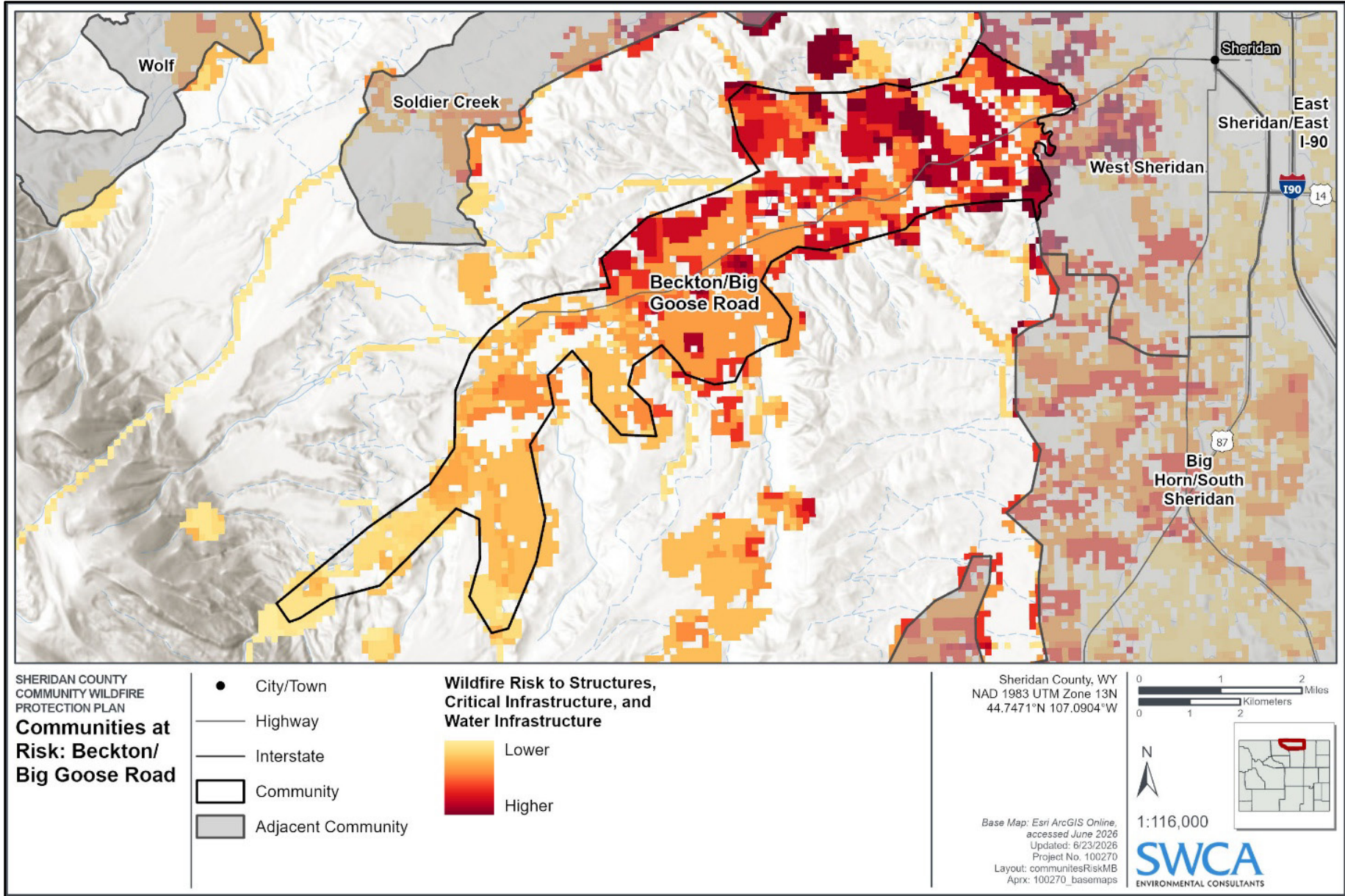


Figure C.4. Wildfire risk to structures and infrastructure around Beckton/Big Goose Road.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	55% Moderate
Risk Variable	Risk Rating
Entrance/Exit	High
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	High
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Moderate
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	High
Water Sources	Moderate
Organized Response	High
Utility Placement	Low
Topographic Features	Moderate
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Install hydrants, water tanks, and other water infrastructure to bolster water sources.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.

Big Horn/South Sheridan

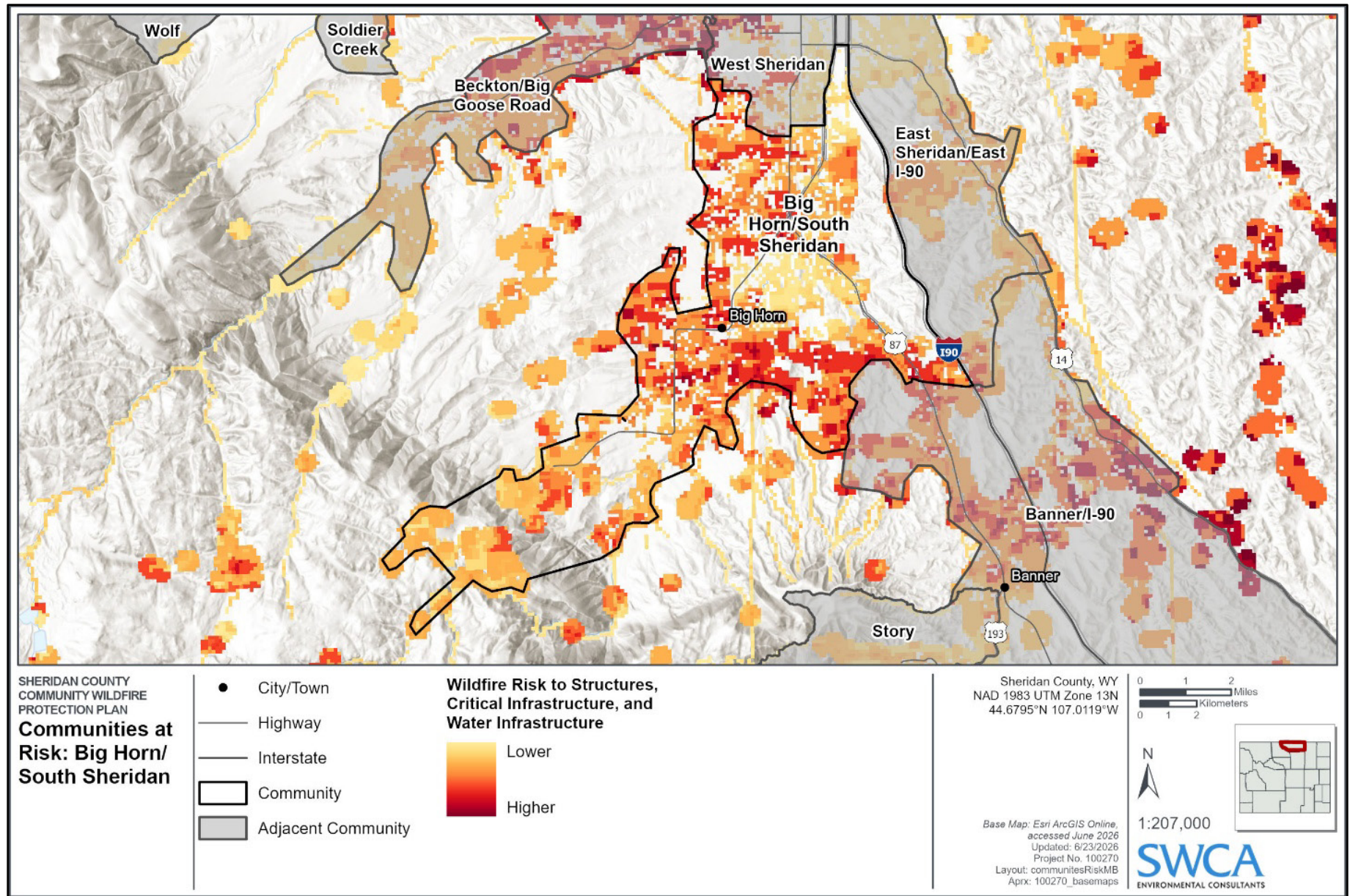


Figure C.5. Wildfire risk to structures and infrastructure around Big Horn/South Sheridan.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	59% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Moderate
Hazardous Fuels	High
Defensible Space	High
Slope	Moderate
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	High
Water Sources	Moderate
Organized Response	Moderate
Utility Placement	High
Topographic Features	High
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and riparian areas.
- Install reflective signage on homes to increase fire response efficiency and access.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.

Burgess Junction

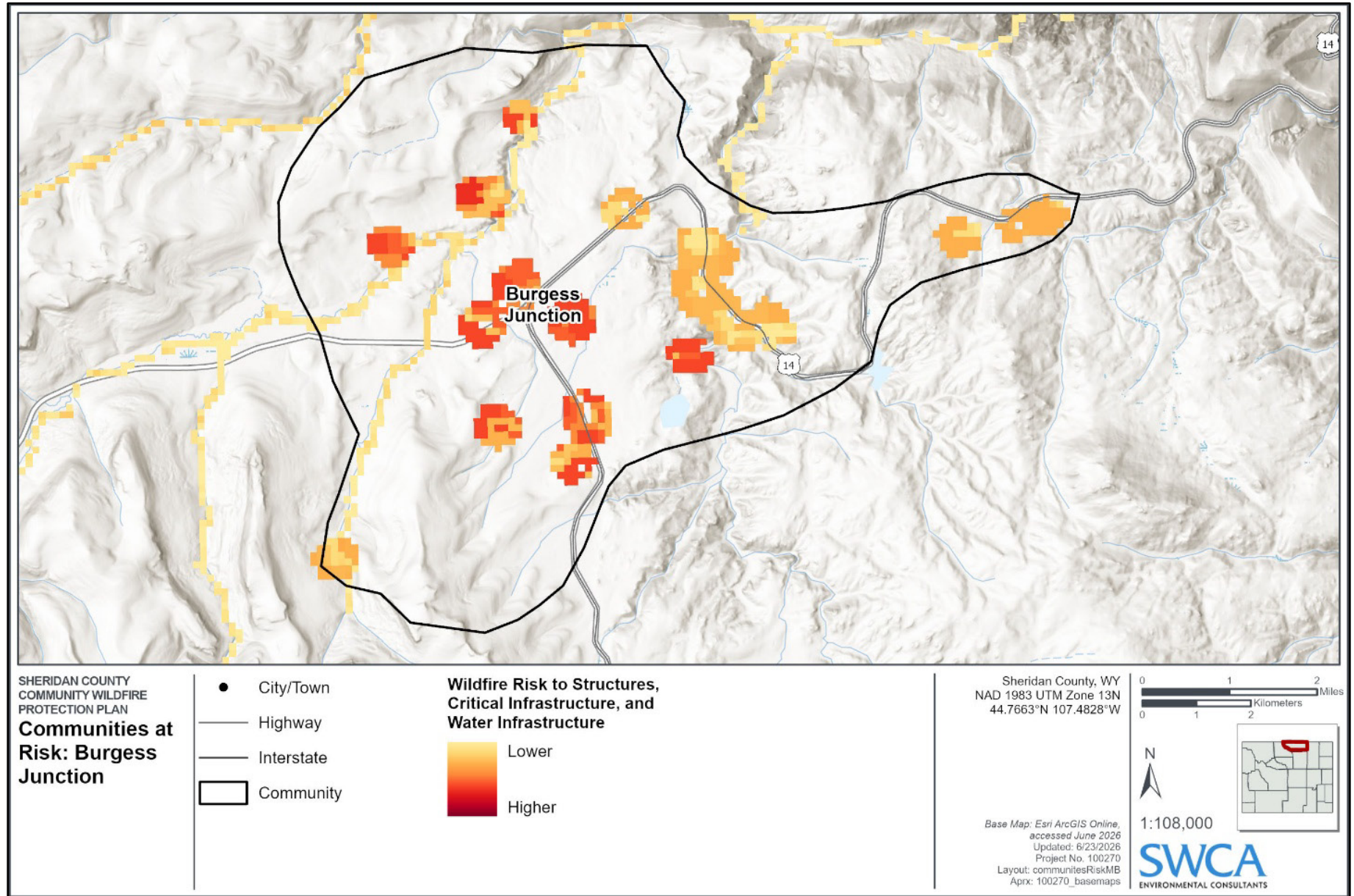


Figure C.6. Wildfire risk to structures and infrastructure around Burgess Junction.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	69% High
Risk Variable	Risk Rating
Entrance/Exit	High
Road Width	High
Road Conditions	Moderate
Fire Truck Access	Extreme
Street Signs	High
Hazardous Fuels	High
Defensible Space	Extreme
Slope	High
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	High
Water Sources	Low
Organized Response	Extreme
Utility Placement	Low
Topographic Features	High
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	High
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and on slopes adjacent to properties.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Install reflective signage on homes to increase fire response efficiency and access.
- Install directional signage on roadways, such as dead end and cul-de-sac messaging, to support effective emergency response and evacuation.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Identify opportunities to improve evacuation options or emergency access routes and response in areas far from emergency response.
- Reduce fuel continuity through landscape-scale fuel treatments in coordination with Bighorn National Forest.

Clearmont/Leiter

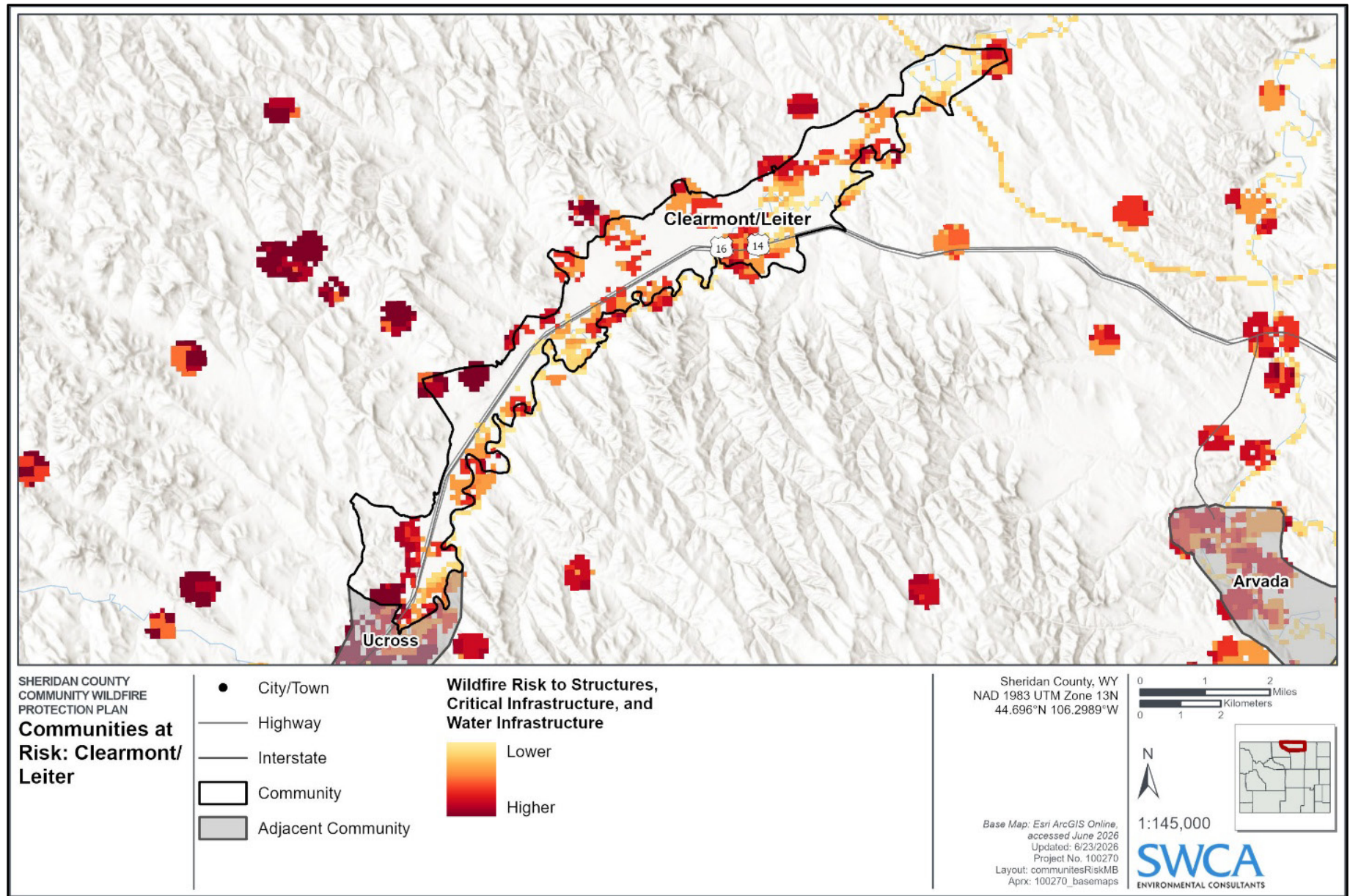


Figure C.7. Wildfire risk to structures and infrastructure around Clearmont/Leiter.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	51% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	High
Organized Response	Moderate
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Moderate

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, removing debris from within the hazard ignition zone.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas.
- Install reflective signage on homes to increase fire response efficiency and access.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Dayton

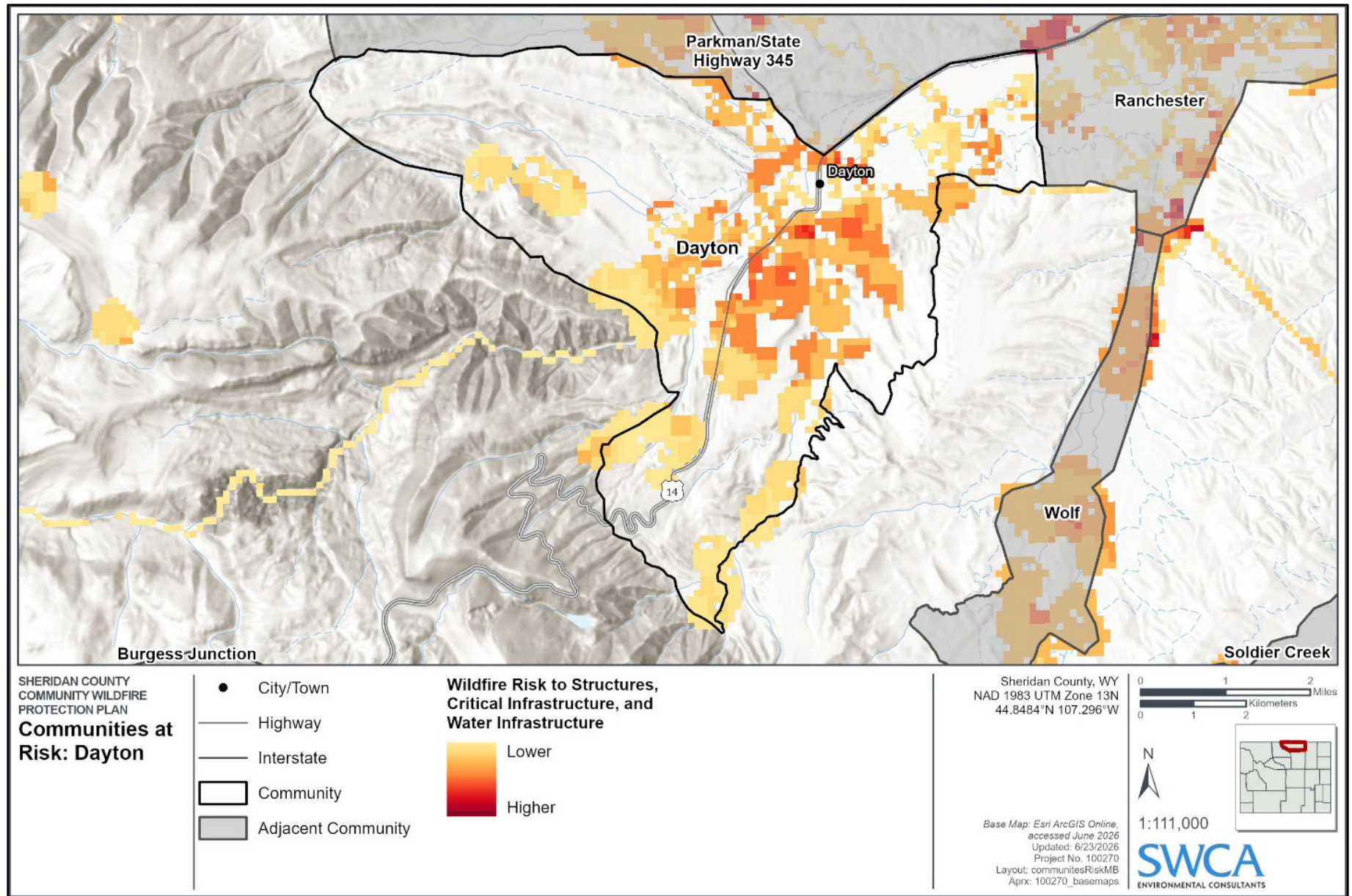


Figure C.8. Wildfire risk to structures and infrastructure around Dayton.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	51% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	Low
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Moderate
Water Sources	Moderate
Organized Response	Moderate
Utility Placement	Extreme
Topographic Features	Moderate
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Reduce rangeland fuels through grazing, harvesting, and other methods.

East Sheridan/East I-90

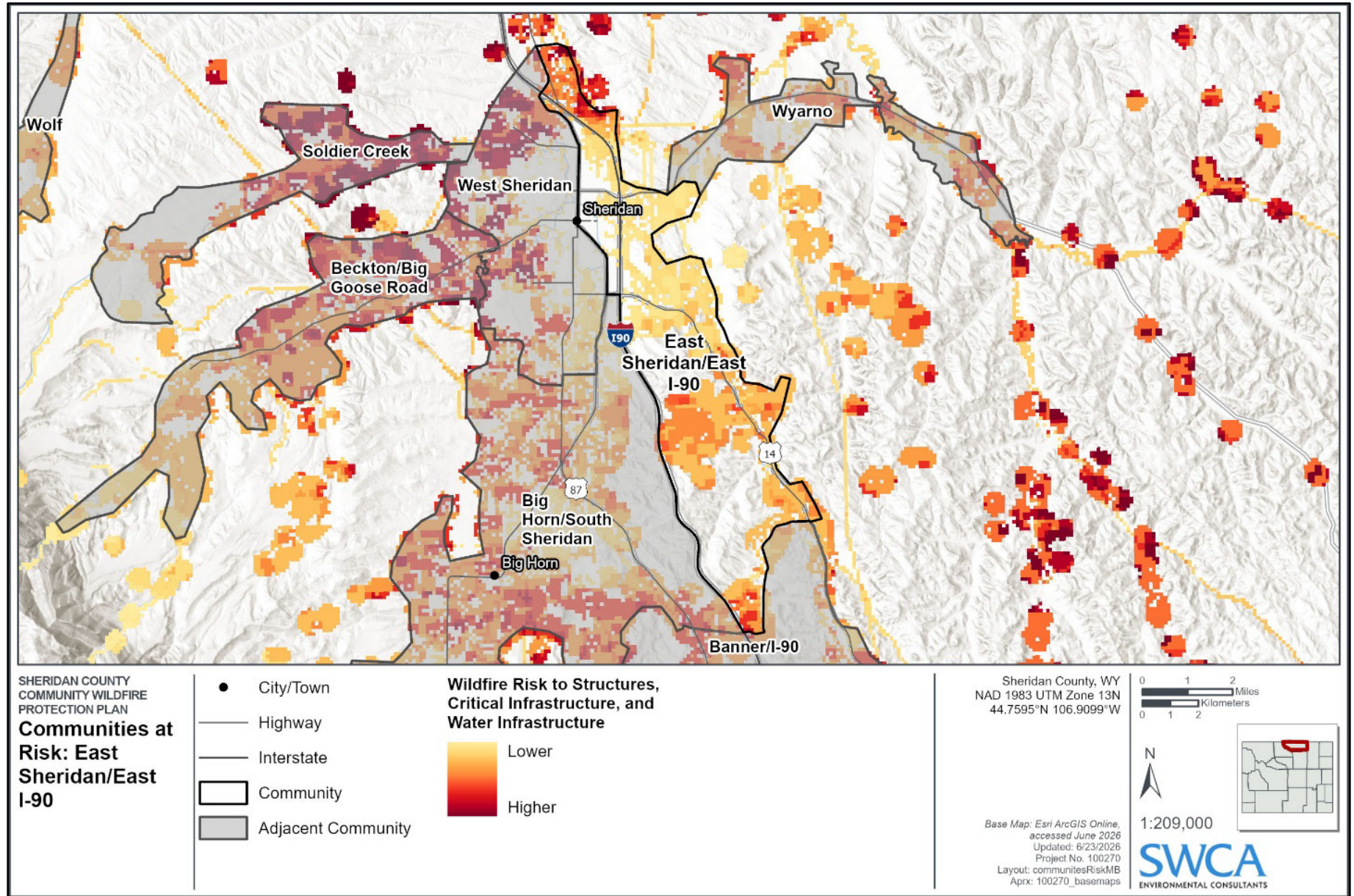


Figure C.9. Wildfire risk to structures and infrastructure around East Sheridan/East I-90.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	49% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	Low
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	High
Building Setback	Moderate
Water Sources	Moderate
Organized Response	Low
Utility Placement	Extreme
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Moderate

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance, particularly where grass and shrub fuels border residential areas.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas.
- Install fuel breaks along the community's perimeter.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Monarch

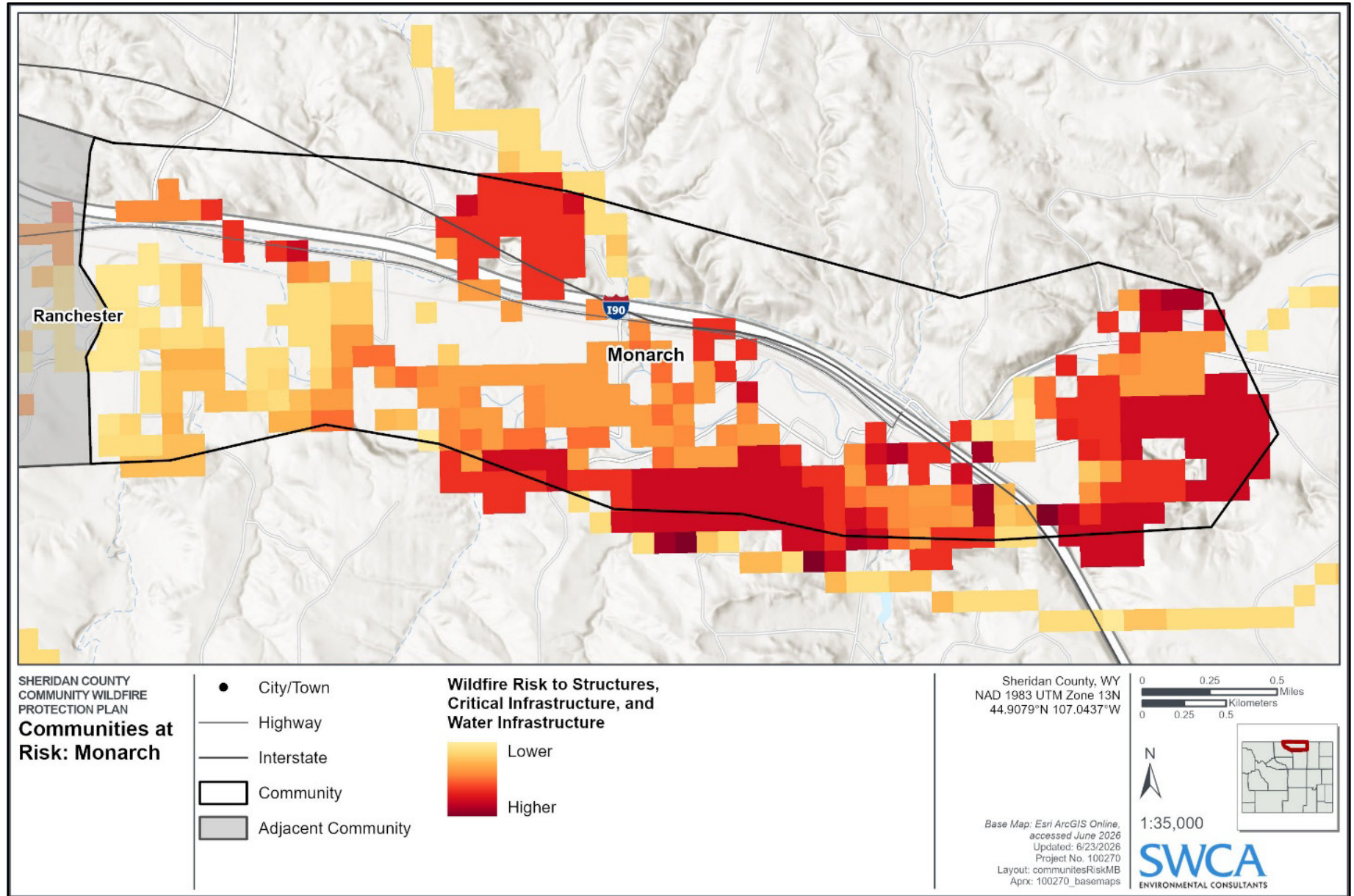


Figure C.10. Wildfire risk to structures and infrastructure around Monarch.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	53% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	High
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	Extreme
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	High
Organized Response	Moderate
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install reflective signage on homes to increase fire response efficiency and access.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and riparian areas.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Parkman/State Highway 345

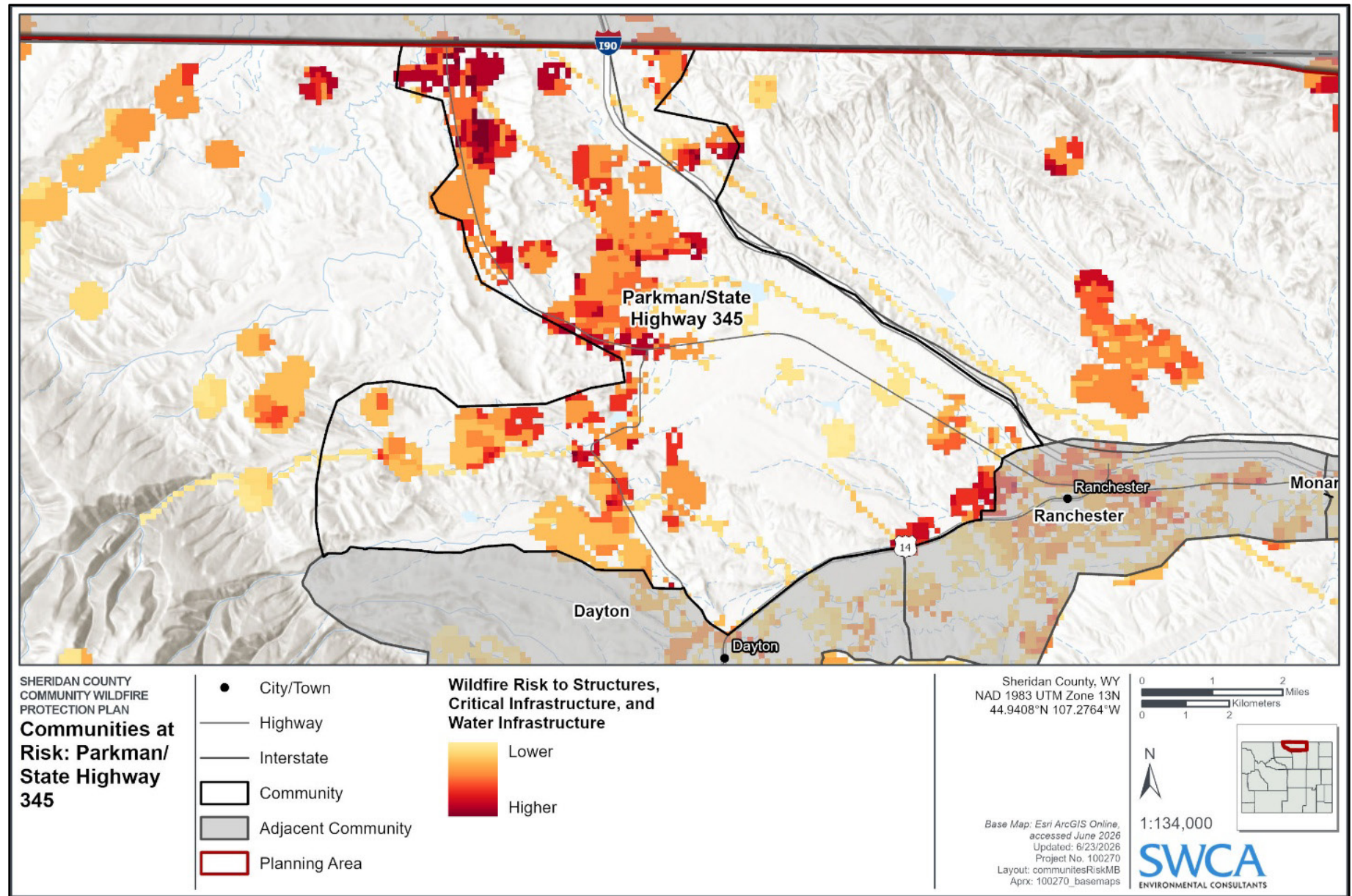


Figure C.11. Wildfire risk to structures and infrastructure around Parkman/State Highway 345.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	54% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Low
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	Extreme
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	Low
Organized Response	Extreme
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	High
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas with creeks and ditches.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Install hydrants, water tanks, and other water infrastructure to bolster water sources.
- Identify opportunities to improve evacuation options or emergency access routes and response in areas far from emergency response.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Ranchester

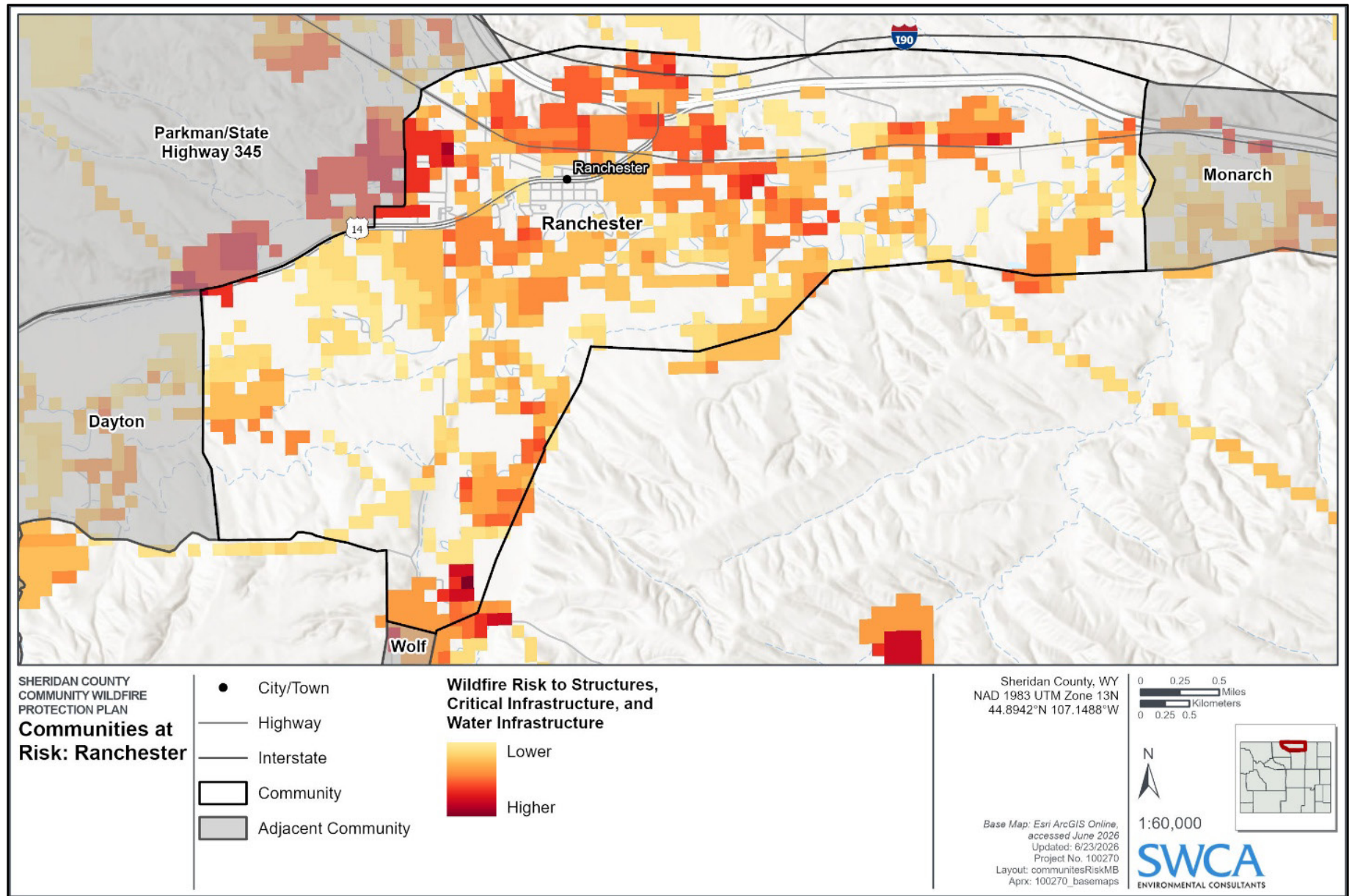


Figure C.12. Wildfire risk to structures and infrastructure around Ranchester.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	48% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Moderate
Road Conditions	Low
Fire Truck Access	Moderate
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	High
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	High
Building Setback	Low
Water Sources	Moderate
Organized Response	Low
Utility Placement	Extreme
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Moderate

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas with creeks and ditches.
- Install fuel breaks along the community's perimeter.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Soldier Creek

