

# South Central West Nebraska Community Wildfire Protection Plan

FOR THE COUNTIES OF FRANKLIN, FURNAS, HARLAN, KEARNEY, AND PHELPS

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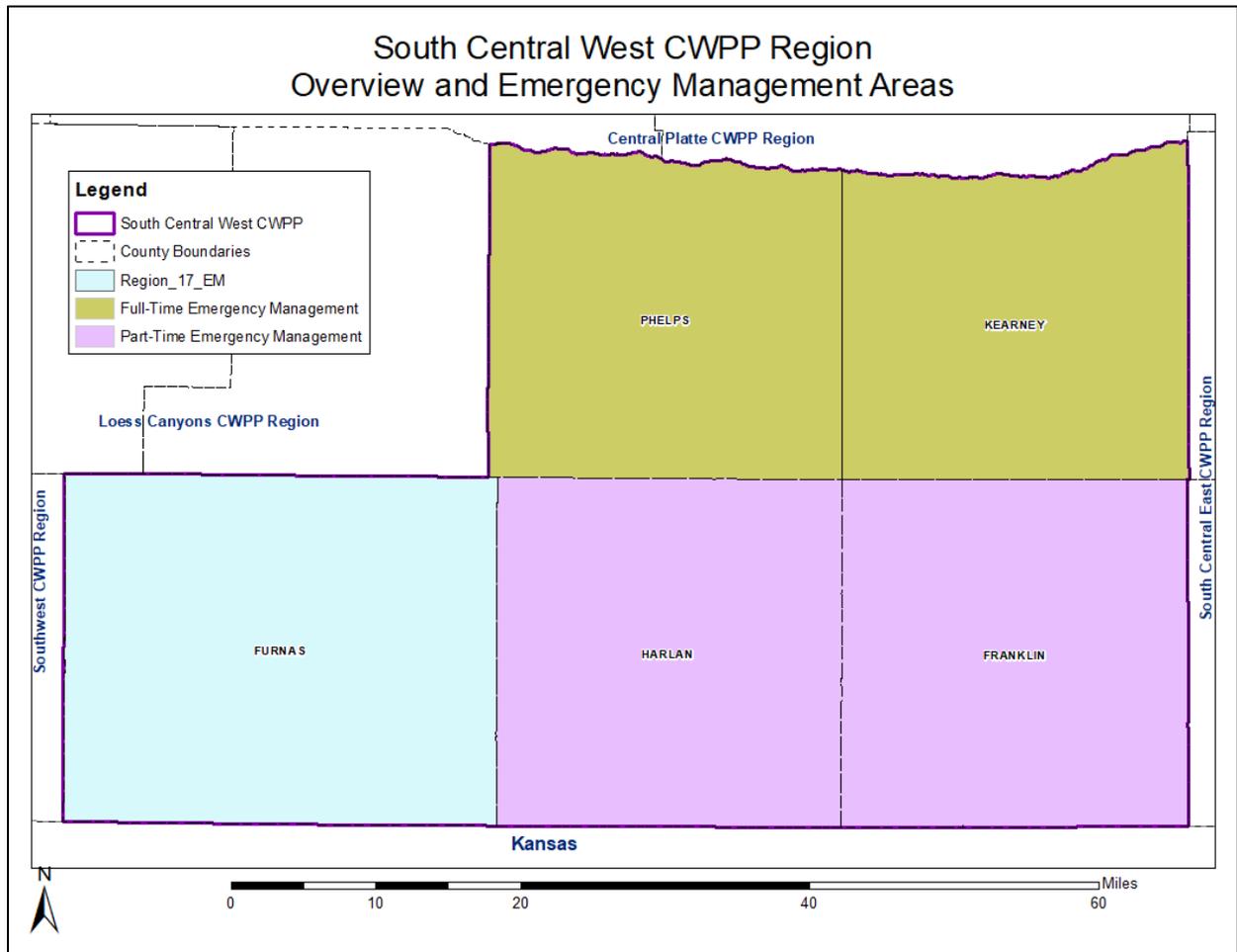
**APRIL, 2021**

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*Photos courtesy of West Nebraska Engine Academy*

# South Central West Community Wildfire Protection Plan



Map 1: Overview of the South Central West CWPP Region and Emergency Management Areas.

# South Central West Community Wildfire Protection Plan

FACILITATED BY THE

## Nebraska Forest Service

IN COLLABORATION AND COOPERATION WITH

FRANKLIN, FURNAS, HARLAN, KEARNEY, AND PHELPS COUNTIES

LOCAL VOLUNTEER FIRE DISTRICTS

COUNTY EMERGENCY MANAGEMENT DIRECTORS  
SOUTH CENTRAL WEST CWPP STEERING COMMITTEE

LOCAL MUNICIPAL OFFICIALS

LOCAL, STATE, AND FEDERAL NATURAL RESOURCES AGENCIES

AREA LANDOWNERS

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*Photo courtesy of Jeffrey Nichols*

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South Central West Community Wildfire Protection Plan

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# South Central West Community Wildfire Protection Plan

## Community Wildfire Protection Plan Acronyms

<b>Acronym</b>	<b>Meaning</b>
BLM	Bureau of Land Management
BUL	Biologically Unique Landscape
CWPP; SCWCWPP	Community Wildfire Protection Plan; South Central West CWPP
FAP	Forest Action Plan
FEMA	Federal Emergency Management Agency
FEPP; FFP	Federal Excess Property Program; Firefighter Property (program)
GIS	Geographic Information System
GPS	Global Positioning System
HMP	Hazard Mitigation Plan
IC	Incident Commander
LEOP	Local Emergency Operations Plan
MA	Mutual Aid
MOU	Memorandum of Understanding
NEMA	Nebraska Emergency Management Agency
NFS	Nebraska Forest Service
NGO	Non-Government Organization
NGPC	Nebraska Game and Parks Commission
NNLP	Nebraska Natural Legacy Project
NRCS	Natural Resources Conservation Service
NRD	Natural Resource District
PL	Priority Landscape
RH	Relative Humidity
SEAT	Single Engine Air Tanker
SRA	State Recreation Area
UNL	University of Nebraska-Lincoln
USACE	US Army Corps of Engineers
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
VFD	Volunteer Fire Department
WIRAT	Wildfire Incident Response Assistance Team
WMA	Wildlife Management Area
WUI	Wildland Urban Interface

# South Central West Community Wildfire Protection Plan

## Introduction

The purpose of this Community Wildfire Protection Plan (CWPP) is to provide a tool for effectively managing fire and hazardous vegetative fuels and to bolster collaboration and communication among the various agencies and organizations who manage fire in the south central west portion of Nebraska. Having a CWPP in place allows the Nebraska Forest Service (NFS) to apply for federal grant dollars to cost-share forest fuels reduction treatments in at-risk areas within the boundaries of the CWPP. It also may increase opportunities for counties, municipalities, and rural fire districts to seek grant funding for activities related to fire protection.

A CWPP can help people be proactive in their approach to wildfire. All of the CWPP counties have experienced big wildfires. Historically, wildfires—often started by the railroad—burned huge swaths of prairie, destroying many homes and lives. A UNL Cooperative Extension publication<sup>1</sup> contains first-hand accounts from survivors of such fires that occurred between 1878 and 1892 in Furnas, Harlan, and Phelps Counties. One of these burned north from Spring Creek in southwest Phelps County to the Platte River; then the wind shifted and it burned southeast to Holdrege. In February, 2017, the Kearney Hub reported four fire departments responded to a fire in Franklin County that burned 252 acres southeast of Franklin. Firefighters were hindered by rough terrain and areas of dense, flammable eastern redcedar.<sup>2</sup> NFS data shows that between 2000 and 2019, volunteer fire departments in the CWPP area reported 16 fires greater than 99 acres in size that burned over 6,400 acres. Because not all fire departments report every year, the actual numbers are likely much higher.

These incidents demonstrate that intense fire behavior can start in rural areas, move aggressively over large expanses, and threaten population centers. For this reason, the CWPP planning team has designated the entire CWPP region as Wildland Urban Interface (WUI). Treatment to reduce fuels will help lessen the risk of wildfire within the WUI. The NFS can utilize federal and state grant funding to cost-share fuels reduction treatments throughout the CWPP region.

## Legislative Background

To be eligible for federal conservation cost-share funding assistance, the US government requires states to prepare action plans that lay out a strategy for forest and wildlife conservation. The Nebraska Game and Parks Commission (NGPC) published the Nebraska Natural Legacy Project (NNLP) in 2005 as the state's first Wildlife Action Plan (updated in 2011). It identified 40 biologically unique landscapes (BULs) to help prioritize where conservation work can best be directed. The South Central West CWPP region lies within the Mixedgrass Prairie Ecoregion identified in the NNLP. Parts of the Rainwater Basin and Central Platte River BULs are found within this CWPP boundary (see Appendix A).

In accordance with the 2008 Farm Bill's requirement for states to conduct a comprehensive analysis of their forests, in 2011 the NFS published the Statewide Forest Resource Assessment and Strategy, known as the Forest Action Plan (FAP). This plan was updated in 2015 and 2020. Priority forest areas were identified throughout the state using the National Land Cover Dataset. This dataset represents 15 land cover and land use types including open water, development, crops, shrubs, grasslands, wetlands, and forests. Portions of the Lower Platte River, Republican River, and Blue Rivers Priority Landscapes (PLs) are located within this CWPP boundary (Map 2). A full description of the PLs is found in the Nebraska Forest Action Plan: <https://nfs.unl.edu/statewide-forest-action-plan>.

The Healthy Forest Restoration Act (US Congress, 2003) requires CWPPs to be developed collaboratively; identify and prioritize areas for fuels reduction and methods to reduce fuels on those areas; and recommend strategies to reduce structural ignitability. This CWPP addresses these requirements and other needs identified by stakeholders.

# South Central West Community Wildfire Protection Plan

## Plan Integration

This CWPP strives to coordinate with existing federal, state, and local plans and provides specific detail on wildfire hazards, areas at-risk from wildfire, emergency operations and capacity, and critical infrastructure. It includes an action plan addressing wildfire-specific issues including a risk assessment procedure, risk reduction measures, preparedness recommendations, training and education, fuels mitigation strategies, and a monitoring and evaluation plan.

The components of the State Emergency Operations Plan are patterned after the National Response Plan. The Nebraska Emergency Management Agency (NEMA) prepared a basic plan that details Nebraska's operational functions approach to the response and recovery phase of emergency management. It defines the roles and responsibilities of the responding and supporting agencies and organizations and defines broad policies, plans, and procedures.<sup>3</sup>

Each county has its own Local Emergency Operations Plan (LEOP). The content of these plans is defined by statute, which stipulates that each county's LEOP consist of specific components, including operations, organization and responsibilities; functional annexes supporting activities critical to emergency response and recovery; technical information on response procedures; protective measures unique to a hazard; and methods for use in emergency operations. It is the responsibility of local emergency management staff to maintain the LEOP according to the guidance from the State.<sup>3</sup>

Each LEOP contains an "Annex F" that covers fire services and includes a listing of county fire departments and mutual aid (MA) partners, as well as equipment lists. Fire department information is listed in Appendix F of this CWPP. Mutual aid associations are listed in Appendix E. One of the gaps common to many county-level LEOPs is a lack of wildfire-specific information. In many, fire is lumped in with hazardous materials. The information contained in this CWPP is intended to augment existing information and support these LEOPs.