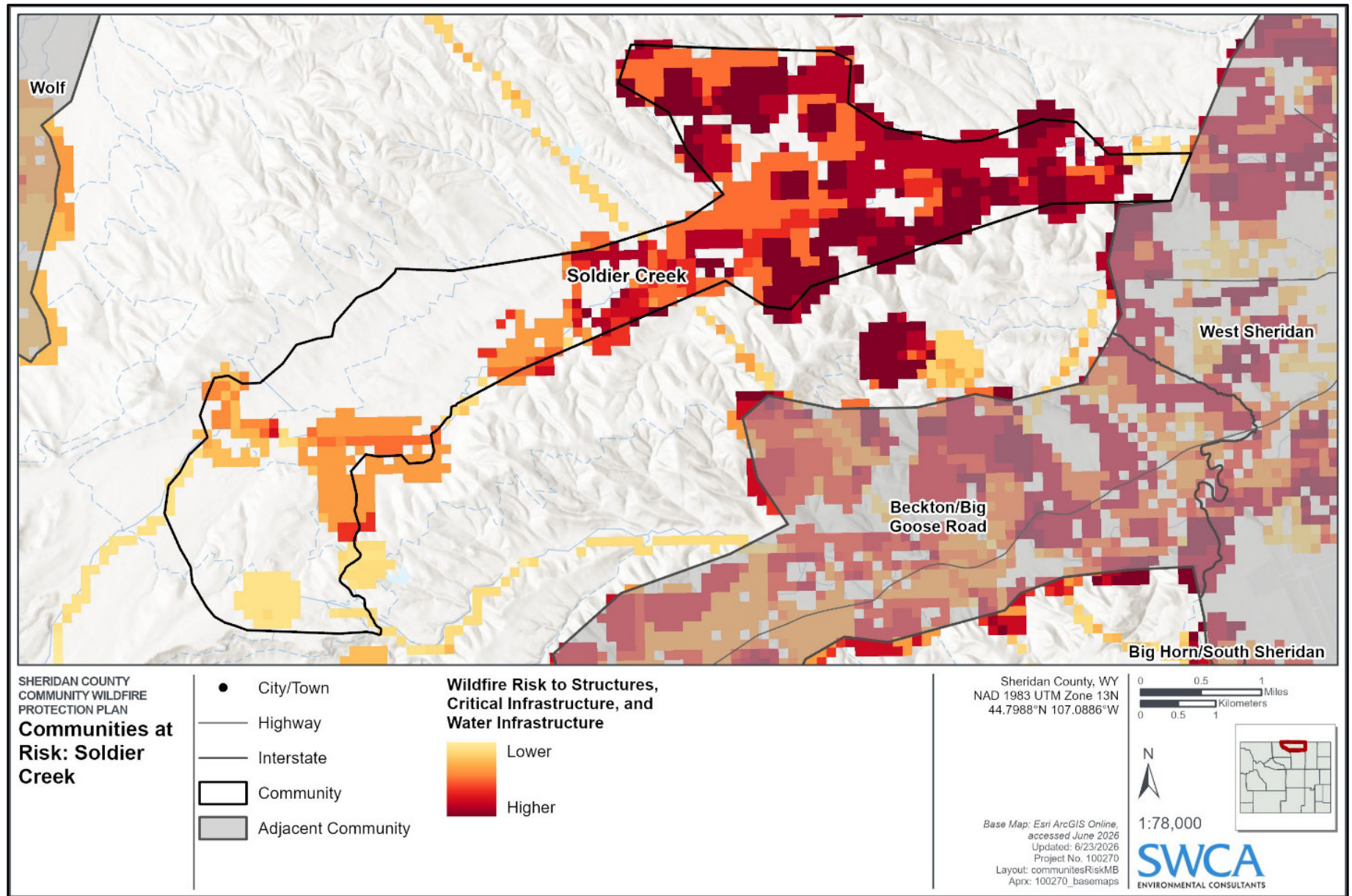


Figure C.13. Wildfire risk to structures and infrastructure around Soldier Creek.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	48% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	Moderate
Road Conditions	Moderate
Fire Truck Access	Moderate
Street Signs	High
Hazardous Fuels	Moderate
Defensible Space	Moderate
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	High
Water Sources	Low
Organized Response	Extreme
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and in riparian areas with creeks and ditches.
- Install hydrants, water tanks, and other water infrastructure to bolster water sources.
- Install directional signage on roadways, such as dead end and cul-de-sac messaging, to support effective emergency response and evacuation.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Install reflective signage on homes to increase fire response efficiency and access.
- Identify opportunities to improve evacuation options or emergency access routes and response in areas far from emergency response.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Story

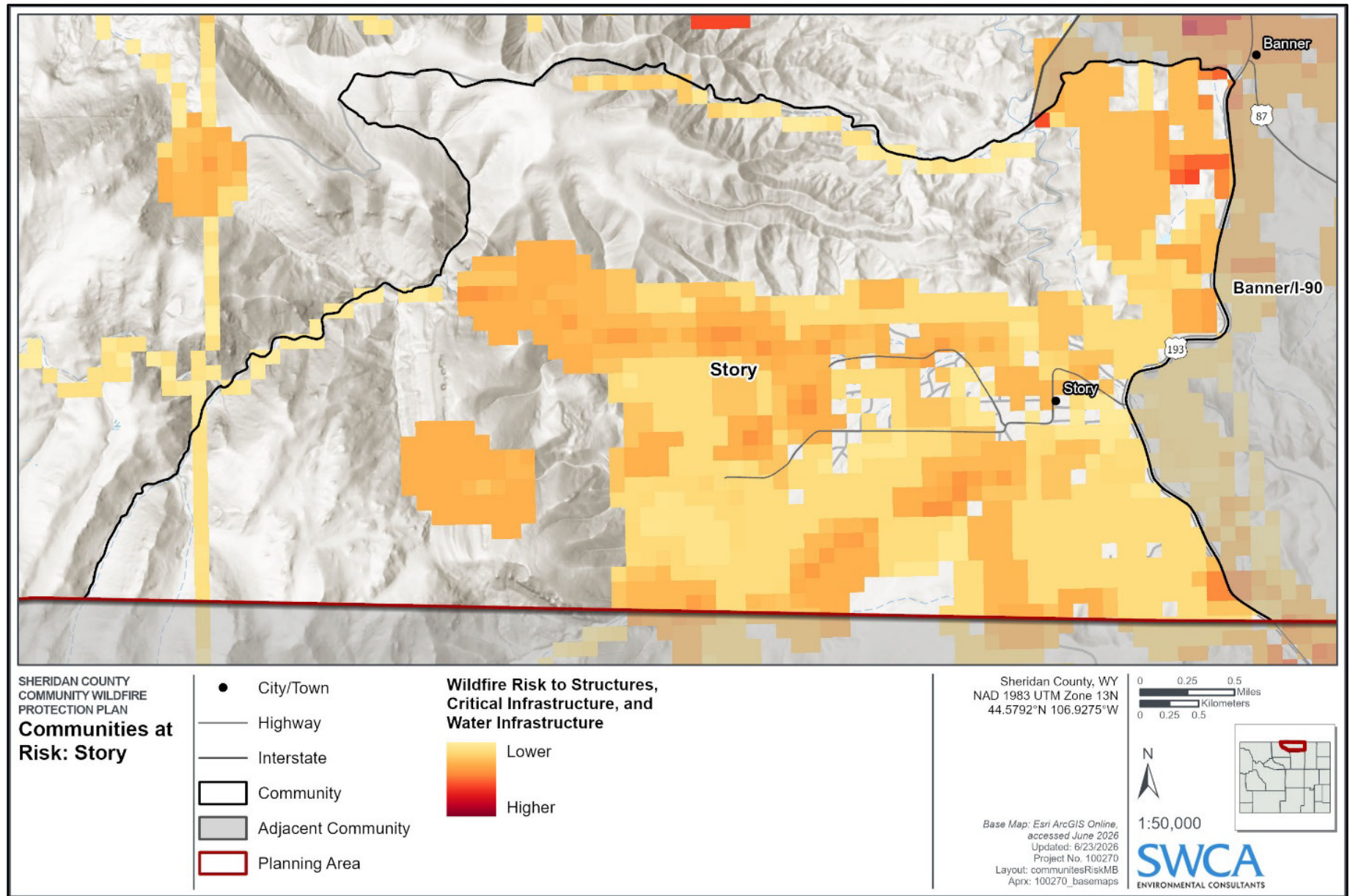


Figure C.14. Wildfire risk to structures and infrastructure around Story.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	63% High
Risk Variable	Risk Rating
Entrance/Exit	Moderate
Road Width	High
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Moderate
Hazardous Fuels	High
Defensible Space	Extreme
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Moderate
Water Sources	High
Organized Response	Low
Utility Placement	Low
Topographic Features	High
History of High Fire Occurrence	Low
Severe Fire Weather Potential	High
Separation of Adjacent Structures	High

Please note that, as discussed in Chapter 3, the results from the QWRA do not align with the on-the-ground risk identified in Story. The community of Story includes structures in close proximity, with dense woody vegetation between structures. Relative to other more grass-dominated communities in the county, burn probability is lower in Story; however, if a fire does impact the community, it is likely to have significant consequences. The combination of limited defensible space and dense vegetation results in a high risk of structure-to-structure spread and crown fires within the community. Additional mitigation is needed to address the risk to structures and the community.

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Maintain existing fuel breaks and install fuel breaks along the community's perimeter.

Ucross

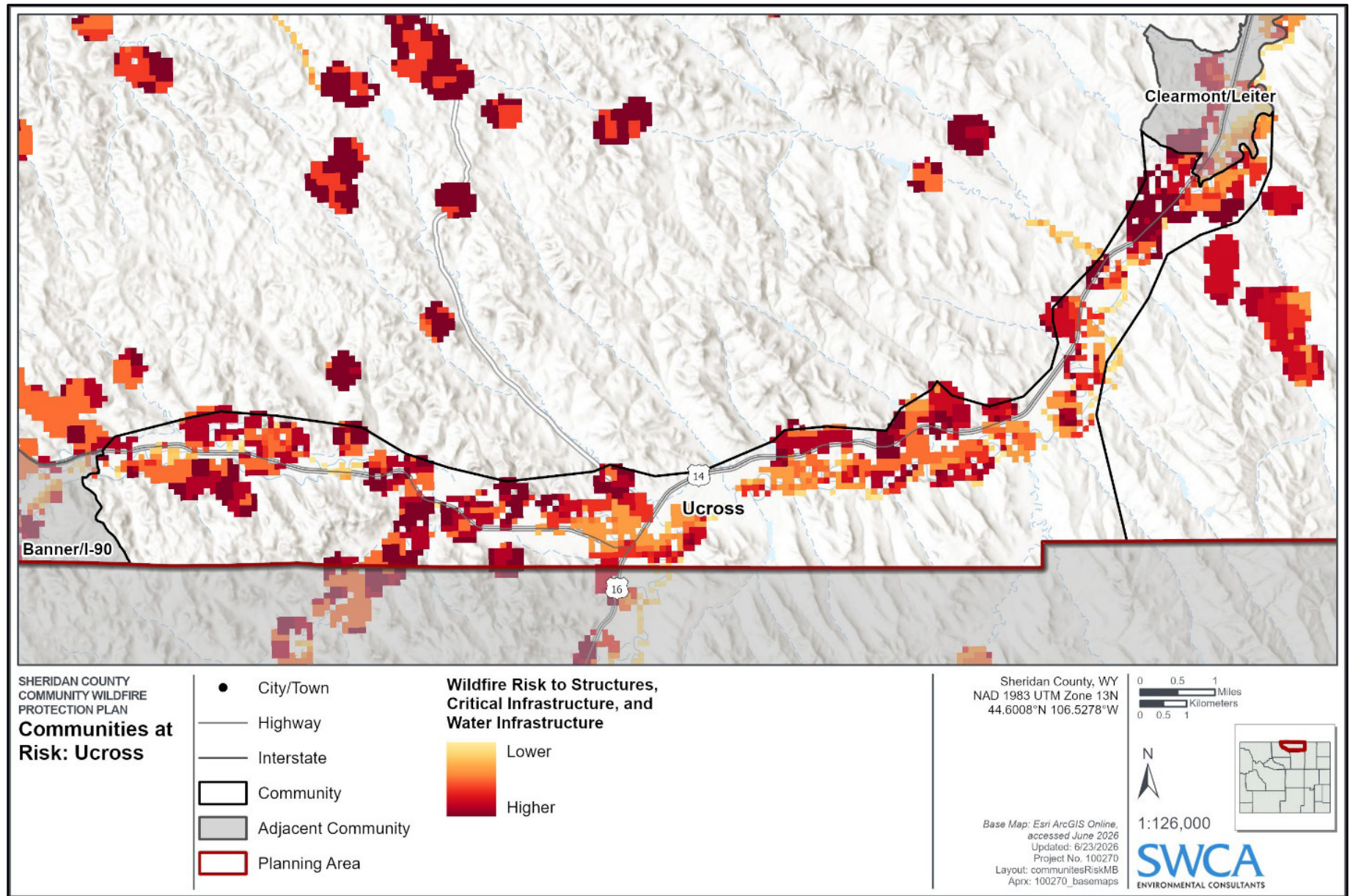


Figure C.15. Wildfire risk to structures and infrastructure around Ucross.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	48% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Low
Fire Truck Access	Extreme
Street Signs	Extreme
Hazardous Fuels	Moderate
Defensible Space	Moderate
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	Low
Organized Response	Moderate
Utility Placement	Low
Topographic Features	Moderate
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and along creeks/ditches.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).
- Install fuel breaks along the community's perimeter.
- Install reflective signage on homes to increase fire response efficiency and access.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

West Sheridan

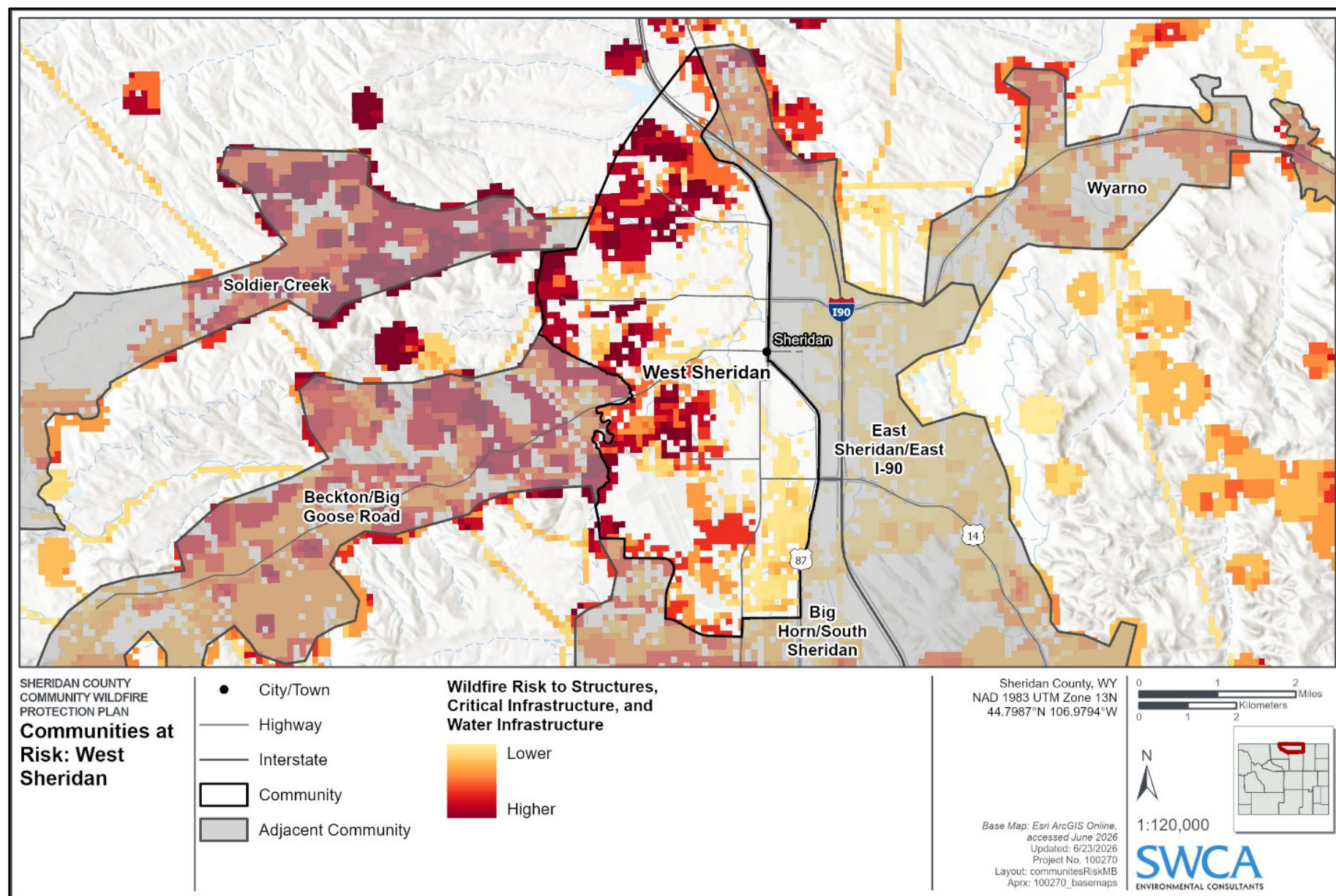


Figure C.16. Wildfire risk to structures and infrastructure around West Sheridan.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	61% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Moderate
Road Width	High
Road Conditions	Low
Fire Truck Access	High
Street Signs	Low
Hazardous Fuels	High
Defensible Space	Extreme
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Moderate
Water Sources	Moderate
Organized Response	Low
Utility Placement	Extreme
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	High
Separation of Adjacent Structures	High

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance and clearing debris within the ignition zone.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways.
- Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations).

Wolf

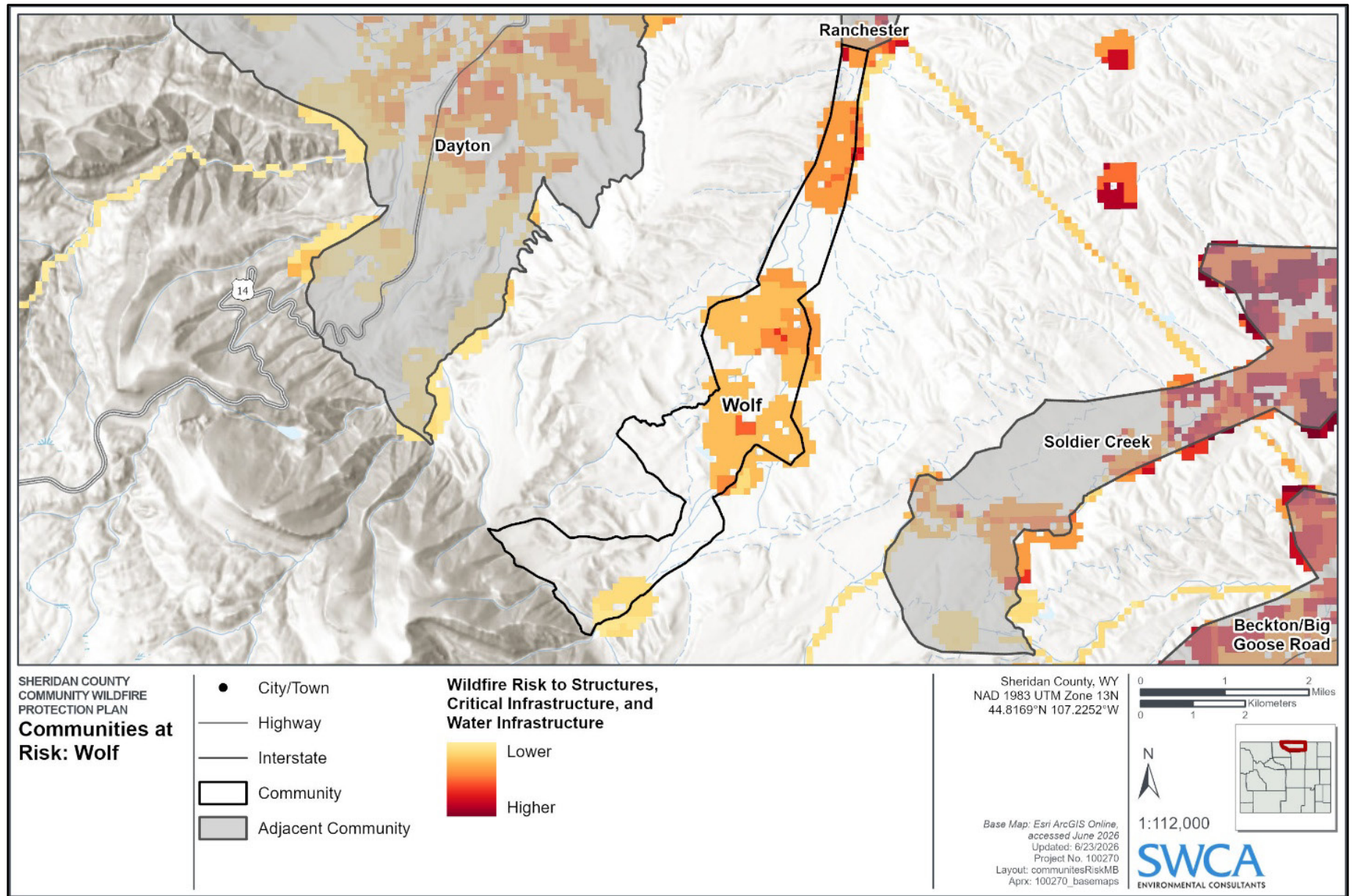


Figure C.17. Wildfire risk to structures and infrastructure around Wolf.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	56% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Moderate
Fire Truck Access	High
Street Signs	High
Hazardous Fuels	Moderate
Defensible Space	Extreme
Slope	Low
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Low
Water Sources	Low
Organized Response	Extreme
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Low
Severe Fire Weather Potential	Moderate
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and along creeks/ditches.
- Install reflective signage on homes to increase fire response efficiency and access.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Identify opportunities to improve evacuation options or emergency access routes and response in areas far from emergency response.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

Wyarno

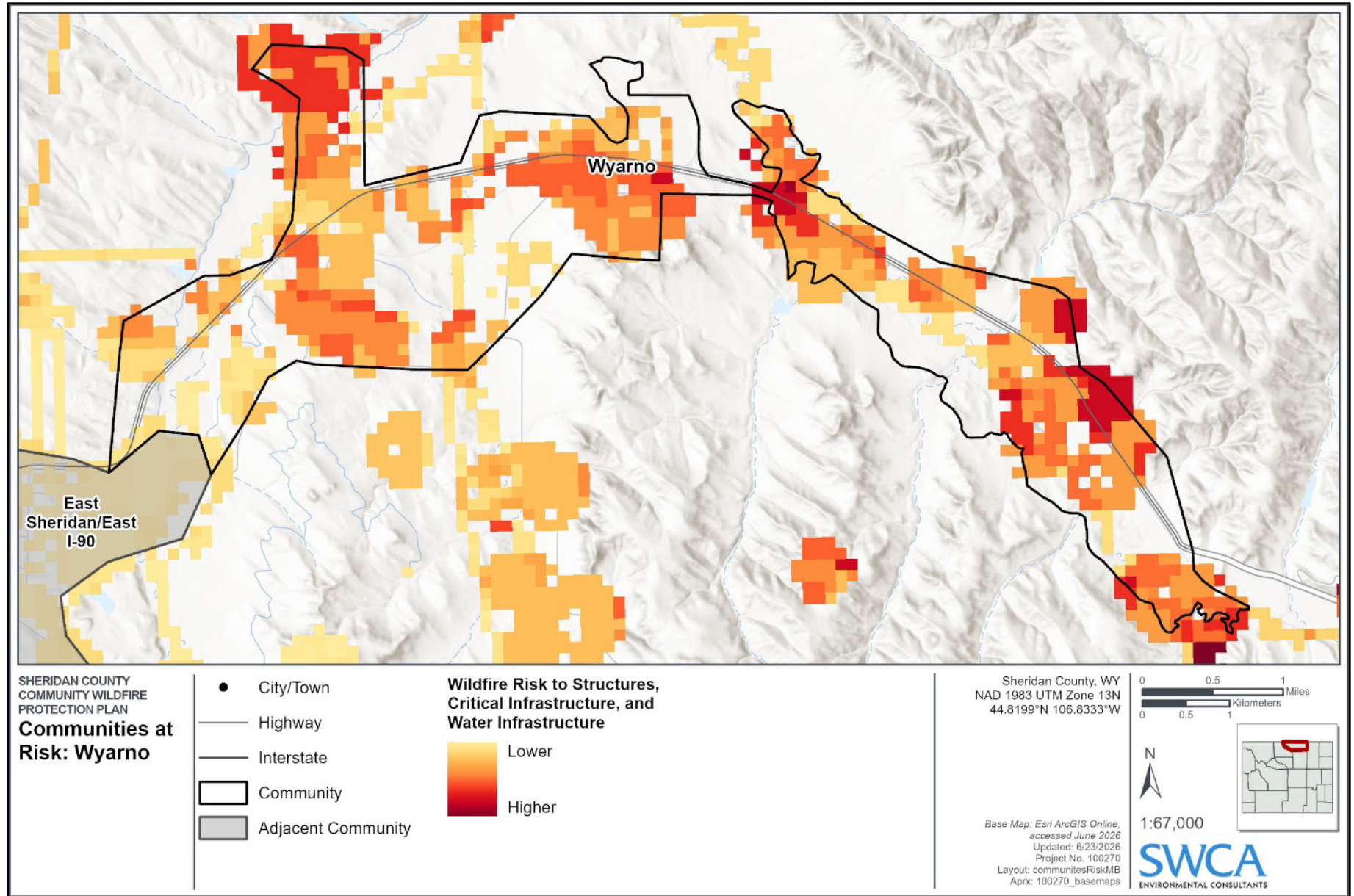


Figure C.18. Wildfire risk to structures and infrastructure around Wyarno.

Wildfire Risk Assessment Summary

Community Wildfire Hazard Rating (lowest possible is 25%)	49% Moderate
Risk Variable	Risk Rating
Entrance/Exit	Low
Road Width	High
Road Conditions	Low
Fire Truck Access	High
Street Signs	Low
Hazardous Fuels	Moderate
Defensible Space	Moderate
Slope	Moderate
Roofing	Low
Siding Materials	Extreme
Deck and Fencing	Extreme
Building Setback	Moderate
Water Sources	High
Organized Response	High
Utility Placement	Low
Topographic Features	Low
History of High Fire Occurrence	Moderate
Severe Fire Weather Potential	Low
Separation of Adjacent Structures	Low

Recommendations

- Increase defensible space around homes by maintaining at least 30–100 feet of vegetation clearance.
- Replace combustible siding, decks, and fencing with ignition-resistant or noncombustible materials where feasible to reduce structure ignition potential.
- Install turnarounds on long driveways and private access roads so fire engines can safely access and exit properties.
- Reduce fuels with an emphasis on treating adjacent to critical access roadways and creeks/ditches.
- Improve narrow road segments (<20 feet) and unsurfaced roads where feasible to support emergency vehicle access and evacuation.
- Reduce rangeland fuels through grazing, harvesting, and other methods.

COMMUNITY SURVEY RESULTS FORMS

East Sheridan/East I-90

SWCA Wildfire Risk Assessment	
Community	East Sheridan/East I-90
Surveyor(s)	Christian Testerman
Survey Date/Time	1781791440000
Means of Access	
Ingress and Egress	Low
2 or more roads in and out	1
1 road in and out	
Road Width	Moderate
> 24 ft	0.25
> 20 ft < 24 ft	0.5
< 20 ft	0.25
Road Conditions	Low
Surfaced road, grade < 5%	0.75
Surfaced road, grade > 5%	0.25
Non-surfaced road, grade < 5%	
Non-surfaced road, grade > 5%	
Other than all season	
Fire Access	Low
< 300 ft with turnaround	0.75
> 300 ft with turnaround	
< 300 ft with no turnaround	0.25
> 300 ft with no turnaround	
Street Signs	Low
Present – reflective	0.75
Present – non-reflective	0.25
Not present	
Notes:	
Vegetation (Fuel Models)	
Predominant Vegetation	Moderate
Non-Burnable (NB)	0.2
Grass (GR)	0.4
Grass-Shrub (GS)	0.1
Shrub (SH)	
Timber-Understory (TU)	0.3
Timber-Litter (TL)	

Slash-Blow (SB)	
Notes:	
Defensible Space	High
> 100 ft around structure	
> 70 ft < 100 ft around structure	
> 30 ft < 70 ft around structure	0.5
< 30 ft around structure	0.5
Notes:	
Topography Within 300 ft of Structures	
Slope	Low
< 9%	0.75
10% to 20%	0.25
21% to 30%	
31% to 40%	
>41%	
Additional Rating Factors (rate all that apply)	
Topographic features	Low
History of high fire occurrence	Low
Severe fire weather potential	Moderate
Separation of adjacent structures	Moderate
Roofing Assembly	
Roofing	Low
Class A - metal/clay/slate/asphalt	0.25
Class B - treated composite	0.75
Class C - untreated/plywood/etc	
Unrated - poor condition	
Notes:	
Building Construction	
Siding Materials (predominant)	Extreme
Non-combustible siding	0.25
Fire-resistive siding	
Combustible siding	0.75
Deck and fencing (predominant)	High
No deck/fence or non-combustible	0.25
Combustible deck and fence	0.75
Building Set-back	Moderate
>30ft to slope	
<30ft to slope	
Notes:	

Available Fire Protection	
Water Sources	Moderate
Water Source	
Organized Response	Low
Station < 5 mi from community	1
Station > 5 mi from community	
Notes:	
Placement of Gas and Electric Utilities	Extreme
Both underground	
Aboveground gas	
Aboveground electric	
Values at Risk Observations	
Forest Health Observations	
Land Use Observations	
Misc Observations	
Community-level recommendations	

Clear vegetation around utility infrastructure (e.g., powerlines, utility poles, gas tanks, substations, etc.), Reduce fuels along creeks/ditches, Install fuel breaks along the community's perimeter, Homeowner implementation of defensible space, Implement home hardening strategies and retrofits

Community Classification	Moderate
---------------------------------	----------

*For numbers between 0 and 1 (including decimals), values are expressed as proportions. For example, 0.25 = 25%. For numbers greater than 1, a scale of 1 – 4 indicates increasing risk potential. For example, a rating of 3 for topographic features indicates challenging topography such as steep ridges and canyons.

APPENDIX D: INTERAGENCY FUEL TREATMENT DECISION SUPPORT SYSTEM



PURPOSE OF THIS APPENDIX

This appendix provides the Interagency Fuel Treatment Decision Support System (IFTDSS) report for wildfire hazard modeling described in Chapter 3. This report summarizes modeled wildfire burn probability, conditional flame length, and integrated wildfire hazard outputs for the Sheridan County planning area.



Report: Landscape Burn Probability Summary Report

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

Area of Interest Acres: 3,328,048

Prepared for: Savannah Walters

Mar 25, 2026

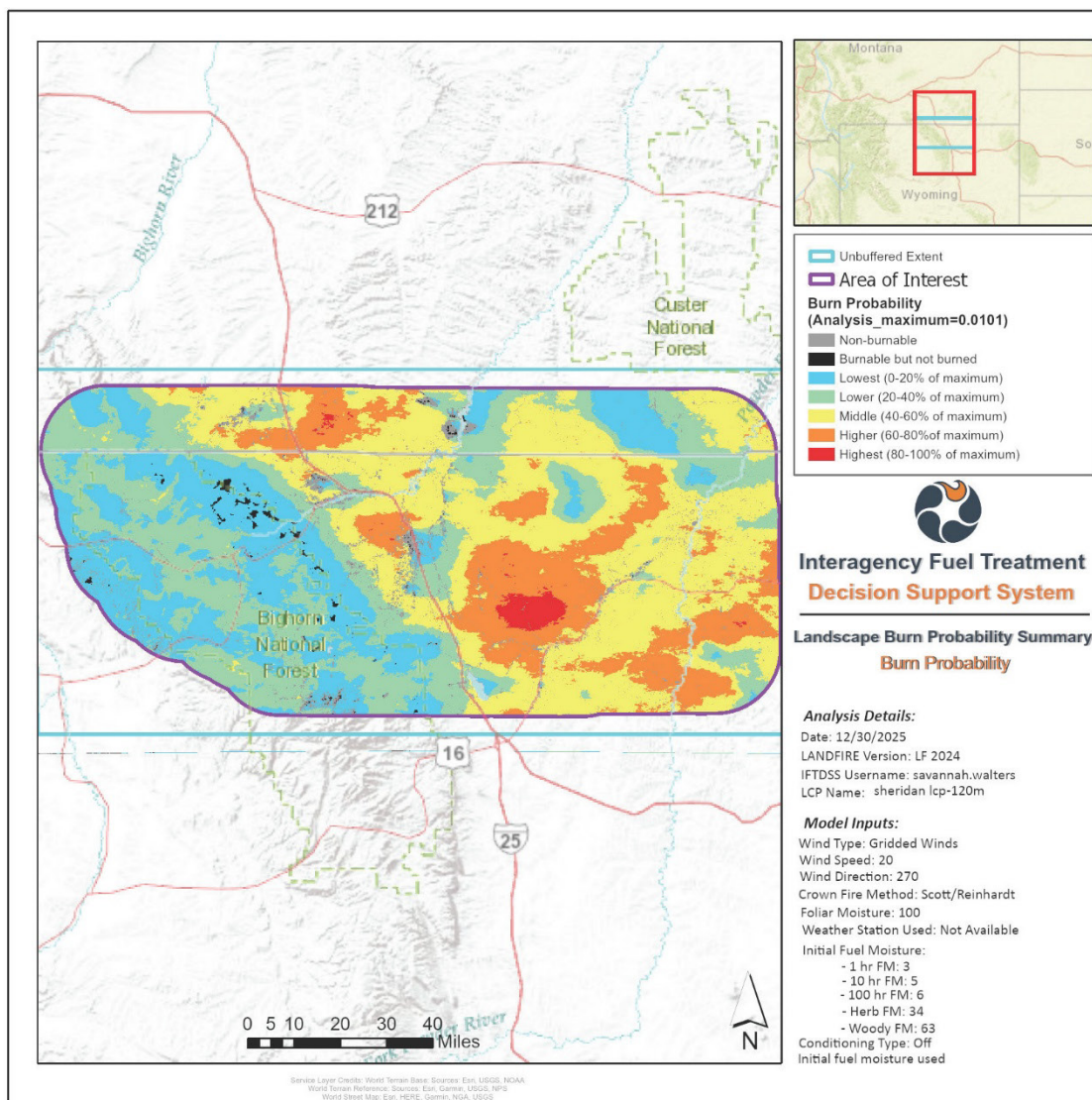
Model Characteristics

Model Run Name: sheridan_wind270 Number of Fires: 13,128
 Model Output Type: Landscape Burn Probability Burn Period Length (hours): 8
 Model Run Resolution: 120 m Spotting Probability (%): 20
 Model Run Date: Dec 30, 2025 12:09:08 PM Ignitions: Random
 Landscape Name: sheridan_lcp-120m
 Landfire Version: LF 2024
 Landscape Acres (unbuffered): 4,112,373
 Area of Interest Name: ifdtss_sheridan
 Area of Interest Acres: 3,328,048
 Wind Type: Gridded Winds
 Wind Speed: 20 mph
 Wind Direction: 270 deg
 Crown Fire Method: Scott/Reinhardt
 Foliar Moisture: 100
 Conditioning: Off - Initial fuel moisture used

Fuel Model	1 Hr Fuel Moisture	10 Hr Fuel Moisture	100 Hr Fuel Moisture	Live Herbaceous Fuel Moisture	Live Woody Fuel Moisture
All	3%	5%	6%	34%	63%

Burn Probability

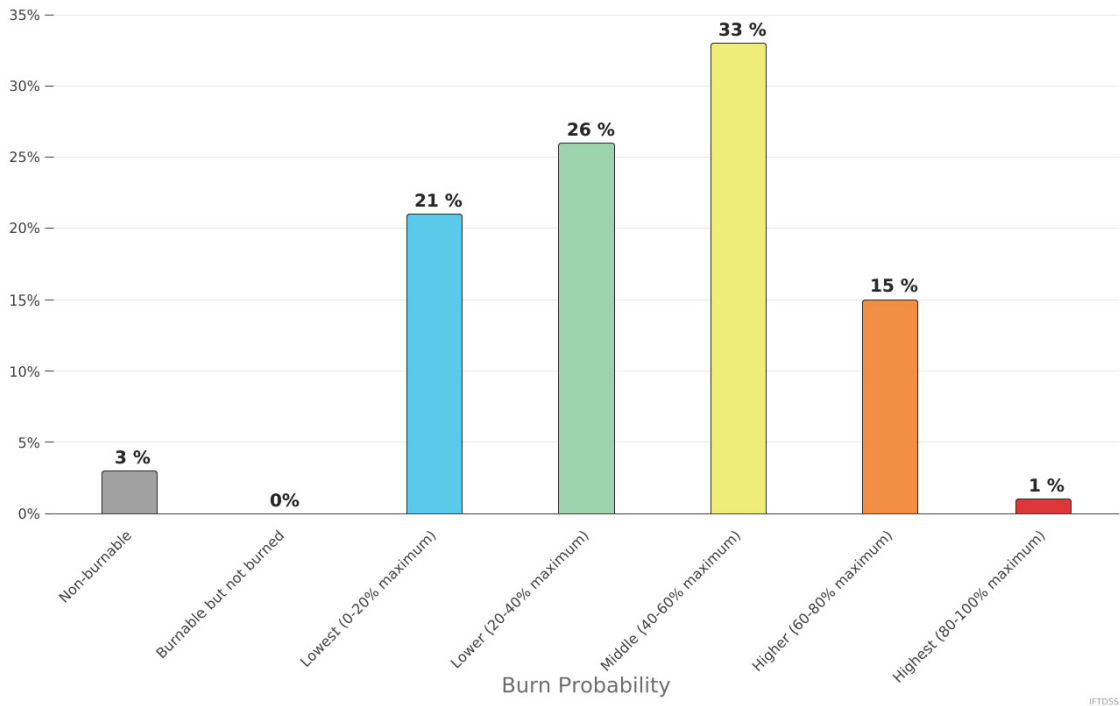
Burn Probability Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape



Burn Probability

Burn Probability Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270
Landscape Name: sheridan_lcp-120m
Landfire Version: LF 2024
Landscape Acres (unbuffered): 4,112,373
Area of Interest Name: ifdtss_sheridan
Area of Interest Acres: 3,328,048
Analysis Maximum Burn Probability: 0.0101



Burn Probability

Burn Probability Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

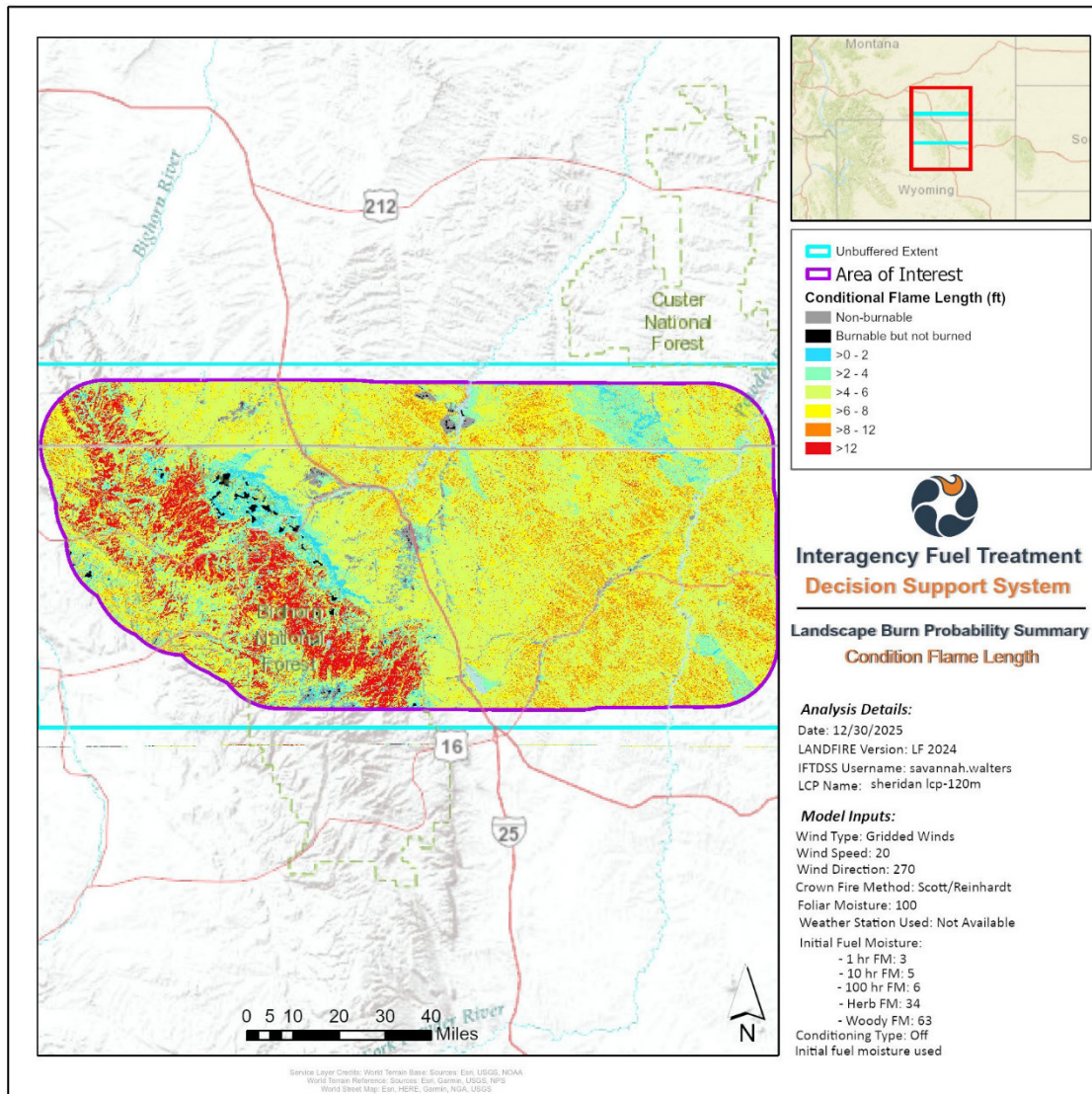
Area of Interest Acres: 3,328,048

Analysis Maximum Burn Probability: 0.0101

Burn Probability	Pixel Count In AOI	Acres In AOI	Percent In AOI
Non-burnable	31,039	110,447	3%
Burnable but not burned	4,072	14,489	0%
Lowest (0-20% maximum)	195,062	694,093	21%
Lower (20-40% maximum)	242,985	864,618	26%
Middle (40-60% maximum)	312,735	1,112,810	33%
Higher (60-80% maximum)	140,273	499,136	15%
Highest (80-100% maximum)	9,121	32,455	1%

Conditional Flame Length

Conditional Flame Length (feet) Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape



Conditional Flame Length

Conditional Flame Length (feet) Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

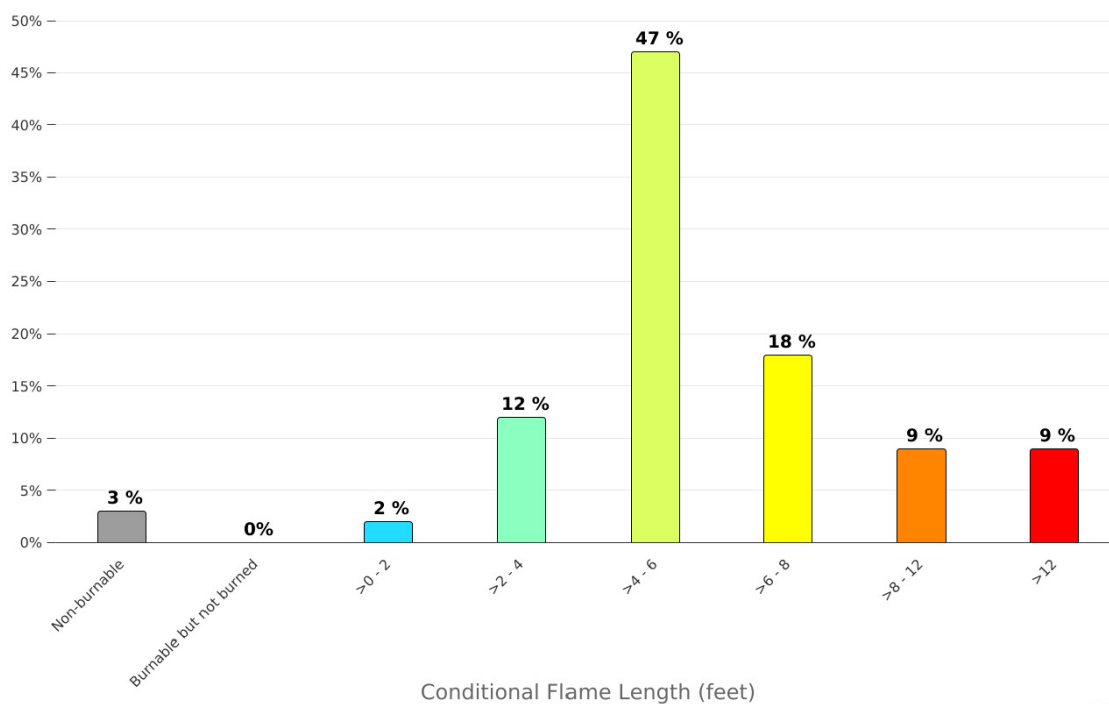
Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

Area of Interest Acres: 3,328,048

Analysis Maximum Burn Probability: 0.0101



Conditional Flame Length

Conditional Flame Length (feet) Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

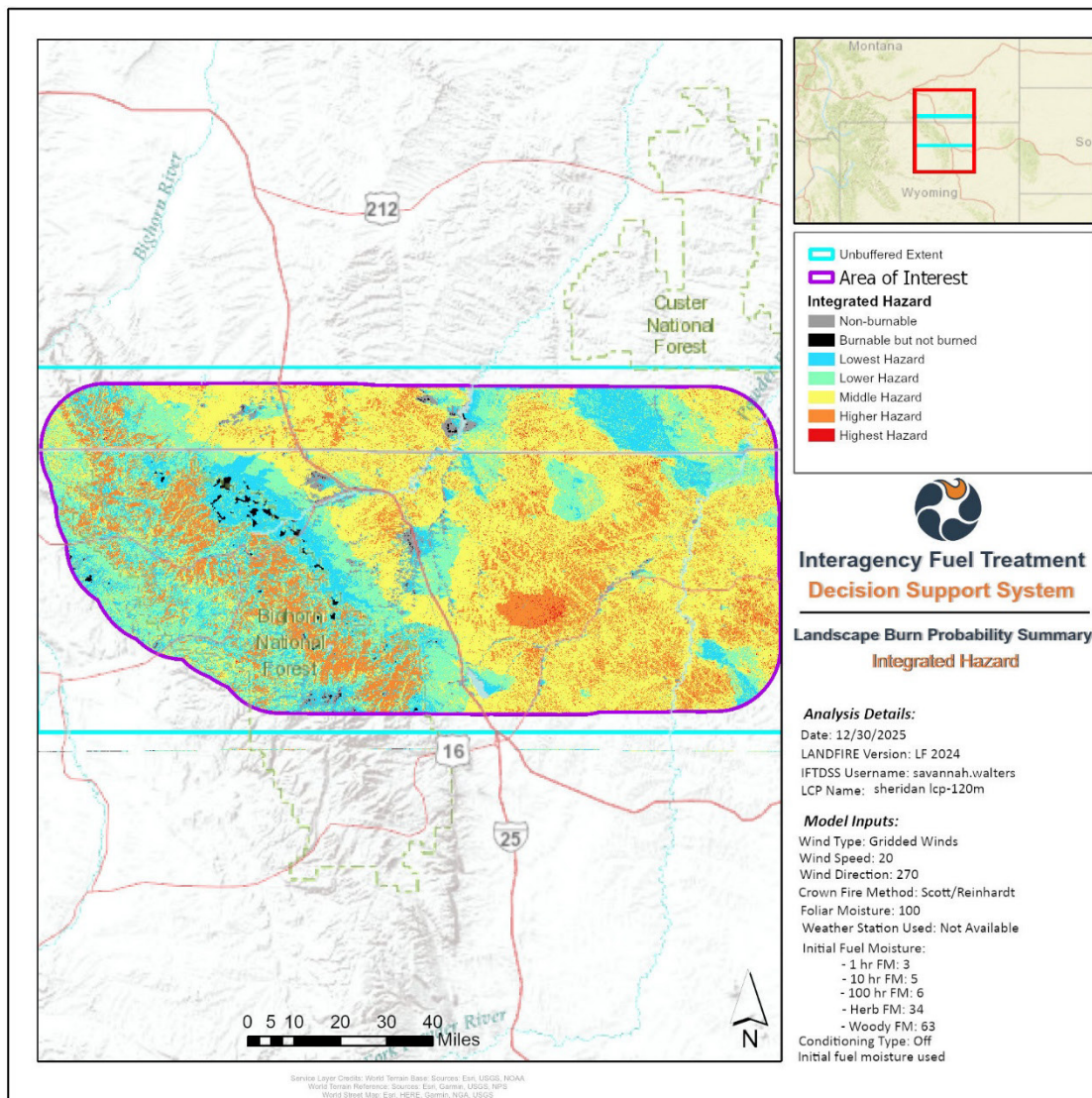
Area of Interest Acres: 3,328,048

Analysis Maximum Burn Probability: 0.0101

Conditional Flame Length (feet)	Pixel Count In AOI	Acres In AOI	Percent In AOI
Non-burnable	31,039	110,447	3%
Burnable but not burned	4,072	14,489	0%
>0 - 2	19,930	70,917	2%
>2 - 4	111,132	395,443	12%
>4 - 6	443,535	1,578,238	47%
>6 - 8	165,551	589,083	18%
>8 - 12	80,312	285,776	9%
>12	79,716	283,655	9%

Integrated Hazard

Integrated Hazard Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape



		Burn Probability Classes				
Cond. Flame Length Classes		Lowest 0-20% of max	Lower 20-40% of max	Middle 40-60% of max	Higher 60-80% of max	Highest 80-100% of max
	> 12 ft					
	> 8 - 12 ft					
	> 6 - 8 ft					
	> 4 - 6 ft					
	> 2 - 4 ft					
	> 0 - 2 ft					
		Lowest Hazard	Lower Hazard	Middle Hazard	Higher Hazard	Highest Hazard

Integrated Hazard

Integrated Hazard Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

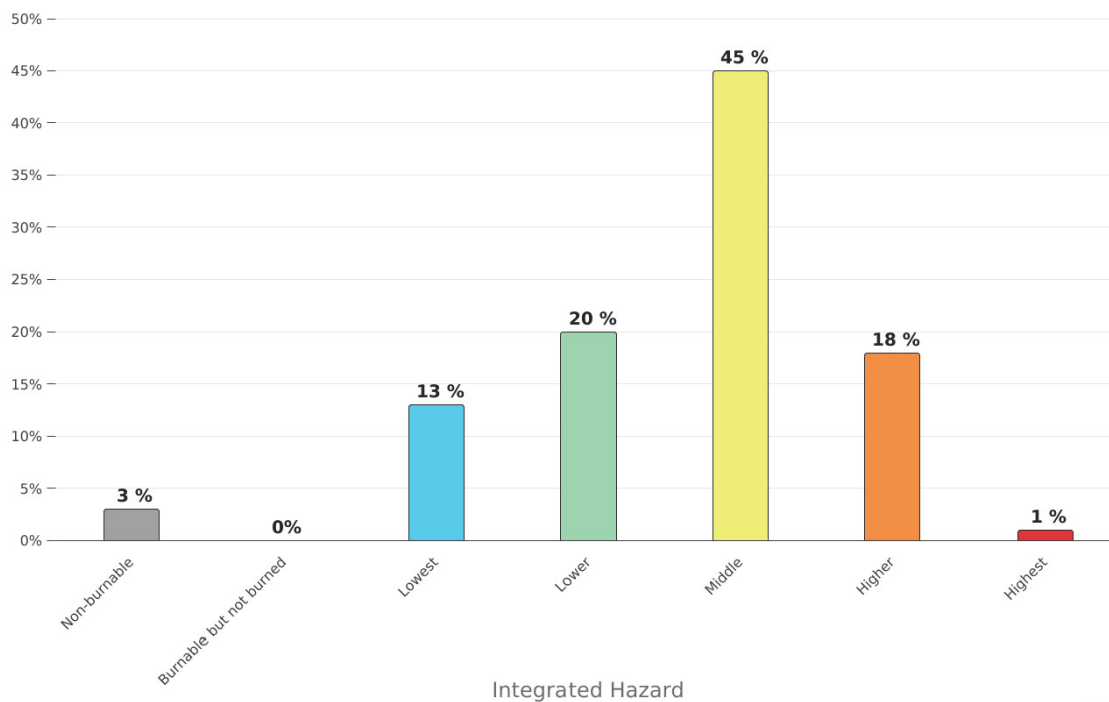
Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

Area of Interest Acres: 3,328,048

Analysis Maximum Burn Probability: 0.0101



Integrated Hazard

Integrated Hazard Data Summary for Area of Interest "ifdtss_sheridan" within "sheridan_lcp-120m" Landscape

Model Output Name: sheridan_wind270

Landscape Name: sheridan_lcp-120m

Landfire Version: LF 2024

Landscape Acres (unbuffered): 4,112,373

Area of Interest Name: ifdtss_sheridan

Area of Interest Acres: 3,328,048

Analysis Maximum Burn Probability: 0.0101

Integrated Hazard	Pixel Count In AOI	Acres In AOI	Percent In AOI
Non-burnable	31,039	110,447	3%
Burnable but not burned	4,072	14,489	0%
Lowest	119,895	426,624	13%
Lower	190,976	679,553	20%
Middle	417,469	1,485,487	45%
Higher	165,357	588,393	18%
Highest	6,479	23,054	1%

APPENDIX E: FUEL TREATMENT TYPES AND METHODS



MITIGATION STRATEGIES

Addressing wildfire risk in a WUI setting generally requires a multi-tiered approach tailored to both the community and landscape setting. The bolded topics below encompass the often-overlapping approaches to preparing for, preventing, and responding to wildfires with mitigating impact to communities at the forefront.

Prevention: public education campaigns, fire safety regulations, and land-use planning can reduce the likelihood of conflagrations by minimizing ignition sources and promoting responsible behavior.

Mitigation: actions taken by residents to reduce the ignitability of the structures on their property, through vegetation management and modification to structures.

Preparedness: investing in early warning systems, firefighting equipment, and emergency response training enhances the capacity to detect and contain conflagrations effectively.

Suppression: tactically deploying firefighting crews and aerial resources and using strategies such as prescribed burns and firebreaks can limit the spread and intensity of conflagrations, safeguarding lives and property.

Resilience: building resilient communities through disaster preparedness initiatives, insurance coverage, and post-fire recovery efforts strengthens the ability to recover from conflagrations and adapt to future threats.

Specific mitigation actions to consider:

- Develop projects in the WUI to manage vegetative and human-made fuels to reduce the rate of fire spread, fire intensity, and the likelihood of wildfire transitioning into the built environment.
- Build with at least 50 feet of space between structures.
- Increase tree canopy spacing within the home ignition zone.
- Conduct vegetation management within the home ignition zone.
- Adopt building codes requiring non-combustible construction materials.

FUEL TREATMENT SCALES

Defensible space

Creating defensible space is the fastest and most cost-effective means of reducing wildfire risk to life and property. Although fire agencies can be valuable in providing guidance and assistance, creating defensible space is the responsibility of the individual homeowner (Figure E.1). Defensible space within the home ignition zone reduces wildfire intensity and flame lengths, which in turn reduces the risk of structure ignition. Creating defensible space also decreases the time and resources needed to protect properties and allows homeowners to evacuate more safely. The Casualty Actuarial Society (CAS) compared the impact of individual and community-level wildfire mitigation and found that implementing defensible space on the individual homeowner level can have a greater impact than any community mitigation alone (CAS 2023).

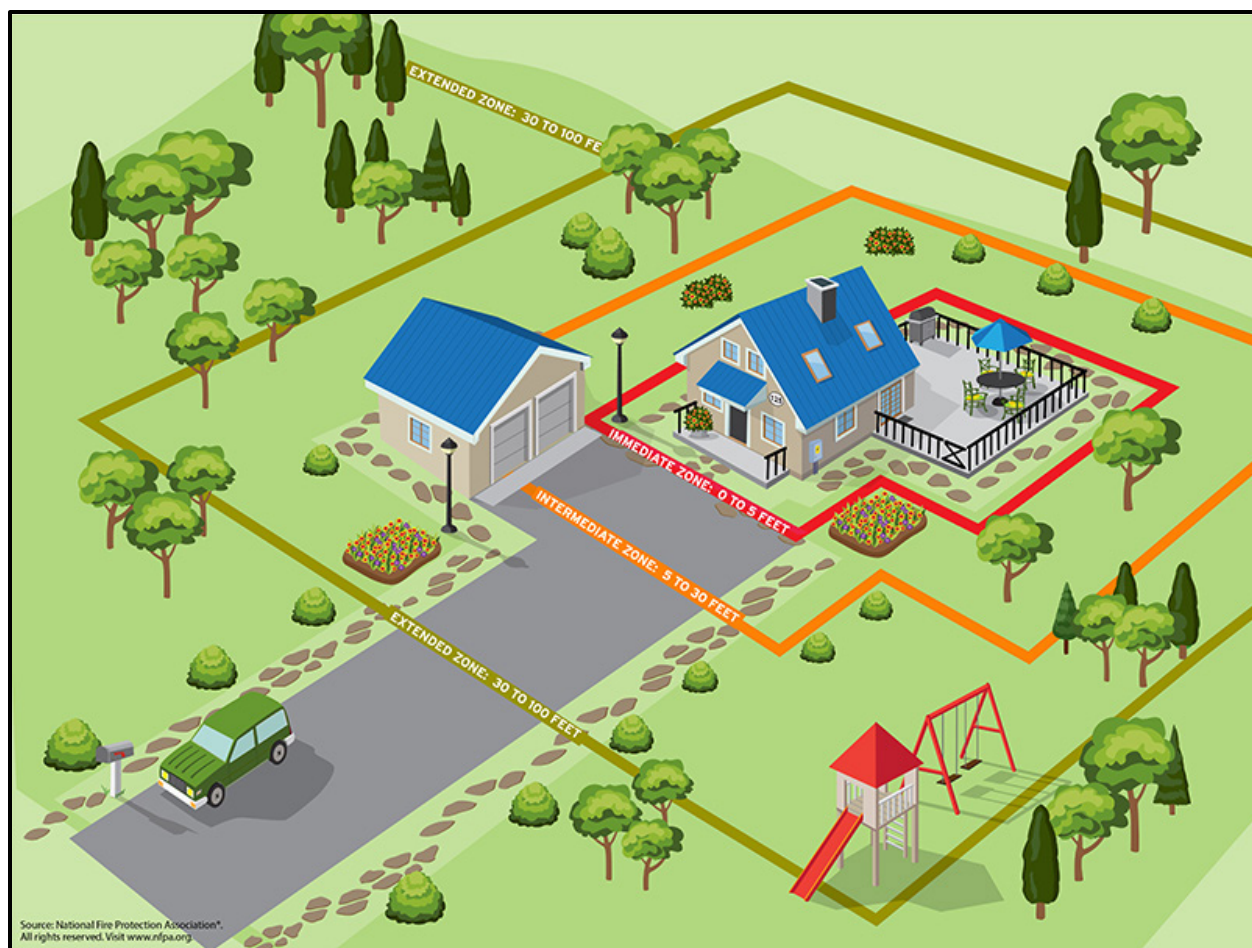


Figure E.1. Defensible space zones providing clearance between a structure and adjacent woodland or forest fuels.

Source: NFPA (2025)

Effective defensible space consists of creating an essentially fire-free zone adjacent to the home, a treated secondary zone that is thinned and cleaned of surface fuels, and (if the parcel is large enough) a transitional third zone that is treated to reduce the intensity and momentum of oncoming wildfire (Figure E.2). These components work together in a proven manner to reduce the likelihood of structure ignition. Zone 1 keeps fire from burning directly to the home; Zone 2 reduces the adjacent fire intensity and the likelihood of torching, crown fire, and ember production; and Zone 3 does the same at a broader scale, keeping fire intensity low and reducing the momentum and rate of spread of wildland fire approaching the home (see Figure E.2) (University of Wyoming Extension 2017).

Actions recommended to be carried out in each home ignition zone are outlined below.

Zone 1: This zone, which consists of an area of 0 to 5 feet around the structure, is measured from the outside edge of the home's eaves and any attached structures, such as decks. Zone 1 should encompass the most intense treatments.

Recommendations for treating Zone 1 include (University of Wyoming 2020):

- Use noncombustible landscaping materials, such as gravel in place of mulch. Clear all dead and dying debris from around a structure, including branches, dead leaves, pinecones, pine needles, grasses, and shrubs. Remember to check areas where the debris can accumulate, such as gutters, stairways, porches, and roofs.
- Remove dead plant materials from within the 30-foot zone of the structure.

- Clean debris (needles/leaves) from gutters and the roof.
- Prune tree branches to 6 to 10 feet off the ground.
- Trim/thin trees to create at least a 10-foot distance between the crowns of the trees to reduce the risk of a running crown fire.
- Use deciduous plants for landscaping instead of conifers (limit the amount of plants within Zone 1).
- Prune branches away from roofs and windows.
- Use non-flammable landscaping materials such as rock instead of wood mulch around structures and decks, if applicable.
- Relocate firewood to Zone 2 (below).
- Irrigate within Zones 1 through 3, if possible.
- Do not plant anything within 5 feet of a structure.
- Enclose the underside of decks with 1/8 inch or smaller (1/16 inch preferred) metal mesh screening.
- Limit the use of combustible materials, such as outdoor furniture, on or under decks or patios.

Zone 2: This zone focuses on fuel reduction efforts and can resemble Zone 1 or 3 depending on management objectives and wildfire risk. The size of Zone 2 depends on the slope of the ground where the structure is built. Typically, Zone 2 should extend at least 30 feet from the structure.

Recommendations for treating Zone 2 include, but are not limited to (University of Wyoming 2020):

- Maintain all grasses to reach a maximum height of 4 inches.
- For shrubs or trees, maintain a distance between plants of at least two times a plant's size. Additional space between vegetation is needed for properties on slopes.
- Flat to mild slope (less than 20%): Minimum distance of 10 feet between trees and two times the size of other plants. Example: shrubs 2 feet in diameter should be placed at least 4 feet apart.
- Mild to moderate slope (20%–40%): Minimum distance of 20 feet between trees and four times the size of other plants. Example: shrubs 2 feet in diameter should be placed at least 8 feet apart.
- Moderate to steep slope (greater than 40%): Minimum distance of 30 feet between trees and six times the size of other plants. Example: shrubs 2 feet in diameter should be placed at least 12 feet apart.
- Mow and maintain grass to a maximum height of 4 inches.
- Create horizontal spacing between trees and shrubs.
- Shrubs should be 5 feet apart on flat ground, with increased spacing between shrubs as slopes become greater. However, the distance between shrubs depends on species, crown spread, and height.
- Trees should be 18 feet apart between crowns on flat ground, with greater spacing between tree canopy on slopes as depicted in Figure E.2.
- Create vertical separation between all vegetation to limit ladder fuels; flammable vegetation between the ground and the tree canopies enables fire to spread vertically and increase in intensity.
- Firewood and propane tanks should ideally be on gravel or concrete pads.
- Remove stressed, diseased, dead, or dying trees and shrubs.
- Remove vegetation along driveways to main access road.

- Avoid accumulation of large surface fuels such as logs, branches, slash, and mulch.

Zone 3: This area extends 30 to 100 feet beyond your structure depending on hill slope. Remove ladder fuels, creating a separation between low-level vegetation and tree branches to keep fire from climbing up trees. A greater number of wildlife trees can remain in Zone 3 but regularly remove dead trees and shrubs. Ensure trees in this area do not pose a threat to power lines or access roads.

Recommendations for treating Zone 3 include, but are not limited to (University of Wyoming 2020):

- Remove all dead, down, and dying trees. Some snags (dead standing trees) could be left for wildlife habitat but make sure they do not pose a threat to life safety and power lines.
- Prune all residual trees to reduce ladder fuels. Ladder fuels are living or dead plant materials that allow a fire to climb from the ground to the canopy of trees.
- Treat all slash (pruned branches and limbs) within Zone 3. There are several different techniques to treat slash. Consult your local forests/natural resource professional for treatment recommendations and other questions.
- Specific thinning requirements will depend on the management objectives for your land.
- Conduct yearly maintenance in Zone 3, with additional thinning occurring every 10-15 years.
- Zone 3 could include fuel breaks (a gap in vegetation aimed to prevent the spread of fire) along roads and property boundaries if the property is large enough (for example, two acres or larger).
- Relocate firewood outside of Zones 1 and 2 and into Zone 3 (at least 30 feet from a structure).

For all zones it is important to properly dispose of the slash removed from thinning trees and shrubs. This can be done by chipping and depositing chips in Zone 3, hauling slash to a disposal site, or piling in open areas for burning later. Spreading slash and wood chips over a large area, avoiding heavy accumulations, will speed decomposition. Burning slash piles can be done in the fall through spring, although piles are ideally burned in winter to prevent spread; please contact local sheriff's office or fire department before doing so. Lopping and scattering slash by cutting it into smaller pieces (less than 24 inches long) and spreading it over a wide area (at a depth not exceeding 18 inches) can also be done.

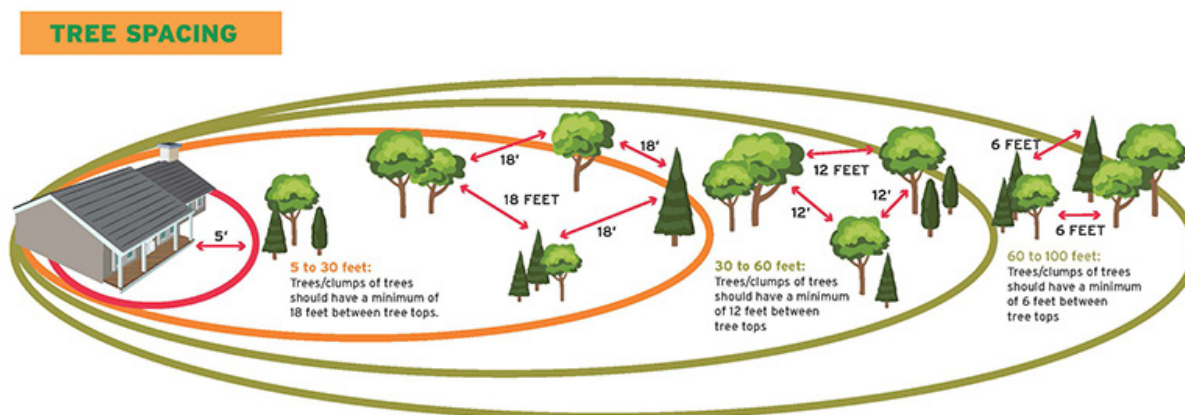


Figure E.2. Defensible space zones.

Source: NFPA (2025)

Specific recommendations should be based on the hazards adjacent to a structure such as slope steepness and fuel type. For instance, older lodgepole pine stands generally do not respond well to selective thinning but instead respond better to removing all trees over a defined area to allow healthy forest regeneration. Selectively thinning lodgepole can open the stand to severe windthrow and stem breakage. However, if your home is located within a

lodgepole pine forest, you may prefer selective thinning instead of removing all the standing trees. Thinning older stands of lodgepole pine to the extent recommended for defensible space may require several attempts spaced over a decade or more. No more than 30% of the trees in a mature stand should be removed in each thinning operation. Focus on removing trees that are obviously lower in height or suppressed in the forest canopy. Leaving the tallest trees will make the remaining trees less susceptible to windthrow. Another option is leaving clumps of 30 to 50 trees. Clumps are less susceptible to windthrow than solitary trees. Allow a minimum of 30 to 50 feet between tree crowns on the clump's perimeter and any adjacent trees or clumps of trees. To ensure a positive response to thinning throughout the life of a lodgepole pine stand, trees must be thinned early. Begin when trees are small saplings and maintain low densities within the stand as the trees mature (Colorado Forest Service 2021). Refer to [the Home Ignition Zone Guidebook](#).

Firewise guidelines and the Homeowner's Guide (see Appendix G) are excellent, in-depth resources, but creating defensible space does not have to be an overwhelming process. The NFPA offers free online trainings such as [Reducing Wildfire Risk to Property: Professional Online Training](#) and [Reducing Wildfire: Home & Business Online Training](#). Both tools are great resources for learning about and implementing defensible space.

Assisting neighbors may be essential in many cases. Homeowners should consider assisting the elderly, sharing ladders for gutter cleaning, and assisting neighbors with large thinning needs. Homeowner actions have been found to also motivate neighbors to act, increasing the scope of the wildfire mitigation across a community (Evans et al. 2015). Adopting a phased approach can make the process more manageable and encourage maintenance (Table E.1).

Table E.1. Example of a Phased Approach to Mitigating Home Ignitability

Year	Project	Actions
1	Basic yard cleanup (annual)	• Dispose of clutter in the yard and under porches. • Remove dead branches from yard. • Mow and rake. • Clean off roofs and gutters. • Remove combustible vegetation or flammable materials near structures. • Coordinate disposal as a neighborhood or community. • Post 6-inch reflective address numbers visible from road.
2	Understory thinning near structures	• Repeat basic yard cleanup. • Limb trees up to 6–10 feet. • Trim branches back 15 feet from chimneys. • Trim or cut down brush. • Remove young trees that can carry fire into forest canopy. • Coordinate disposal as a neighborhood or community.
3	Understory thinning on private property along roads and drainages	• Limb trees up to 6–10 feet. • Trim or cut down brush. • Remove young trees that can carry fire into forest canopy. • Coordinate disposal as a neighborhood or community.
4	Overstory treatments on private property	• Evaluate the need to thin mature, diseased, or dead trees. • Prioritize and coordinate tree removal within neighborhoods to increase cost effectiveness.
5	Restart defensible space treatment cycle	• Continue the annual basic yard cleanup. • Evaluate need to revisit past efforts or catch those that were bypassed.

Fuel Breaks and Open Space Cleanup

The next location priority for fuels treatments should be where the community meets wildland. This may be the outer margins of a town or an area adjacent to occluded open spaces such as a park. Fuel breaks (also known as shaded fuel breaks) are strips of land where fuel (for example, living trees and brush, grasses, dead branches, leaves, or downed logs) have been modified or reduced to limit the fire's ability to spread rapidly. Fuel breaks should not be confused with firebreaks, which are areas where vegetation and organic matter are removed down to mineral soil. Shaded fuel breaks may be created to provide options for suppression resources or to provide opportunities to introduce prescribed fire. In many cases, shaded fuel breaks may be created by thinning along roads and Potential Operational Delineation (POD) boundaries. This provides access for mitigation resources and firefighters, as well as enhancing the safety of evacuation routes.

For an example of the effectiveness of fuel breaks in Wyoming, visit:

<https://www.uwyo.edu/barnbackyard/files/documents/magazine/2021/summer/0721wildfiredamagereduction.pdf>

Wildfires frequently burn across jurisdictional boundaries, sometimes on landscape scales. As such, these larger treatments need to be coordinated on a strategic level. This requires coordination between projects and jurisdictions, as is currently occurring. Cross-boundary fuels reduction efforts in Wyoming provide an example of federal, state, and local governments joining with nonprofit entities in collaborative efforts to reduce wildfire risk. Specifically, land managers have carried out numerous pre- and post-fire forest restoration projects across the county and have ongoing projects that are designed to reduce hazardous fuels to protect communities and resources, while restoring fire-adapted communities.

Farther away from WUI communities, the emphasis of treatment often becomes broader, recognizing the unique challenges posed by the diversity of open landscapes, shrublands, grassland, and woodland ecosystems that occur across Sheridan County. While reducing the buildup of hazardous fuels remains important, other objectives are often included, such as promoting ecosystem health, enhancing resiliency to catastrophic wildfires, and addressing the impacts of climate change (Figures E.3 and E.4).

Monitoring early-season moisture levels is also vital in Sheridan County, particularly across rangelands and grass-dominated fuels where curing can occur quickly under hot, dry, and windy conditions. Incorporating mid- to late-summer grazing can help reduce vegetation biomass, decreasing potential fuel loads as fall approaches (Clark et al. 2023). Simultaneously, it is important to consider local wildlife, particularly ground-nesting birds and other grassland-dependent species common to northern Wyoming. Many nesting periods extend through late spring and early summer, and treatments such as mowing, mechanical removal, or prescribed fire should be timed to minimize disruption to nesting habitat while maintaining the effectiveness of wildfire mitigation efforts. Scheduling fuel treatments after peak nesting periods can help reduce impacts to wildlife while ensuring fuels reduction activities remain effective and strategically timed for fire season conditions.

Additionally, reestablishing native vegetation in these areas offers long-term benefits, as native plants generally retain higher moisture content during the hotter, drier months of August and September, thereby reducing fire risk. Incorporating low-growing native vegetation in buffer zones can further enhance the effectiveness of fuel breaks, creating a more resilient landscape that supports both wildfire mitigation and ecological health.



Figure E.3. Mechanical fuels reduction treatment, Wyoming State Forestry, Old Scout Camp GNA PCT Project.

Source: Sheridan Core Team 2026



Figure E.4. Slash pile burning on BLM lands in western Johnson County, Wyoming.

Source: Oil City News (2024)

Landscape-Scale Treatments

Farther away from WUI communities, the emphasis of treatments often becomes broader. While reducing the buildup of hazardous fuels remains important, other objectives are often included, such as forest health and resiliency to catastrophic wildfire, restoring watershed health, and climate change considerations. Large-scale

treatments can range from biological methods, prescribed fire, and mechanical treatments. Large-scale hazardous fuel reduction treatments can range from increasing forest diversity in age, size, density, and heterogeneity through targeted intermediate and regeneration treatments. Additionally, patchwork thinning projects (creating openings in the landscape) reduce fuels under a specific diameter which can then be stacked in piles or scattered throughout the landscape and broadcast burned.

Wildfires frequently burn across jurisdictional boundaries, sometimes on landscape scales. As such, these larger treatments need to be coordinated on a strategic level. This requires coordination between projects and jurisdiction, as is currently occurring. Large-scale treatments are usually performed by a Federal or State land-manager with community consideration and potentially cross-agency collaboration.

FUEL TREATMENT METHODS

Several treatment methods are commonly used for hazardous fuels reduction, including manual treatments, mechanized treatments, prescribed fire, and grazing (Table E.2). Due to the variability of the planning area's topography, vegetation type, and distribution, certain treatments will be appropriate for specific landscapes.

Specific information on fuel treatment recommendations for each vegetation type found in the county is provided in Chapter 4 along with a map of recommended fuel treatment locations and approach. This brief synopsis of treatment options is provided for general knowledge; specific projects will require further planning. The appropriate treatment method and cost will vary depending on factors such as the following:

- Average size/diameter class of material
- Proximity to structures
- Size/complexity of project
- Transportation fuel costs
- Steepness of slope
- Access for product transportation
- Volume of biomass
- Project objectives

It is imperative that long-term monitoring and maintenance of all treatments is implemented. Post-treatment rehabilitation such as seeding with native plants and erosion control may be necessary. In addition, post-treatment fuel clean-up is a must as neglected piles of vegetation may result in increased fire risk.

Table E.2. Summary of Fuels Treatment Methods

Treatment	Comments
Machine mowing	• Appropriate for large, flat, grassy areas on relatively flat terrain.
Manual treatment with chipping or pile burning	• Requires chipping, hauling, and pile burning of slash in cases where lop and scatter is inappropriate. • Slash tree limbs to 6 feet from ground or max of 1/3 of tree height. • Remove ladder fuels below / near trees. • Pile burning must comply with smoke management policy and permits must be acquired through state or local offices.

Treatment	Comments
Brush mastication	• Brush species tend to re-sprout vigorously after mechanical treatment. • Frequent maintenance of treatments is typically necessary. • Mastication tends to be less expensive than manual (chainsaw) treatment and eliminates disposal issues.
Timber mastication	• Effective on materials up to 6 inches in diameter, slopes up to 30%, and in combination with tree thinning treatments. • Removing smaller diameter trees that act as ladder fuels enhances the effectiveness of mastication. • Mastication of treetops and slash can significantly reduce fuel loads. Reduces disposal issues of smaller diameter fuels. • Environmental impact of residue being left on-site is still being studied.
Prescribed fire	• Can be very cost effective for public land but not close to the densely populated areas. • Ecologically beneficial. • Can be used as training opportunities for firefighters. • May require manual or mechanical pretreatment. • Carries risk of escape. • Unreliable scheduling due to weather and smoke management constraints.
Feller buncher	• Mechanical treatment on slopes more than 30% or of materials more than 10 inches in diameter may require a feller buncher rather than a masticator. • Costs tend to be considerably higher than masticator.
Grazing (goats)	• Can be cost effective. • Ecologically beneficial. • Can be applied on steep slopes and shrubby and flashy fuels. • Requires close management.

Manual Treatment

Manual treatment refers to crew-implemented cutting with chainsaws and other hand tools. Although it can be more expensive than mechanized treatment, crews can access many areas that are too steep or otherwise inaccessible with machines. Treatments can often be implemented with more precision than prescribed fire or mechanized methods allow. Merchantable materials and firewood can be removed while non-merchantable materials are often lopped and scattered, chipped, or piled and burned on-site. Care should be exercised to not increase the fire hazard by failing to remove or treat discarded material in a site-appropriate manner. Additional information on specific manual fuel treatments is included below.

Hand Felling and Piling

Hand felling is generally used for smaller-diameter trees and understory ladder fuels (shrubs, low limbs downed branches). This method is appropriate on smaller sites or where precise thinning is needed such as near homes and structures and in environmentally sensitive areas. Vegetation that is removed by hand is then piled in mounds to be dried and burned during snowy and moist months.

Hand Felling and Lop and Scatter

Similar to hand felling with piling, felling and lop and scatter is an appropriate treatment method for smaller treatment areas and where it may not be feasible to burn piles later or when trying to improve soil organic matter content. With this treatment method, small trees, shrubs, and ladder fuels are cut by hand then masticated to reduce their size. The slashed material is then spread across the forest floor to reduce fuel volume and height.

Care should be taken when utilizing this method near homes to ensure defensible space zone standards are maintained.

Mosaic Thinning

Mosaic thinning may be a cost-intensive method for treating forested lands. With this treatment, selective thinning with chainsaws and hand tools occurs under the guidance of a forester or mitigation expert. Exact treatment intensity and methodology will vary from site to site depending on need and present species.

Pruning and Limbing

With this treatment method, branches are removed from mature trees to reduce ladder fuels and potential fire intensity. Trees are treated based on branch height and distance from neighboring trees. This method is most effective for maintaining defensible space as outlined above.

Mechanized Treatments

Mechanized treatments include mowing, mastication (shredding timber), and whole tree felling (Figure E.5), mechanized cut to length logging, and aerial skyline systems. The decision to use mechanized methods as opposed to hand felling or prescribed fire treatments depends on a variety of factors including:

- Scale of the treatment project (number of acres, stand maturity, fuel loading).
- Ecological restoration goals
- Slope steepness
- Availability of resources and personnel
- Wildfire mitigation goals (fuel break, fire break, reduced fuel loading)
- Alignment with nearby fuel treatment efforts and future planned treatments

Mechanized fuel treatments are often effective in treating larger project areas that contain high fuel loads. Pairing mechanized treatments with monitoring, restoration practices, and even prescribed fire is essential to managing land holistically for multiple resource benefit. Fuel treatment projects often make use of a variety of methods to accomplish different goals.



Figure E.5. Example of mechanical fuel treatments.

Mowing

Mowing can effectively reduce grass and brush fuels adjacent to structures and along highway rights-of-way and fence lines. Managed grasslands that are cut and baled serve as excellent fuel breaks as the material is removed from the site. For heavier fuels, several different masticating machines can be used, including drum- or blade-type masticating heads mounted on machines and ranging in size from a small skid-steer to large front-end loaders. Mowing and mastication do not reduce the amount of on-site biomass but alter the fuel arrangement to a less combustible profile.

In extreme risk areas more intensive fuels treatments may be necessary to keep the fire on the ground surface and reduce flame lengths. Within the fuel break, shrubs should be removed, and tree branches should be pruned 5 to 6 feet from the ground and with space between the trees.

Mastication

Mastication, also known as mulching, is the process of chopping, grinding, or shredding woody biomass to decrease fuel volume on a site and reducing vertical fuel. The process involves utilizing an attachment on a tractor or heavy machinery that chips shrubs and trees without manually felling trees. The wood is spread across the forest floor, which reduces crown fire potential and fireline intensity.

Mechanical feller buncher/processors are used for whole tree removal and processing. The processed logs are typically utilized for a variety of low-value products, while the slash (tops and limbs) is of negative value and disposed of by chipping, grinding, or burning on-site (Jain et al. 2018).

Chipping

Chipping is an effective way to reduce large woody slash that is collected from manual mitigation efforts. It involves using a chipping machine that shreds the large wood into 3-inch or smaller chips that can be spread across the forest floor, used as mulch or disposed of (Jain et al. 2018). Wildfire Partners manages an annual

chipping program where county residents can sign up to have a chipper brought to their neighborhood or house; the wood chips are then donated to local farms.