Nebraska also has a state Hazard Mitigation Plan (HMP), which establishes the policies, plans, guidelines, and procedures for the Hazard Mitigation Program in Nebraska. NEMA coordinated with regional emergency management agencies, Natural Resource Districts (NRDs), and counties to update and maintain multi-jurisdictional hazard mitigation plans throughout the state.<sup>4</sup> Kearney and Phelps Counties are included in the Tri-Basin NRD's plan. Franklin, Furnas, and Harlan Counties are included in the Quad Counties HMP. Appendix B contains links to these HMPs.

## Goals and Objectives

### *State Action Plan Goals and Objectives*

The 2020 FAP goals and objectives are listed below:

1. Enhance and promote the role of Nebraska's forests and trees for mitigation and adaptation to the global change in climate
2. Manage trees and forest landscapes to include rural and community forest settings
3. Manage the function of forest and tree systems in Nebraska for maximum and sustained benefits
4. Improve, protect, and enhance fish and wildlife habitat in Nebraska
5. Restore fire-adapted landscapes to reduce risk of wildfire impacts on Nebraska's trees, forests, and communities
6. Manage for the health and productivity of Nebraska's trees and forests
7. Manage and build the capacity of Nebraska's trees and forests, in conjunction with the forest products industry, agriculture, and communities, which are all vital to Nebraska's economy
8. Maintain the natural environments of Nebraska including trees and forests, waterways, and rangelands
9. Manage Nebraska's forest and trees to enhance the water resources of Nebraska
10. Improve air quality and energy conservation through tree planting

## South Central West Community Wildfire Protection Plan

11. Connect people to the state's trees and forest resources
12. Engage Nebraskans in the stewardship of trees and forests

This CWPP and the results of its implementation relate directly or indirectly to all of these. Sustainable forest management maintains natural environments and reduces negative wildfire impacts in the region's forests and adjacent communities, and it reduces threats to ecosystem health. Healthy forests and grasslands, in turn, protect air and water resources and fish and wildlife habitat, helping these ecosystems better cope with a changing climate. Communities that plan for and reduce wildfire risks and engage in environmental stewardship activities may also reap both direct and indirect economic benefits of healthy forests in fire-adapted landscapes.

Implementation of this CWPP relates directly to the NNLP goals of conserving natural communities, keeping common species common, and protecting at-risk species. Sustainably managed, fire-adapted forests include diverse habitats for both at-risk and common species. Restoring unnaturally dense forests to a more natural mosaic vegetative pattern benefits both wildlife and human communities.

### *CWPP Goals and Objectives*

The steering committee identified the following goals and objectives that are consistent with the state Forest Action Plan and specific to community wildfire protection planning in western South Central Nebraska.

1. Identify wildfire risk potential
  - a. Evaluate vegetation, land use, response capacity, and other risk factors associated with wildfire
  - b. Identify areas of concern
2. Reduce wildfire risk
  - a. Identify, prioritize, and treat hazardous fuels
  - b. Suppress unplanned ignitions to protect private property and natural and cultural resources from unacceptable impacts attributable to fire
  - c. Support emergency response through training and acquisition of equipment
3. Promote wildfire prevention and education
  - a. Partner with natural resources agencies, schools, prescribed fire organizations, and other groups to ensure that outreach targets a broad audience, including the agricultural community, schools, landowners, home and business owners, recreationists, and the general public; identify specific ways to address this
  - b. Increase public awareness of wildfire and damage from uncharacteristic wildfires
  - c. Educate the public in *Firewise*® landscaping and construction techniques
  - d. Promote the use of defensible space to reduce fuel loads to protect communities and resources
  - e. Encourage communities to develop strategies to reduce wildfire risk; provide communities with tools to address human-caused fires
  - f. Integrate fire prevention protocols into plans and procedures for schools; educate youth to prevent and respect wildfires; address accidental ignitions caused by children
4. Provide training to enable rapid assessments of burned lands and the implementation of stabilization techniques
5. Restore fire-adapted ecosystems
  - a. Provide land managers with resources to use native plant species when restoring ecosystems
  - b. Safely incorporate prescribed fire into historically fire-adapted ecosystems, using trained personnel and standard operating procedures
  - c. Encourage land managers to control non-native invasive plant species and to actively manage prolific and aggressive native species
6. Enhance communications among fire management agencies
  - a. Ensure all relevant Memorandums of Understanding (MOUs) and Mutual Aid Agreements (MAAs) are in place and updated appropriately

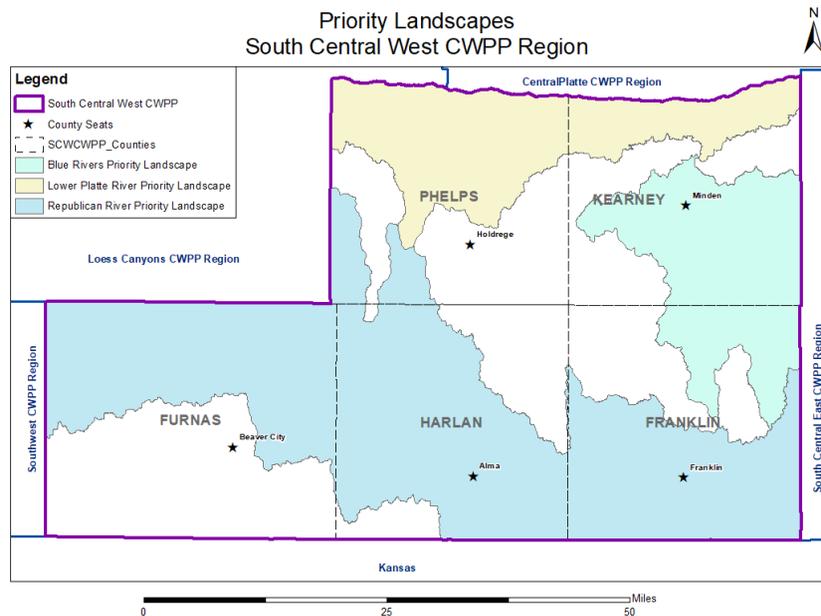
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- b. Train fire departments in the use of the V-TAC and UHF mutual aid radio channels
  - c. Partner with landowners, land managers, fire personnel, natural resources agencies, and other organizations to incorporate local concerns and objectives into fire management programs
  - d. Educate fire departments and 911 dispatchers about notifying assisting mutual aid departments which V-TAC or UHF Channel will be used when arriving at an event
7. Establish/Implement a monitoring and evaluation process
- a. Annually evaluate the CWPP implementation effectiveness and recommend changes as needed
  - b. Conduct monitoring of selected collaboratively developed projects and activities to assess progress and effectiveness

## Priority Landscapes

At the state level, the FAP identified PLs to help focus effort and funding on landscape-scale approaches. This CWPP region includes portions of the Republican River PL, the Lower Platte River PL, and the western section of the Blue Rivers PL (see Map 2). These landscapes include many locally-identified “Areas of Concern” where vegetative fuels reduction activities can be targeted (see maps in Appendix A).

Unnaturally dense and unhealthy woodlands and encroachment of eastern redcedar into grasslands create extreme wildfire risk. Drought cycles are predicted to occur with increasing frequency. Communities can protect structures by reducing their ignitability, reducing the surrounding woody fuels, and improving access for emergency equipment. Priority Landscapes help focus management activities on areas most at-risk.



Map 2: The principal Priority Landscapes in this CWPP region are located along the Republican, Platte, and Little Blue Rivers. These landscapes include many locally-identified Areas of Concern. Areas of Concern maps are located in Appendix A.

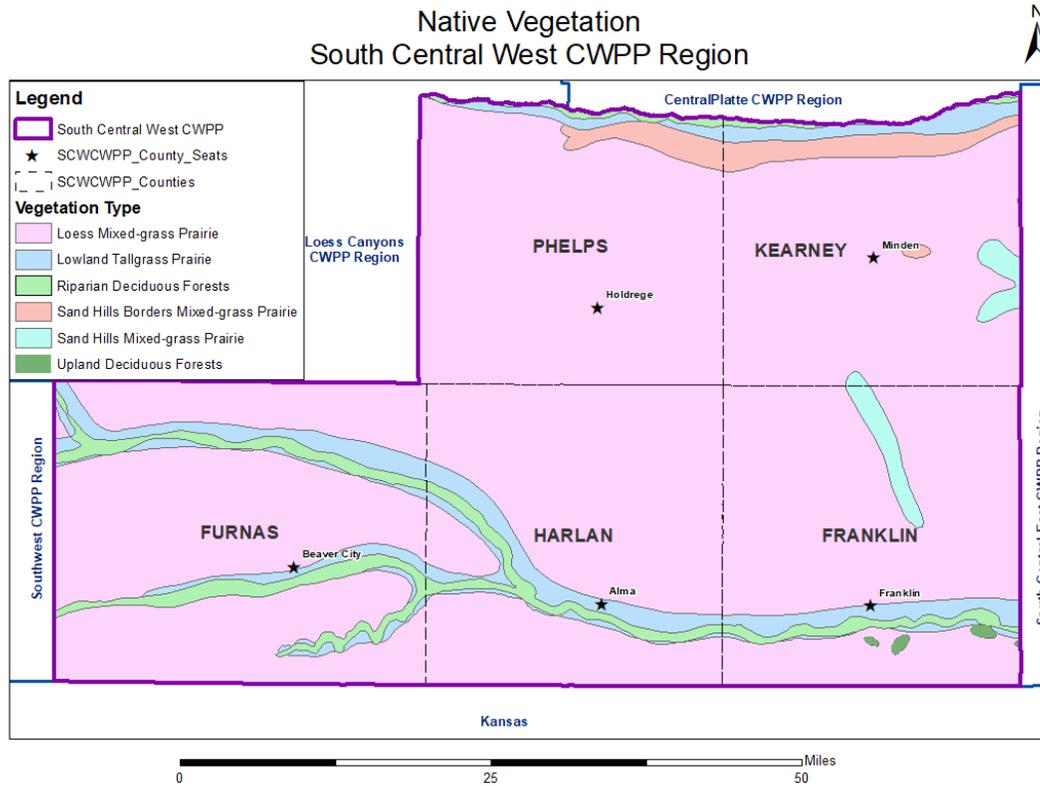
## Vegetation Types and Areas of Concern within Priority Landscapes

The PLs contain a range of topography and vegetation types, including deciduous forest (upland mixed deciduous and riparian woodlands), mixed forest (deciduous and eastern redcedar), mixed-grass prairie, and strips of lowland tallgrass prairie along the rivers. Within each county, local stakeholders have identified “Areas

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of Concern”—specific sites that are at greatest risk for wildfire within the larger landscapes. Most of these lie within the PLs. Areas of Concern maps are in Appendix A.

Managing the grass component of the forested areas is extremely important. Deciduous woodlands can develop a heavy grass and shrub component which, if not managed appropriately, create a significant fuels risk. The best management is done on a landscape basis—fuels mitigation treatments are only as effective as their weakest link. Unmanaged islands among managed areas pose a significant risk to the managed lands.



Map 3: The South Central West CWPP counties are dominated by mixed-grass prairie, with lowland tallgrass prairie and riparian deciduous forests along the rivers. Patches of Sandhills borders and Sandhills mixed-grass prairie are scattered across the eastern part of the region. A few upland deciduous forests are located in the southeast corner of the region.<sup>5</sup>

## Process

The first step in the CWPP planning process was to establish a core working group of stakeholders to form a steering committee and planning team. Information about the purpose of the CWPP and an invitation to participate in the process was given to each of the five county boards and their emergency managers within the region. Counties appointed individuals to the steering committee to help guide the process.

An outreach notice was sent to stakeholders and other potentially interested parties, including fire districts within the CWPP region, municipal governments, natural resources districts, federal and state agencies, state legislators, and non-government organizations. The steering committee was rounded out from responses to this outreach. Containing a mix of county board appointments and volunteers, it included representatives from local and state emergency management, fire departments, NRDs, the NFS, the Natural Resources Conservation Service (NRCS), NGPC, the US Fish and Wildlife Service (USFWS), and the US Army Corps of Engineers (USACE) Harlan County Project.

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For planning purposes, each county within the CWPP boundary is considered a WUI community. County officials, fire department personnel, and steering committee members identified areas of concern within each county that may be particularly at-risk from wildfire. The committee adopted CWPP goals and objectives and provided the locally-focused framework for the plan.

The planning team (a subset of the steering committee) gathered pertinent data, seeking input from county officials, fire departments, and others as needed to provide background and overview information, determine local wildfire risk factors, and map areas of concern.

The NFS sent a questionnaire to the fire departments in the CWPP region asking for current contact information, list of equipment, and pertinent issues, concerns, and priorities. Seventeen of the 29 fire departments returned the survey. Their responses appear in Appendix F, along with information obtained from Annex F of each county's LEOP for all fire departments located entirely or partially within the CWPP boundary. The fire department survey and distribution list appear in Appendix G.

A news release sent to local newspapers and radio stations described the planning process, encouraged input, and provided contact information for comments. CWPP information was posted on the NFS website and social media page, and a flyer was provided for posting in county and municipal offices and in popular gathering places to extend the outreach. The stakeholder list, outreach letters, and media releases appear in Appendix H.

Feedback from the outreach was incorporated into a draft document, along with background information, risk assessment, and action plan. The draft was released for a 45-day public review period. Comments were incorporated into the final document, which was then sent to the county boards for signature. Final copies were provided to county boards and emergency managers. The plan is also available online at <https://nfs.unl.edu/documents/CWPP/SouthCentralWest.pdf>.

## Overview

This section contains background information common to all counties within the CWPP region. Information specific to only certain areas is included in the individual county sections.

## Landforms, Climate and Weather

The South Central West CWPP region lies within the Mixedgrass Prairie Ecoregion. This region sits atop the Ogallala Aquifer, which underlies about 175,000 square miles in eight states from Texas to South Dakota.

Nebraska has a continental climate with cold winters and hot summers. The National Climatic Data Center reported 2012-2013 as central Nebraska's warmest, driest years on record, with some areas receiving less than half of normal rainfall. In recent decades droughts have become more severe. Extreme drought and wildfire years occurred in 1988, 1994, 2000, 2006, and 2012.

Weather data was obtained from the University of Nebraska High Plains Regional Climate Center<sup>6</sup> and Iowa State University.<sup>7</sup> Weather factors, including temperature, precipitation, humidity, and wind, define fire season, as well as fire direction and speed. There are two fire seasons in this area. The early fire season occurs from snowmelt and the last spring frost (when the previous year's cured vegetation dries) until early May, then eases as vegetation greens up. The late season begins in mid to late summer as fine fuels, such as grasses and forbs, begin to dry. In most years the late season extends to mid-November, coinciding with agriculture crop harvests, leaf drop, and curing of prairie grasses. Wet springs can delay the onset of the early season, but they produce more fine fuels in ditches and across rangelands that, in late summer and fall, become tinder for sparks that can start wildfires. In drier years fine fuels can start curing by mid- to late July, but there is less growth, and consequently fewer fine fuels to catch sparks from trains, farm equipment, or motorists.

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County	April			July			October		
	Max. Temp.	Precip.	Min. RH	Max. Temp.	Precip.	Min. RH	Max. Temp.	Precip.	Min. RH
Franklin	64.04	2.23	33	89.11	3.74	48	66.11	2.01	40
Furnas	64.64	2.18	33	89.85	3.36	44	67.09	1.95	39
Harlan	63.97	2.13	33	89.26	3.73	48	66.34	1.95	40
Kearney	63.15	2.21	35	87.98	3.65	59	65.22	2.04	40
Phelps	62.71	2.22	35	87.29	3.76	56	64.91	1.92	41

*Table 1: Average maximum temperatures (degrees F), precipitation (inches) and median minimum relative humidity (percent) 1982-2018 for April, July, and October for the South Central West CWPP counties. Relative humidity (RH) data interpolated from selected weather stations.<sup>6</sup>*

Wind is a primary factor in fire spread, even where fuels are light and/or discontinuous as it is in much of the plan area. Many areas are more than half agriculture and grass fuels. Wind rosettes for April, July, and October from four stations in or near the plan area—Hastings, Holdrege, Kearney, and McCook—are in Appendix C.

### Vegetation and Natural Communities

Native vegetation in the South Central West CWPP Region is primarily mixed-grass prairie, with riparian deciduous forests in the drainages. Eastern redcedar occurs within some of the deciduous woodlands along the rivers and their tributaries, and in some areas has encroached into the prairies. Agricultural fields occupy most of the rural areas in the region. A land cover map<sup>8</sup> appears in Appendix A.

The principal deciduous tree species are eastern cottonwood, hackberry, green ash, wild plum, box elder, and honeylocust. Most of the green ash is expected to die when the emerald ash borer, an invasive pest, moves into the region. Other woody species that are locally abundant include sand cherry, smooth sumac, and chokecherry. Riparian deciduous woodlands follow the major drainages. Most of the deciduous trees and shrubs are found in stringers and patches along the drainages with cooler, more humid environments. In general, fuel continuity in the forested areas is high.

### Land Use

There are about 1,873,280 acres (2,927 sq. mi.) in the CWPP region, which includes Franklin, Furnas, Harlan, Kearney, and Phelps Counties. Public and non-profit conservation lands include 31,020 acres in the USACE Harlan County Recreation Area; 9,955 acres in 21 USFWS Waterfowl Protection Areas; a 1-acre US Bureau of Land Management (BLM) tract; 5,714 acres in 13 NGPC Wildlife Management Areas (WMAs), two State Recreation Areas (SRAs), and a State Historical Park; a 204-acre NRD-managed site; and 5,219 acres in five non-profit conservation organization properties. Nebraska School Lands constitute approximately 27,572 acres in the region.<sup>9</sup> Other than a few county and municipal properties, the remainder of the land in these counties is privately owned.

The USACE owns and manages the 13,250-acre Harlan County Lake and an additional 17,750 acres of land surrounding the lake, which is Nebraska’s second largest. The Harlan County Dam, constructed from 1946-1952, is located on the Republican River, approximately two miles south of Republican City, eight miles east of Alma, and fourteen miles west of Franklin. The surrounding topography is gently rolling to hilly, with some steeply-sloped drainages eroding into wind deposited (loess) soils. The elevation ranges from 1,885 feet to 2,012 feet above sea level. The USACE operates the project for flood control, irrigation, natural resource management, and recreation. Harlan County Dam controls a drainage area of 7,164 square miles and is part of a network of lakes that help control flooding on the Republican, Kansas, Missouri, and Mississippi Rivers.

## South Central West Community Wildfire Protection Plan

The USACE manages the natural resources of Harlan County Lake in cooperation with the NGPC through several techniques. Some of the land has been restored to native grassland, while other areas are leased for agricultural purposes, with wildlife management being a central theme. Land management practices such as prairie restoration, prescribed burning, and tree planting help conserve soil and benefit wildlife.<sup>10</sup>

Agriculture (crops and livestock) is the predominant use on rural private and school lands. Residential, commercial, manufacturing, and industrial land uses dominate the region's 31 incorporated cities and villages and their immediate surroundings. Land use is primarily agricultural in the region's four unincorporated communities. Rural residential land use exists in conjunction with agricultural operations. According to US census data, there are 26,630 permanent residents in the five counties within the CWPP region.

All counties in the CWPP region have county zoning plans in place. There are currently no restrictions in any of the counties for new building construction in fire-prone areas.

Popular outdoor recreational activities include hunting, fishing, boating, hiking, biking, and camping at public recreation areas in the region.

The USACE operates six parks around Harlan County Lake, which offer campsites with utilities, beaches, boat ramps, fish cleaning station, and picnic grounds. Current visitation estimates suggest 720,000 people visit annually.<sup>10</sup>

Over 108,000 people visit Fort Kearny State Historical Park and Recreation Area each year.<sup>11</sup> Although no visitor numbers are available for Sandy Channel State Recreation Area and state WMAs, NGPC staff reports significant use by recreationists.

### Wildland Urban Interface

The WUI is defined as areas where homes and other structures are built on or near lands prone to wildfire. According to the "Ready, Set, Go!" program, managed by the International Association of Fire Chiefs, the WUI is not necessarily a place, but a set of conditions that can exist in nearly every community. It can be a major subdivision or it can be four homes on an open range. National Fire Protection Association literature states that conditions include, but are not limited to, the amount, type, and distribution of vegetation; the flammability of the structures in the area and their proximity to fire-prone vegetation and to other combustible structures; weather patterns and general climate conditions; topography; hydrology; average lot size; and road construction. The WUI exists in every state in the country, and in every county/community within the CWPP boundary. Site-specific WUI issues are listed in each county section of this CWPP.

### Infrastructure

Webster defines infrastructure as: "the system of public works of a country, state, or region; also: the resources (such as personnel, buildings, or equipment) required for an activity." In the CWPP region, infrastructure includes county, state, and federal roads and bridges, communications systems, the power grid, water systems, hospitals, schools, parks and fairgrounds, public administration buildings, fire halls, public officials, law enforcement officers, and fire personnel. These systems, structures and people are critical to regional functionality. One of the goals of community planning is to protect the basic physical and organizational structure of communities. This infrastructure, in turn, protects citizens.

Regional infrastructure expedites access to a fire by emergency responders, allows them to communicate with one another and the public, facilitates evacuations and support functions, and assists recovery efforts after the event. It is important for both local and out-of-area responders to know what facilities and resources are available and where they are located.