Patch Cuts

The patch cut fuel treatment method is effective for treating mature lodgepole pine stands. Implementing patch cuts involves removing various sized clumps of trees of varying distances apart throughout a stand. Mature and dense lodgepole pine stands have adapted to high-severity, stand-replacing fire due to the prevalence of crown fire (Zimmerman and Omi 1998). Creating patches in the canopy reduces wildfire intensity by mimicking natural stand-replacing fire, allowing tree stands to regenerate in an age class mosaic (Keyes et al. 2014). Patch cuts are necessary to treat mature lodgepole pine that develop shallow roots and can be susceptible to wind throw if thinned using traditional crown spacing methods. Young lodgepole pine (<30 years) can effectively be thinned as rooting depth will increase over time with reduced competition. Patch cut size and thinning prescriptions should be determined by a certified forester contingent on treatment goals and site characteristics.

Grazing

Grazing can be an effective and beneficial fuel treatment method in Sheridan County and across Wyoming, supporting both wildfire risk reduction and rangeland health by enhancing habitat for native plant and wildlife species while helping to manage invasive vegetation. By strategically managing livestock to consume and modify vegetation, grazing can reduce the amount, height, and continuity of fine fuels, particularly in grassland and shrubland systems that dominate much of northeastern Wyoming (WGFD 2025).

Grazing is a dynamic fuel management tool, and its effectiveness depends on understanding key management considerations, including the type of livestock (e.g., cattle, sheep, or goats), targeted vegetation (annual versus perennial species), timing of grazing relative to plant growth cycles, grazing intensity and duration, and plant palatability and distribution across the landscape. Properly managed grazing can influence vegetation structure and fuel characteristics while maintaining productive rangelands; however, poor grazing management may negatively affect plant communities, soil stability, and habitat conditions, underscoring the importance of site-specific planning and adaptive management (WGFD 2025).

For more information on grazing management and standards in Wyoming, visit:

<https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/wyoming>.

Prescribed Burning

Prescribed burning is the single most effective tool to reduce the threat of extreme fire behavior by removing excessive standing plant material, litter, and woody debris while limiting the encroachment of shrubby vegetation (Moore et al. 2024) (Table E.3).

In Sheridan County, prescribed burning on private property is regulated at both the state and local level. Most open burning activities require registration and a permit through the Wyoming Department of Environmental Quality (DEQ) to address air quality and smoke management requirements (Wyoming DEQ 2026b). In addition, landowners must comply with local fire restrictions and are expected to notify the Sheridan County Dispatch Center prior to ignition to avoid unnecessary emergency response (Sheridan County 2026a). The County Fire Warden and local fire protection districts provide oversight of fire conditions and may offer guidance on safe burning practices (WSFD 2026). Because requirements can vary depending on burn size, weather conditions, and fire restrictions, landowners are encouraged to coordinate with both DEQ and local fire authorities before conducting a prescribed burn (University of Wyoming Extension 2020).

Public safety is the primary consideration in the design of any prescribed burn plan. Use of prescribed fire on public land should be carried out within the confines of the agency's fire management planning documents and

requires individual prescribed burn plans that are developed for specific burn units and consider smoke management concerns and sensitive receptors within the WUI. Smoke monitors should be placed in areas where smoke concerns have been raised in the past.

Following any type of fuels reduction treatment, post-treatment monitoring should continue to ensure that management actions continue to be effective throughout the fire season. The vegetation within this ecosystem can change rapidly in response to drought or moisture from year to year and during the course of the season, so fuels treatments should be adjusted accordingly. To learn more about firing techniques, visit the EFIRE Fire Techniques webpage: <https://efire.cnr.ncsu.edu/efire/fire-techniques/>.

Table E.3. Types of Prescribed Fire Treatments

Treatment	Comments
Broadcast Burning	Consists of burning larger areas of land that have been prepped for prescribed burning operations. Preparation includes fuel reduction, fuel rearrangement, containment line construction, smoke abatement, and contingency planning. Broadcast burns can be implemented in various fire-adapted fuel types such as lodgepole pine, ponderosa pine, and annual grasslands. Monitoring of broadcast burn units is important for achieving desired results and mitigating ecological consequences such as high tree mortality.
Ditch Burning	Consists of burning built up fuels along and in irrigation ditches. Burning is contained to the ditch and area immediately surrounding the ditch. Due available moisture, vegetation within the ditch can grow quickly but can also be efficiently managed with fire.
Pile Burning	Consists of burning piles of cut, gathered, and stacked vegetation. Pile burning is often simpler to implement than broadcast burning and can be conducted in the winter when wildfire risk is low. Pile burning is effective in removing fuels from a landscape but can have consequences to soil health due to the intense heat of piles scorching the ground.
Agricultural Burning	Consists of burning agricultural lands such as hay fields and wheat stubble to remove vegetation, improve soil health, increase productivity, and reduce wildfire risk. Agricultural burning is conducted during key times of the year that are conducive to the growing season of desired crops.

Impacts of Prescribed Fire to Communities

Prescribed fires can have impacts on air quality that may impact local communities. Impacts on a regional scale are typically only acute when many acres are burned on the same day, which is uncommon in this region. Local problems are occasionally acute due to the large quantities of smoke that can be produced in a given area during a short period of time. Residents with respiratory problems may be impacted during these burning periods since smoke consists of small particles of ash, partly consumed fuel, and liquid droplets that are considered air pollutants.

Other combustion products include invisible gases such as carbon monoxide, carbon dioxide, hydrocarbons, and small quantities of nitrogen oxides. In general, prescribed fires produce inconsequential amounts of these gases compared to wildfires.

Effective smoke management is an important component of planning and implementing prescribed fire in Sheridan County, as smoke has the potential to affect air quality, visibility, and public health. In Wyoming, smoke from prescribed and wildland fires is regulated under the Wyoming Department of Environmental Quality's Air Quality Division through the Smoke Management and Open Burning programs, which are designed to manage emissions and minimize impacts to surrounding communities (Wyoming DEQ 2026a, 2026b). It is important to consider the differences in air quality impacts produced by large wildfires compared to smaller, controlled prescribed fires, particularly in terms of duration, intensity, and smoke dispersion. The Wyoming DEQ provides guidance and regulatory frameworks to help ensure that prescribed burning activities are conducted in a manner that reduces smoke impacts and maintains compliance with state and federal air quality standards (DEQ 2026a).



Figure E.6. Smoke is released during a prescribed burn in Bighorn National Forest.

Source: Northern Wyoming News 2023.



Figure E.7. Smoke from Elk Fire, showing an example of the dark, dense smoke that can be released during a wildfire.

Source: Cowboy State Daily 2024.



Figure E.8. Smoke from Elk Fire, showing an example of the more dispersed smoke that can be released during a wildfire.

Source: Cowboy State Daily 2024.

In addition, the National Wildfire Coordinating Group (NWCG) released the *NWCG Smoke Management Guide for Prescribed Fire* in 2020 (NWCG 2020). This plan is designed to act as a guide to all those who use prescribed fire. Smoke management techniques, air quality regulations, public perception of prescribed fire, foundational science behind prescribed fire, modeling, smoke tools, air quality impacts, and more are all discussed in this plan. The document is meant to pair with NWCG's Interagency Prescribed Fire Planning and Implementation Procedures Guide for planning and addressing smoke when prescribed fire is used (NWCG 2020). To view the plan, please visit: <https://www.nwcg.gov/publications/pms420-3>.

Effects of smoke can be managed by burning on days when smoke will blow away from smoke-sensitive areas. Precautions are taken when burning near populated areas, highways, airports, and other smoke sensitive areas. Any smoke impact downwind is considered before lighting a fire. Smoke management is a significant component of all prescribed burn plans.

Other mitigating actions include alerting the public of upcoming burning activities, including the purpose, best conditions for ensuring good smoke dispersal, duration, size, and location of projects. Local radio, newspapers, social media, and TV can provide broad coverage for alerts. Land management agencies in the planning area consistently work with concerned citizens regarding smoke management and attempt to provide solutions such as the placement of smoke monitors at sensitive sites.

Prescribed fire is a key action to reduce hazardous fuels in the county and across the broader landscape. Current fuel loads far exceed healthy levels and are unable to be addressed solely with hand and mechanical treatments. Public acceptance and support are critical to implementing prescribed burning projects. As such, federal, state, and county representatives must coordinate education efforts related to burning activities to reduce resistance to planned actions. This can include information on the rationale for the prescribed fire, precautions and resources related to smoke, and risk information to ease homeowner concerns.

Thinning and Prescribed Fire Combined

Combining thinning and prescribed fire can be the most effective treatment (Graham et al. 2004). In ecosystems where fire exclusion or disease has created a buildup of hazardous fuels, prescribed fire cannot be safely applied, and pre-burn thinning is required. The subsequent use of fire can further reduce residual fuels and reintroduce this ecologically imperative process. The National Association of Forest Service Retirees (NAFSR) published a

paper on “America’s Forest Management Crisis – A National Catastrophe” (NAFSR 2021) where they observed the effectiveness of pairing thinning treatments with prescribed fire.

Additionally, national guidelines like those from the NWCG stress the importance of careful planning when combining these treatments, ensuring that they meet local and federal safety and environmental regulations (NWCG 2020).

Management of Nonnative Plants

The U.S. Department of Agriculture (USDA) maintains a list of introduced, invasive, and noxious plants by state (USDA 2022). Fuel treatment approaches should always consider the potential for introduction or proliferation of invasive nonnative species as a result of management actions. Invasive species, particularly winter annual invasive grasses and noxious broadleaf weeds common to northern Wyoming, have been shown to increase fire frequency, temperature, flame length, and rate of spread.

Species of concern in Sheridan County include cheatgrass (*Bromus tectorum*), leafy spurge (*Euphorbia esula*), Canada thistle (*Cirsium arvense*), diffuse knapweed (*Centaurea diffusa*), and other noxious weeds identified in local management resources. Many of these species create dense, continuous fuel beds that ignite easily and can move across the landscape under high wind conditions, rapidly spreading fire. These fuel characteristics are particularly concerning in the county’s grasslands, rangelands, and open shrublands, where wind-driven fire behavior is common.

Efforts to remove invasive species that contribute to wildfire risk are crucial. These plants often create dense, continuous fuel beds that are easily ignited and burn intensely. By removing invasive species, fire behavior can be mitigated, reducing the likelihood of high-intensity fires. Additionally, the removal of invasive plants allows native vegetation to reestablish, which typically maintains higher moisture levels and is less flammable, thereby creating a more fire-resilient ecosystem. The benefits of removing invasive species extend beyond fire risk reduction, contributing to the overall health and biodiversity of the ecosystem.

For Sheridan County specific resources on weed management and plant identification, visit:

<https://www.scweeds.com/>

For more resources on Wyoming nonnative plant identification, visit: <https://wyoweed.org/identify-weeds/>

APPENDIX F: HOMEOWNER RESOURCES



Public education and outreach programs are a common factor in virtually every jurisdiction involved with wildfire response. The emphasis of shared responsibility in wildfire preparedness and mitigation is permeating wildfire mitigation programs across all scales. Education and engagement play a pivotal role in Sheridan County's approach to facilitating greater community safety and resilience to disasters and other emergencies.

COUNTY AND MUNICIPAL PROGRAMS AND SERVICES

Sheridan County

Sheridan County provides locally focused wildfire resources through fuels mitigation and outreach efforts throughout the county—especially in high-risk areas, such as Story and Red Grade—which offer defensible space guidance, evacuation planning information, and examples of fuel reduction treatments. Sheridan County also produces a Wildfire Awareness Newsletter to share information on wildfire risk, mitigation strategies, and available assistance, and maintains communication on fire restrictions and safe burning practices. Together, these efforts reflect a collaborative, place-based approach to wildfire preparedness and risk reduction supported by local partners and state funding programs. Links to these resources can be found on the [Sheridan County Website](#).

Sheridan Fire-Rescue

Sheridan Fire-Rescue provides a variety of services and resources to support wildfire preparedness, fire prevention, and community safety within the City of Sheridan and surrounding areas. In addition to fire suppression and emergency response, the department plays a key role in public education by offering fire prevention programs, safety inspections, and training opportunities for residents and businesses. These services include fire extinguisher training, CPR and first aid certification, and residential safety guidance. Sheridan Fire-Rescue also promotes the use of Community Connect, an online platform that allows residents to voluntarily share critical property and occupancy information to assist emergency responders during incidents. Visit the [Sheridan Fire-Rescue website](#) for more information on these resources.

STATE RESOURCES

University of Wyoming

The University of Wyoming Extension, through its Barnyards & Backyards program, provides a wide range of resources to assist landowners, homeowners, and communities in preparing for, responding to, and recovering from wildfire. These resources include curated publications, articles, and guidance covering all phases of wildfire, including pre-fire preparedness, actions during active fire events, and post-fire recovery and rebuilding. The program also offers topic-specific information such as defensible space, vegetation and fuel management, financial assistance, erosion control, and infrastructure repair, as well as links to additional state and federal programs. Resources are regularly updated to reflect current conditions and evolving recovery needs and emphasize that wildfire impacts and recovery pathways vary by landownership, regulatory context, and site-specific conditions. Visit the [University of Wyoming Barnyards & Backyards wildfire resources page](#) to explore the available tools, publications, and guidance for wildfire preparedness and recovery.

Wyoming State Forestry Division

The WSFD maintains a variety of programs and resources to assist landowners, communities, and local agencies in preparing for, mitigating, and responding to wildfire. Through its Fire Management program, WSFD provides tools and information on wildfire conditions, risk assessment, fire restrictions, and response coordination, as well

as access to statewide fire information systems and situation updates. In addition, the Hazardous Fuels Mitigation Program offers education, technical guidance, and financial assistance opportunities to support wildfire risk reduction across Wyoming. Resources focus on implementing defensible space, fuels reduction treatments, and strategic fuel breaks to reduce vegetation hazards, influence fire behavior, and improve firefighter and public safety. Visit the [Wyoming State Forestry Division Fire Management page](#) and the [Fuels Mitigation program page](#) to learn more about available programs, tools, and funding opportunities.

Wyoming Department of Agriculture

The Wyoming Department of Agriculture provides wildfire-related resources and guidance primarily focused on agricultural producers, ranchers, and rural landowners. The department connects residents to a variety of federal and state programs that support wildfire preparedness, response, and recovery, including technical and financial assistance for livestock losses, forage impacts, and land rehabilitation following wildfire. Resources also include information on USDA disaster assistance programs, watershed protection efforts, and land management practices that can improve resilience to wildfire impacts. While these programs are oriented toward agricultural operations, they offer valuable support for rural homeowners and landowners in Sheridan County whose properties and livelihoods are closely tied to working landscapes. Visit the [Wildfire Resources page](#) for more information.

Wyoming Department of Fire Prevention and Electrical Safety

The Wyoming Department of Fire Prevention and Electrical Safety provides a range of resources that support fire prevention, life safety, and risk reduction for residents and communities across the state. Through its fire prevention and community risk reduction programs, the department offers fire safety education, inspections, and plan review services to ensure compliance with adopted fire and building codes, helping reduce structural vulnerabilities and ignition risks. These services include public education campaigns, fire safety outreach, and coordination with local fire departments to identify and address fire hazards in homes and communities. While not specific to wildland fire, these programs play an important role in reducing human-caused ignitions and improving overall fire preparedness at the household level. For more information, visit the agency's [Fire Prevention page](#).

FEDERAL RESOURCES

Wildfire Risk to Communities

The USFS developed this free, interactive tool to assist residents in understanding and prioritizing local risk factors. The risk assessment also shows the roles of different community members in preventing and recovering from wildfire. This link shows the [assessed risk for Sheridan County](#).

Ready, Set, Go!

The Ready, Set, Go! Program, managed by the International Association of Fire Chiefs, was launched in 2011 at the National WUI conference. The program seeks to develop and improve the dialogue between fire departments and residents and educate residents who live in high-risk wildfire areas on how to best prepare themselves and their properties for wildfire. Figure F.1 shows examples of home preparedness and resources available through the program. The program resources are available at <http://www.wildlandfirersg.org>.

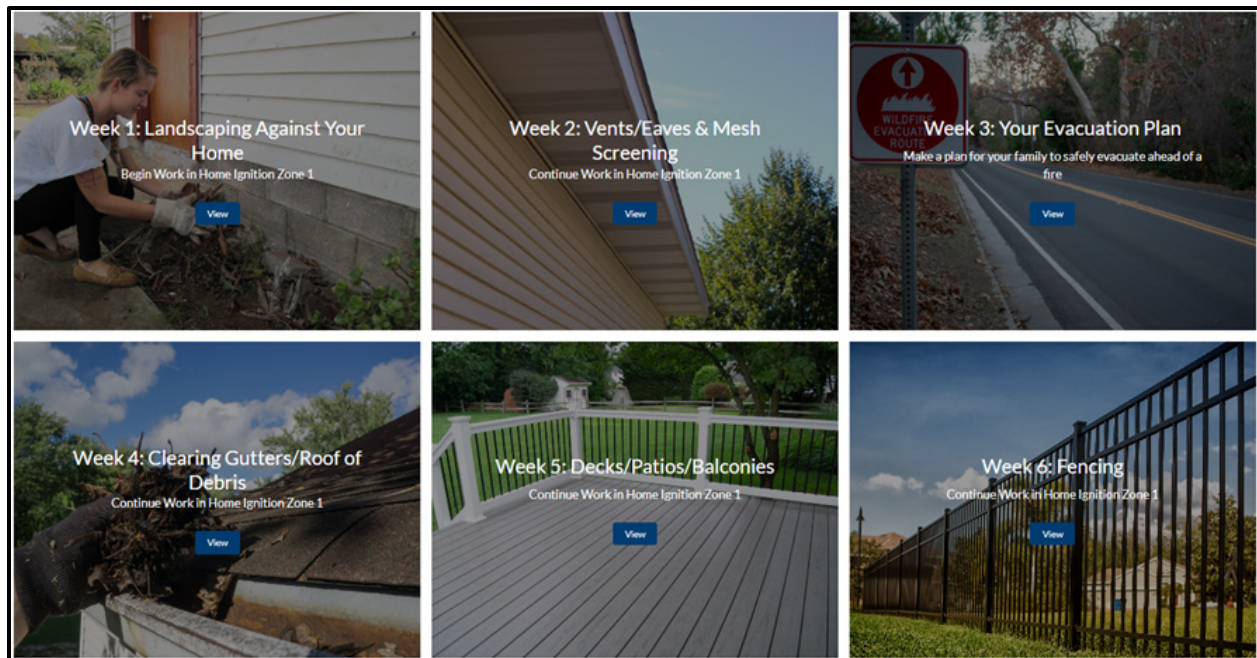


Figure F.1. Example of home preparedness and evacuation resources available from Ready, Set, Go!
Source: IAFC 2025.

Federal Emergency Management Agency

FEMA provides a number of educational resources, funding programs, research, and other tools to help communities understand wildfires better and increase actions that improve resilience. Resources are categorized into before, during, and after an event and include information on evacuation preparations, insurance, alerts, warnings, sheltering, post-burn flooding, debris flow, and recovery first steps. Available funding programs are related to both preparations and recovery. Visit their website to view all [FEMA resources](#).

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) maintains wildfire resources that can help communities better prepare for and recover from a disaster. The EPA is a particularly good resource for smoke and air quality-related research and guidance. The agency manages a local air quality search tool, has guides on dealing with wildfire smoke, and provides information on the health effects of smoke. A full list of [EPA resources and research](#) is available on the agency website.

Ready.Gov

Ready.Gov is a program developed by the Department of Homeland Security intended to provide disaster and emergency information and preparation resources. The site provides guides, educational documents, and other resources to help citizens harden their homes and foster defensible space, plan for a wildfire, stay safe during an event, and safely return home or rebuild following a wildfire. The full list of resources is available here: <https://www.ready.gov/wildfires>.

National Fire Protection Association Firewise USA

The NFPA is a global non-profit organization devoted to eliminating death, injury, and economic loss due to fire. Its 300 codes and standards are designed to minimize the risk and effects of fire by establishing criteria for building, processing, design, service, and installation around the world (NFPA 2013).

The NFPA develops easy-to-use educational programs, tools, and resources for all ages and audiences, including Fire Prevention Week, an annual campaign that addresses a specific fire safety theme. The NFPA's Firewise USA program (www.firewise.org) encourages local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from wildfire risks.

The NFPA is a premier resource for fire data analysis and research. The Fire Analysis and Research Division conducts investigations of fire incidents and produces a wide range of annual reports and special studies pertaining to fire hazards.

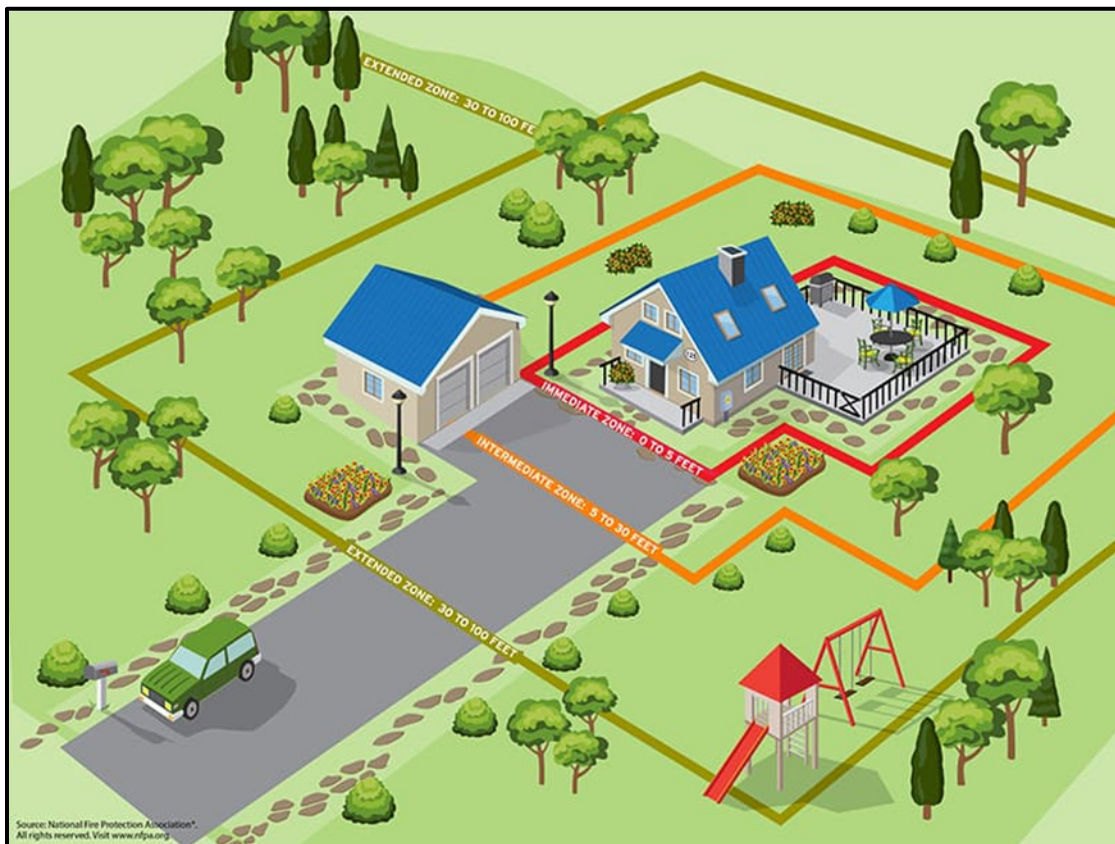


Figure F.2. Defensible Space Zone guide from NFPA

National Interagency Fire Center

The National Interagency Fire Center (NIFC) provides a wide array of fire resources and services and can provide communication assistance to over 32,000 firefighters and 50 major events at any given time (NIFC 2026a).

The program also offers wildfire forecasts and predictions using fuel and weather data collected from their remote automated weather base with over 2,000 weather stations. Additionally, the NIFC has a training branch where national curricula are developed, including FireWorks, an educational program designed for kids K-12.

The program teaches children about wildland fire science, ecosystem fluctuations, human interaction on the environment, and other environmental science topics. NIFC public education resources can be here:

<https://disastersafety.org/wildfire/wildfire-ready/>

U.S. Fire Administration's WUI Resources

The U.S. Fire Administration (USFA) is an entity of the U.S. Department of Homeland Security's FEMA that aids in the preparation for and response to fire. Their WUI resources consist of websites and other information related

to risk assessments, public outreach, and community training. Find the resources here:

<https://www.usfa.fema.gov/wui/>

Wildfire Research Center (WiRē)

The [Wildfire Research Center](#) (WiRē) is a non-profit organization that works with local wildfire services to highlight community-tailored pathways to reduce risk to wildfire while simultaneously promoting pathways to fire adaptation. WiRē's mission states that fire adaptation is "about living with fire" while "creating safe and resilient communities that reduce wildfire risk on their properties before a fire, and supporting effective response when fires threaten a community." WiRē states that wildfire is an integral component of many ecosystems, and that safe fire must be allowed to ensure healthy forests.

To achieve its goals and serve communities, WiRē typically assesses factors contributing to wildfire risks, including building materials, vegetation near homes, background fuels, local topography, and access to emergency fire services. Additionally, they conduct social surveys to gauge residents' perceptions about wildfire, wildfire risk, risk mitigation behavior, and assess their willingness to take action in reducing wildfire risks.

Community Navigators

The Community Navigators Program supports historically underserved communities in collaboration with the USFS. The Community Navigators Program connects communities to appropriate resources for building resilience, such as access to funding and partnership support. The program aims to create mutually beneficial relationships between local communities, the USFS, and other federal agencies. Through their website, community leaders can request a navigator; resources are available in Spanish and English, and accessibility accommodations are available. For more information, please visit: <https://co-co.org/community-navigator/>

Firewise USA Program

The Firewise USA program is designed to help communities get started with assisting residents in protecting their homes, neighborhoods, and their safety. The program includes a toolkit with educational materials for homeowners and information for reducing fuel threats. Communities can become a Firewise USA site, which includes completing online training and creating a three-year action plan with an organized board or committee of volunteers to represent the community. For more information, please visit: <https://www.nfpa.org/education-and-research/wildfire/firewise-usa>

Community Mitigation Assistance Team

The Community Mitigation Assistance Team (CMAT) is a national interagency group that helps communities facing wildfire risk by working with local partners, agencies, and residents to identify challenges and develop plans for reducing that risk. They provide technical guidance, facilitate collaboration, and support communities before, during, or after wildfire events, focusing on strengthening local capacity for long-term wildfire mitigation rather than doing the work for them. CMAT assignments are tailored to each community's needs and aim to leave behind stronger partnerships, clearer priorities, and tools that help keep mitigation efforts going after the team leaves. For more information, please visit the [CMAT program page](#).

American Red Cross

The American Red Cross is a leading disaster response and recovery agency primed to provide disaster relief. Additionally, the Red Cross provides a number of preparation guides and resources for individuals and families and empowers community members to assist in relief and recovery efforts. Follow this link for the full list of [Red Cross resources and trainings](#).

MISCELLANEOUS RESOURCES

Fire Adapted Communities Pathways Interactive Tool

This tool helps community members properly identify the most beneficial adaptation methods for their local environment: <https://facpath.fireadaptednetwork.org/>.

Climate Mapping for Resilience and Adaptation Portal

Provides a live dashboard to help communities see extreme weather and other hazards from climate change: <https://resilience.climate.gov/#real-time-data>.

COMMUNITY PLANNING ASSISTANCE FOR WILDFIRE

Assists communities with wildfire risk-reduction communications, increasing land use planning capacity, and collaborating with agencies to identify overlap in scopes of work: <https://cpaw.headwaterseconomics.org/>

APPENDIX G: POST-FIRE RESPONSE AND RESTORATION



Experiencing wildfire is a traumatic and highly impactful event that takes time and energy to fully recover from. Support from neighbors, community, and government is essential to returning your home and environment to a safe and healthy state. The recovery process often involves many of these steps:

- Damage assessment and hazard identification.
- Returning home and cleaning up.
- Coordinating and mobilizing a group of teams in the community to respond to post-fire related emergencies (not to be confused with initial fire response).
- Identifying immediate needs and critical resources impacts (impacts to wells, food sources, and other necessities).
- Temporary housing and replacing goods.
- Rebuilding communities and assessing economic needs—securing the financial resources necessary for communities to rebuild homes, businesses, and infrastructure.
- Restoring the damaged landscape—restoration of watersheds, soil stabilization, and tree planting.

Prioritizing the needs of socially vulnerable residents/communities who have specific circumstances, such as individuals living in poverty, minorities, people without vehicles, people with disabilities, older adults, and people with limited English proficiency, is imperative in the post-fire recovery process.

COMMUNITY RESPONSE AND RECOVERY

Assessments of the burned landscape are often well-coordinated using interagency crews who are mobilized immediately after a fire to assess the post-fire environment and make recommendations for rehabilitation efforts. For the communities impacted by fire, however, returning home and recovering from a wildfire is often a piecemeal in nature unless pre-fire planning is comprehensive and responsible entities are clearly defined. Residents impacted by the fire need assistance making insurance claims; finding temporary accommodation for themselves, pets, and livestock; rebuilding or repairing damaged property; removing debris and burned trees; stabilizing the land for construction; mitigating potential flood damage; repairing infrastructure; reconnecting to utilities; and mitigating impacts to health. Oftentimes, physical impacts can be mitigated over time, but emotional impacts of the loss and change to surroundings are long-lasting and require a supportive community network. Residents can refer to Sheridan County's Emergency Preparedness Guides:

https://www.sheridancountywy.gov/departments/emergency_management/emergency_preparedness/index.php

After the Fire

Rebuilding and recovery from wildfire in Wyoming can vary widely across communities, particularly between rural areas and those with limited access to financial and technical resources. Rural landowners, agricultural producers, and lower-income households may face additional challenges in covering insurance costs, rebuilding infrastructure, and restoring land and livelihoods after a wildfire. Recovery timelines can range from months to several years depending on the extent of damage and available resources.

In Wyoming, wildfire recovery is coordinated across multiple state and federal agencies rather than a centralized system, with entities such as the WSFD, University of Wyoming Extension, and the State's Grants Management Office providing guidance, technical assistance, and access to funding programs for homeowners, landowners, and communities.

Because recovery efforts rely heavily on coordination among local governments, state agencies, and federal partners, the capacity and experience of local project sponsors can influence the pace and effectiveness of post-fire recovery, particularly for watershed restoration and landscape rehabilitation. As a result, some communities

may experience slower or more resource-limited recovery processes than others. Given the level of coordination required, a variety of state and partner resources are available to support wildfire recovery planning and implementation at the individual, community, and landscape scale, as described in the section below.

State Resources

The University of Wyoming manages a wildfire page which includes numerous key recovery resources for homeowners, community leaders, and land managers. These resources include evacuation guides, wildfire monitoring and tracking resources, cleanup and assessment guides, recovery efforts for individuals and communities, and financial resources for recovery. The page may serve as a consolidated resource guide for mitigating post-fire hazards and rehabilitating land and watersheds.

These resources, articles on treatment effectiveness, and more are available on the University of Wyoming Wildfire website: <https://www.uwyo.edu/uwe/programs/wyo-disaster/wildfire.html>

Returning Home

Returning home after a fire can be a daunting and emotional experience for residents and may pose hazard threats depending on the impact of the fire. Residents should always follow the advice and recommendations of emergency management agencies, fire departments, utility companies, and local aid organizations regarding activities following the wildfire. Evacuate your home as early as possible and do not linger once evacuation orders have been given. The more quickly neighborhoods can evacuate, the sooner wildfire response and emergency resources can ingress to begin suppression activities (NFPA 2023). Additionally, to ensure personal safety, do not attempt to return to your home until fire personnel have deemed it safe to do so.

When driving, watch for trees, brush, and rock which may have been weakened or loosened by the fire. Be aware of any damage or debris on roads and driveways. Use extreme caution around trees, power poles, and any other tall objects that may have been weakened by the fire.

Even if the fire did not damage your house, do not anticipate an immediate return to normal routine. Instead, look for damaged utility infrastructure and necessary repairs. When you return home, check for hazards, such as gas, water leaks, and electrical shorts. Turn off damaged utilities if you did not do so previously. Request that the fire department or utility companies turn the utilities back on once the area is secured. Similarly, water supply systems may have been damaged; do not drink from the tap until you have been advised that it is safe to do so. Well owners need to inspect and test their well and septic system following impact by wildfire.

Insurance Claims

Your insurance agent is the best source of information for submitting a claim. If you do not have insurance, reach out to local disaster recovery groups for assistance. It is recommended you take photos of your home, both inside and out, in preparation of an emergency. Keep the photos in a safe place as this will make the insurance claim process easier. Most expenses incurred during the time you are displaced may be reimbursed, so be sure to keep all receipts. Additional items that may be covered are extra transportation costs to and from work or school, telephone installation, furniture rental, extra food costs, and water damage. Do not start any repairs without the approval of your claims adjuster.

Natural disasters aren't always predictable, but there are steps property owners can take to better prepare for an emergency.

- Review your insurance policy annually to see if your home is adequately insured
- Know your "loss of use" section – these cover living expenses should your home become unlivable due to fire, smoke, or otherwise

You can view a guide on creating a home inventory here: <https://www.statefarm.com/simple-insights/residence/home-inventory-how-to-create-one>

Learn more about fire loss prevention in Wyoming here: <https://doi.wyo.gov/consumers/fire-loss-prevention>

Beginning in 2022, the Wildfire Prepared Home Program from the Insurance Institute for Business & Home Safety (IBHS) was expanded into Wyoming. The program provides a science-based checklist of mitigation options for homeowners to undertake. Once the mitigation actions have been implemented, recorded, and shared with IBHS, they will provide a certification to the homeowner. The certification can be shared with the insurer as proof of risk reduction on the property. This can result in continued coverage and, in some cases, reduced rates or discounts. To learn more about the program, visit IBHS' site here: [Wildfire Prepared Home](#)

United Policy Holders also provides insurance resources for property damage and loss: <https://uphelp.org/>

Community Safety: Post-Fire Floods and Debris Flows

There are numerous natural hazards after a wildfire. Perhaps the most dangerous are potential flash floods and landslides following rainfall in a burned area upstream of a community. Wildfires increase risk of flooding because burned soil is unable to absorb rainfall efficiently therefore creating higher surface flow rates. When this occurs, drainages, creeks, and rivers can become overwhelmed resulting in elevated water levels. Residents on or adjacent to flood plains should take extra precautions as studies have shown that a 10-year rain event in a severely burned watershed can result in a 50- to 100-year flood event (Yochum and Norman 2015). Factors that contribute to flooding and debris flows are steep slopes, heavy rainfall, weak or loose rock and soil, denuded landscapes, and improper construction and grading.

Following wildfire, burned areas are susceptible to debris flows for 5 to 10 years, leaving downhill residents in danger. The highest danger is immediately after the fire when vegetative cover is lowest, and soil has yet to recover. Debris flows can move very fast, stripping the land of trees and other structures, and further degrading the landscape. Flooding and debris flow can heavily impact critical infrastructure such as roads and bridges, water treatment and other water infrastructure, and any facility or structure located in or adjacent to an active flood plain or drainage. It is crucial to be aware of your surroundings and take note of steep unstable slopes that could require hasty evacuation during rainstorms. Develop an evacuation plan with your family and stay away from waterways, storm channels, and arroyos. Be aware of your risk, pay attention to weather forecasts, listen to local authorities, and have a household inventory with copies of critical documents. The Western Fire Chiefs Association (WFCA) lists the following tips for staying safe from debris flow and flooding (WFCA 2024):

- Stay informed: tune into local radio, news, and phone notifications. Watch weather forecasts and be aware of flood warnings.
- Travel cautiously: Assume roads and highways on the downhill side of recently burned slopes are at risk and avoid taking those routes when possible.
- Stay out of floodwater: do not walk, bike or drive in flooded areas. Water may be contaminated and even one foot of water can generate enough power to move a car.
- Watch for changes in water level: watch for sudden increases or decreases in flow or sudden discoloration as this may indicate incoming flooding or debris movement.
- Find high ground: If you are caught in an unsafe situation, seek high ground immediately to avoid being trapped or caught in flows.

Mobilizing your Community

Wildfires that produce extensive damage in Sheridan County and across Wyoming require a coordinated, community-scale response to support recovery efforts. Local emergency management agencies, including the

county Emergency Manager, work in coordination with the Wyoming Office of Homeland Security and state and federal partners to manage disaster response and urgent needs. While these agencies provide structure and support, mobilizing local response and recovery teams remains a critical component of the recovery process. Coordinated direction among community volunteers, local governments, and partner organizations is essential to ensure effective and timely recovery (Wyoming Office of Homeland Security 2026).

Unlike wildfire suppression, post-fire recovery in Wyoming is not managed by a single unified command structure. Instead, individual agencies, organizations, and jurisdictions operate under their own authority, often with support from state and federal partners such as the WSFD, federal land management agencies, and disaster assistance programs. This distributed approach increases the need for coordination at the local level, including information sharing among agencies and alignment of recovery priorities. Local emergency managers play a key role in coordinating these efforts and connecting communities with available state and federal resources (WSFD 2026).

In addition, each community is encouraged to create its own type of a Post-Fire Coordination Group (PFCG) to direct the response to any ensuing post-wildfire natural hazards and aid in determining post-fire mitigation actions. The PFCG should work directly with local, state, or federal agencies, emergency response officials, and others to aid in a coordinated response. Primary duties of the PFCG include coordinating the exchange of information among agencies and the Risk-Hazard Assessment, assembling and exchanging geospatial data, assisting public communications, and coordinating with elected officials.

Communities are also encouraged to establish a post-fire coordinator. The post-fire coordinator is appointed by the community to facilitate a coordinated response to wildfire and to aid the community's post-fire recovery efforts. The post-fire coordinator is likely to collaborate with local, state, and federal organizations that participate in emergency response and post-fire recovery efforts. It is important that the post-fire coordinator demonstrated management, internet, and social media skills, community knowledge, and experience with government agencies and programs.

The recovery coordinator should become familiar with representatives from local, state, and government agencies that will be helping with coordination or funding of post-fire recovery. Any large wildfire will also involve an Incident Command System (ICS), an appropriately sized team assigned to aid in post-fire recovery. Learn more here [Wildland Fire Incident Command System Levels](#).

Communication

After a recovery team is established and immediate priorities are identified, it is important to determine effective methods for sharing information within the community. Strategies may include distributing printed materials, maintaining contact lists for affected residents, coordinating with local organizations, and holding public meetings or briefings. In some cases, community members may also assist with locating displaced livestock or pets and supporting neighbors during evacuation and recovery.

Three overarching principles can support effective communication during and after a wildfire:

- **Communicate through trusted and familiar sources.** Information is more likely to be received and acted upon when it is delivered by credible, locally recognized individuals or organizations (FEMA 2023).
- **Provide clear and actionable information.** Messaging should be concise, consistent, and focused on specific actions that residents can take to protect themselves, their property, and their livelihoods (FEMA 2023).
- **Tailor messages to the community.** Communication strategies should reflect the needs of different audiences, including rural landowners, agricultural producers, and vulnerable populations, recognizing that information access and communication preferences vary across Sheridan County (FEMA 2023).

Long-term Community Recovery

On non-federal land, recovery efforts are the responsibility of local governments and private landowners. Challenges associated with long-term recovery include homes that were severely damaged or were saved but are located in high-severity burn areas. Furthermore, homes saved but located on unstable slopes or in areas in danger of flooding or landslides present a more complicated challenge. Economically, essential businesses that were burned or were otherwise forced to close pose a challenge to communities of all sizes. Given these complications, rebuilding and recovery efforts can last for years, with invasive species control and ecosystem restoration lasting even longer (CUSP 2016). It is critical that a long-term plan is in place and there is sufficient funding and support for all necessary ecosystem and community recovery. To learn about more post-fire recovery resources, visit the [After the Flames website](#).

POST-FIRE LANDSCAPE REHABILITATION AND RESOURCES

Wildfires that cause extensive damage necessitate dedicated efforts to avert long term landscape degradation. Following a fire, the primary priority is emergency stabilization to prevent additional damage to life, property, or natural resources. The soil stabilization work starts immediately and may proceed for many years after a fire depending on the need and difficulty of revegetation. For the most part, rehabilitation efforts focus on the lands not likely to recover naturally from wildfire damage (USFS 2006).