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Emergency evacuations depend on infrastructure. Immediate evacuation destinations are likely to be in areas away from the fire that have water, power, and room for gathering. Often fairgrounds and parks make good short-term destinations, as they have large parking areas, restrooms, and electricity. In a wildfire evacuation scenario, local officials will designate immediate evacuation destinations. During prolonged evacuation periods or when homes or access routes have been destroyed, longer range planning is needed.

The Participant Profiles sections of regional HMPs identify specific sheltering locations, which are primarily the mass care facilities identified in the county LEOs. The Department of Homeland Security's website <https://www.ready.gov/evacuating-yourself-and-your-family> also offers some ideas.

The CWPP region is crossed by several high tension power lines. Rural electric service in the counties is provided by the Nebraska Public Power District, the Southern Power District, and Twin Valleys. Both cellular and landline telephone services are available region-wide. Cellular reception is spotty in some parts of Franklin, Furnas, and Harlan Counties.

### Hazardous Fuels Reduction

Hazardous fuels reduction is key to decreasing risks to human life and damage to property. In terms of wildfire, hazardous fuels include any kind of living or dead vegetation that is flammable. Implementation of hazardous fuels reduction projects reduces fuels that feed wildfires, resulting in less extreme fire behavior and intensity. Fire behavior reductions include reduced rates of spread and shorter flame lengths. Fuels treatment can be accomplished via several approaches, including forest thinning, fuelbreak and firebreak establishment, prescribed fire, prescribed grazing, and implementing Firewise® practices around structures.

The NFS, NGPC, and NRCS offer cost share programs to help private landowners mechanically reduce hazardous woody fuels on their properties. During the last five years, NRCS staff in Alma reported cost share projects used mechanical means to treat vegetation on 17,000 acres in Franklin, Furnas, and Harlan Counties. The NGPC Parks Division annually hays most of the undeveloped portion of the Fort Kearny SRA, about 23 acres. Information is not available for the NGPC WMAs. The USACE has hayed 3,750 acres since 2016. During that time frame, The Twin Valley Weed Management Area facilitated removing undesirable woody vegetation on 10,519 acres in Franklin, Furnas, and Harlan Counties via their cost-share program. This CWPP enables the NFS to offer cost share for mechanical fuels reduction in counties that adopt it. Fuels reduction is discussed in detail in the Action Plan section of this document.

### Prescribed Fire and Prescribed Burn Associations

In recent years, prescribed fire has increased as a method of keeping woody encroachment in check, particularly in grasslands, where it can be extremely efficient for managing eastern redcedar. In forested settings where eastern redcedar is present, prescribed fire is more effective and safer when used to maintain woodlands after they have been mechanically thinned. When tree densities are reduced prior to burning, it is easier to keep the fire on the ground, where it cleans up downed woody fuels. Crown fires are difficult to control, and they kill healthy trees.

Prescribed fire practitioners include individual landowners, groups of landowners in organized prescribed burn associations, non-profit organizations, and public agencies. The South Central Nebraska Prescribed Burn Association operates in Harlan, Franklin, and Webster Counties. The USACE, USFWS, NGPC, and many conservation organizations use prescribed fire as an effective land management tool on federal, state, and non-profit lands.

The USACE typically uses prescribed fire from the end of March to the end of April to reduce thatch, control eastern red cedars, and reduce woody shrubs in warm season grasslands. They either perform the burns themselves or hire local volunteer fire departments to complete the burns. They install a dual firebreak that

# South Central West Community Wildfire Protection Plan

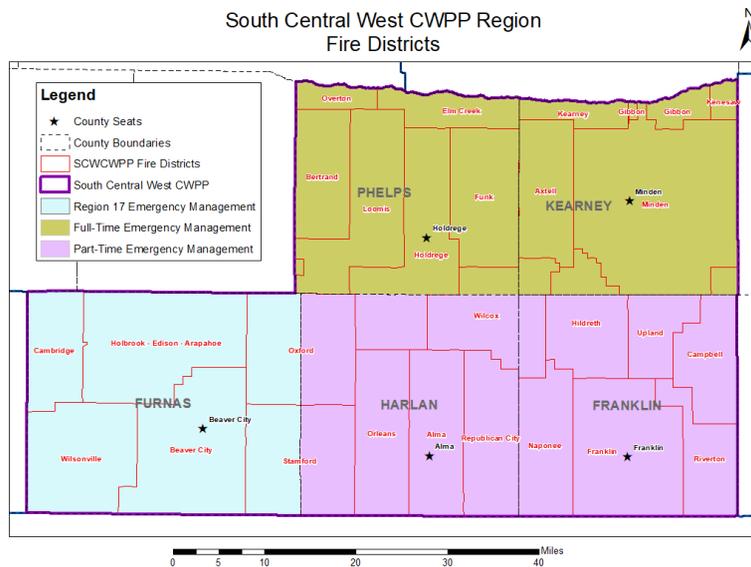
consists of a mowed/hayed line approximately 25' wide followed by a tilled line approximately 10' wide. Each prescribed fire requires a burn plan, risk hazard analysis, and post burn report. In addition, they prepare a position hazard analysis and activity hazard analysis for each prescribed fire.

During the last five years, NRCS staff in Alma reported cost share projects using prescribed fire to treat vegetation on 2,300 acres in Franklin, Furnas, and Harlan Counties. The USACE conducted prescribed fire on 1,500 acres at the Harlan County Recreation Area. The Twin Valley Weed Management Area used prescribed fire to treat 658 acres in Franklin, Furnas, and Harlan Counties. The Tri-Basin NRD reported that a 120-acre prescribed burn was conducted in Phelps County in 2015. The Pheasants Forever Prescribed Fire Coordinating Wildlife Biologist stated that their organization facilitated both prescribed fire and mechanical treatment in the CWPP region over the past five years, but acreage numbers are not available. The NGPC Parks Division does not conduct prescribed fire on their land in this region. Information is not available for the NGPC WMAs.

## Fire Districts and Emergency Management

There are 27 fire districts (29 volunteer fire departments) all or partially within the CWPP boundary. These are shown on Map 4. Reported fires by district are summarized in Table 3.

Each fire department was asked to provide current contact information, equipment lists, and a summary of their wildfire issues and concerns. The responses received appear in Appendix F.



Map 4: Fire Districts all or partly within the South Central West CWPP Region.

## Wildfire Hazard: History and Impacts

### Historic Role of Fire

Prior to European settlement, large fires (started by lightning or intentionally as management activities by indigenous people) were common, and these fires kept the prairies free of most woody vegetation, except along the rivers and streams. Table 3 shows the wooded draws and ravines experience a mean replacement fire interval of 45 years, while the mean replacement fire interval for floodplain forests was 500 years (*note: the flooding-caused replacement interval for these forests may be more frequent*). The prairies in the region may have experienced a replacement fire interval of five to fifteen years prior to Euro-American influence. However, since settlement, people have become increasingly adept at suppressing wildfire. Without fire, over time, forests became densely overcrowded and woody vegetation encroaches on prairies.

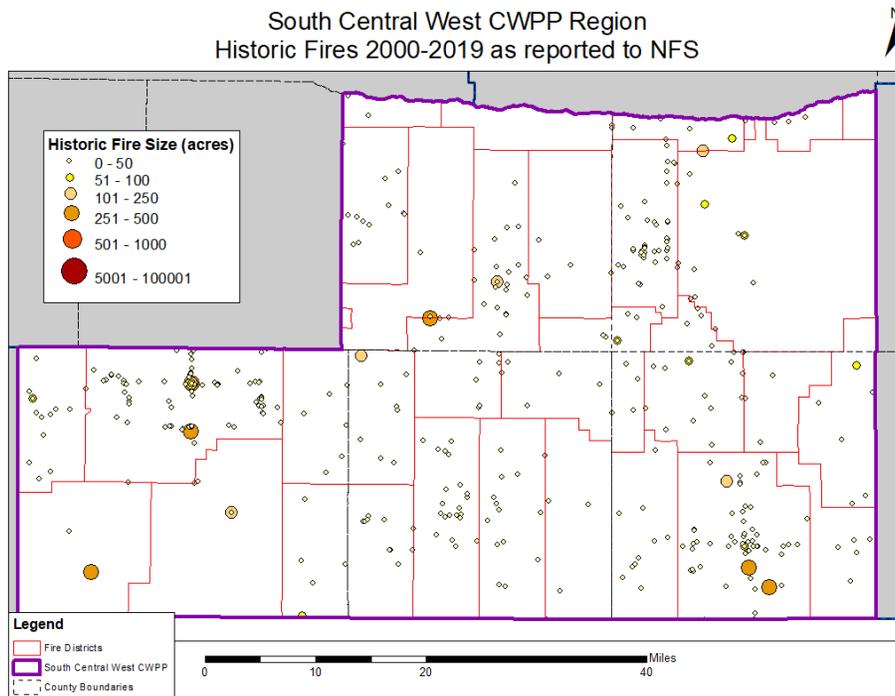
# South Central West Community Wildfire Protection Plan

Vegetation Community	Fire Severity	Fire Regime Characteristics			
		% of Fires	Mean Interval (years)	Min. Interval (years)	Maximum Interval (years)
Northern Great Plains wooded draws/ravines	Replacement	38	45	30	100
	Mixed	18	94		
	Surface or Low	43	40		
Great Plains floodplain	Replacement	100	500		
Northern Mixed-grass Prairie	Replacement	67	15	8	25
	Mixed	33	30	15	35
Central Tallgrass Prairie	Replacement	75	5	3	5
	Mixed	11	34	1	100
	Surface or Low	13	28	1	50

Table 2: Fire intervals for the South Central West CWPP vegetation communities.<sup>12</sup>

## Local Fire History

Nebraska is no stranger to extremely large fires. In 1865 the US Army and ranchers intentionally set a 300 mile wide prairie fire during a dispute with Native Americans. The fire blackened the entire section of Nebraska south of the Platte River and west of Fort Kearny. It was visible from Colorado and Kansas, and eventually burned all the way to Texas. In the CWPP area, wildfires exceeding 100 acres in size have occurred in all of the counties, and fires larger than 300 acres have occurred in all but Harlan County. The largest reported to the NFS was a 640 acre fire in the Kearney Fire District in March, 2009. Map 5 shows the locations of some of the larger fires reported in the CWPP area since 2000. In 2012, fire departments from across the state, including some in the CWPP region, provided support for major wildfires that burned nearly half a million acres in the Pine Ridge and the Niobrara Valley areas of Nebraska. As observed that year, and evidenced in historical research, rivers are not always a barrier to fire spread.<sup>12</sup>



Map 5: Some of the larger fires reported in the CWPP area since 2000 are shown in the map above. Departments reported 18 fires greater than 100 acres that burned over 4,300 acres.

## South Central West Community Wildfire Protection Plan

Some fire districts voluntarily report their annual fire response data to the NFS. Table 3 shows the fire data reported by fire departments from 2000 through November, 2020.<sup>13</sup> Because the fire districts vary in their level of reporting, there is no accurate, comprehensive fire history available for the CWPP area.

Fires Reported 2000-2019							
Department	# Fires Human	# Acres Human	# Fires Lightning	# Acres Lightning	Total # Fires	Total # Acres	Mutual Aid Responses
Alma	25	101	3	30	28	131	2
Arapaho-Edison-Holbrook	142	1,722	10	66	152	1,788	155
Axtell	67	63	1	1	68	63	21
Beaver City	25	346	0	0	25	346	0
Bertrand	36	323	5	43	41	366	8
Cambridge	31	240	1	2	32	242	14
Campbell	11	185	3	101	14	286	1
Elm Creek	14	46	0	0	14	46	2
Franklin	99	1,362	2	12	101	1,374	17
Funk	10	13	0	0	10	13	0
Gibbon	91	240	0	0	91	240	2
Hildreth	48	336	3	8	51	344	15
Holdrege	46	571	0	0	46	571	11
Kearney	273	3,030	3	1	276	3,031	11
Kennesaw	25	194	0	0	25	194	8
Loomis	10	46	2	1	12	47	0
Minden	38	496	1	1	39	497	3
Naponee	20	203	1	1	21	204	14
Orleans	19	163	2	5	21	169	18
Overton	26	598	1	1	27	599	4
Oxford	63	283	1	1	64	284	19
Republican City	3	36	1	5	4	41	0
Riverton	18	54	0	0	18	54	2
Stamford	42	191	3	62	45	253	2
Upland	9	10	0	0	9	10	3
Wilcox	24	184	0	0	24	184	6
Wilsonville-Hendley	9	36	0	0	9	36	1
<b>Total</b>	<b>1,224</b>	<b>11,072</b>	<b>43</b>	<b>340</b>	<b>1,267</b>	<b>11,412</b>	<b>339</b>

*Table 3: Fires reported by South Central West CWPP fire departments from 2000 through November, 2020. Departments reported a total of 46,197 volunteer hours for this period. Only departments that reported are listed. Some departments did not report every year. Actual numbers are higher.*

### Fire Hazard

In the years since European settlement, exclusion of low-intensity ground fires and prolific regeneration of eastern redcedar have increased the fire hazard in both prairies and woodlands. During most years the majority of wildfires are small and do not burn with high intensity because of rain or quick suppression. However, in some years medium-sized and large fires occur and burn with high intensity and extreme fire behavior, posing a threat to rural homes. Often the fires are wind-driven from the southwest or northwest and can burn at a rapid rate. This situation challenges fire suppression personnel and agency managers to remain vigilant while monitoring the fire danger ratings and indices. Fuel continuity in the forested areas and in some of the open grasslands in this region is very high to extreme.

## South Central West Community Wildfire Protection Plan

Planning team members and local fire departments identified specific “Areas of Concern” for wildfire response in each county in the CWPP region. These locations include the edges of municipalities and wooded areas along rivers and creeks where there are homes and other structures. Some of these areas experience heavy seasonal visitor use, have limited access and/or water availability, are high-risk ignition sources due to dense undergrowth, and they often experience dry weather conditions conducive to fire ignition from lightning and hot farm machinery. The team underscored the importance of addressing fuel load reduction in community mitigation plans. The Areas of Concern are described in each community-specific section of the CWPP. See Appendix A for maps.

### *Fuel Moisture*

Dead fuels are classified according to how fast they gain and lose moisture. They are categorized into 1, 10, 100, and 1,000-hour fuel size classes.<sup>14</sup> The larger the fuel, the longer it takes for the weather to affect it. Large branches (100-hour fuels) will take much longer to dry out than dead fine fuels such as grass (1-hour fuels). Once 100 and 1,000 hour fuels become dry, it also takes a long time for them to regain moisture from wetter weather. See Appendix D for more information on fuel models.

A statewide map of local mitigation planning areas is included in Appendix A. Phelps and Kearney Counties are in the Tri-Basin NRD planning area; Harlan, Franklin, and Furnas Counties are in the Quad Counties planning area. Each of the planning units has its own Multi-Jurisdictional HMP that includes a discussion of wildfire hazard. Appendix B contains links to these plans. This CWPP builds on these plans to address specific wildfire concerns.

### *Fuel Models*

NFS fire staff identified the following grass-shrub fuel models<sup>15</sup> as the most prevalent within the CWPP region:

- GS2 Moderate Load, Dry Climate: Shrubs are 1 to 3 feet high, grass load is moderate. Spread rate is high; flame length moderate. Moisture of extinction is low.
- GS3 Moderate Load, Humid Climate: Moderate grass/shrub load, average grass/shrub depth less than 2 feet. Spread rate is high; flame length moderate. Moisture of extinction is high.
- GS4 High Load, Humid Climate: Heavy grass/shrub load, depth greater than 2 feet. Spread rate high; flame length very high. Moisture of extinction is high.

Full descriptions of these fuel models appear in Appendix D.

## **Economic Impacts**

Excessive fuel loading can affect local economies in many ways. It reduces available forage, and therefore the grazing carrying capacity, for livestock and wildlife. If woody fuels are removed by uncontrolled, high intensity wildfire, other resources are affected. Intense fires may induce hydrophobic soils, which significantly increase runoff and erosion in steep terrain. Loss of grazing capacity and decreased water quality can be long-lasting problems for landowners whose livelihoods depend on livestock and/or hunting income.

A proactive approach to reducing hazardous fuels can provide jobs and generate valuable wood products such as lumber, posts, and biomass. Mechanically thinning forests reduces the hazard and risk of intense wildfire, can improve grazing capacity and wildlife habitat, and can increase the amount of precipitation that reaches streams, lakes, and the water table. Adherence to the *Forestry Best Management Practices for Nebraska* (<https://nfs.unl.edu/documents/ruralforestry/NebraskaBMP.pdf>) by those conducting mechanical thinning operations can reduce the potential for soil erosion from equipment use.

# South Central West Community Wildfire Protection Plan

## Emergency Operations

### Responsibilities and Mutual Aid Agreements

Volunteer fire departments are the first line of defense against wildfires on private and state lands in this planning area and statewide. During large wildfires, they rely on mutual aid agreements with neighboring jurisdictions. The 29 fire departments in the CWPP area belong to one or more of the nine mutual aid (MA) associations that overlap the region: Central Nebraska Volunteer Fire Association, South Central Nebraska MA, Buffalo County MA, Quad Cities MA, Hastings Area MA, Platte Valley MA, Phelps County MA, Stateline MA, and Tri-Valley MA. See Appendix E for a complete list of mutual aid associations and member fire departments.

Four of the five CWPP Counties have their own full or part time emergency manager. Furnas County is part of Nebraska's Region 17 Emergency Management Area. Map 4 shows the CWPP's Local Emergency Management Areas.

In addition to notification by Sheriff's Department personnel and/or dispatch, emergency management areas have notification from "Code Red" that allows them to develop groups that can be called in an emergency situation for notification of evacuations, hazardous material incidents, and any other emergency notification, including wildfire. This allows notification of a large geographical area or a group of people. This is an 'opt-in' program which can be used to notify residents in the area of wildfire events, but would likely not reach all members.

The state introduced the Salamander identification card check-in system for emergency response personnel and equipment prior to the 2012 wildfires. This identification and credentialing system allows first responders (agencies, personnel, and equipment) to more efficiently respond to incidents. It streamlines the incident check-in process and tracks time spent on an incident for both personnel and equipment. The cards use bar codes that identify equipment, people and their qualifications, and can track volunteers.

The Mobile Express program is used to track an incident. The Rapid Tag program helps track volunteers. A volunteer's driver's license is swiped and the data used to print an identification card which is then used by Mobile Express to track the volunteer. The program can also be used to generate a printed "Battle Book" that lists equipment (with picture, description, and identification card) and personnel so that first responders can check into an incident via radio without having to physically check in. Training for this system is ongoing statewide.

### Staging Areas and Safety Zones

The forested drainages in the CWPP region are separated by expanses of grasslands and farm ground. There are abundant staging area locations in the uplands away from the drainages. Grazed pastures, green alfalfa fields, and fallow farmland can provide staging areas away from forested areas. Fairgrounds and city parks are generally good staging areas, depending on the particular location of a wildfire. Safety zone sites are designated by fire officials and will depend upon the wildfire location and characteristics.

### Roads/Bridges

In addition to the federal and state highways, the region is served by a network of county-maintained roads. Farm and ranch trails provide additional access for emergency vehicles. Restricted bridges and roads which could restrict truck/lowboy passage have not been mapped. Developing such a map has been identified as a need that should be addressed (see *Action Plan* section).

### Communications

Some radio compatibility issues in Nebraska were addressed after the 2012 wildfire season. Location-specific information about communications is listed in each county section of this CWPP for those entities that

## South Central West Community Wildfire Protection Plan

responded to requests for information. Gaps in cellular service exist across a few parts of Franklin, Furnas, and Harlan Counties, particularly in steeper drainages.

### Capabilities and Capacity

Resources to support emergency responder safety and help fire departments prepare for and respond to fire, natural disasters and non-fire emergencies can include vehicles, equipment, air support, and personnel. The resources described in this section are available to Volunteer Fire Departments (VFDs) in Nebraska.

#### *Vehicles and Equipment*

A listing of apparatus and staffing for each fire district is included in Appendix F. Through the Federal Excess Property Program (FEPP) and Fire Fighter Property (FFP) program, a cooperative effort with the U.S. Forest Service, the NFS acquires and reconditions excess equipment which is no longer needed by the federal government. This equipment is then loaned to rural fire districts, which are responsible for maintenance. When no longer needed, the equipment is returned to the NFS and either re-assigned or sold, with the proceeds being returned to the US Treasury or state program. In 2020 there were 894 pieces of FEPP equipment in use by 299 rural fire districts and emergency management agencies across Nebraska, valued at \$96,049,400. In this CWPP Region, there are 49 pieces of FEPP equipment, valued at \$6,017,100 and housed at 15 fire districts.

These programs allow fire districts to obtain essential fire-fighting equipment at an affordable price. The NFS Fire Shop can also provide cooperating fire districts resources to reduce vehicle maintenance costs. This includes securing parts for vehicles and providing complimentary maintenance checks. Mechanics can also provide routine vehicle maintenance at the NFS Fire Shop in Mead or fire districts may use a trusted local mechanic. Two NFS mobile repair units are available to respond to the maintenance needs of cooperating fire districts. These units can provide routine repairs, as well as on-site support for cooperating districts in the event of catastrophic fires.

#### *Aerial Resources*

The Wildfire Control Act of 2013 enabled the establishment of Single Engine Air Tanker (SEAT) bases in Nebraska. The SEAT provides critical observation and access for remote areas. Tanker support is vital for locations away from towns and for wildfires located in difficult terrain or spreading quickly. Having a SEAT dedicated strictly to wildfire suppression provides nearby resources for quick initial attack on small fires, keeping them from growing into large catastrophic wildfires.

Permanent (Type 1) SEAT bases enhance fire aviation and initial attack capabilities. SEAT bases are staffed by NFS personnel during the fire season, working with a SEAT on contract to Nebraska through its partners at NEMA. During peak wildfire season (generally July 15-September 15) the state of Nebraska hires a SEAT for at least a 60 day contract period. NEMA pays for the aircraft's daily rate, and flight time is paid out of the Governor's Emergency fund. NFS provides the SEAT Manager who directs the entire operation. It is an interagency effort managed by NFS and paid for by NEMA.