The recent increase in severe fires has highlighted the numerous complexities of post-fire response. Research indicates that high-severity burn areas may produce erosion and runoff rates 5 to 10 times higher than the rates produced by moderate-severity burn areas. Following a fire, heavy rains may result in widespread floods carrying trees, boulders, and soil through canyons, gullies, and ephemeral stream channels, ultimately damaging communities and critical infrastructure.

Soil cover is dramatically reduced in areas with moderate soil burn severity (SBS) with minimal surface litter retained and some topsoil present. The loss of vegetative soil support will lead to decreased soil stability and higher erosion rates. By contrast, soil cover is nearly non-existent in areas experiencing high SBS as the surface soil has been burned to a fine, hydrophobic powder. Exposed, granular mineral soil is readily transported during rain events resulting in elevated soil erosion and surface runoff which creates sediment loading in streams, creeks, and rivers (USFS 2006).

Burned Area Emergency Response

One example of a post-fire response program is the USFS's post-fire emergency stabilization program, called the Burned Area Emergency Response (BAER) program. The goal of the BAER program is to discover post-wildfire threats to human life and safety, property, and critical natural or cultural resources on USFS lands and take appropriate actions to mitigate unacceptable risks (NIFC 2026b).

There are many facets to post-fire recovery, including but not limited to:

- Ensuring public health and safety—prompt removal of downed and hazard trees, addressing watershed damage, and mitigating potential flooding.
- Rebuilding communities and assessing economic needs—securing the financial resources necessary for communities to rebuild homes, business, and infrastructure.
- Restoring the damaged landscape—restoration of watersheds, soil stabilization, and tree planting.
- Reducing fire risk in the future—identifying hazard areas and implementing mitigation.
- Prioritizing the needs of vulnerable and disadvantaged communities during response and disaster recovery efforts.

- Reducing post-fire recovery time by replanting native species.
- Retaining downed logs for erosion control and habitat maintenance.
- Evaluating and updating disaster recovery plans every 5 years to respond to changing needs and characteristics of the community.
- Coordinating with planning, housing, health and human services, and other local, regional or state agencies to develop contingency plans for meeting short-term, temporary housing needs of those displaced during a catastrophic wildfire event.
- Incorporating forecasted impacts from climate change into trends and projections of future risk and consideration of policies to address identified risk.
- Updating codes and ordinances to specify procedures and standards for planning and permitting the reconstruction of buildings destroyed by wildfire.

Following the 2024 Elk Fire, BAER teams were deployed to the impacted areas in the Bighorn National Forest. The teams assessed burn severity and geologic hazards resulting from the fire impact. Based on fire severity and underlying geology, a report was developed identifying debris flow likelihood and anticipated volume for each burned drainage (Beal et al. 2024). The data from the report was used to do further analysis of each high-hazard drainage to inform prioritized hazard mitigation and notification efforts.

Emergency Watershed Protection Program

As another example, the Natural Resources Conservation Service's (NRCS's) Emergency Watershed Protection program provides technical and financial services for watershed repair on public (state and local) and private land. The goal is to reduce flood risk through funding and expert advice on land treatments. This funding is used by the State Emergency Rehabilitation Team (a multi-agency group assembled by the NRCS) to develop specific recovery and treatment plans.

Examples of potential treatments include:

- Hillside stabilization (for example, placing bundles of straw parallel to the slope to slow erosion)
- Hazard tree cutting
- Felling trees perpendicular to the slope contour to reduce runoff
- Mulching areas seeded with native vegetation
- Stream enhancements and construction of catchments to control erosion, runoff, and debris flows
- Planting or seeding native species to limit spread of invasive species

The effectiveness of various treatments is described at: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf.

SPECIFIC TREATMENT DETAILS FOR POST-FIRE WATERSHED PROTECTION

These treatments are primarily intended to be used in the post-fire environment; however, these treatments can also be applicable for degraded forests, rangelands, and stream channels in a pre-fire context and can directly improve landscape resilience to post-fire hazards.

Hillslope Treatments Appropriate for Gentle and Steep Slopes

These methods are derived from the USFS's [Burned Area Emergency Response Treatments Catalog](#) (USFS 2006).

Dry Mulch

The purpose of dry mulch treatment is to reduce surface erosion, reduce downstream peak flows, secure seeds in the soil, and provide favorable moisture and temperature conditions for seed sprouting. Mulch applications have been shown to be one of the most effective methods for stabilizing soil and promoting vegetative growth following a fire. This method requires straw, woodchips, and/or fiber materials and can be applied on the following conditions:

- Soils with moderate to high burn severity and high erosion potential, usually in the upper portion of watersheds
- Slopes up to 65%
- Areas of low wind
- Areas with sensitive or rare plants should be avoided
- Areas with surface roughness (surface roughness can be created with felled or limbed trees)
- Areas without needle-cast or regrowth potential in the first year
- Areas with high values at risk immediately adjacent to burn area or downstream from a burn area
- Slopes with less than 25% surface rock and soils deeper than 8 inches

Methods

- Refer to page 27 of the [Burned Area Emergency Response Treatments Catalog](#)

Erosion Control Mat

The purpose of erosion control mats is to provide temporary (several months to years) soil stability to targeted sites until vegetation can establish and reduce soil temperature and retain soil moisture. This method can be used on slopes, streambanks, or other areas of concentrated runoff. This method requires lightweight organic or synthetic mats (netting or blankets) staked to soil surface and can be applied for the following conditions:

- Areas of high burn severity with loss of effective soil cover
- Small areas with high values at risk
- Areas with a persistent hydrophobic layer
- Soils with a high erosion hazard rating
- Areas with increased overland runoff

This method can be time and labor intensive and may not be the best options when stabilizing large slope areas.

Estimated cost

- \$0.35 to \$1.00 per square yard, plus installation

Methods

- Refer to page 37 of the [Burned Area Emergency Response Treatments Catalog](#)
- Refer to page 15 of the [Wildfire Restoration Handbook](#)



Figure G.1. Dry mulch being mechanically applied to a hillslope.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf



Figure G.2. Crews manually applying dry mulch in a burned area.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf

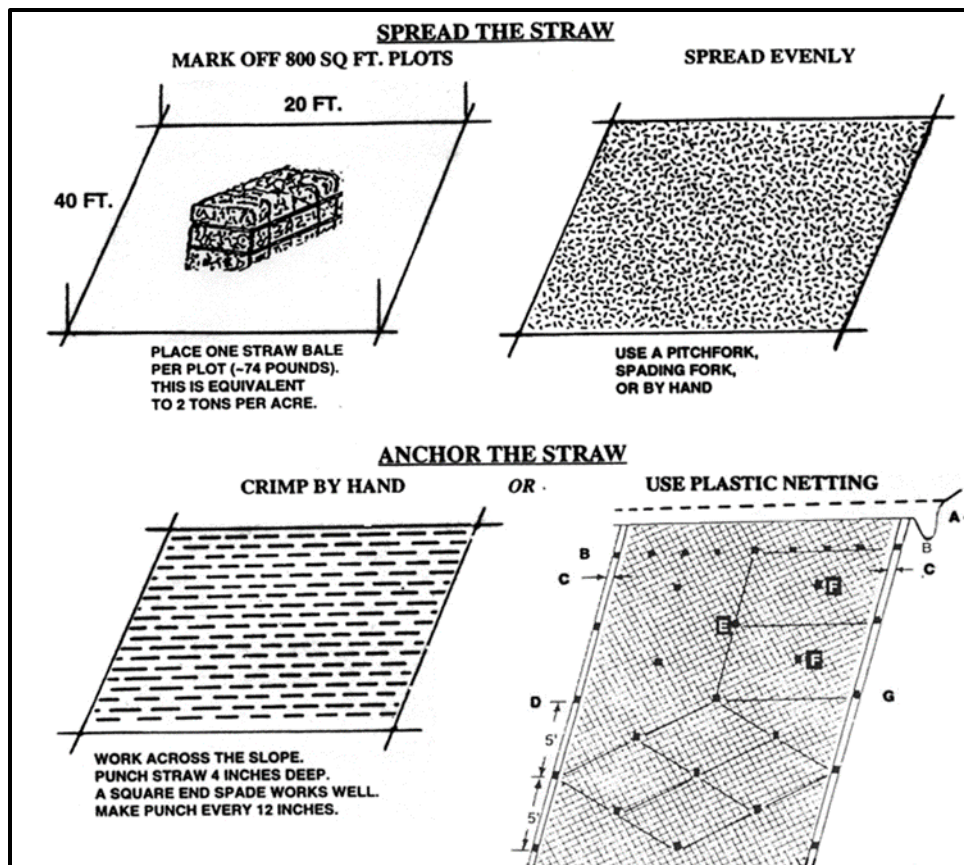


Figure G.3. Dry mulching application diagram.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf

Hydromulch

The purpose of hydromulching is to create a cover and retain moisture and seeds on steep slopes, which promotes seed sprouting while holding soil. Native seed mixes in the hydromulch mixture should be prioritized. This method is prioritized in areas where there may be an increased risks of invasive and noxious plants along the roadside. This method requires a hydromulch that is composed of a mixture of organic fibers (e.g., paper, cotton, flax, shredded wood), suspension agents, and native seeds that are mixed together with water and can be applied for the following conditions:

- Soils with high burn severity and high erosion potential
- Slopes between 20% to 50% without effective soil cover
- Areas without needle-cast or regrowth potential in the first year
- Areas with high values at risk immediately adjacent to the site or downstream
- Slopes with less than 25% surface rock and soil deeper than 8 inches
- Areas at risk for invasive and noxious plant colonization post-fire

Methods

- Refer to pages 15–17 and 22–23 of the [Burned Area Emergency Response Treatments Catalog](#)

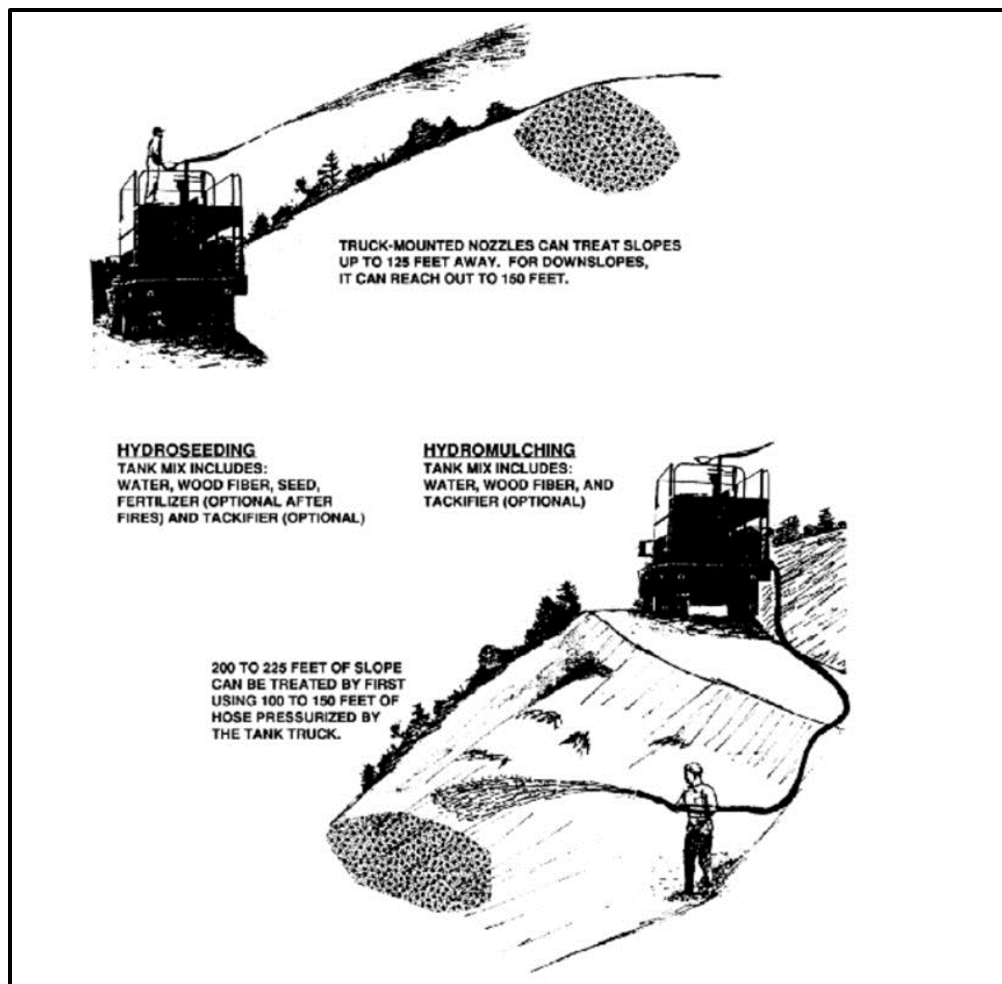


Figure G.4. Hydromulch application method.

Source: NRCS 2012.



Figure G.5. Post-wildfire hydromulching operations using a hydroseeder trailer.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf



Figure G.6. Hydromulching via aerial delivery on a slope.

Source: https://www.fema.gov/sites/default/files/documents/fema_dr-4652-NM-watershed-post-fire-treatment-DPEA_08232022.pdf

Log Erosion Barrier (Contour Log Felling)

The purpose of log erosion barriers (i.e., control log felling) is to slow runoff, improve infiltration, provide surface roughness, and capture sediments when logs are arranged in a bricklayer pattern on hillslopes in timbered areas. This method can also be applied in gullies and eroding drainage points and has been shown to be very effective under typical storm conditions. If the burned area experiences higher than normal precipitation, the contour felled logs may be less effective and become overwhelmed by sediment or undercut by high-intensity runoff and flooding. This method requires logs that are partially entrenched and/or staked to soil surface parallel to the slope contours. This method involves felling of burned trees and is very hazardous and should only be completed by trained sawyers. This method can be applied for the following conditions:

- Hillslopes with high and moderate burn severity
- Slopes between 25% and 60%
- Water-repellent soils
- Soils with high erosion hazard ratings
- Watersheds with high values at risk
- 60 to 120 trees per acre is recommended.
- Utilize trees no smaller than 6 inches in diameter and no larger than 12 inches in diameter
- Leave felled tree stump high to help secure the log erosion barrier

Methods

- Refer to page 45 of the [Burned Area Emergency Response Treatments Catalog](#)
- Refer to page 17 of the [Wildfire Restoration Handbook](#)



Figure G.7. Log erosion barrier.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf

Seeding and Replanting

The purpose of post-fire seeding is to reduce soil erosion, as well as reduce the risk of invasive and noxious plants. This method requires broad-scale application of seeds through either aerial or ground methods. Seeds mixtures should prioritize native seeds that ecologically appropriate for the landscape they are being applied to. Seeding should not be done in the first-year post-fire as it is ineffective, it should be included with other treatments such as dry mulching, hydromulching, or soil scarifying to ensure the soil has stabilized and soil holds adequate nutrients for plant growth.

Tree seedling planting is also an effective method for stabilizing slopes and revegetating burned areas. Depending on the severity of the fire, tree planting can take place within months of the fire or may require multiple years for soil health to improve before planting after a high-severity fire. This method is cost and labor intensive, however, and locating a large number of regionally adapted seedlings may be difficult. Seeding and replanting will be most effective in the following conditions:

- Areas of low burn severity
- Areas within or adjacent to high values at risk
- Soils with soil cover that are relatively stabilized
- Slopes of up to 60%
- Areas with potential spread of known noxious and invasive plants

Methods

- Refer to page 64 of the [Burned Area Emergency Response Treatments Catalog](#)



Figure G.8. Post-fire manual planting operations.

Source: Ouellet 2018.

Slash Spreading

The purpose of slash spreading is to reduce hillslope erosion by increasing the amount of ground cover to minimize precipitation erosion. This method requires the felling, lopping, and subsequent scattering of trees and brush by hand or with mechanical equipment. This method can be applied to areas with the following conditions:

- High and moderate burn severity
- Burned areas with available slash material on-site
- Soils with high erosion hazard ratings

Estimated cost

- \$220 to \$1,000 per acre

Methods

- Refer to page 33 of the [Burned Area Emergency Response Treatments Catalog](#)



Figure G.9. Mechanical slashing and spreading of vegetation.

Source: Slashbuster 2026.



Figure G.10. Post-fire aerial seeding operations.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf

Hillslope Treatments Appropriate for Slopes Below 30 Degrees

Fiber Rolls

The purpose of fiber rolls is to reduce erosion by shortening the slope length to slow overland flow velocity, trap sediment, and provide a seedbed for vegetative recovery. Fiber rolls are only intended for low surface flows that are not expected to exceed 1 cubic foot per second. Fiber rolls should not be used in stream channels or gullies. This method requires prefabricated fiber rolls made from rice straw wrapped in degradable netting. Additionally, on-site woody debris may be rolled in netting. This method can be applied to the following conditions:

- Areas of high and moderate burn severity
- Slopes with less than 40% of the original ground cover remaining
- Slopes between 20% and 40%
- Soils not less than 8 inches deep
- Slopes with less than 25% surface rock

Estimated cost

- \$2,929 per acre on average (Girona-Garcia et al. 2023)

Methods

- Refer to page 51 of the [Burned Area Emergency Response Treatments Catalog](#)
- Refer to page 19 of the Wildfire Restoration Handbook



Figure G.11. Fiber rolls in place on a hillslope following a fire.

Source: https://www.fema.gov/sites/default/files/documents/fema_dr-4652-NM-watershed-post-fire-treatment-DPEA_08232022.pdf

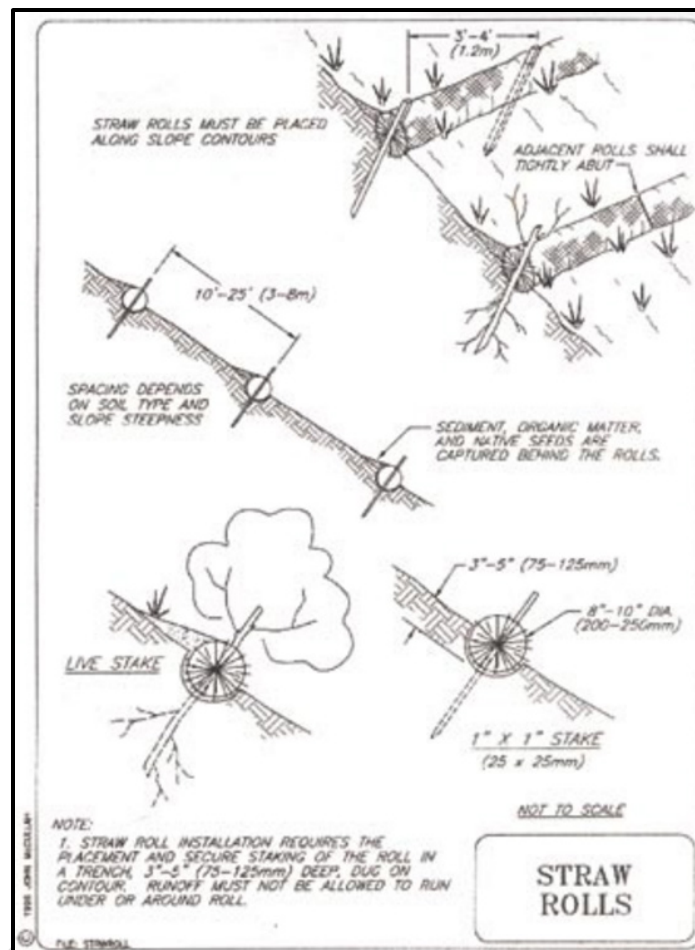


Figure G.12. Diagram of proper fiber roll installation.

Source: https://www.fs.usda.gov/rm/pubs/rmrs_gtr240.pdf

Silt Fence

The purpose of a silt fence is to trap sediment and protect areas with high values at risk, including heritage resources, water quality, and aquatic resources. Silt fences can be used in areas where other treatments such as log erosion barrier or fiber rolls may be ineffective. This method requires permeable fabric installed parallel to the contour and anchored with wooden stakes or metal t posts. This method can be applied to the following conditions:

- Areas with high values at risk
- Areas accessible for inspection and maintenance
- Areas with site-specific resource concerns

Estimated cost

- \$21 per foot labor costs dependent on size of installation (assume \$15/hour)

Methods

- Refer to page 56 of the [Burned Area Emergency Response Treatments Catalog](#)



Figure G.13. Silt fence constructed at the bottom of a slope post-fire. Contour felled logs can be seen uphill from the fencing as well.

Source: https://www.fema.gov/sites/default/files/documents/fema_dr-4652-NM-watershed-post-fire-treatment-DPEA_08232022.pdf

Soil Scarification

The purpose of soil scarification is to breakdown hydrophobic soil layers, prepare seed beds, and increase water infiltration rate. This method requires hand tools or mechanical equipment to break up and loosen topsoil in a manner that increases soil surface area. This method can be applied to the following conditions:

- Areas of high and moderate burn severity
- Slopes with high erosion potential
- Slopes less than 20% (ATV or small dozer application)
- Slopes between 20% to 40% (hand crew application)

Estimated cost

- \$245 to \$300 per acre (hand crew)
- \$50 per acre (ATV)

Methods

- Refer to page 60 of the [Burned Area Emergency Response Treatments Catalog](#)



Figure G.14. Crews scarify soil in a burn area by hand.

Source: Napper 2006.



Figure G.15. ATV with scarifying tool attachment.

Source: Napper 2006.

In-Channel Treatments

These methods were adapted from the Burned Area Emergency Response Treatments Catalog (USFS 2006) and the Erosion Control Field Guide (Quivira Coalition 2013).

Channel Deflector

The purpose of a channel deflector is to protect structures or infrastructure from increased streamflows/flooding post-fire. This method requires engineered structures such as j-hooks and single- or double-wing deflectors and can be applied to the following areas:

- Roads parallel to stream channels

- Facilities at risk from streambank flooding or erosion

Estimated cost

- Variable; on average \$4,304

Methods

- Refer to page 99 of the [Burned Area Emergency Response Treatments Catalog](#)

Check Dam

The purpose of a check dam is to provide temporary erosion control measures designed to trap and store sediment mobilized from an upslope hillslope and to slow water velocity. This method reduces stream/river downcutting, and attenuates peak stream/river flows. This method requires mini dams built with straw, logs, or rocks. The size of these materials depends on the channel gradient. Check dams are useful for closing eroded roads and trails and restoring severely eroding hillsides. This method can be applied to the following areas:

- Areas of high burn severity with highly erodible soils
- Channels where energy dissipation is necessary
- Channels with high values at risk such as road crossings or sensitive aquatic species
- Channels with unstable bedload and high sediment-loading potential
- Watersheds with small drainage areas (less than 5 acres)
- Areas with less than 20% ground cover

Estimated cost

- \$150 each (straw)

Methods

- Refer to page 84 of the [Burned Area Emergency Response Treatments Catalog](#)
- Refer to page 26 of the [Wildfire Restoration Handbook](#)

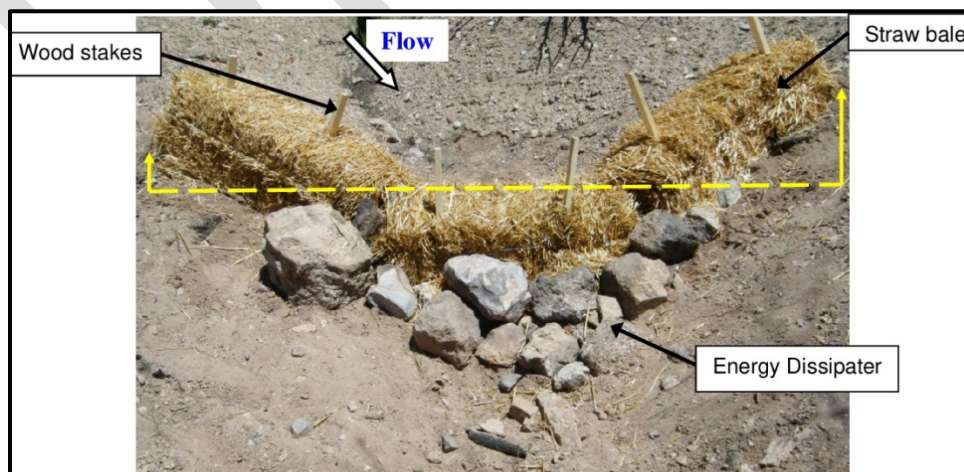


Figure G.16. Check dam construction technique.

Source: Storrar 2013.

Debris Basin

The purpose of debris basins (i.e., sediment basins) are to store runoff and sediment. It is important to note that debris basins are usually used as a last recourse to prevent downstream flooding, sedimentation, or threats to human life and property. Debris basins also provide immediate protection from floodwater, floating debris, sediment, boulders, and mudflows. Debris basins are constructed to treat the loss of runoff control and deterioration of water quality or threats to human life and property. This method requires an engineered and constructed emergency basin for storing large amounts of sediment moving in an ephemeral stream channel. This method can be applied to the following areas.

- Areas of moderate to high burn severity
- Areas identified with pre-fire debris flow and landslide hazards
- Areas where high-value resources are immediately threatened
- Sites with the capacity to trap the estimated debris flow volume
- Sites with access available for construction and maintenance

Estimated cost

- Expensive; varies with location, access, size of debris basin, availability of material, and frequency of maintenance. Expenses tend to be high.

Methods

- Refer to page 102 of the [Burned Area Emergency Response Treatments Catalog](#)



Figure G.17. Example of a debris basin.

Source: After Wildfire NM n.d.

Grade Stabilizer

The purpose of a grade stabilizer is to prevent channel incising and downcutting in the channel. Grade stabilizers maintain channel gradient and reduce channel scouring or downcutting from increased overland runoff. The objective is to reduce water quality deterioration and establish grade control. This method requires a structure that is constructed with rocks, logs, or plant materials installed in ephemeral channels on the grade and applies to the following areas:

- Where downstream beneficial uses are high
- Where channel indicators of instability exist
- Watershed with a high percentage of burn throughout
- Areas with soil cover loss and woody debris
- Watersheds with persistent hydrophobic conditions
- Seasonal channels with low to moderate flows
- Channel gradients less than 6%

Estimated cost

- \$250 to \$4,000 per structure depending on materials and installation method

Methods

- Refer to page 94 of the [Burned Area Emergency Response Treatments Catalog](#)

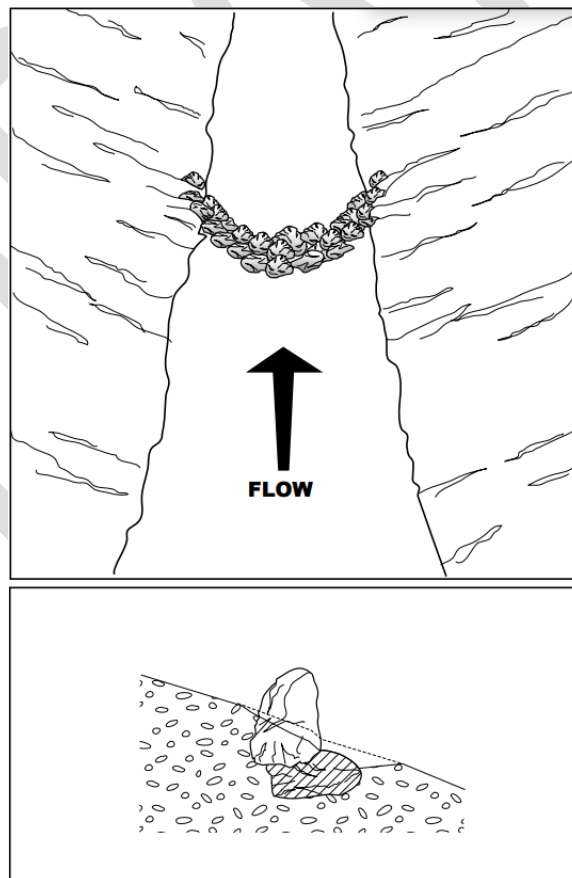


Figure G.18. Diagram of an in-channel grade stabilizer.

Source: https://www.fs.usda.gov/eng/pubs/pdf/BAERCAT/lo_res/06251801L.pdf



Figure G.19. Example of a grade stabilizer.

Source: After wildfire NM n.d.

In-Channel Tree Felling

The main purpose of in-channel tree felling is to trap floating debris and suspended sediment. In-channel felling replaces woody material consumed by the fire, providing in-channel stability and fish habitat. The presence of large material in the channel will also dissipate stream energy which reduces flash flood impacts to downstream communities and infrastructure and reduces scouring and bank erosion. Additionally, this method reduces the risk of in-channel debris flow bulking for several years after the fire. This method requires the practitioners to directionally fell trees in a staggered herringbone pattern with tops pointed upstream and can be applied to the following areas:

- Areas of high burn severity where woody material has been consumed
- Channels where energy dissipation is necessary
- Channels with high values at risk such as road crossings or sensitive aquatic species
- Channels with unstable bedload and high sediment-loading potential

Estimated cost

- \$500 to \$1,200 per acre

Methods

- Refer to page 90 of the [Burned Area Emergency Response Treatments Catalog](#)

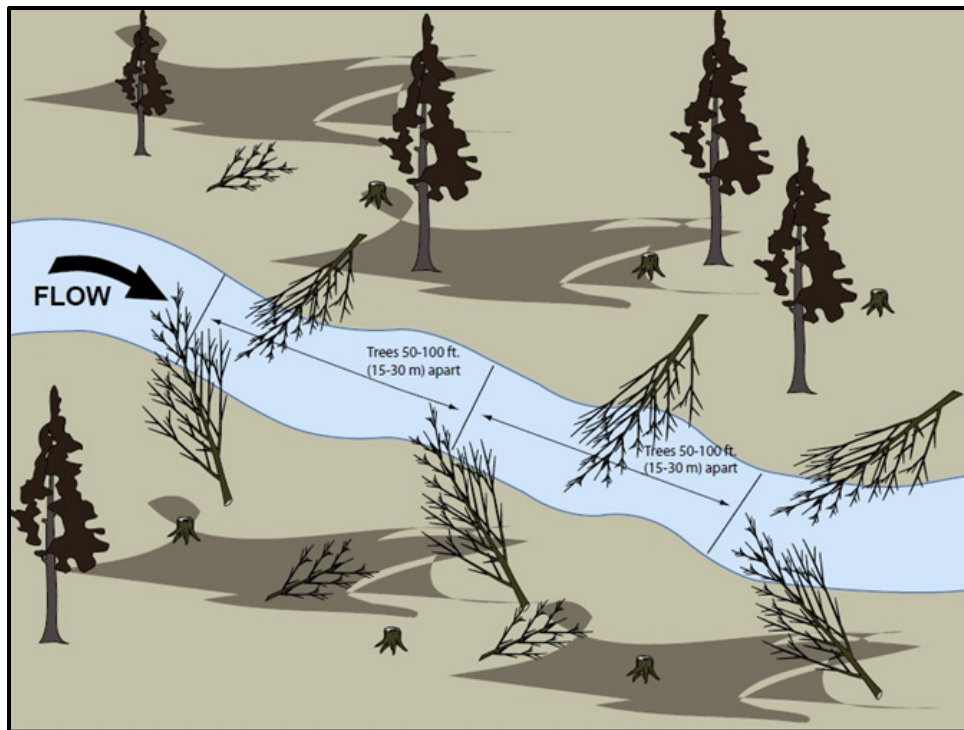


Figure G.20. Diagram of in-channel tree felling.

Source: After wildfire NM n.d.



Figure G.21. Example of in-channel tree felling.

Source: Cambria Conservation District 2025.

Logfalls

The purpose of logfalls is to prevent headcuts from continuing to migrate upslope and mitigating erosion. This method requires clearing out the headcut, installing logs until they reach the upper channel bed, increasing log

diameter and length per layer, followed by re-sloping the walls of the erosion channel and backfilling the project area to be re-countered as a more stable channel. This method can be applied to the following areas:

- Areas which have a headcut (a sudden change in elevation or a knickpoint at the leading edge of a gully)
- Headcuts can range from less than an inch to several feet in height

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 20 of the Wildfire Restoration Handbook

Log Cross-Vanes

The purpose of log cross-vanes is to provide grade control upstream, increasing bank stability and grade control. This method requires installing two log vanes, extending from the bank to meet at a 20 to 30 degree angle out from the stream bank, facing upstream, followed by installing the vanes into the bank 12 to 14 inches. This method can be applied to the following areas:

- In-channel areas needing increased grade control and bank stability to reduce increased erosion post wildfire

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 24 of the Wildfire Restoration Handbook

Media Luna

The purpose of media luna is to prevent erosion at the head of rills and gullies by creating a stable transition from sheet flow to channel flow at the collection point. This method requires two types of media luna structures, both of which utilize rocks: sheet flow collectors and sheet flow spreaders. This method can be applied at the head of rills and gullies.

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 10 of the [Erosion Control Field Guide](#)

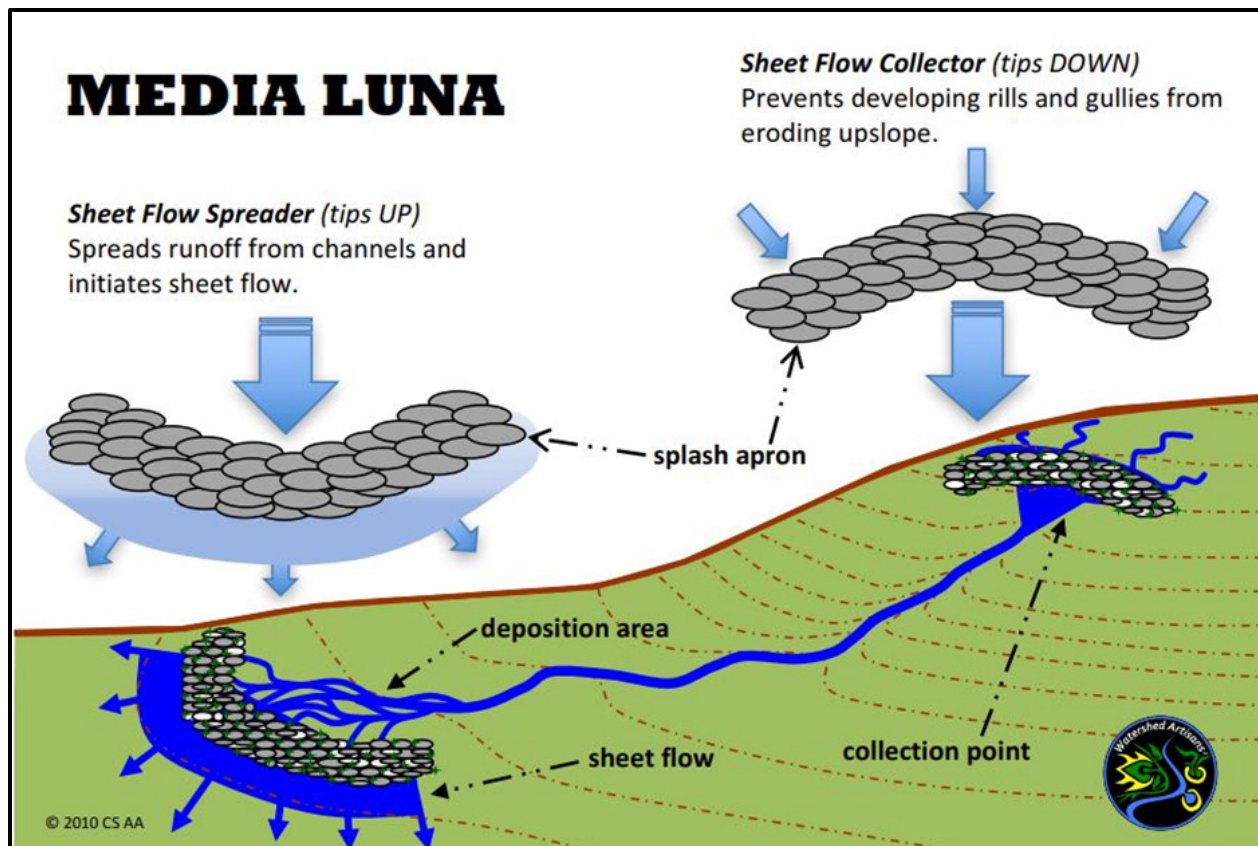


Figure G.22. Media luna.

Source: Sponholtz and Anderson 2010.

One Rock Dam

The purpose of one rock dams is to stabilize the bed of the channel by slowing the flow of water. This can increase roughness, recruit vegetation, capture sediment, and gradually raise the bed level over time. Additionally, one rock dams can increase soil moisture, infiltration, and plant growth. This method requires a low-grade control structure built with a single layer of rock on the channel bed. Materials needed for this method consist of rocks and seeds. This method can be applied to the following areas:

- Areas where channel indicators of instability exist
- Channels where energy dissipation is necessary
- Channels with unstable bedload and high sediment-loading potential

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 3 of the [Erosion Control Field Guide](#)

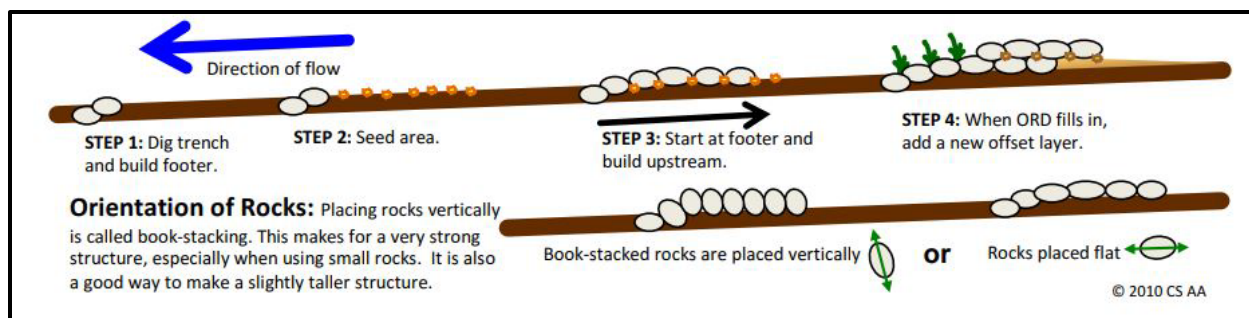


Figure G.23. One rock dam diagram (1 of 2).

Source: Sponholtz and Anderson 2010.

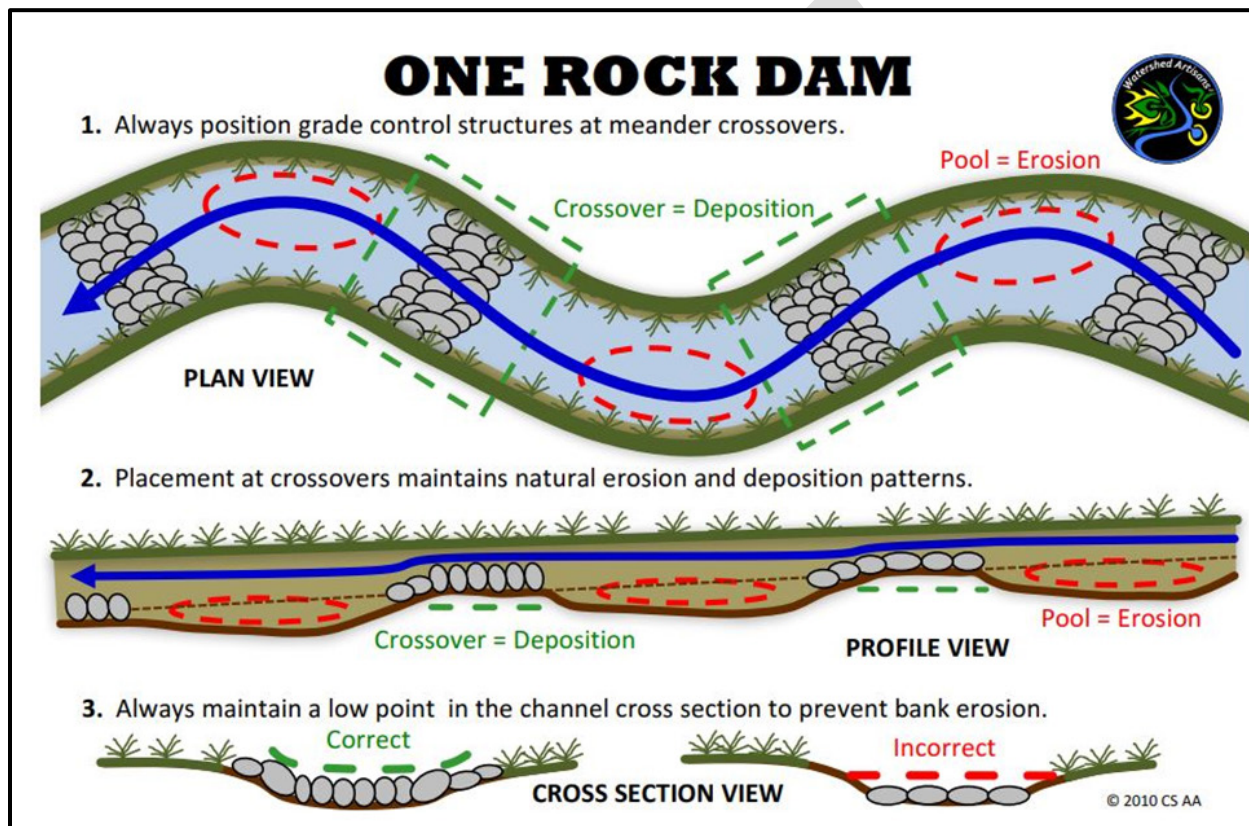


Figure G.24. One rock dam diagram (2 of 2).