Of the five permanent SEAT bases in Nebraska, McCook's is the closest to this CWPP Region. The other bases are located in Alliance, Chadron, Scottsbluff, and Valentine. In addition, NFS has a mobile SEAT base to support operations at airports without a permanent base. Each base houses LC 95 retardant.

Prior to the onset of fire season, the Wildfire Advisory Group assesses wildfire risk throughout the state. This committee consists of representatives from the NFS, State Fire Marshal's Office, NEMA, US Forest Service (USFS), and Great Plains Dispatch. They have two in-person meetings per year plus weekly conference calls to discuss wildfire operations, fuel conditions, and resources. The group recommends to NEMA which SEAT base is the best location to station the SEAT plane, and when and for how long the SEAT will be contracted.

## South Central West Community Wildfire Protection Plan

The state has a long history of utilizing agricultural aerial applicators for fire suppression. These are an important resource because they are available year around; not just during the peak fire season. Aerial applicators sign up yearly to be part of this program, but are not “on call” for wildfire response. Any fire chief who decides one is needed can simply call directly to see if the applicator is available. These aircraft can only carry loads of water or foam, not the preferred and more effective retardant product. Their availability may be limited due to the pilot not being present or out spraying fields. These pilots and the aircraft are not federally “carded” to fly missions on federal land, so they cannot be utilized on USFWS fires.

The NFS *Yellow Book* (link in Appendix J) contains detailed information about aerial resources, including:

- Contact information for state, federal and private agencies that have emergency suppression resources or can provide technical expertise in the suppression of wildfires
- Aerial Applicator and Foam Retardant Directory
- Deployment procedures and forms needed to order a SEAT
- Map of cooperating aerial applicators and SEAT base locations

### *Overhead Teams*

In major wildfire situations, overhead teams can be called in to help VFDs. State assistance starts with a Wildfire Incident Response Assistance Team (WIRAT) response. This team is comprised of State Fire Marshals and the NFS. When an Incident Commander (IC) orders the team, the four closest members will respond and assist. This could include scouting the fire, ordering additional resources, establishing a communication plan, operations, communicating with aircraft, or reloading aircraft. The team does not take over responsibility for the fire. Once a state disaster is declared by NEMA and the governor, a state-level All Hazard Type 3 Team can respond. At this point the fire is beyond the capabilities of the local IC. The team either takes control of the fire or shares the responsibility with the local IC. If the fire grows beyond their capabilities, then the Federal Emergency Management Agency (FEMA) and a Type 1 or 2 team become involved.

## Training

The NFS, Nebraska State Fire Marshal’s Office, and NEMA provide wildland fire training through classes in communities across the state, as well as mutual aid schools and State Fire School attended by thousands of people each year.

In addition, the NFS sponsors the Nebraska Wildland Fire Academy, held annually in April at Fort Robinson State Park. Launched as an interagency effort by the NFS and the USFS, the Academy provides opportunities for Nebraska volunteer firefighters to attend nationally-recognized wildland fire and incident management training at little or no cost, on a schedule that doesn’t require them to be away from home more than what is already required by their volunteer efforts. It utilizes the expertise of local, state, and federal firefighters to ensure the fire training needs of Nebraska and the surrounding region are met. It also enables local volunteers to enter the national red card system and develop certifications that are recognized across the nation.

Classes cover a variety of topics ranging from beginning to advanced firefighting techniques, Firewise® landscaping and construction, leadership, and fire prevention education. The classes offer flexibility and can be fine-tuned to meet the needs of local fire departments. NFS delivered and sponsored 2,133 course hours in 2020. Wildland fire instructors are based in Ainsworth, Chadron, and Lincoln.

# South Central West Community Wildfire Protection Plan

## Community-Specific Considerations

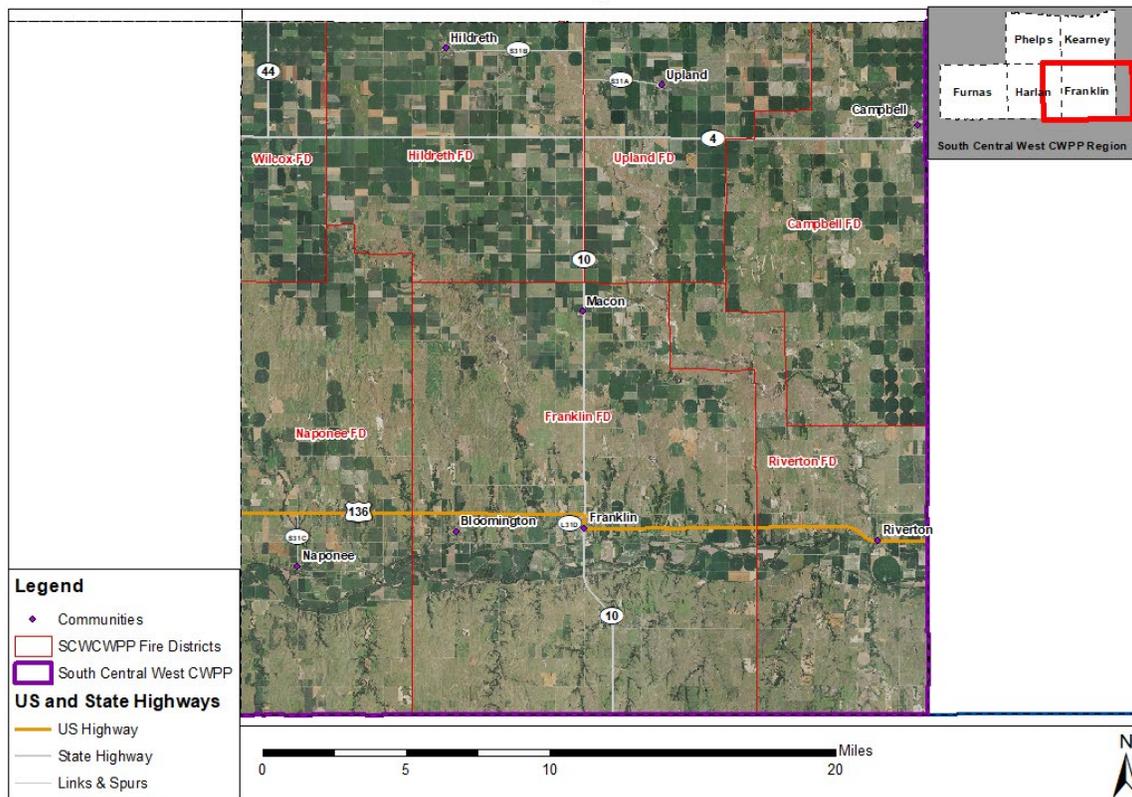
Topics pertinent to the entire CWPP region appear in the overview portion of this plan. For planning purposes, each county is considered a community. This part of the document contains elements specific to each county/ community. Each community section consists of a “Community Profile” (description and fire hazard) and “Infrastructure and Protection Capabilities” (fire districts, emergency operations, water sources, utilities, roads and bridges, and greatest concerns listed by fire departments). The HMPs contain complete critical infrastructure lists; therefore, these community sections include only a reference to the HMP link in Appendix B. Critical facilities are determined based on the discretion of the jurisdiction.

### FRANKLIN COUNTY

576 sq. miles

2018 population: 3,023

South Central West CWPP Region  
Franklin County Overview



### Community Profile

Franklin County lies in the southeast corner of the CWPP region. It is bounded on the west by Harlan County, on the north by Kearney County, on the east by Webster County, and on the south by Kansas. Incorporated municipalities include the county seat of Franklin (pop. 994), Bloomington (pop. 98), Campbell (pop. 307), Hildreth (pop. 354), Naponee (pop. 100), Riverton (pop. 855), and Upland (pop. 134). Macon (no pop. data available) is an unincorporated community.

Federal lands within the county include 1,954 acres in four USFWS Waterfowl Protection Areas and a one-acre BLM tract. State lands include 869 acres in three NGPC WMAs, and approximately 5,813 acres in school lands. Non-profit conservation lands include 122 acres in one Ducks Unlimited tract.

## South Central West Community Wildfire Protection Plan

Most of the county lies within the Loess mixed-prairie vegetation zone. A strip of lowland tallgrass prairie with riparian deciduous forests follows the Republican River. A few areas of upland deciduous forest are located in the southeast part of the county, south of the Republican River. Agriculture crop fields cover much of the north half of the county and the Republican River corridor. Grazing lands occupy most of the rest of the county. The Republican River crosses the south part of the county, and the Little Blue River cuts across the northeast corner. Most of the county's woodlands are located along the rivers and their tributaries.

The WUI areas most at-risk from wildfire are the lands surrounding municipalities and recreational and residential areas along the rivers where there are heavy fuels and limited access. The Hildreth VFD named the south end of their district as an area of concern, due to hills, valleys, and canyons with limited entrances. NRCS staff from Alma noted that cedars encroaching under cottonwoods along the Republican River and other streams could eventually cause an issue during dry years, due to heavy fuels and difficult access. The Upland VFD identified Thompson Creek as of particular concern due to multiple structures, difficult access, rough terrain, one way in/out, and lack of water within effective distance. The Campbell VFD named commercial sites on the south edge of town as having issues of multiple structures, heavy fuels, and lack of water within effective distance. One has a single way in and out. Areas of concern in Franklin County were identified by steering committee members, fire chiefs, or in the statewide Priority Lands analysis; a map is included in Appendix A. All of Franklin County lies within the boundaries of the WUI as defined in the introduction to this CWPP.

### Infrastructure and Protection Capabilities

#### *Fire Districts and Emergency Management Area*

Fire districts all or partly within Franklin County include Campbell, Franklin, Hildreth, Naponee, Riverton, Upland, and Wilcox. The county has a part-time emergency management director.

#### *Water Sources*

Most communities have municipal water systems. Farms and ranches are on wells. The Republican and Little Blue Rivers and their larger tributaries are reliable water sources. The Franklin and Naponee irrigation canals follow the north and south sides of the Republican River, respectively. Windmills can provide water when they are operational. Ponds and stock tanks are located on farms and ranches throughout the county. During drought conditions some of the ponds may not be reliable water sources.

#### *Utilities/Phone Service*

The Southern Power District provides electric service. Both cellular and landline telephone services are available in the county.

#### *Roads and Bridges*

The Campbell VFD expressed concern about some county road bridges being unable to support tankers. The regional Hazard Mitigation Plan contains complete critical infrastructure lists; see HMP link in Appendix B.