Source: Sponholtz and Anderson 2010.

Reinforced Rock Berms

The purpose of reinforced rock berms is to protect existing culverts by reducing sediment in runoff approaching the culvert. This method requires installed crushed rock and/or recycled concrete that is secured by chicken wire in an enclosure structure placed at the intake of the culvert. This method should only be used to reinforce existing culverts.

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 25 of the Wildfire Restoration Handbook

Rock Mulch Rundown

The purpose of rock mulch rundown is to slow runoff, increase soil moisture, recruit vegetation, and prevent headcuts from migrating upstream. This method requires a headcut control structure where the face of the headcut has been laid back to a stable angle of repose (3:1 slope minimum) and then covered with a single layer of rock mulch. Materials needed for this method consist of rocks and seeds. This method should only be used on low-energy headcuts (e.g., headcuts in upland rills and gullies with small catchment areas) and where sheet flow collects and enters a channel.

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 6 of the [Erosion Control Field Guide](#)

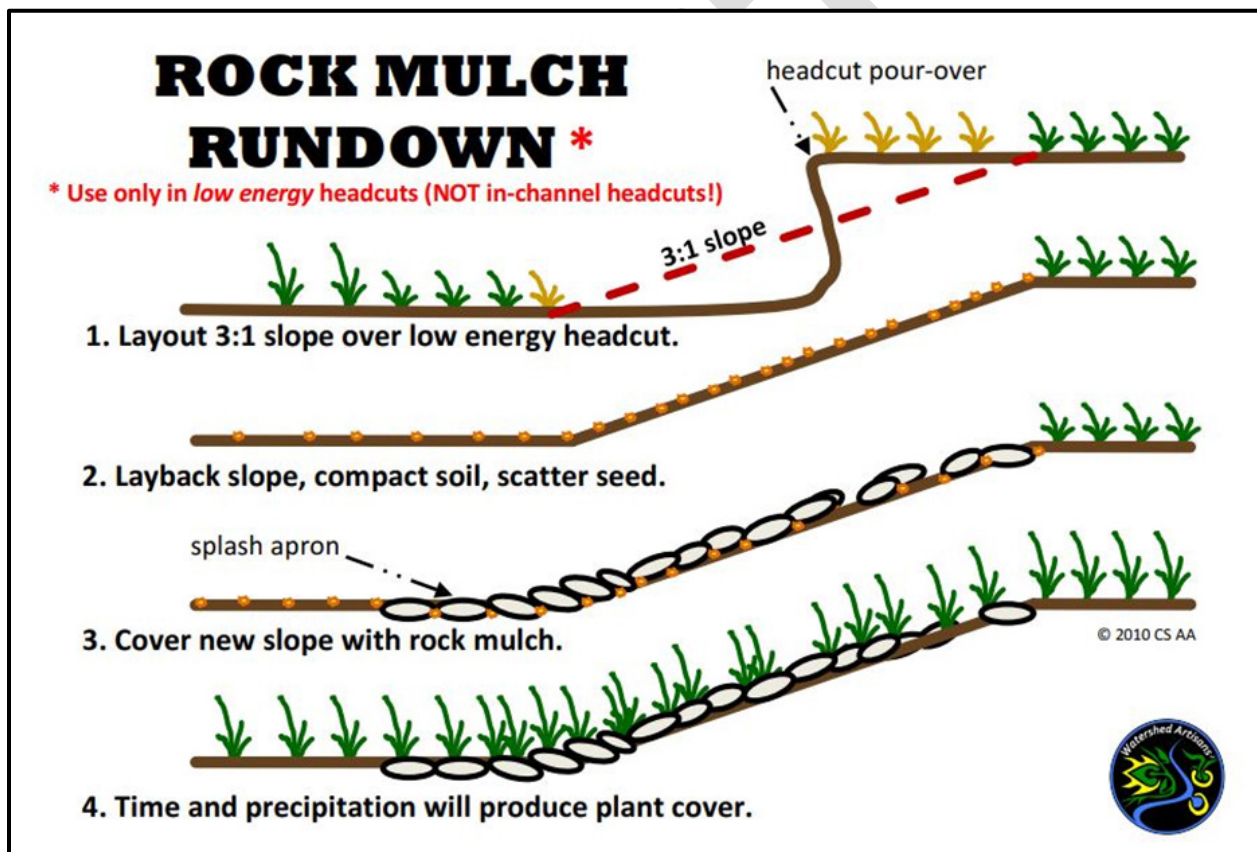


Figure G.25. Rock mulch rundown.

Source: Sponholtz and Anderson 2010.

Stream Bank Armoring

The purpose of stream bank armoring is to reduce erosion and sediment in stream channels. This method can reduce the potential for bank cutting and impacts from increased peak flows. Stream bank armoring moderates the severity of stream bank erosion and reduces the degradation of water quality. This method requires reinforcement of streambanks with protective covering, such as rocks, vegetation, or engineering materials (which include boulders, riprap and gabion baskets). This method can be applied to the following areas:

- Highly erodible streambanks

- Areas with high values at risk

Estimated cost

- No specific cost estimates are available; depends on location, access, and size of materials required.

Methods

- Refer to page 97 of the [Burned Area Emergency Response Treatments Catalog](#)

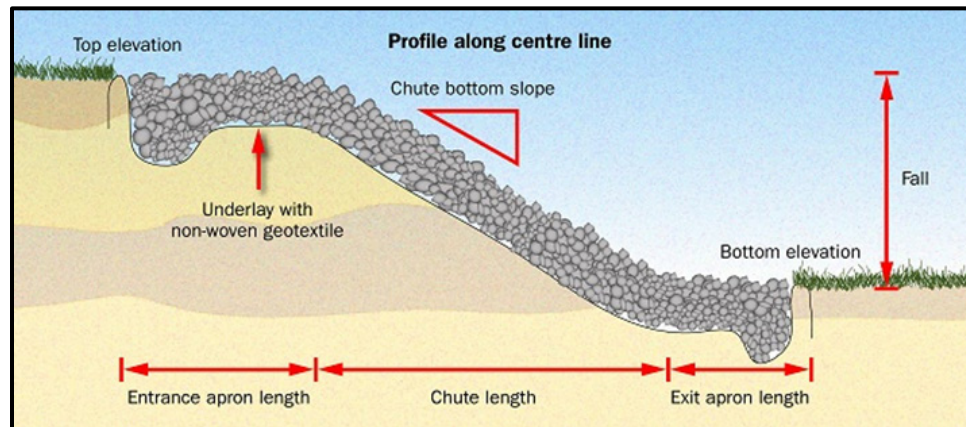


Figure G.26. Diagram showing cross section of stream bank armoring.

Source: Groundforce 2022.



Figure G.27. Example of stream bank armoring.

Source: After Wildfire NM n.d.

Zuni Bowl

The purpose of a zuni bowl is to stabilize actively eroding headcuts from continuing to migrate upstream. Zuni bowls also dissipates energy of falling water at the headcut pour-over and the channel bed. Zuni bowls also

maintain soil moisture on the face of the headcut, which promotes establishment of protective vegetation. This method requires an in-channel headcut control structure composed of rock-lined step falls and plunge pools. Materials to carry out this method consist of rocks and geotextile fabric (optional). This method can be applied to actively eroding in-channel headcuts.

Estimated cost

- No specific cost estimates are available

Methods

- Refer to page 8 of the [Erosion Control Field Guide](#)

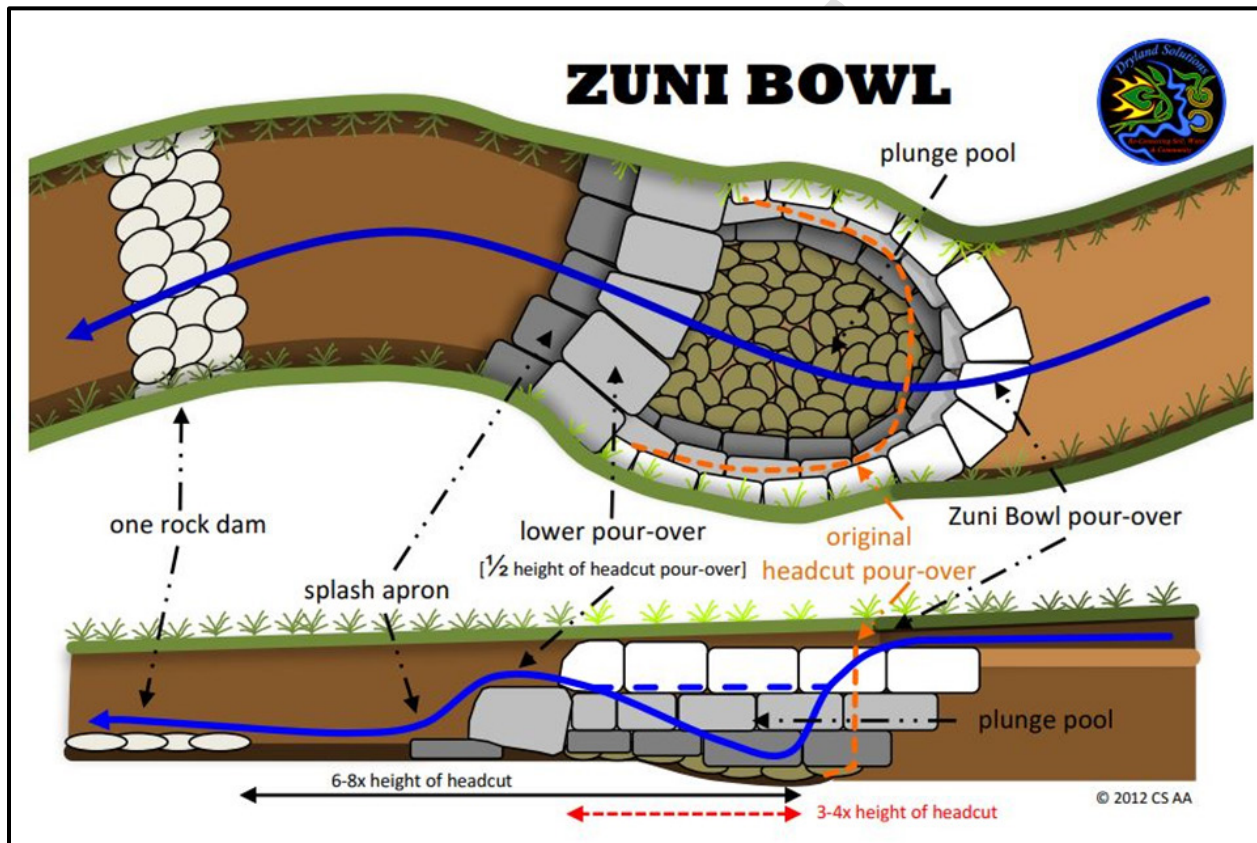


Figure G.28. Zuni bowl.

Source: Sponholtz and Anderson 2010.

Road and Trail Treatments

Outsloping and rolling dips (water bars): alter the road shape or template to disperse water and reduce erosion. These methods are helpful on areas to reduce increased run-off, sediment, and debris associated with the effects of fire.

Overflow structures: protect the road by controlling runoff and diverting stream flow to constructed channels. Structures are typically placed in defined channels, or in areas between defined channels where increased storm runoff is predicted.

Low water stream crossing: reduce or eliminates the loss of control of water and reduces the threat to water quality. Culverts are replaced by natural fords, vented ford with pipes, or a low-water bridge to prevent stream diversion and keep water in the natural channel.

Culvert modification: upgrading culvert size to account for increased runoff and associated bedload and debris.

Debris rack and deflectors: structure placed in a stream channel to protect culverts from plugging with debris. This prevents potential stream diversion and damage to infrastructure or property.

Riser pipes: protect transportation infrastructure by filtering out debris and allow the passage of water in stream channels. Cannot be used in areas where aquatic passage is required.

Catchment-basin cleanout: using machinery to clean debris and sediment out of stream channels, above culverts, and catchment basins. Creates a flash flood and increases the channel capacity for predicted sediment.

Trail stabilization: constructing water bars and spillways to provide adequate drainage features for anticipated increase runoff from the surface

For more information about how to install and build treatments, see the [Wildfire Restoration Handbook](#).

Timber Salvage

Salvage logging, often referred to as timber salvage consists of the removal of fallen or damaged trees after a wildfire, or timber left standing but burned on the landscape. Salvage logging can remove biomass from the landscape and allow for economic benefit after a natural disaster. Many private landowners may decide to harvest trees killed in the fire, a decision that can be highly controversial. Trees remaining post-fire can be instrumental for soil and wildlife habitat recovery, but dead standing trees may also pose safety concerns and fuel loadings may still be conducive to future high intensity wildfires.

Salvage logging can remove hazard trees from the landscape which can be particularly useful in the WUI, surrounding communities, or in areas of high recreation such as popular trails, campgrounds, and fishing and hunting areas. Burned soils are especially susceptible to soil compaction and erosion so it is recommended to have professionals perform the timber salvage. Several programs assist landowners with timber salvage, including the NRCS Environmental Quality Incentives Program (EQIP). It has been shown that salvage logging has negative effect on regulating ecosystem services, and it is suggested that salvage logging occur 2 to 4 years after wildfire occurrence to reduce these negative effects without affecting surface fuel loads (Leverkus et al. 2020).

Invasive Species Management and Native Revegetation

Wildfire provides opportunity for many invasive species to dominate the landscape because many of these species quickly colonize and thrive on recently burned landscapes. Continual disturbances post fire—such as grazing or logging—may promote introduction of invasive species to the landscape. Therefore, it is imperative that landowners prevent invasive establishment by eradicating weeds early, planting native species, and limiting invasive seed dispersal (CUSP 2016). The Wyoming best practices manual provides guidance methods to reduce invasive plants during operations available at: <https://wsfd.wyo.gov/forest-management/bmp-s>.

Planting native seeds is an economical way to restore a disturbed landscape by providing protection against erosion and stabilizing exposed soils. In order to be successful, seeds must be planted during a certain time of year with proper techniques including:

- Using a native seed mixture with a diversity of species and considering the species' ability to compete with invasive species.
- Before planting, preparing the seedbed with topsoil by raking to break up the hydrophobic soil layer.
- When transplanting or outplanting native species, considering whether the landscape has made a sufficient recovery to ensure the survival of the plants.

APPENDIX H: PUBLIC OUTREACH



COMMUNITY OUTREACH

Throughout the project, the Core Team utilized online resources, public engagement events, and surveys to gather public feedback. Eight existing community events were targeted by the Core Team to spread awareness about the planning process, gather input on community concerns, and share helpful resources about defensible space and wildfire preparedness. Table H-1 lists details about targeted events during the planning process.

To maximize audience reached, online resources were used to provide information to the public and solicit feedback. Figures H.1 through H.3 show examples of online posts.

Table H.1. Public Engagement Community Events

Public Engagement Community Events		
Event	Date	Location
Story Yard Sale Day	Sunday, June 7, 2026	Story
Sheridan County 3rd Thursday Street Festival	Thursday, June 18, 2026	Downtown Sheridan from Alger to Loucks
Big Horn Pancake Breakfast	Saturday, June 20, 2026	Big Horn
Big Horn FD Pancake Breakfast	Sunday, June 21, 2026	Big Horn
Ranchester Fire Department 4th of July Pancake Breakfast	Saturday, July 4, 2026	Ranchester Fire Department
Dayton Days BBQ	Sunday, July 26, 2026	Dayton
Sheridan County 3rd Thursday Street Festival	Thursday, August 20, 2026	Downtown Sheridan from Alger to Loucks
Story Days	Saturday, August 29, 2026	Story

SHERIDAN COUNTY
WYOMING EST. 1888

Home County Government Departments Community How Do I

70 °F

Community Wildfire Protection Plan Update

Home > News List > News Post

Public Input needed - Community Wildfire Protection Plan Update

SHERIDAN COUNTY

COMMUNITY WILDFIRE PROTECTION PLAN

THE PLAN

With funding from a USDA-Forest Service Community Wildfire Defense grant Sheridan County has contracted SWCA Environmental Consultants to work in collaboration with the County Fire Warden, Fuel Mitigation Committee, Office of Emergency Management, representatives from local fire departments, Wyoming State Forestry, Federal and State land management agencies, and stakeholder groups to develop the 2027 Sheridan County Community Wildfire Protection Plan Update (CWPP).

This 2027 CWPP update will identify fire hazards and community values at risk within Sheridan County and provide recommendations to reduce the threat of wildfire to life and property. You (the public) can play a part in crafting fire mitigation recommendations to reduce risk in your community. Read below to find out more about the collaborative Community Wildfire Protection Plan process and public involvement.

What Does a Community Wildfire Protection Plan Do?

- Identify areas at risk for wildland fire
- Make recommendations for hazardous fuels treatments (vegetation thinning)
- Prioritize areas for wildfire mitigation funding
- Make recommendations for homeowners to reduce fire risk
- Ask the public to share ideas about wildfire prevention and identify community values at risk

WHY YOU SHOULD BE INVOLVED

Sheridan County has contracted SWCA Environmental Consultants to develop a 2027 Community Wildfire Protection Plan (CWPP) update. A CWPP is a plan designed to identify and mitigate wildfire hazards to communities and infrastructure located in the wildland-urban interface (WUI), which is an area located between wildland and human development. This project is an update to the 2018 County CWPP. The development of the County CWPP has facilitated collaboration among local, state, and federal officials, as well as non-governmental stakeholders and private citizens. The 2027 Sheridan County CWPP Update includes a revision to the risk assessment, Wildland Urban Interface boundary, and provides new project recommendations aimed at reducing wildfire risk on the landscape, increasing community preparedness and safety, and improving wildfire response resources.

Now it is time to provide your input and concerns regarding wildfire risk in Sheridan County. Please use the link below to complete the community survey: [Sheridan County CWPP Community Feedback Survey](#)

Additionally, we will be hosting a booth at the **3rd Thursday Street Festival on June 18th**. Please stop by the booth to learn more about the CWPP, provide your feedback on wildfire risk, and learn about resources to help you and your community prepare for wildfire.

A CWPP is designed to assist the County and landowners in ensuring that a future catastrophic wildfire is avoided or mitigated by assessing areas at risk and recommending measures to decrease risk. For many years the County and partners have been successful in planning and implementing many wildfire mitigation actions, including thousands of acres of hazardous fuel treatment projects on public and private land; organizing public outreach and education campaigns that focus on wildfire prevention and the importance of defensible space; and

Figure H.1. Article on Sheridan County website announcing CWPP public input period.

SHERIDAN COUNTY

COMMUNITY WILDFIRE PROTECTION PLAN

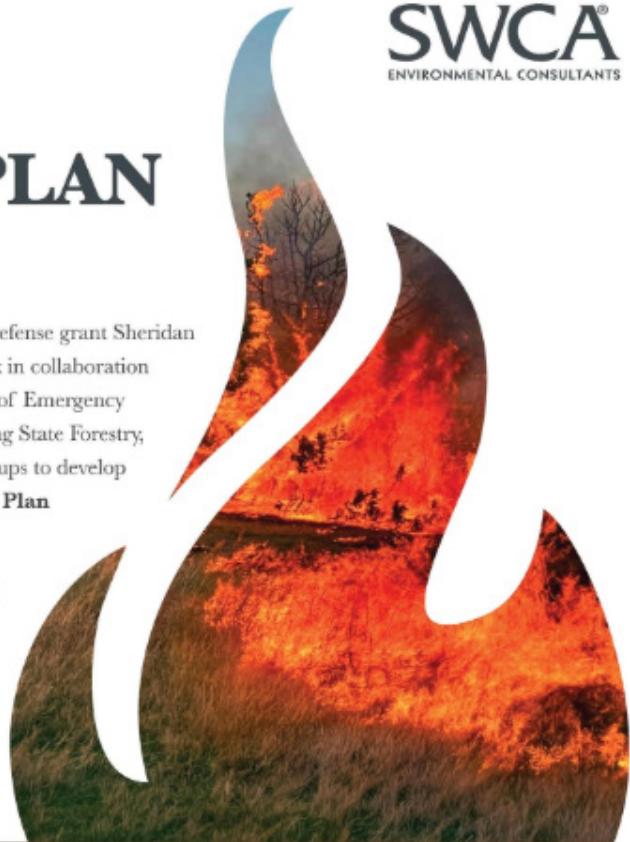
THE PLAN

With funding from a USDA-Forest Service Community Wildfire Defense grant Sheridan County has contracted SWCA Environmental Consultants to work in collaboration with the County Fire Warden, Fuel Mitigation Committee, Office of Emergency Management, representatives from local fire departments, Wyoming State Forestry, Federal and State land management agencies, and stakeholder groups to develop the **2026 Sheridan County Community Wildfire Protection Plan Update (CWPP)**.

This 2026 CWPP update will identify fire hazards and community values at risk within Sheridan County and provide recommendations to reduce the threat of wildfire to life and property. You (the public) can play a part in crafting fire mitigation recommendations to reduce risk in your community. Read below to find out more about the collaborative Community Wildfire Protection Plan process and public involvement.



SWCA[®]
ENVIRONMENTAL CONSULTANTS



What Does a Community Wildfire Protection Plan Do?

- Identify areas at risk for wildland fire
- Make recommendations for hazardous fuels treatments (vegetation thinning)
- Prioritize areas for wildfire mitigation funding
- Make recommendations for homeowners to reduce fire risk
- Ask the public to share ideas about wildfire prevention and identify community values at risk

WHY YOU SHOULD BE INVOLVED

A CWPP is designed to assist the county and landowners in mitigating wildfire risk. It is important that this process is collaborative. The county has a comprehensive community engagement plan that provides residents, partners, and stakeholders with the opportunity to provide input. There are multiple ways to stay involved with this planning process and provide your input. Please visit <https://www.sheridancountywy.gov/index.php> for updates on the plan and information on events. Please visit <https://survey123.arcgis.com/share/02fa14ac1814498999c876fc91f4d8ee> or scan the QR code to complete the community survey.



CONTACT EMAILS: Christian.Testerman@swca.com | Ben.Gager@swca.com

Figure H.2. CWPP flyer describing the planning process and sharing the community survey to residents.

|Press Release

Sheridan County Community Wildfire Protection Plan Update

June 5, 2026

Sheridan County Fire has contracted SWCA Environmental Consultants to develop a 2027 Community Wildfire Protection Plan (CWPP) update. A CWPP is a plan designed to identify and mitigate wildfire hazards to communities and infrastructure located in the wildland-urban interface (WUI), which is an area located between wildland and human development. The CWPP makes recommendations for hazardous fuels reduction, public outreach and education, structural ignitability reduction, and fire response capabilities.

This project is an update to the 2018 County CWPP. The development of the County CWPP has facilitated collaboration among local, state, and federal officials, as well as non-governmental stakeholders and private citizens. The 2027 Sheridan County CWPP Update includes a revision to the risk assessment, Wildland Urban Interface boundary, and provides new project recommendations aimed at reducing wildfire risk on the landscape, increasing community preparedness and safety, and improving wildfire response resources.

A CWPP is designed to assist the County and landowners in ensuring that a future catastrophic wildfire is avoided or mitigated by assessing areas at risk and recommending measures to decrease those risks. For many years the County and partners have been successful in planning and implementing many wildfire mitigation actions, including thousands of acres of hazardous fuel treatment projects on public and private land; organizing public outreach and education campaigns that focus on wildfire prevention and the importance of defensible space; and better preparing communities that are at high to extreme risk of wildfire by utilizing the Fire Adapted Community concepts. Much of this work has been achieved through interagency collaboration, working with communities and across ownership boundaries to develop landscape-level wildfire mitigation solutions. This CWPP effort builds upon that long history of collaboration.

The Planning Team is continuing to work together to review and revise the original CWPP to ensure the plan is applicable to the communities it is designed to serve. The goal is that all recommended projects are designed to greatly reduce wildfire risk to residents and ensure that communities can live safely in this fire-prone environment.

Now it is time to provide your input and concerns regarding wildfire risk in Sheridan County. Please use the link below to complete the community survey: [Sheridan County CWPP Community Feedback Survey](#)

Additionally, we will be hosting a booth at the 3rd Thursday Street Festival on June 18th. Please stop by the booth to learn more about the CWPP, provide your feedback on wildfire risk, and learn about resources to help you and your community prepare for wildfire.

The CWPP will be a guiding document for fire and emergency managers, as well as agencies who manage land within the County. The CWPP is designed to serve County residents, and we encourage your interest and engagement in the process. For more information, please contact Chris Thomas, Sheridan County Fire Warden at cthomas@sheridancountywy.gov, or Christian Testerman, Project Manager, at christian.testerman@swca.com.

Figure H.3. Press release announcing CWPP feedback options and outreach.



Figure H.4. Outreach booth at June 3rd Thursdays event in Sheridan.

Community Survey

As part of the CWPP public engagement process, SWCA held a public survey period from June 2026 through August 2026. **Feedback received during this feedback process was addressed through diligent adoptions and additions to the plan's content and mitigative recommendations.** Figures H.5 through H.19 show a range of survey outcomes illustrated with charts and response numbers.

Printed copies were available at all CWPP tabling events for those residents who have unreliable internet access or who simply prefer to complete the survey by hand. Thirty surveys were submitted during the feedback period.

The survey captured basic demographic data along with residents' knowledge base, attitudes, and opinions related to wildfire factors such as perceived risk, values at risk, structural preparedness, and public outreach/communication. The data collected from the survey compliments the feedback gathered at each CWPP community event, giving a fuller picture of community members' levels of concern, preparedness, engagement, and understanding of living with wildfire in Sheridan County.

In general, the community is more concerned about wildfires than they were 5 years ago and advocated for fuels management with a focus on protecting human lives, property, infrastructure, and natural resources. Residents showed a mix of familiarity about where to get evacuation and fire incident information from highlighting an opportunity to increase awareness. 73% of respondents believe that fire preparedness and mitigation is an individual responsibility and 63% indicated the responsibility should fall on the local FPDs as well. 26% of

respondents indicated that they have not taken any action to improve their defensible space around their home. 33% stated that they are only somewhat familiar with home hardening concepts, indicating an opportunity for increased education on the subject. Please view the graphs below for additional information survey results information.

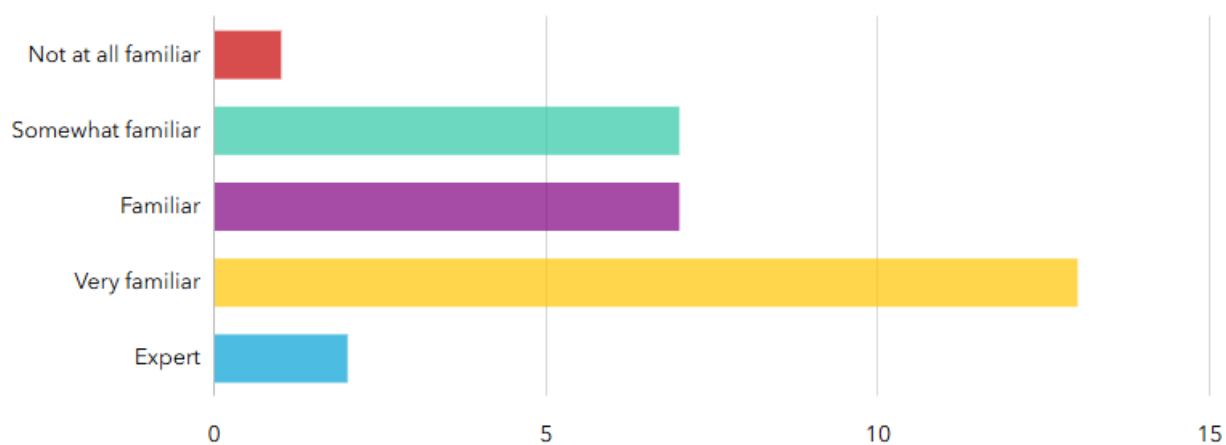


Figure H.5. What is your level of familiarity or knowledge about wildfire?

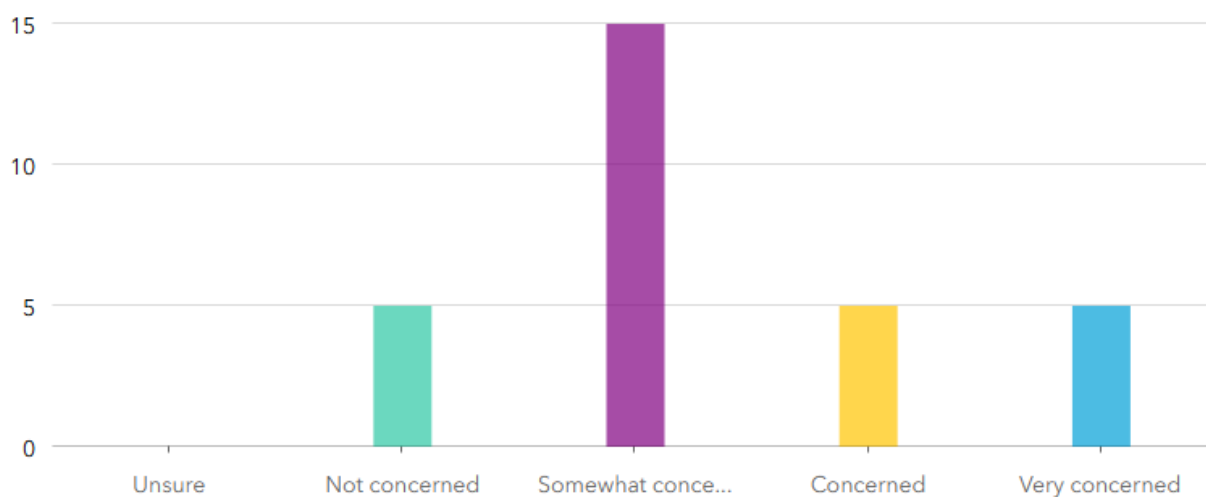


Figure H.6. How concerned/worried are you about the risk of wildfire where you live and the threat wildfire poses to your primary residence?

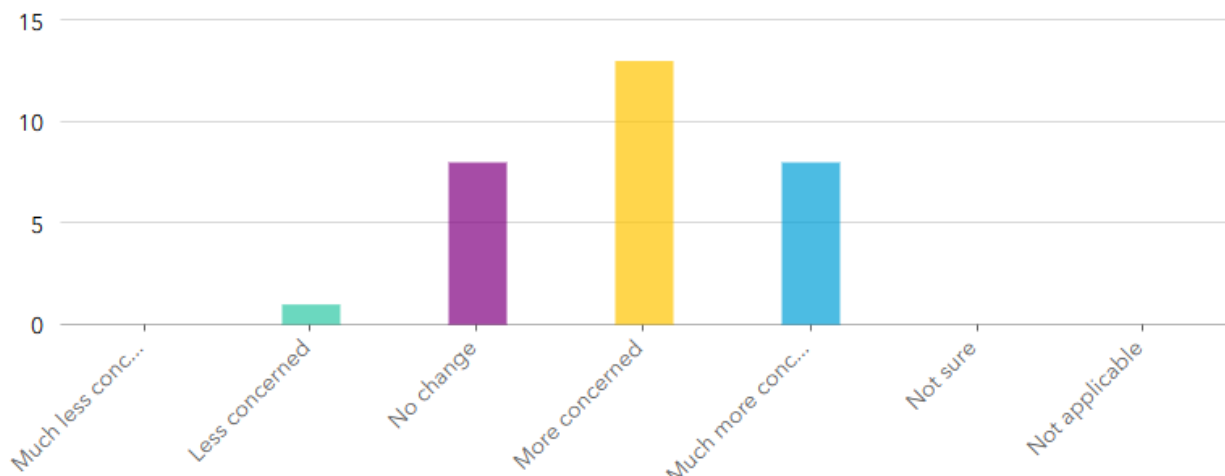


Figure H.7. Compared to five years ago, how would you describe your level of concern/worry regarding your safety from wildfires and the safety of your family, home, and assets?

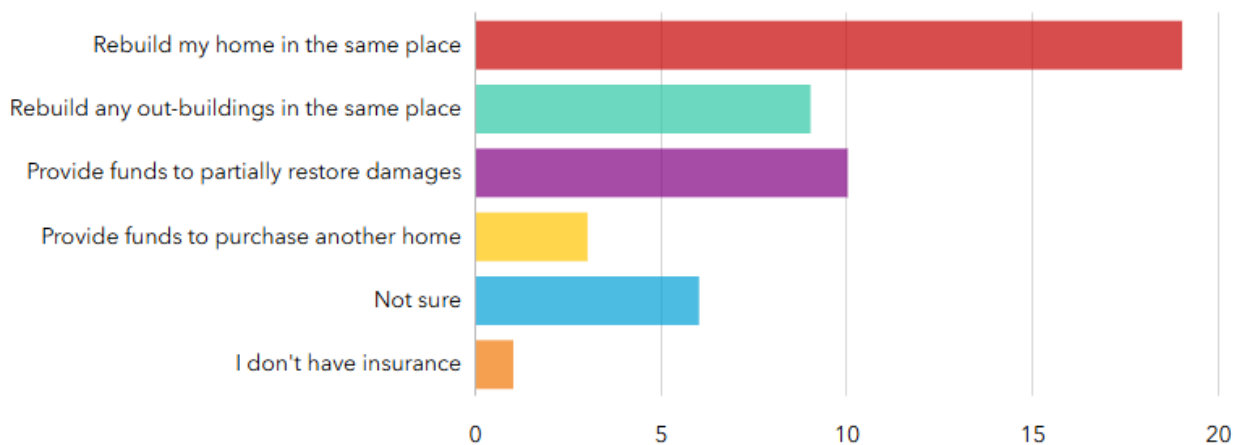


Figure H.8. What do you think your current insurance would cover in the event of a wildfire?

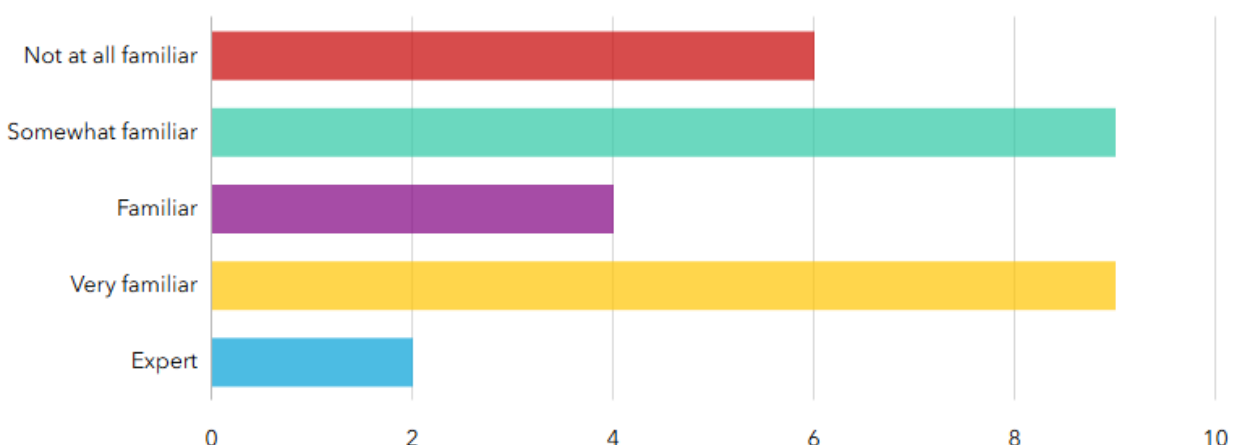


Figure H.9. Are you familiar with where to get updates and information regarding evacuation or incidents?

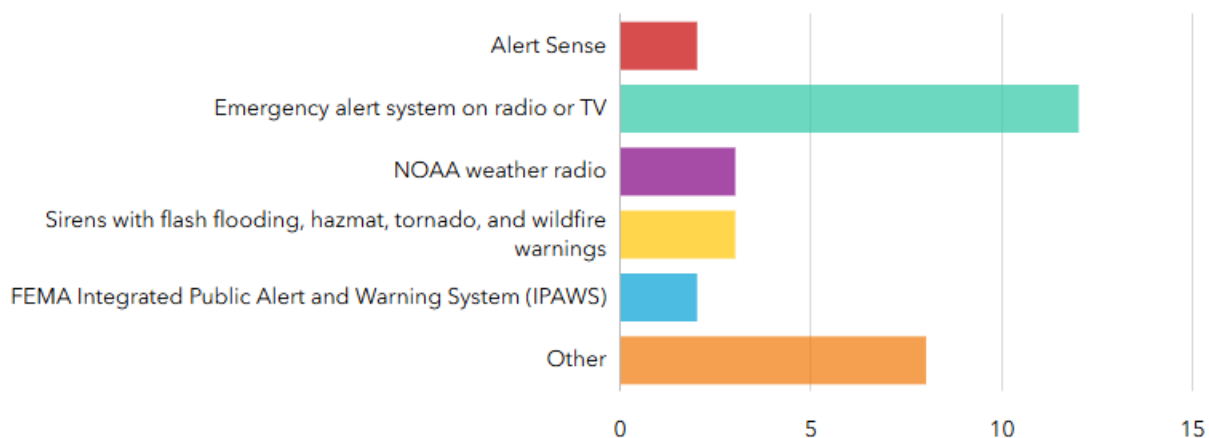


Figure H.10. Where do you currently get most of your updates and information regarding evacuations or incidents?

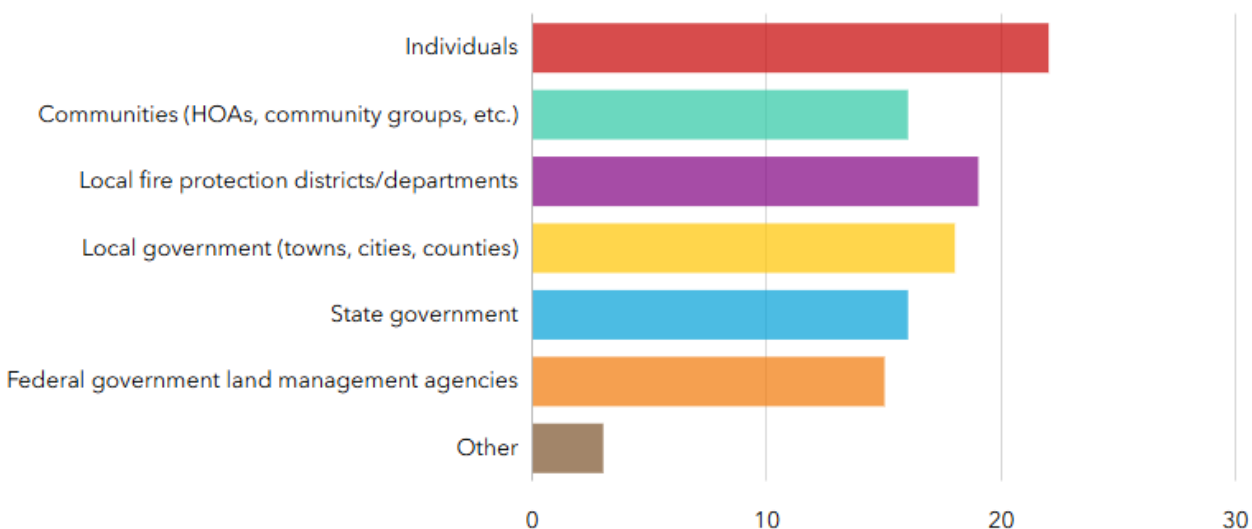


Figure H.11. In your opinion, whose responsibility is fire preparedness and mitigation?

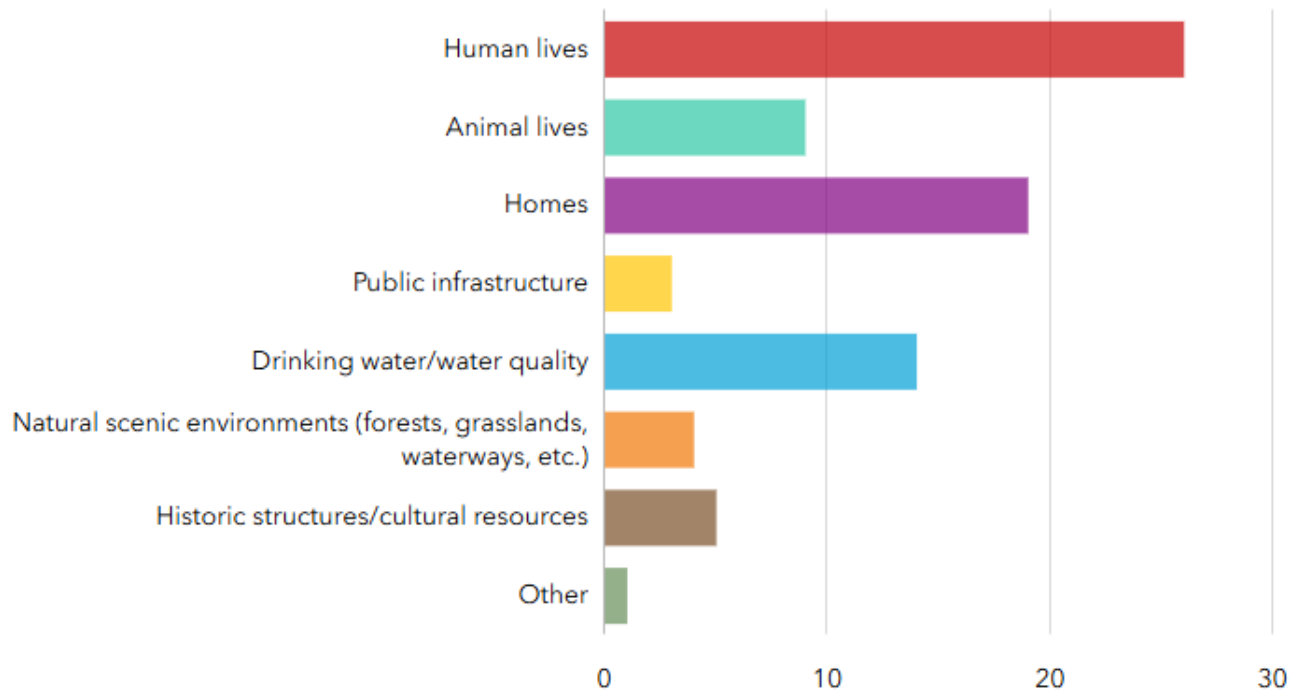


Figure H.12. What are the values/assets that you want protected in the immediate area around your residence (~1 mile)?

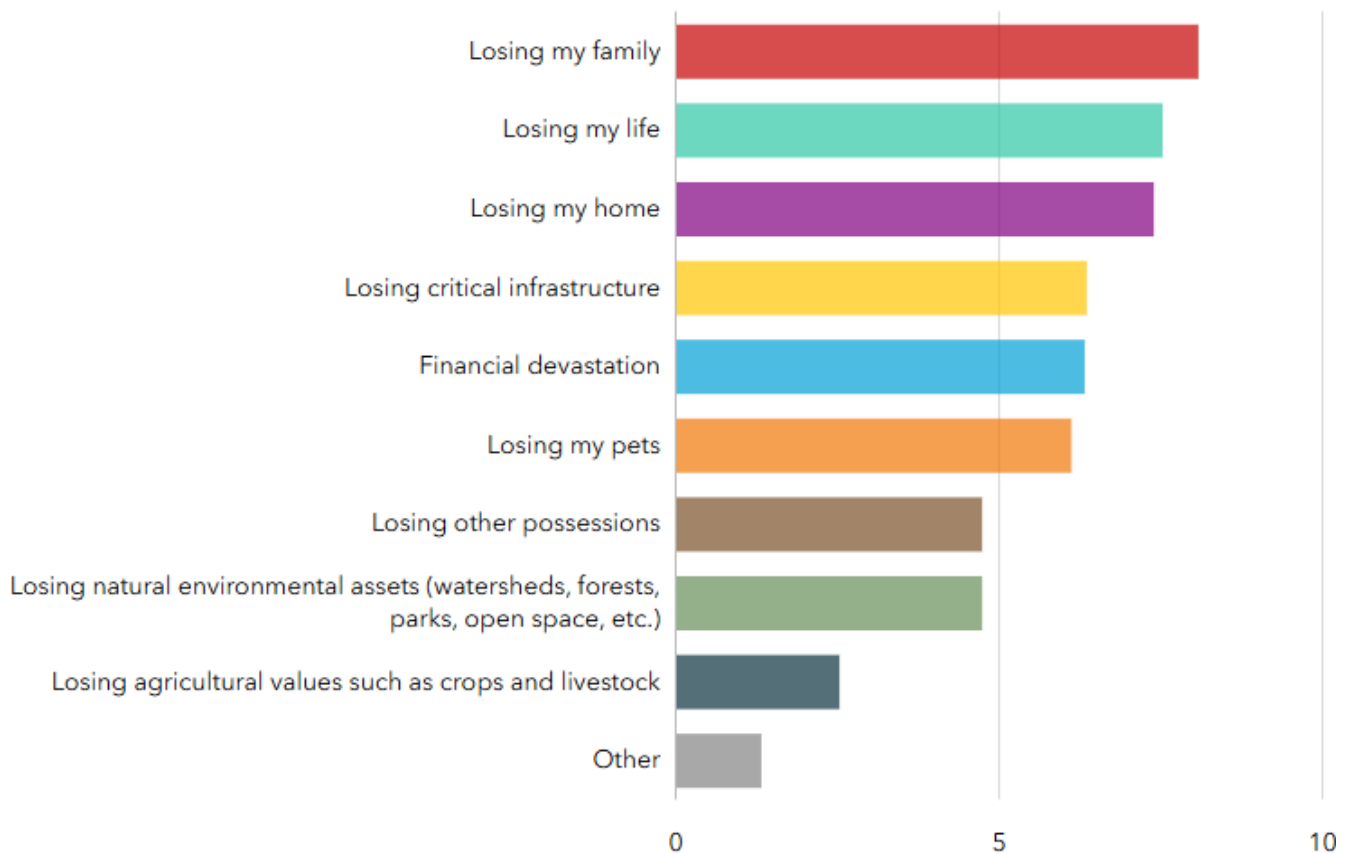


Figure H.13. What are the greatest concerns that you have about the risk from wildfire? Please rank these in order with 1 being the greatest concern, 2 being the next highest concern, etc.

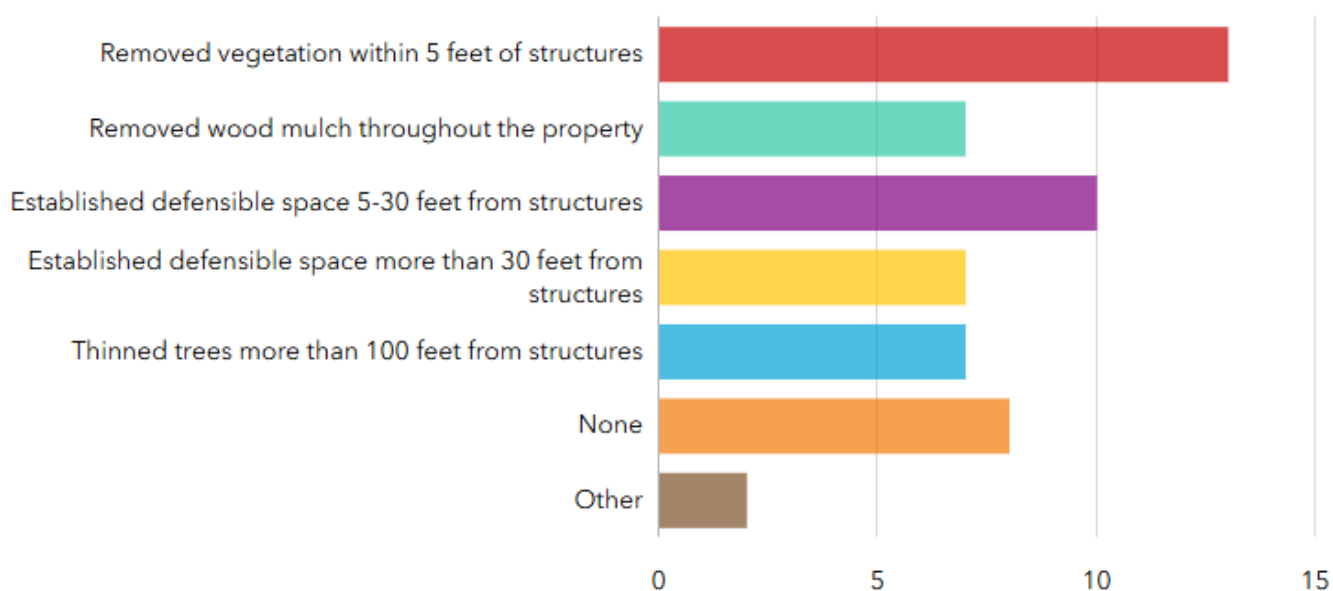


Figure H.14. Defensible space is the 100 feet between your property and the surrounding area. Which of the following defensible space activities have you completed?

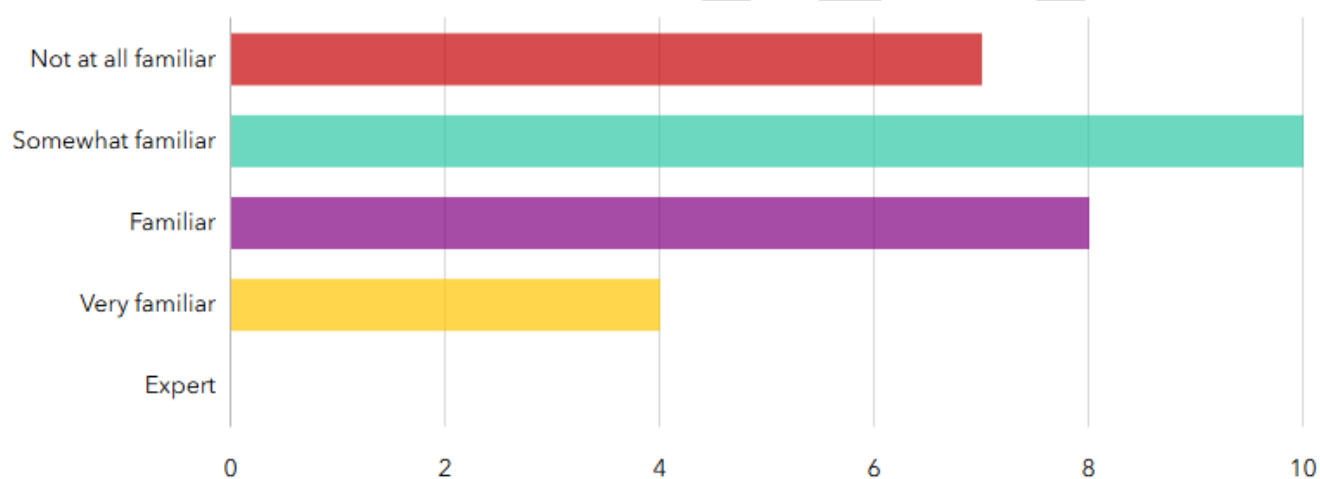


Figure H.15. Home hardening is the concept of implementing fire-resistant upgrades to your home. Are you familiar with "home hardening" concepts and how they pertain to residential property (i.e., the physical structure itself, including mesh vents, siding, roof types, eaves, windows, chimneys, fences, etc.)?

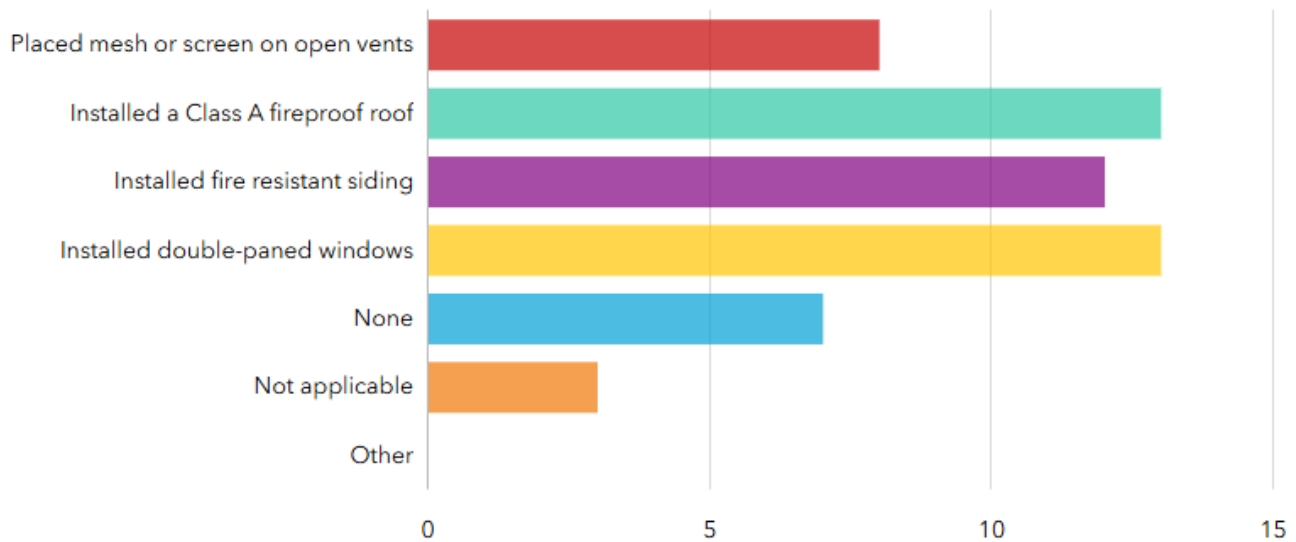


Figure H.16. Which of the following home hardening activities have you completed?

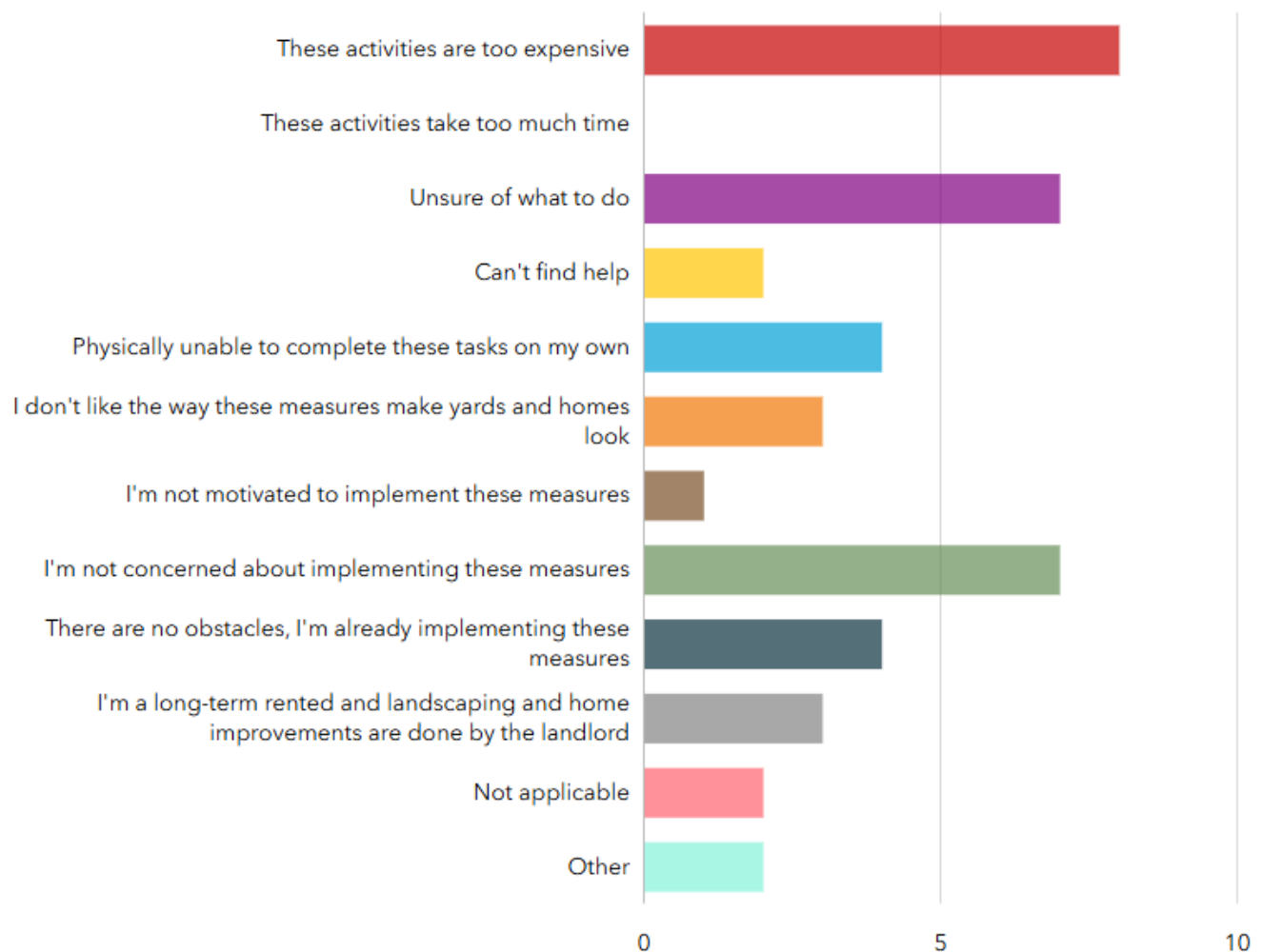


Figure H.17. Are there any obstacles preventing you from implementing defensible space and home hardening measures on your home?

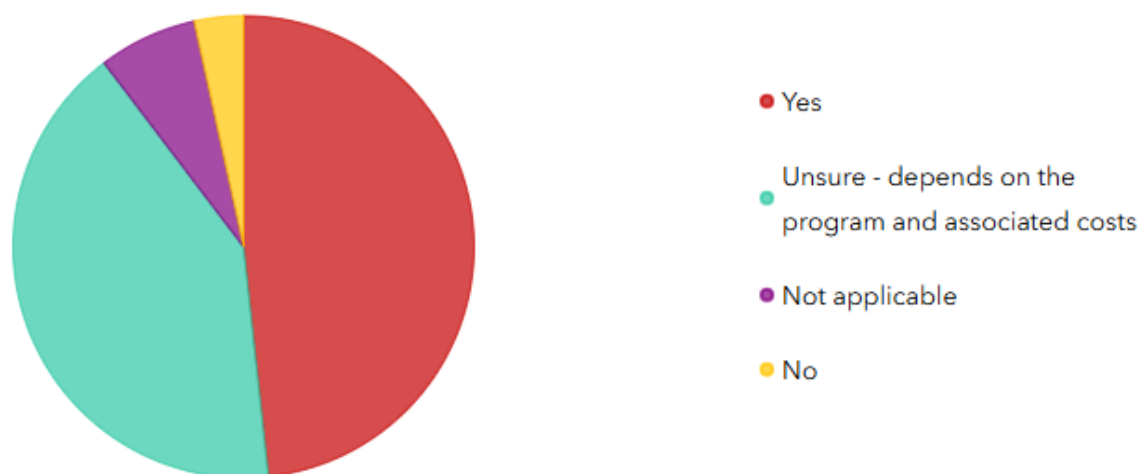


Figure H.18. If a cost-share grant or incentive program were available, would you participate in it to better prepare your home and property from wildfire risk?

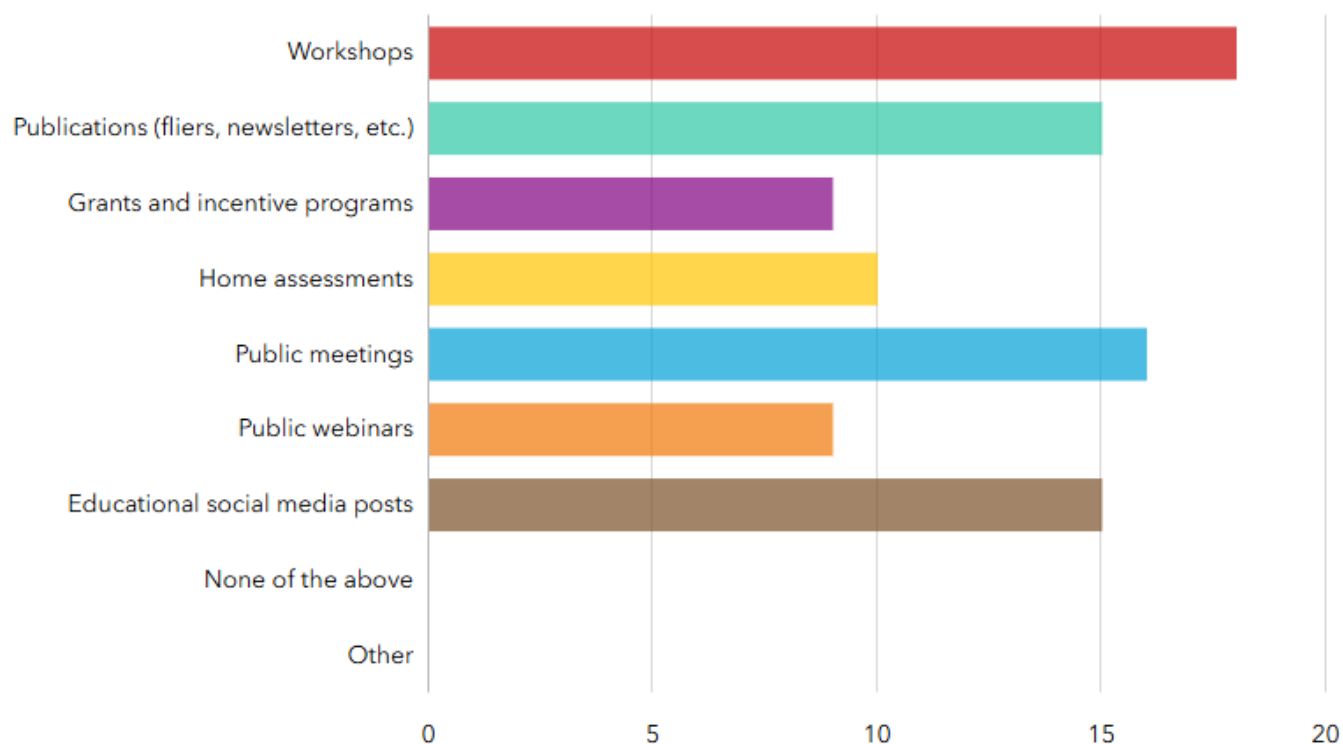


Figure H.19. What do you think are the most effective ways for residents and the community to become more aware of wildfire risks and hazards?

APPENDIX I: ADDITIONAL MAPPING



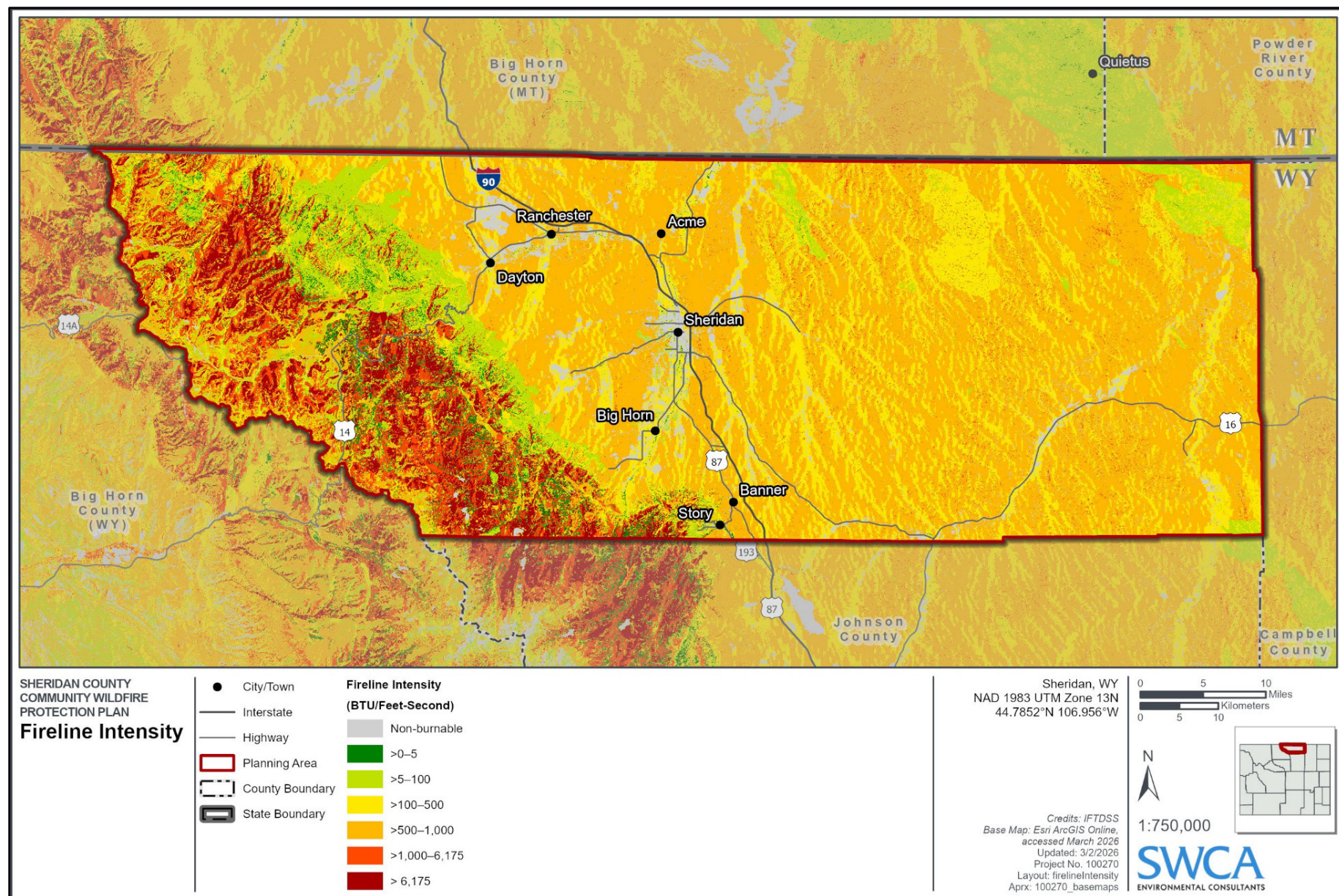


Figure I.1. Modeled fireline intensity.

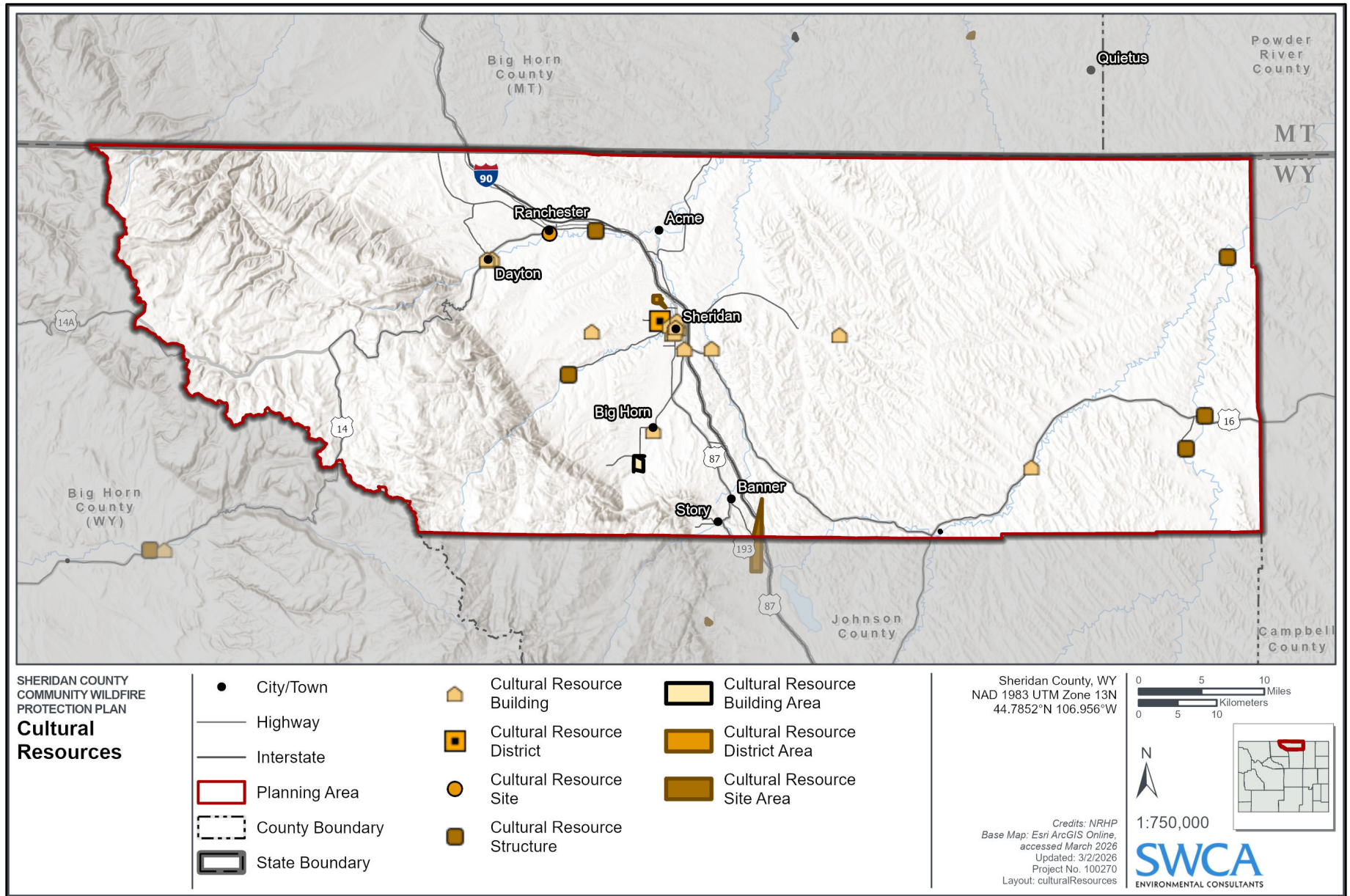


Figure I.2. Mapped cultural resources.

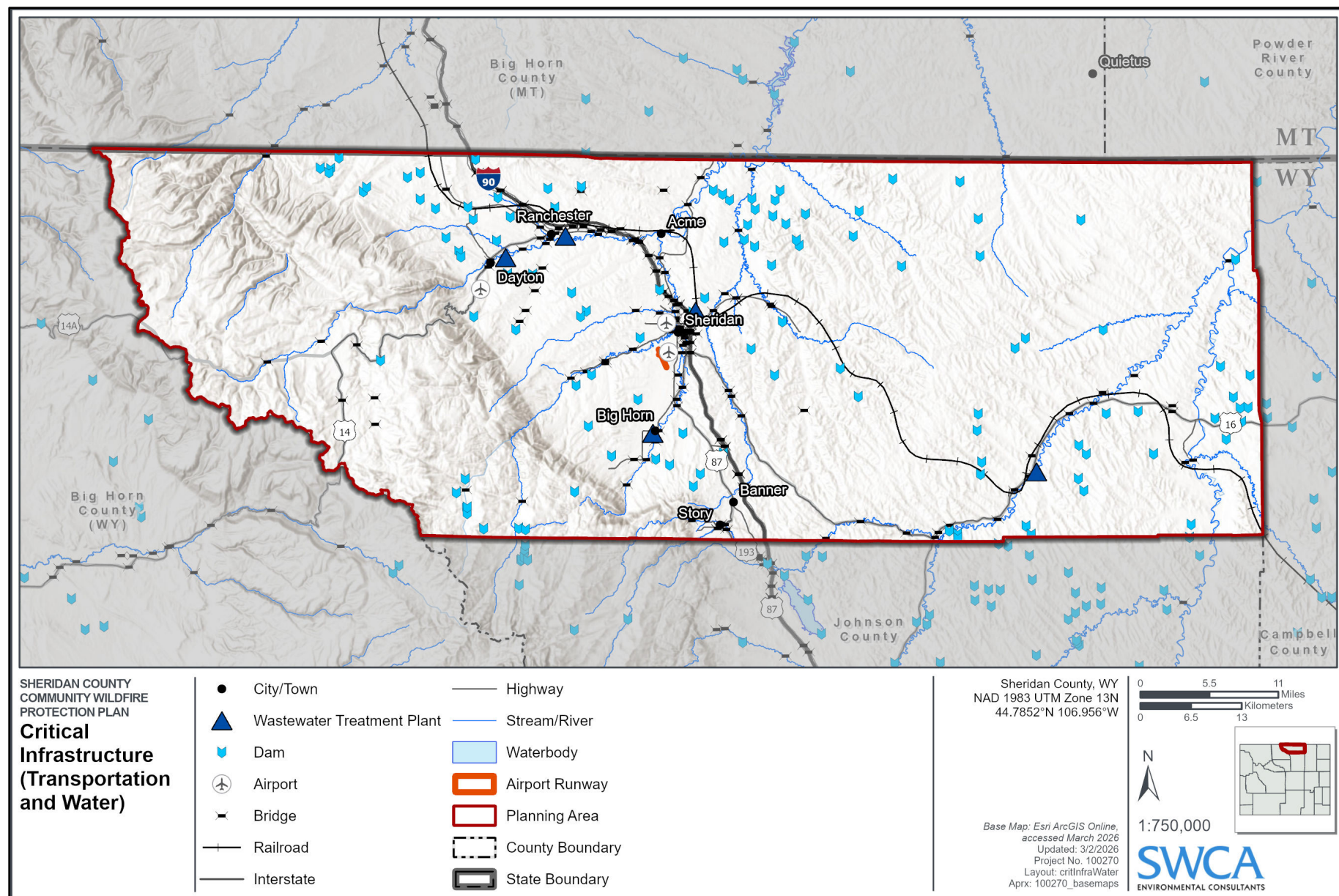


Figure I.3. Mapped transportation and water critical infrastructure.

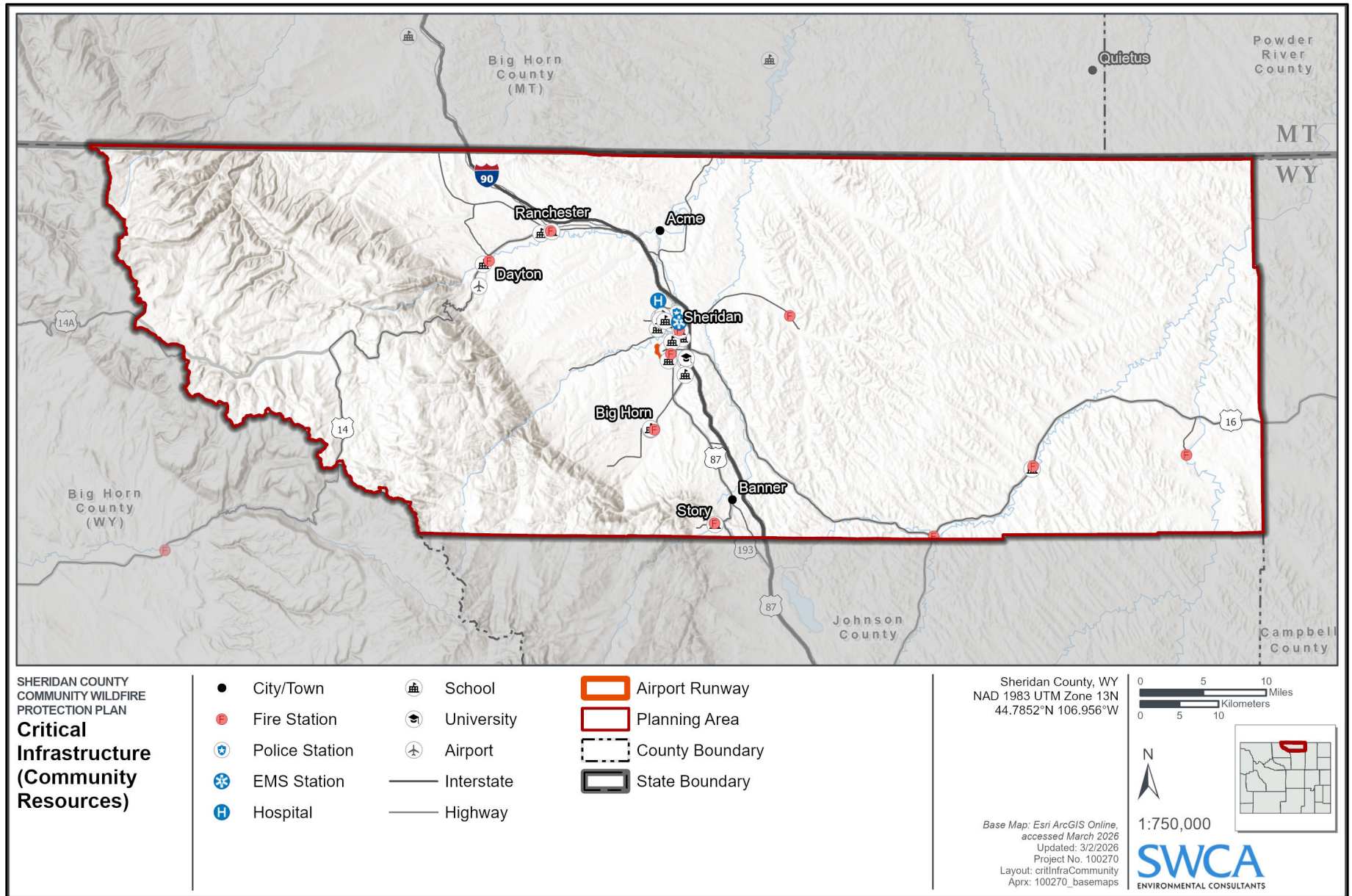


Figure I.4. Mapped community resources.