#### *Greatest Concerns*

The fire departments were asked to list their greatest concerns for their district, shown in the table below:

Department	Greatest Concerns
Campbell	Getting to water quickly in rural areas; having enough EMTs & personnel to operate the trucks
Franklin	(survey not returned)
Hildreth	None indicated
Naponee	(survey not returned)
Riverton	(survey not returned)
Upland	Personnel and equipment
Wilcox	Manpower and water resources

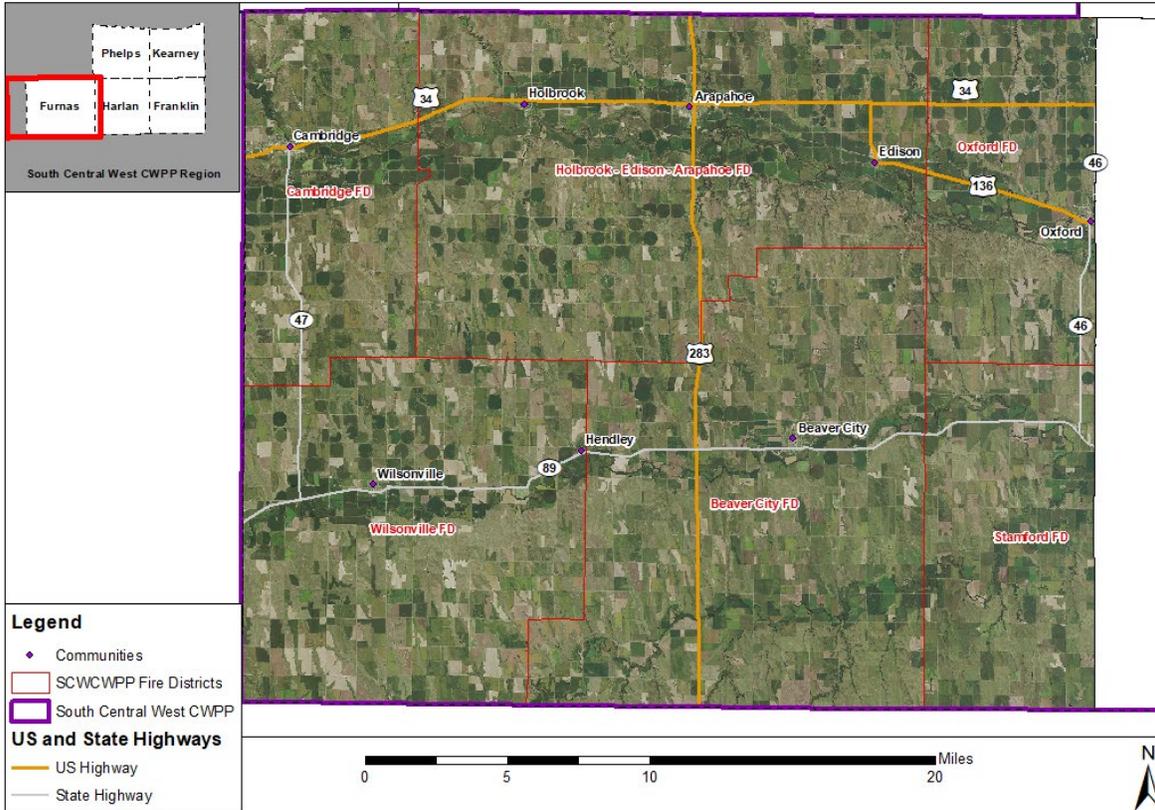
# South Central West Community Wildfire Protection Plan

## FURNAS COUNTY

721 sq. miles

2018 population: 4,715

### South Central West CWPP Region Furnas County Overview



### Community Profile

Furnas County lies in the southwest corner of the CWPP region. It is bounded on the west by Red Willow County, on the north by Frontier and Gosper Counties, on the east by Harlan County and on the south by Kansas. Incorporated municipalities include the county seat of Beaver City (pop. 573), Arapahoe (pop. 976), Cambridge (pop. 1,026), Edison (pop. 125), Hendley (pop. 23), Holbrook (pop. 196), Oxford (pop. 740), and Wilsonville (pop. 88). There are no unincorporated communities in the county.

The majority of the county lies within the Loess mixed-grass prairie vegetation zone. Strip of lowland tallgrass prairie with riparian deciduous forests follow the Republican River, Beaver Creek, and Sappa Creek. Agriculture crop fields, hayland, and grazing lands cover much of the county. The Republican River crosses the northern part of the county. Most of the county's woodlands are located along the river and its tributaries. There are no federal lands within Furnas County. State lands include 1,426 acres in three NGPC WMAs and approximately 12,371 acres in school lands.

The lands most at-risk from wildfire are along the Republican River in the northern portion of the county and along several creek drainages in the southern parts of the county, where topography is rough and woody fuels are dense in some areas, creating high fire hazard. Beaver City Rural Fire listed exterior rural residential areas with rough terrain, heavy fuels, and lack of water within effective distance as areas of primary concern in their district. The Edison VFD noted that areas with difficult access, rough terrain, and heavy fuels can be problematic. The Holbrook fire chief identified the northwest sections of fire district as being the most at risk. It contains grassland and trees, and is rough, with few access points. Water refill points are few and a distance away. The

## South Central West Community Wildfire Protection Plan

Oxford fire chief said there is limited access to southern half of the district due to lack of bridges. The Stamford VFD said that areas with rough terrain and lack of water within effective distance present concerns. The Wilsonville/Hendley VFD has concerns with the southeast part of the district, where there is rough ground and a lack of water. NRCS staff from the Alma office noted that cedars encroaching under cottonwoods along the Republican River and other streams could eventually cause an issue during dry years, due to heavy fuels and difficult access. In 2019, the Cambridge VFD listed the following areas of concern: the ethanol plant at the south-east edge of Cambridge; the southwest corner of T4N R25W; Harry Strunk Lake housing areas and trails; and the east side of Cambridge with new housing development, hotel, truck stop, and fueling station. Areas of Concern identified by steering committee members, fire chiefs, or in the statewide Priority Lands analysis are shown in Appendix A. All of Furnas County lies within the WUI boundary as defined in the introduction to this CWPP.

### Protection Capabilities and Infrastructure

#### *Fire Districts and Emergency Management Area*

Fire districts all or partly within Furnas County include Beaver City, Cambridge, Holbrook-Edison-Arapahoe, Oxford, Stamford, and Wilsonville. The county is part of the Region 17 Emergency Management Area.

#### *Water Sources*

Most communities have municipal water systems. Farms and ranches are on wells. The Republican River and its larger tributaries are generally reliable water sources. The Cambridge irrigation canal runs along the north side of the Republican River from Cambridge to Oxford, exiting into Harlan County. The Red Willow irrigation canal, also on the north side of the river, enters the county from Red Willow County and ends near Cambridge. The Bartley canal enters from Red Willow County and follows the south side of the river, ending south of Holbrook. Windmills can provide water when they are operational. There are small ponds and stock tanks on farms and ranches throughout the county. During drought conditions many ponds may not be reliable water sources.

#### *Utilities/Phone Service*

Electric service is provided by the Twin Valleys and Nebraska Public Power Districts. Both cellular and landline telephone services are available in the county.

#### *Roads and Bridges*

The Stamford VFD noted that in their rural district, minimum maintenance roads can be an issue. In 2019, the Cambridge VFD reported that bridges in the Roads 411 and 728 vicinity and Road 731 (crossing Deer Creek) will not support the weight of some equipment. The Oxford VFD has limited access to the southern half of their district due to a lack of bridges. The regional HMP contains critical infrastructure lists; see link in Appendix B.

#### *Other*

The Stamford fire department has an aerial applicator who is on the department and uses his plane when available and needed.

#### *Greatest Concerns*

The fire departments were asked to list their greatest concerns for their district, shown in the table below:

<b>Department</b>	<b>Greatest Concerns</b>
Arapaho	(survey not returned)
Beaver City	Lack of water
Cambridge	Communication; incident command staging (reported in 2019)
Edison	Manpower
Holbrook	Personnel and water
Oxford	Rural water supply
Stamford	Rural water supply, proper wildland gear and equipment
Wilsonville-Hendley	Water supply

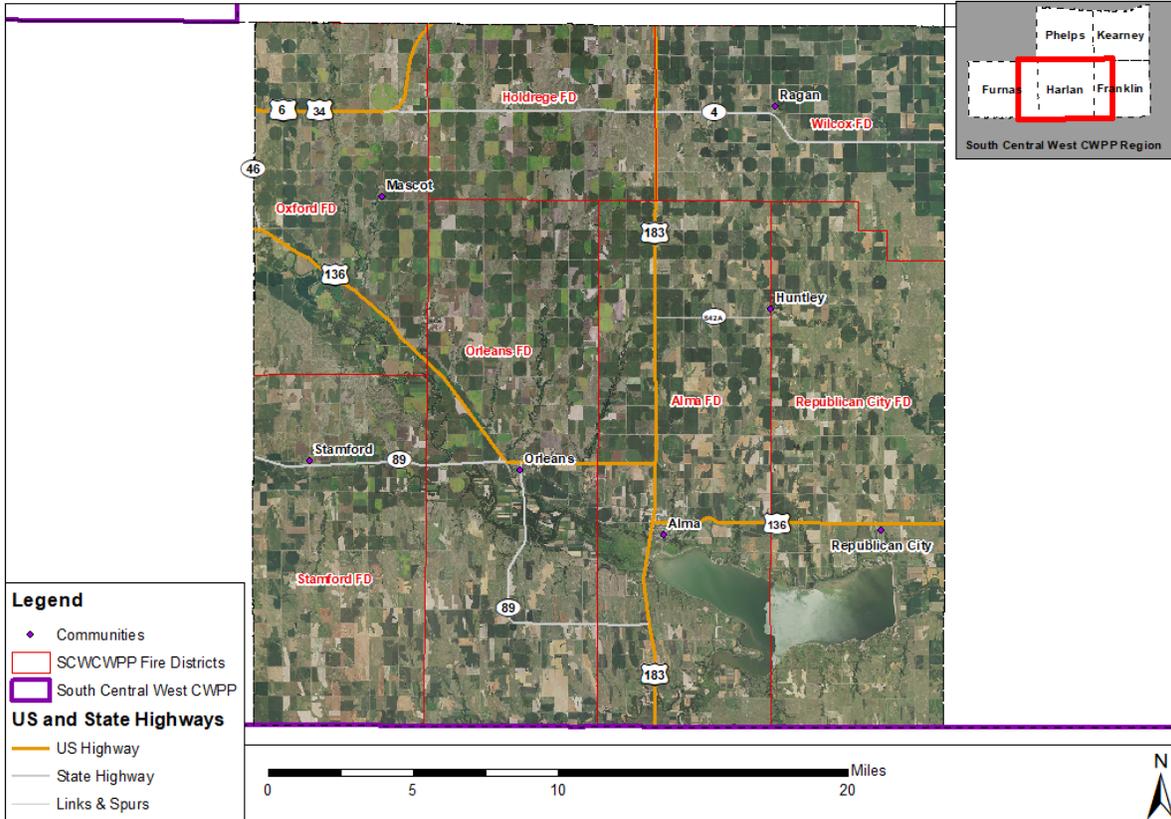
# South Central West Community Wildfire Protection Plan

## HARLAN COUNTY

574 sq. miles

2018 population: 3,401

### South Central West CWPP Region Harlan County Overview



### Community Profile

Harlan County lies on the south central edge of the CWPP region. It is bounded on the west by Furnas County, on the north by Phelps County, on the east by Franklin County, and on the south by Kansas. Incorporated communities include the county seat of Alma (pop. 1,130), Huntley (pop. 44), Orleans (pop. 376), Ragan (pop. 38), Republican City (pop. 155), and Stamford (pop. 183). Mascot is an unincorporated community (no pop. data available). The 31,020-acre Harlan County Recreation Area is the only federal land in the county. State lands include 380 acres in three NGPC WMAs and approximately 4,454 acres in school lands.