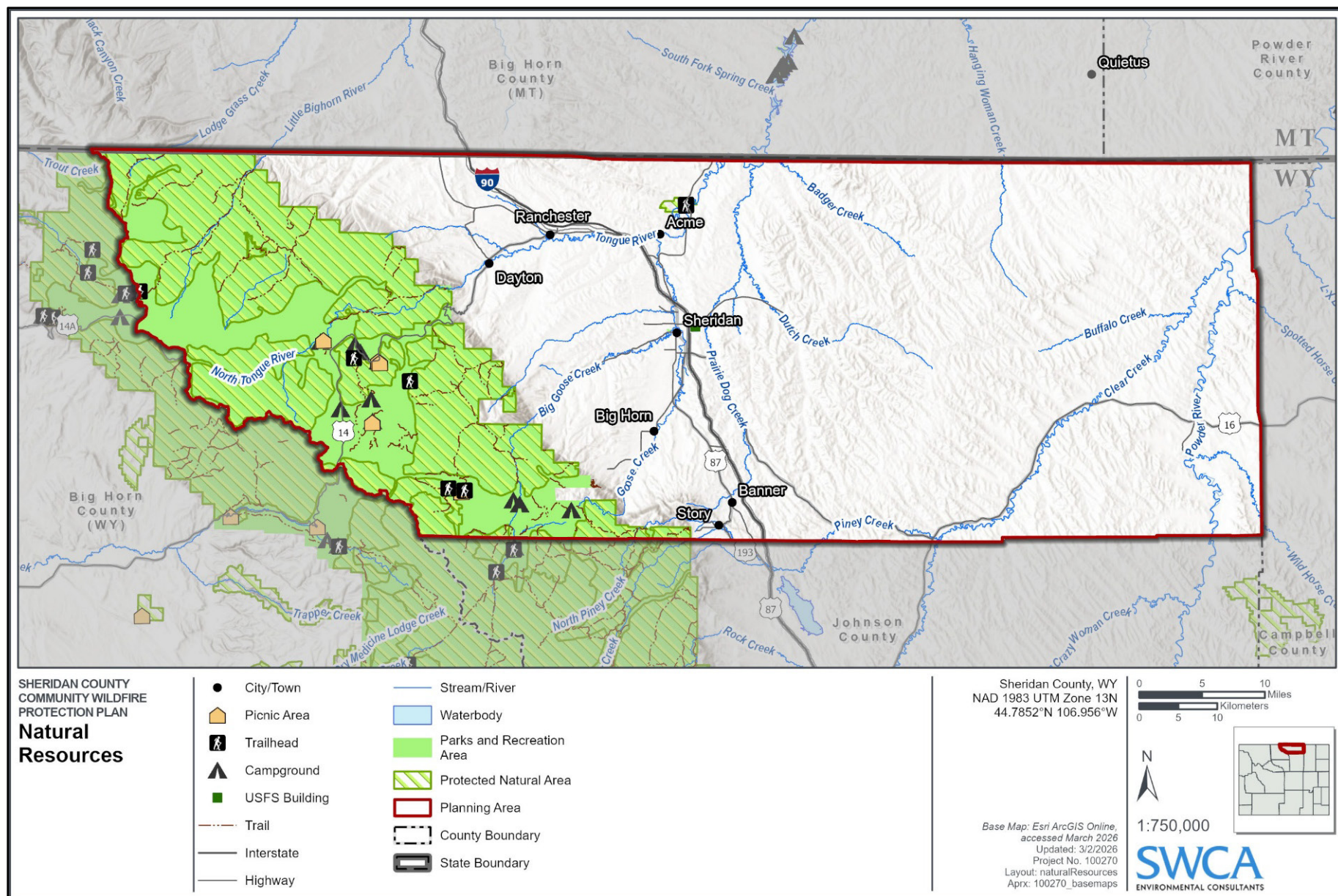


Figure I.5. Mapped natural resources.

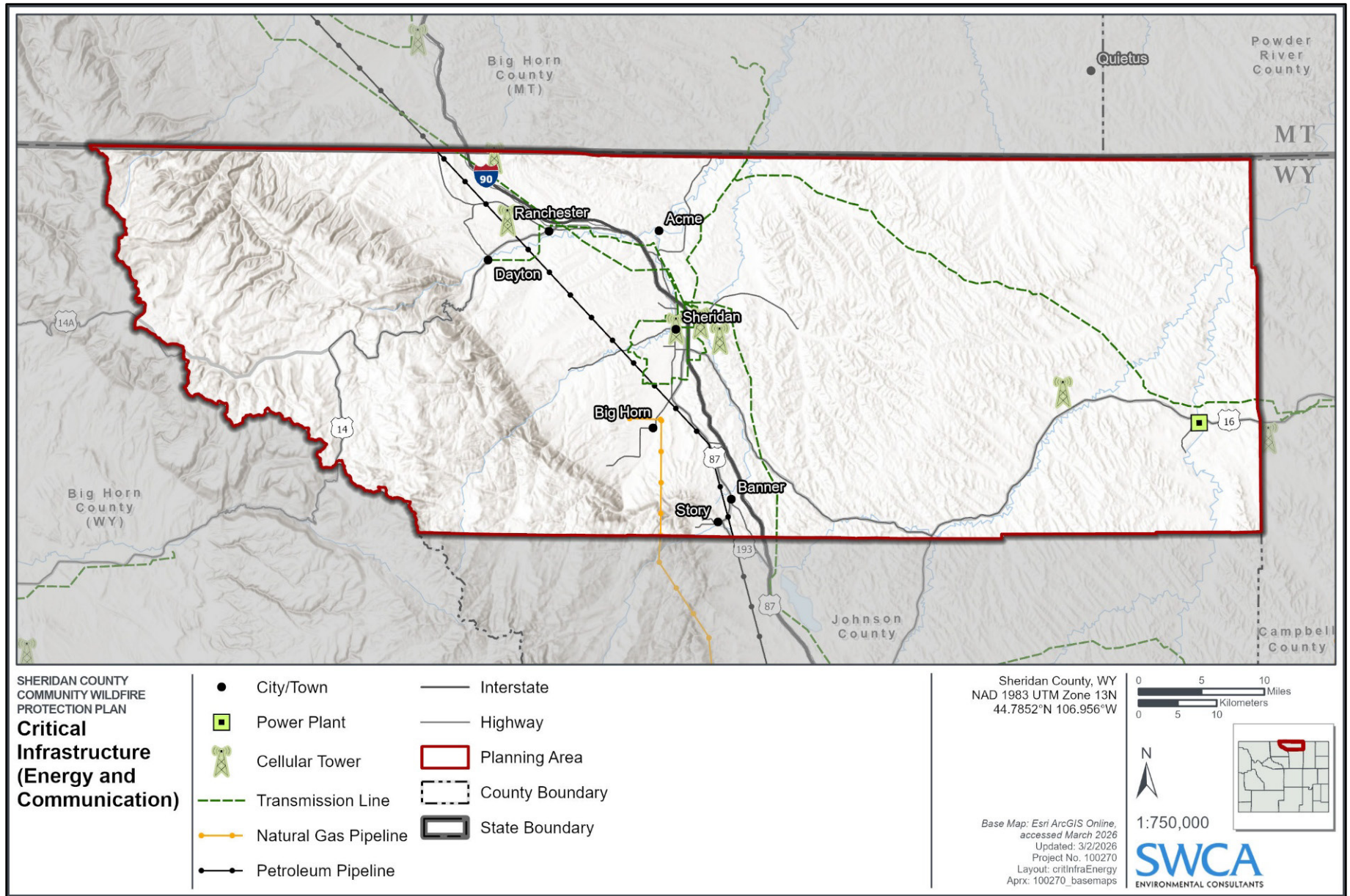


Figure I.6. Mapped energy and communication infrastructure.

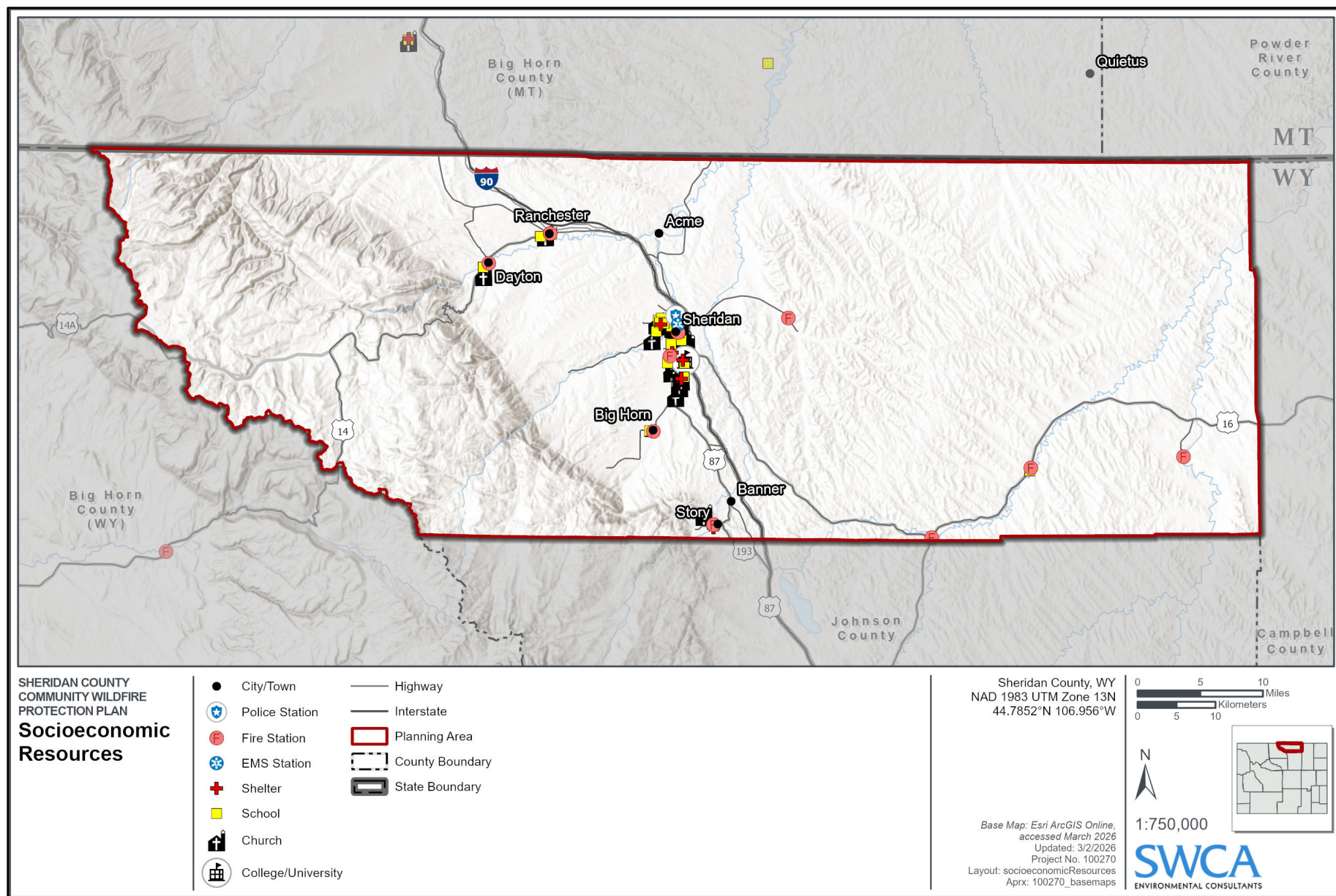


Figure I.7. Mapped socioeconomic resources.

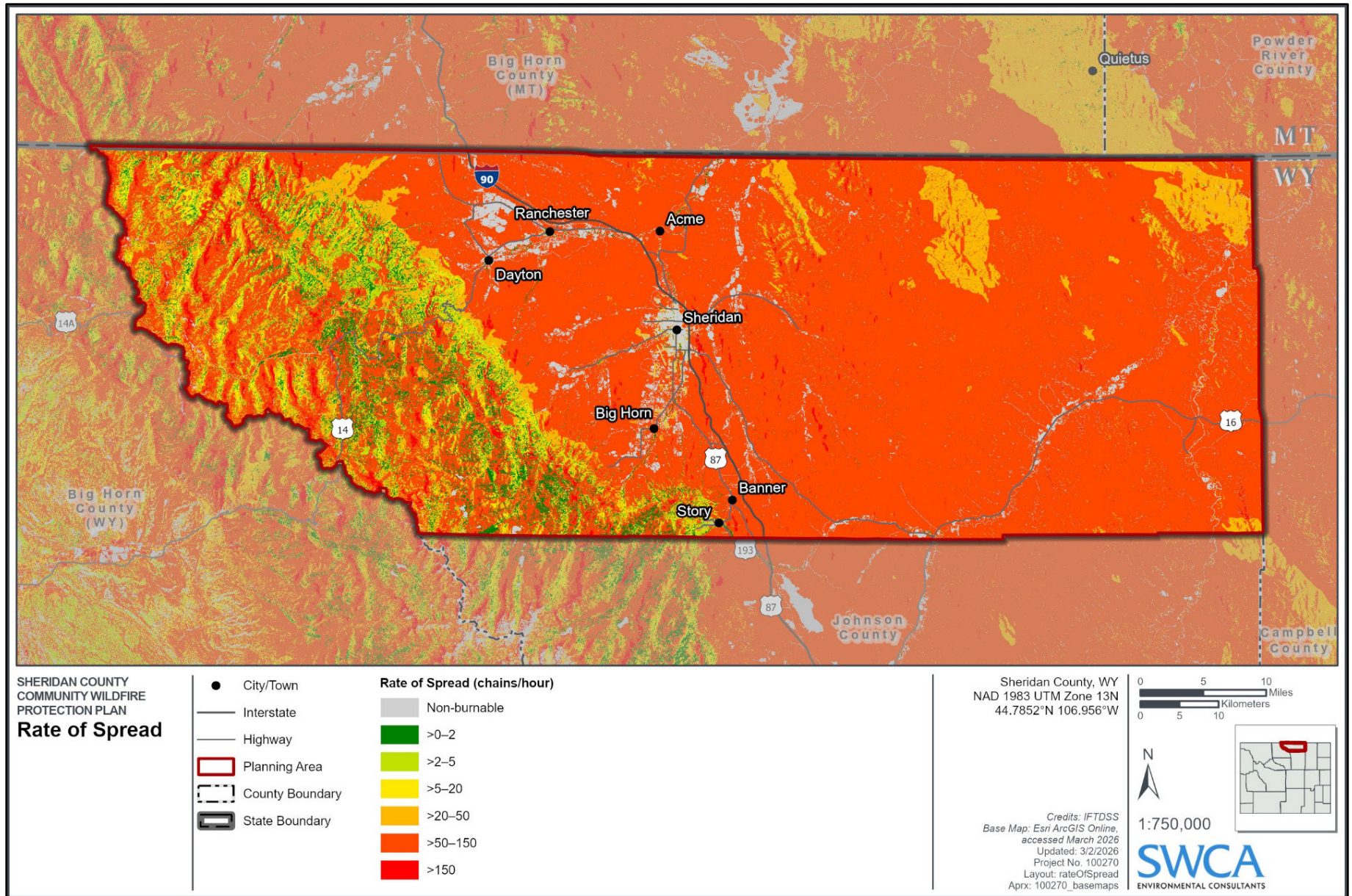


Figure I.8. Modeled rate of spread.

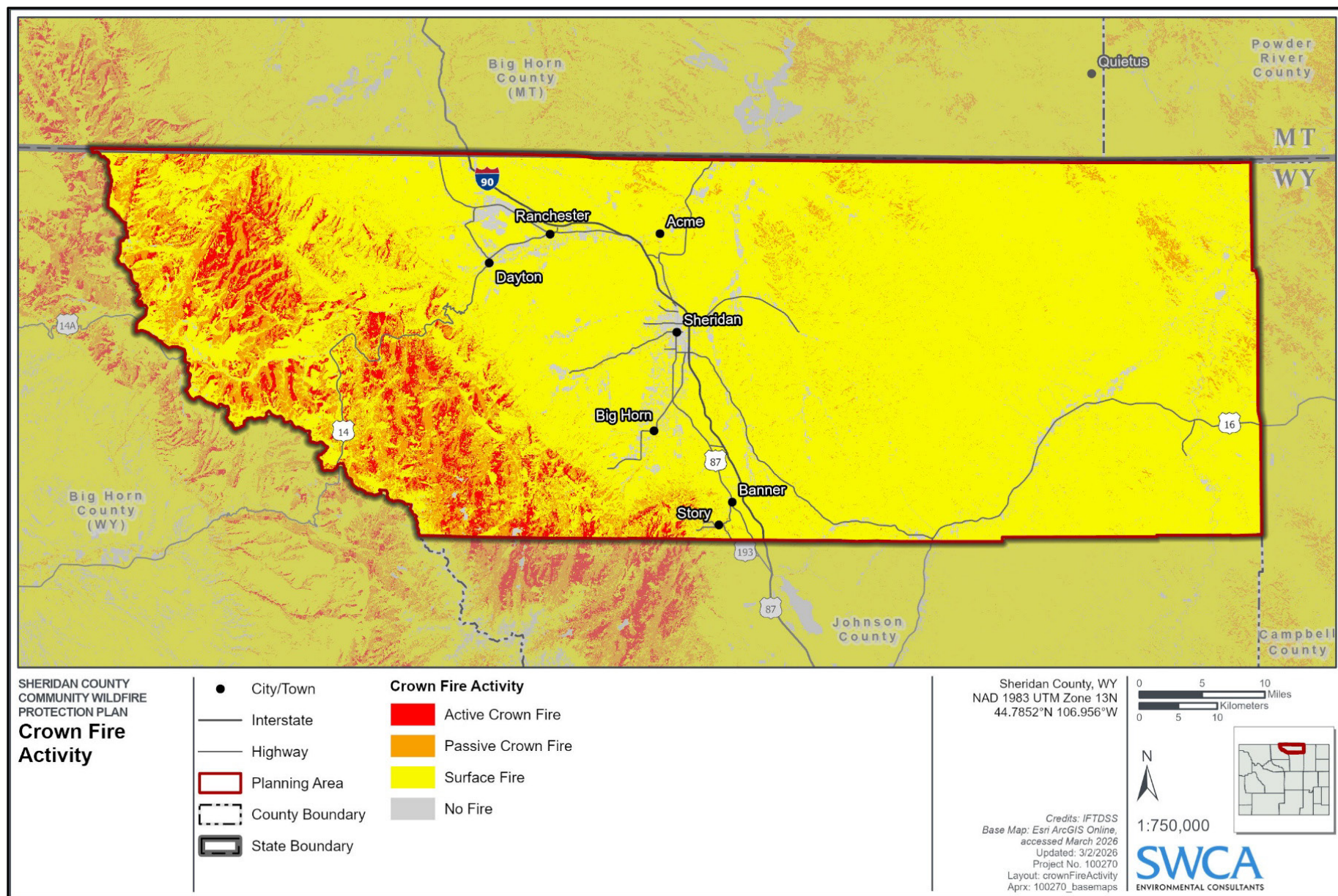


Figure I.9. Modeled crown fire activity.

APPENDIX J: FUNDING RESOURCES



Table J.1 provides information on federal, state, and private funding opportunities for conducting wildfire mitigation projects.

Table J.1. Potential Funding Sources for Wildfire Mitigation Projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Federal				
Tribal Lands Landscape Scale Restoration Grants	First Nations Development Institute (via USFS)	Supports Native-led nonprofits and Tribal programs focused on food systems, water, languages, ecological knowledge, and land protection.	https://www.firstnations.org/	Multiple
Hazard Mitigation Grant Program (HMGP)	Federal Emergency Management Agency (FEMA)	Helps communities rebuild to reduce future disaster risks after a presidential disaster declaration. It supports a wide range of projects aimed at increasing long-term resilience, such as infrastructure upgrades and hazard mitigation planning.	https://www.fema.gov/grants/mitigation/learn/hazard-mitigation	Hazard mitigation projects (planning and enforcement, flood protection, retrofitting, and construction)
HMGP – Post Fire	FEMA	Post-wildfire version of HMGP that offers funding to reduce future hazards after a fire event. Communities can use the funding for critical recovery efforts such as soil stabilization, flood prevention, and reforestation. The program is designed to support long-term recovery through proactive environmental management.	https://www.fema.gov/grants/mitigation/post-fire	Post-wildfire mitigation projects (soil stabilization, flood diversion, and reforestation projects)
Building Resilient Infrastructure and Communities (BRIC)	FEMA	Supports states, U.S. territories, federally recognized Tribal Nations, and local governments to do hazard mitigation activities including upgrading and modernizing infrastructure and code adoption/enforcement.	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities	*Due July 23, 2026* Hazard mitigation, Nature-based solutions, capacity building
Flood Mitigation Assistance (FMA) Grant	FEMA	Helps communities reduce flood damage to buildings insured by the National Flood Insurance Program. Funding is awarded competitively based on project eligibility and cost-effectiveness. Eligible projects may include property elevation, acquisition, or relocation to reduce repetitive loss.	https://www.fema.gov/grants/mitigation/floods	Flood reduction projects that aim to eliminate the risk of repetitive flood damage
Emergency Management Performance Grant (EMPG)	FEMA	Strengthen emergency management capabilities at the state, local, Tribal, and territorial levels. Funding priorities are aligned with national and regional preparedness goals, addressing capability gaps identified in assessments like Threat and Hazard Identification Risk Assessment and Stakeholder Preparedness Review. Programs must be collaboratively prioritized with FEMA regions.	https://www.fema.gov/grants/preparedness/emergency-management-performance	Prevention, protection, mitigation, response, and recovery mission areas projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Fire Management Assistance Grant (FMAG) Program	FEMA	Provides expedited funding to help manage large or potentially catastrophic wildfires. States must meet cost thresholds and demonstrate the fire poses a major disaster risk to qualify. Grants can support fire suppression, emergency response coordination, and protective actions.	https://www.fema.gov/assistance/public/fire-management-assistance	Firefighting activities (field camps, repair and replacement tools, mobilization and demobilization activities, equipment use, materials, and supplies)
Regional Catastrophic Preparedness (RCP) Grants	FEMA	Designed to help regional partners improve planning and response capacity for large-scale disasters. Funding supports the development of integrated, cross-jurisdictional emergency plans. The focus is on enhancing coordination and readiness for catastrophic events.	https://www.fema.gov/grants/preparedness/regional-catastrophic	National Preparedness Goal projects (housing and logistics and supply chain management)
Emergency Forest Restoration Program (EFRP)	USDA Farm Service Agency	Supports private forest landowners in restoring lands damaged by natural disasters, excluding drought and insect outbreaks. Eligible practices include removing fallen trees, replanting, and restoring access roads or fire lanes. Funding is administered locally through Farm Service Agency offices.	https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/emergency-forest-restoration/index	Forest Restoration Program projects
Emergency Conservation Program (ECP)	USDA Farm Service Agency	Provides financial assistance to farmers and ranchers recovering from natural disasters. Grants may support repairs to conservation structures or the implementation of water-saving practices during drought. The goal is to restore productivity and conservation benefits on agricultural lands.	https://www.fsa.usda.gov/programs-and-services/conservation-programs/emergency-conservation/index	Repair and farmland restoring project affected by natural disasters
Environmental Quality Incentives Program (EQIP)	Natural Resources Conservation Service (NRCS)	Offers competitive, multiyear-contract (up to 10 years) funding up to 75% of practice costs (90% for socially disadvantaged producers) to implement conservation practices (such as prescribed grazing, streambank stabilization, fuelbreaks, and forest tree-mortality prevention) on working farms, ranches, and private forest lands.	https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives	Conservation plan
Emergency Watershed Protection Program	NRCS	Delivers technical assistance and covers 75%–100% of construction costs (debris removal, bank stabilization, drainage repair, levee restoration, and emergency seeding) through local sponsors, such as counties, conservation districts, and Tribes, when a watershed poses an imminent threat after flood, wildfire, or windstorm events. Sponsors submit work plans; USDA provides design and oversight.	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/	Flood protection, soil erosion
Regional Conservation Partnership Program (RCPP)	NRCS	Funds solutions to natural resource challenges on agricultural land at state or multi-state level. Public private partnerships that help producers install and maintain conservation activities in selected project areas.	https://www.nrcs.usda.gov/programs-initiatives/regional-conservation-partnership-program	Working lands, irrigation, wildlife habitat

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Tribal Environmental General Assistance Program (GAP)	U.S. Environmental Protection Agency (EPA)	Provides annual base grants (up to \$200,000/year under Regional Tribal Allocation) to federally recognized Tribes to develop and implement their own environmental plans, staffing structures, monitoring programs, and ordinances. Funds may cover salaries, travel, equipment, and training but cannot be used for enforcement or remediation.	https://www.epa.gov/tribal-pacific-sw/epa-region-9-tribal-environmental-gap-funding	Environmental protection programs and solid and hazardous waste programs
Specific Region 8 EPA Grant Programs	EPA	Suite of targeted opportunities: • Multipurpose Grants to States and Tribes (broad program development). • Environmental Education Grants (K–12 and community curricula). • Environmental Justice Grants (community-driven pollution reduction). • Each request for proposal specifies eligible entities, cost-share (often 5%–50%), project scales, and performance measures.	https://www.epa.gov/grants/specific-epa-grant-programs	Multiple
Conservation Innovation Grants (CIG)	NRCS	Competitive grants (minimum 50% match) using EQIP funds to test and scale innovative conservation tools and approaches (e.g., remote sensing for cover-crop adoption or precision nutrient management) in collaboration with non-federal partners. Awarded at national and state levels, with funding categories spanning water, soil, air, and grazing/forest health.	https://www.nrcs.usda.gov/programs-initiatives/cig-conservation-innovation-grants	Natural resource conservation on private lands, and projects that work with farmers to try out new conservation methods
Urban and Community Forestry Program – Challenge Cost Share	USFS	Funds up to 50% of project costs (no cap on match) for planting climate-resilient trees, community outreach, management plans, and disaster-mitigation planning in municipalities, Tribes, and nonprofits. Emphasizes environmental justice communities and long-term canopy maintenance.	https://www.fs.usda.gov/managing-land/urban-forests/ucf	Urban communities' green spaces, forests, and tree planting and maintenance projects
Catalog of Federal Funding Sources: Land Resources	EPA (hosted clearinghouse)	Online database of >600 federal grants and loans for land-related projects (forestry, soil stabilization, habitat restoration, public-access amenities) filterable by agency, Catalog of Federal Domestic Assistance (CFDA) number, and applicant type. Examples: Forest and Woodlands Resource Management Grant: https://sam.gov/fal/3258dad2c3d247a9a8fcdedb398e3195/view Environmental Education Grant: https://www.epa.gov/education/grants Public Assistance Grant Program: https://www.fema.gov/assistance/public	https://ordspub.epa.gov/ords/wfc/f?p=165:512	Land management, restoration, and resiliency projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Catalog of Federal Funding Sources: Water Resources	EPA (hosted clearinghouse)	Searchable clearinghouse covering federal funding for water conservation, infrastructure upgrades, stormwater management, and watershed restoration. Examples: Wyoming Rural Decentralized Water Systems Grant Program https://www.rd.usda.gov/programs-services/water-environmental-programs/rural-decentralized-water-systems-grant-program/wy Wyoming Emergency Community Water Assistance Grants https://www.rd.usda.gov/programs-services/water-environmental-programs/emergency-community-water-assistance-grants-0	https://ofmpub.epa.gov/apex/wfc/f?p=165:12	Water infrastructure projects
Firewise USA Program	NFPA and partners	Voluntary community-based program that awards modest seed grants (up to \$2,500) and technical support to neighborhoods, HOAs, and Tribal councils for defensible space projects, chipping/cleanup days, homeowner roofing retrofits, and public education events. Eligibility is open to recognized "Firewise" sites that draft an action plan.	http://www.firewise.org	Defensible space projects, chipping/cleanup days, homeowner roofing retrofits, and public education events
National Fire Plan (NFP) – State and Volunteer Fire Assistance	U.S. Department of the Interior and USDA	Provides 50% cost-share funds to states that, in turn, offer matching grants to private landowners and rural fire districts for hazardous fuel treatments (thinning, pruning, slash removal) and emergency equipment. Emphasis on low-income and volunteer departments; administered through state forestry or fire warden offices. *Administered by WSFD *	https://www.fs.usda.gov/database/budgetoffice/NFP_final32601.pdf https://wsfd.wyo.gov/fire-management/fire-grants-assistance/vfa-grants	Hazardous fuel treatments projects and emergency equipment
Staffing for Adequate Fire and Emergency Response (SAFER)	FEMA	Awards multiyear grants covering up to 75% of firefighter salaries (declining each year) and up to 100% of volunteer recruitment/retention costs. Departments apply to recruit new staff or bolster volunteer ranks, to achieve 24/7 coverage and meet NFPA staffing standards over a 5-year performance period.	https://www.fema.gov/grants/preparedness/firefighters/safer	Volunteer and staff recruitment/retention
Fire Prevention and Safety (FP&S) Grants	FEMA	Supports community and firefighter safety projects (public education campaigns, juvenile fire-setter interventions, arson prevention programs, and research) through 100% federal funding (no match). Typical awards range from \$50,000 to \$500,000 with defined performance metrics on risk reduction and outreach.	https://www.fema.gov/grants/preparedness/firefighters/safety-awards	Community and firefighter safety projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Federal Excess Personal Property (FEPP) Program	U.S. Forest Service (USFS) and General Services Administration	Loans surplus federal equipment (often decommissioned vehicles, pumps, and tools) to state foresters, who in turn place it with local, rural, and wildland fire departments at no cost. Participating state agencies manage inventory, maintenance, and redistribution.	https://www.fs.usda.gov/managing-land/fire/fepp https://wsfd.wyo.gov/fire-management/fire-grants-assistance/fepp	Wildland and rural firefighting
Assistance to Firefighters Grants (AFG)	FEMA	Competitive awards that fund up to 95% of equipment, personal protective equipment, apparatus, training, and facility upgrades for fire/EMS departments. Career departments receive 90% federal share; volunteer departments 95%. Requests must align with Department of Homeland Security preparedness goals and undergo merit-based review.	https://www.fema.gov/grants/preparedness/firefighters	Equipping and training emergency personnel
National Fire Plan (NFP) – WUI Community Fire Assistance	U.S. Fish and Wildlife Service (USFWS)	Dedicated to high-risk WUI areas; offers up to \$10 million per project (\$25 million total program cap) for fuels reduction, community training, CWPP development, and small-business workforce initiatives. Requires 25% non-federal match and coordination with adjacent landowners.	https://www.federalgrantswire.com/national-fire-plan-wildland-urban-interface-community-fire-assistance.html	Hazardous fuels reduction projects
Forest Landowner Support	USDA USFS	Forest Landowner Support provides competitive grant opportunities to entities and organizations for delivering technical and financial assistance to private forest landowners.	https://www.fs.usda.gov/about-agency/state-private-tribal-forestry/coop-forestry/ira-forest-landowner-support	Nonindustrial private forest landowner participation in emerging markets, tribal access to emerging markets, forest landowner cost share and payment
Wildland Urban Interface Grant Program	Council of Western State Foresters/ USFS	Grant program for fuels treatment, education, and mitigation planning on non-federal lands using USDA Forest Service State, Private, and Tribal Forestry State Fire Assistance funds. Requires a 1:1 match. *Submit through WSFD*	https://www.westernforesters.org/wui-grants https://wsfd.wyo.gov/fire-management/fuels-mitigation/grants-available	Hazardous fuels, restoration, Planning, Prevention education
Joint Chiefs' Landscape Restoration Partnership	NRCS and USFS	Provides 75% cost-share (25% match) on multi-year, cross-boundary projects that restore fire-adapted landscapes, protect water sources, and improve wildlife habitat across national forests and neighboring state, Tribal, or private lands.	https://www.nrcs.usda.gov/programs-initiatives/joint-chiefs-landscape-restoration-partnership	Conservation and restoration projects (hazardous fuel treatments, installing fire breaks, reforestation, riparian habitat restoration, and many other activities)
Landscape Scale Restoration (LSR) Competitive Grant Program	USFS and Western Forestry Leadership Coalition	Funds collaborative, science-based restoration projects at the landscape scale in western states and Pacific territories. Grants require at least 50% match (cash or in-kind), alignment with State Forest Action Plans, and demonstrable cross-jurisdictional coordination.	https://www.thewflc.org/landscape-scale-restoration-competitive-grant-program	Restoration projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Community Wildfire Defense Grant (CWDG)	USFS	Under Cohesive Strategy goals, offers up to \$250,000 for CWPP development or revision and up to \$10 million for project implementation (fuel breaks, defensible-space work) in WUI communities. Requires 25% match and prioritizes underserved, Tribal, or high-risk communities with plans less than 10 years old.	https://www.fs.usda.gov/managing-land/fire/grants	Fuel breaks, and defensible-space projects
Wood Innovations Grant Program	USFS	Stimulates, expands, and supports U.S. wood products markets and wood energy markets to support the long-term management of National Forest System and other forest lands. National focus areas include mass timber, renewable wood energy, and technological development that supports hazardous fuel reduction and sustainable forest management.	https://www.fs.usda.gov/science-technology/energy-forest-products/wood-innovation	Wood utilization
Habitat Restoration and Enhancement Programs	National Fish and Wildlife Foundation (NFWF)	Congressionally chartered private conservation foundation that works on public and private lands to protect fish, wildlife, and plant species and restore requisite habitats for specific species or to accomplish broader ecosystem specific objectives. Funds are provided through federal allotments and corporate contributions. Western Big Game Seasonal Habitat and Migration Corridors Fund aims to conserve critical winter range and migration corridors through: restoring degraded priority winter range, stopover areas and migration corridors by removing encroaching trees from sagebrush ecosystems, rehabilitating areas damaged by fire or treating exotic/invasive vegetation to improve the quality and value of these areas to big game and other wildlife. The Healthy American Forests Initiative support watershed restoration and vegetation management projects on National Forest System lands to achieve a healthy forest ecosystem Northern Great Plains projects maintain and/or improve interconnected grasslands in focal areas to sustain healthy populations of grassland-obligate species while fostering sustainable livelihoods and preserving cultural identities including tribal cultures and food sovereignty.	https://www.nfwf.org/apply-grant	Restoration, fuels treatment, recreation, access

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Collaborative Forestry Programs	U.S. Forest Service	Multiple funding programs available to aid communities and forest managers in maintaining forests across watersheds and ecosystems. The programs can be applied to both private and public lands. Collaborative Forestry programs include funding for the Forest Stewardship program, Forest Legacy Program, Community Forest and Open Space Conservation Program, Urban and community Forestry Program, Wood Innovations, and Forest Taxation and estate Planning.	https://www.fs.usda.gov/about-agency/state-private-tribal-forestry/coop-forestry	Fuel treatments, reforestation, wood utilization
State				
Wyoming State Forestry Division (WSFD) - Fire Prevention and Safety (FP&S) Grants	WSFD	See above in Federal	https://wsfd.wyo.gov/fire-management/fuels-mitigation/grants-available	
Community Forestry Partnership	WSFD	See Urban and Community Forestry Program in Federal	https://wsfd.wyo.gov/forestry-assistance-programs/community-forestry/community-grants	Tree Planting, Program Development, Program Scholarship
Forest Health Grant Program	WSFD	Site-specific forest management advice to private forest landowners, municipalities, and local government land managers. <u>Aerial reconnaissance</u> and ground surveys.	https://wsfd.wyo.gov/forest-management/forest-health-management	Fire breaks, thinning, fuel treatment, pest suppression, water quality projects
Local and Private				
Foundation grants	Maki Foundation	Makes grants for protection and preservation of the Rocky Mountain West's remaining wild lands, rivers, and wilderness, as well as the wildlife that depends on these lands.	https://www.makifoundation.org/	Restoration
Good Neighbor Firefighter Safety Program	State Farm and NVFC	Help resource-constrained volunteer fire departments secure needed equipment. Provides volunteer fire departments with \$10,000 grants to enhance safety, effectiveness, and operational readiness.	https://www.nvfc.org/good-neighbor-firefighter-safety-program/	Community wildfire prevention events, home safety upgrades, disaster preparedness training, and post-event recovery
ESRI Grants	Environmental Systems Research Institute (ESRI)	In-kind awards of ArcGIS software, hardware, and training bundles (valued up to \$100,000+) to nonprofits, educational institutions, and public agencies for mapping, conservation, and fire-mitigation applications.	http://www.esri.com/grants	Mapping, conservation, and fire-mitigation applications
Innovative Finance for National Forests Grant Program	National Forest Foundation	Competitive grants (pilot, scaling, research and development) to leverage non-USFS funds on wildfire resilience, watershed health, and recreation infrastructure. Awards typically range from \$50,000 to \$500,000 with multi-year plans.	https://www.nationalforests.org/grant-programs/innovative-finance-for-national-forests-grant-program	Wildfire resilience, watershed health, and recreation infrastructure projects

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
Matching Awards Program (MAP)	National Forest Foundation	Matches USFS cooperative-agreement funds 1:1 with non-federal dollars raised by awardees to implement stewardship projects (thinning, invasive removal, trail work) on National Forest System lands.	https://www.nationalforests.org/grant-programs/map	Stewardship projects
Environmental Grants and Support	Patagonia	Operating and project grants (\$5,000–\$25,000) to grassroots organizations addressing environmental crises (such as wildfire adaptation and community resilience) focused in regions where Patagonia has ties.	https://www.patagonia.com/how-we-fund/	Wildfire adaptation and community resilience projects
Re:wild	Re:wild	Global grant awards (\$25,000–\$250,000) for nonprofits that enhance climate resilience, protect wildlife, and restore ecosystems, with priority given to frontline and Indigenous communities.	https://www.rewild.org/	Climate resilience, wildlife protection, and ecosystem restoration projects
Forestry and Communities Grant Programs	U.S. Endowment for Forestry and Communities	Multiyear grants (\$50,000+) and partnership funding supporting market-based strategies for sustainable working forests, wood-products innovation, and thriving forest-reliant community economies.	https://www.usendowment.org/	Sustainable forestry projects
Action, Implementation and Mitigation (AIM) Grants	Coalitions and Collaboratives Inc. (COCO)/USFS	Awards \$10,000–\$75,000 (100% match) to 501(c)(3) or fiscally sponsored entities for on-the-ground fire-adaptation projects (fuel breaks, equipment upgrades, and community planning) on non-federal lands.	https://co-co.org/aim-grant/	Fire-adaptation projects
Other				
Western Forestry Leadership Coalition (Clearinghouse)	Western Forestry Leadership Coalition	Online portal compiling federal, state, Tribal, and private funding opportunities for forestry, fire management, watershed, and related natural resources projects.	https://www.thewflc.org/	Multiple
USDA Information Center	National Agricultural Library (USDA)	Centralized resource hub for USDA-related funding, data, and technical assistance centers covering conservation, forestry, water, and rural development programs.	https://www.nal.usda.gov/main/information-centers	Multiple
Fire Management (USFS)	USFS	Comprehensive information on USFS fire management grants, programs, and technical guidance for wildland fire prevention, suppression, and post-fire recovery.	https://www.fs.usda.gov/managing-land/fire	Multiple
Mitigate	Insurance Services Office (Rebranding as Verisk)	Community Hazard Mitigation team that works with fire departments, building departments, water suppliers, and municipalities with our Public Protection Classification, Building Code Effectiveness Grading Schedule, water outreach, and emergency communication center review programs.	http://www.isomitigation.com/	Multiple
National Fire Protection Association	NFPA	Standards, codes, and funding news for fire prevention, suppression, and safety research; includes links to NFPA grants and public safety resources.	http://www.nfpa.org	Resources and news

Name	Agency/Entity/ Organization	Description	Link	Qualified Project
NIFC – Fire Prevention, Education and Mitigation	NIFC	Collates wildland fire prevention, education, and mitigation resources across federal agencies, including grant listings and community outreach tools.	https://www.nifc.gov/fire-information/fire-prevention-education-mitigation	Multiple
U.S. Fire Administration (USFA)	U.S. Fire Administration (Department of Homeland Security/FEMA)	Central portal for USFA grants and assistance programs (AFG, SAFER, FP&S), with links to applications, guidance, and regional contacts for fire departments and EMS agencies.	https://www.usfa.fema.gov/index.html	Multiple
Tribal Funding Registry	The Hozhonigo Institute	The Tribal Funding Registry is a free, online, searchable grants database tailored specifically for Tribes and Native-led nonprofits. Created by the Native-led Hozhonigo Institute (established November 2022), it serves as a central hub for Indigenous entities to discover and pursue funding opportunities, including government, foundation, and corporate grants.	https://www.tribalfunding.org/	Multiple

DRAFT