Most of the county lies within the Loess mixed-prairie vegetation zone. Strips of lowland tallgrass prairie with riparian deciduous forests follow the Republican River and Sappa Creek. Agriculture crop fields and grazing lands cover much of the county. The Republican River enters the northwest part of the county from Furnas County and runs southeast into Franklin County. Most of the county's woodlands are located along the rivers and their tributaries.

Locations of special concern include population centers adjacent to wildlands where topography is rough and woody fuels are dense in some areas, creating high fire hazard. The areas most at-risk from wildfire are located along the river and major creeks. The Oxford fire chief noted that there is limited access to southern half of the district due to lack of bridges. The Stamford VFD said that areas with rough terrain and lack of water within effective distance present concerns. NRCS staff from the Alma office noted that cedars encroaching under cottonwoods along the Republican River and other streams could eventually cause an issue during dry years, due to heavy fuels and difficult access. The Harlan County Emergency Manager and the Alma and Republican

## South Central West Community Wildfire Protection Plan

City VFDs described a grassland area approximately 8 miles long and 5 miles wide in the Prairie Dog and Republican City Townships south of Harlan County Reservoir as having difficult access, rough terrain, heavy fuels, and a lack of water within effective distance. The Republican City fire chief noted specifically an area west of Patterson Harbor with these issues, plus multiple structures and one way in and out. The USACE reported that they have not identified specific areas of concern in the Harlan County Recreation Area. However, they do address public management to reduce risk of wildlife by placing signage prior to upland bird season and rifle deer season to keep vehicles off of warm-season grass strips and they actively patrol the natural resource areas during those hunting seasons and strictly enforce those rules. Areas of Concern identified by steering committee members, fire chiefs, or in the statewide Priority Lands analysis are shown in Appendix A. All of Harlan County's population centers, dispersed farms and ranches, and wooded areas along the rivers and streams lie within the boundaries of the WUI as defined in the introduction to this CWPP.

### Protection Capabilities and Infrastructure

#### *Fire Districts and Emergency Management Area*

The Alma, Holdrege, Orleans, Oxford, Republican City, Stamford, and Wilcox Fire Districts lie all or partly within Harlan County. The county has a part-time emergency management director.

#### *Water Sources*

Most communities have municipal water systems. Farms and ranches are on wells. The Republican River and its larger tributaries are generally reliable water sources. The Cambridge irrigation canal enters the county from Furnas County near Oxford, and runs along the north side of the river, ending west of Alma. The Naponee and Franklin irrigation canals begin at the Harlan County Dam and exit into Franklin County on the south and north sides of the river, respectively. Windmills can provide water when they are operational. There are small ponds and stock tanks on farms and ranches throughout the area. During drought conditions many ponds may not be reliable water sources.

#### *Utilities/Phone Service*

Electric service is provided by the Nebraska Public Power District. Both cellular and landline telephone services are available in the county.

#### *Roads and Bridges*

The Stamford and Alma VFDs noted that in their rural district, minimum maintenance roads can be an issue. The Oxford VFD has limited access to the southern half of their district due to a lack of bridges. The regional Hazard Mitigation Plan contains complete critical infrastructure lists; see HMP link in Appendix B.

#### *Other*

The Stamford fire department has an aerial applicator who is on the department and uses his plane when available and needed.

#### *Greatest Concerns*

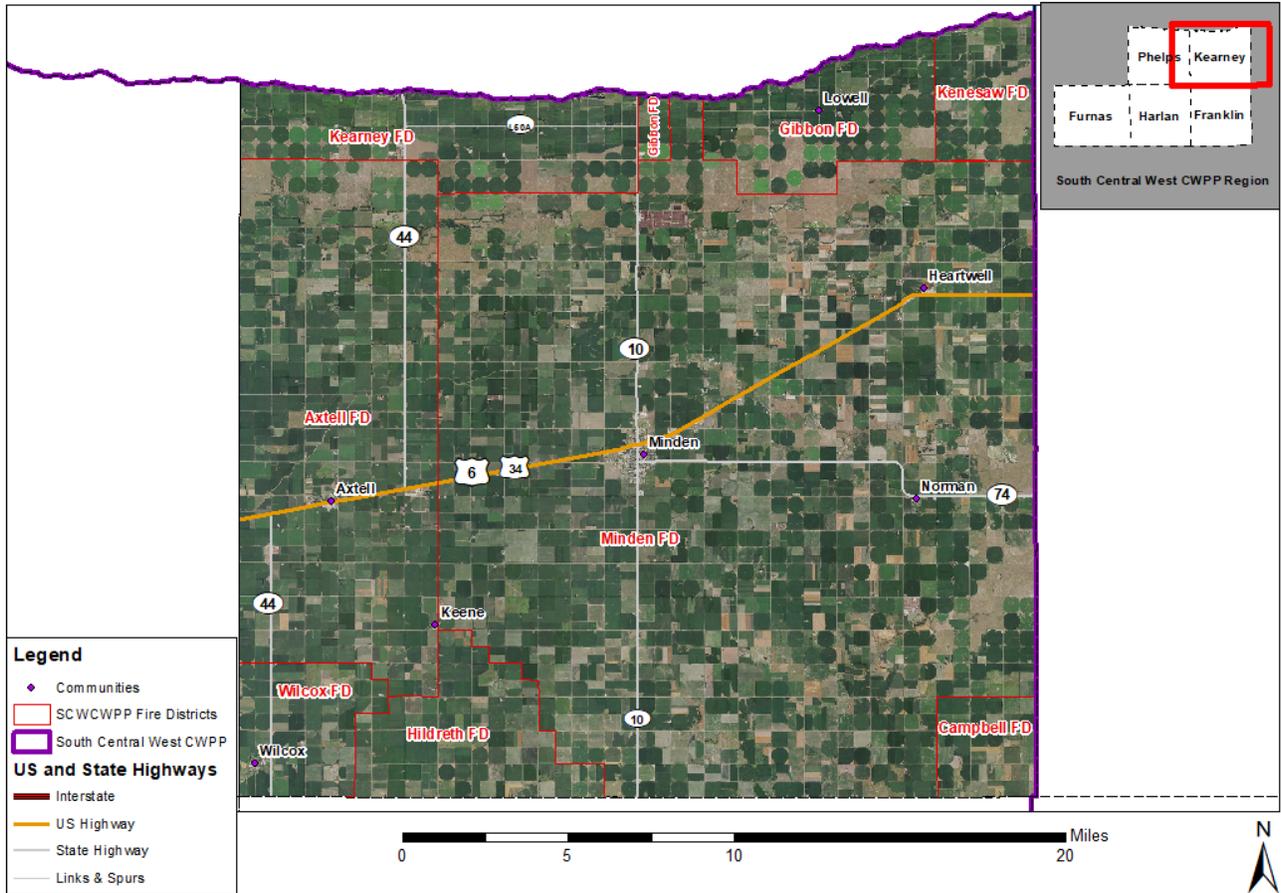
The fire departments were asked to list their greatest concerns for their district, shown in the table below:

Department	Greatest Concerns
Alma	Rough terrain
Holdrege	(survey not returned)
Orleans	(None indicated)
Oxford	Rural water supply
Republican City	(None indicated)
Stamford	Rural water supply, proper wildland gear and equipment
Wilcox	Manpower and water resources

# South Central West Community Wildfire Protection Plan

**KEARNEY COUNTY**  
 516 sq. miles  
 2019 population: 6,495

## South Central West CWPP Region Kearney County Overview



### Community Profile

Kearney County forms the northeast corner of the CWPP region. It is bounded on the south by Franklin County, on the west by Phelps County, on the north by Buffalo County, and on the east by Adams County. Incorporated municipalities include the county seat of Minden (pop. 2,977), Axtell (pop. 752), Heartwell (pop. 70), Norman (pop. 42), and Wilcox (pop. 349). Keene (no pop. data available) and Lowell (2018 pop. 171) are listed as unincorporated communities in the county.

Federal lands in Kearney County include 3,327 USFWS acres in ten Waterfowl Production Areas and one 78-acre tract. State lands include a 40-acre NGPC WMA, about 36 acres of the Fort Kearny State Historical Park and Recreation Area, and approximately 3,535 acres of school lands. Non-profit conservation lands include 2,251 acres in two properties managed by National Audubon and Ducks Unlimited.

Most of the county lies within the mixed-prairie vegetation zone. A strip of lowland tallgrass prairie with riparian deciduous forests follows the Platte River. Agriculture crop fields cover most of the county. The Platte River forms the county’s north boundary. The Little Blue River rises near the center of the county, south of Minden,

## South Central West Community Wildfire Protection Plan

and flows southeast into Franklin County. Most of Kearney County's woodlands are located along the rivers and their tributaries.

Locations of special concern include population centers adjacent to wildlands, and wooded areas along the rivers and streams. The Minden fire chief identified two sites northwest of Minden as areas of concern due to multiple structures, difficult access, heavy fuels, one way in and out, rough terrain, and lack of water within effective distance. The Hildreth fire department named the south end of their district as an area of concern, due to hills, valleys, and canyons with limited entrances. Areas of Concern identified by steering committee members, fire chiefs, or in the statewide Priority Lands analysis are shown on a map of in Appendix A. All of Kearney County's population centers, rural areas, and wooded waterways lie within the boundaries of the WUI as defined in the introduction to this CWPP.

### Protection Capabilities and Infrastructure

#### *Fire Districts and Emergency Management Area*

Fire districts all or partly within Kearney County include Axtell, Campbell, Gibbon, Hildreth, Kearney, Kennesaw, Minden, and Wilcox. The county has a full time emergency manager.

#### *Water Sources*

Most communities have municipal water systems. Farms and ranches are on wells. The rivers and their larger tributaries are generally reliable water sources. The Phelps County Irrigation Canal and laterals are located in the west central part of the county, and the Adams County Canal is located in the northeast part of the county. Windmills can provide water when they are operational. There are small ponds and stock tanks on farms and ranches throughout the area. During drought conditions many ponds may not be reliable water sources.

#### *Utilities/Phone Service*

Electric service in Kearney County is provided by the Nebraska Public Power District and Southern Public Power District. Both cellular and landline telephone services are available in the county.

#### *Roads and Bridges*

The Campbell fire department noted that bridges on county roads may not be able to support their tankers. The regional Hazard Mitigation Plan contains complete critical infrastructure lists; see HMP link in Appendix B.

#### *Greatest Concerns*

The fire departments were asked to list their greatest concerns for their district, shown in the table below:

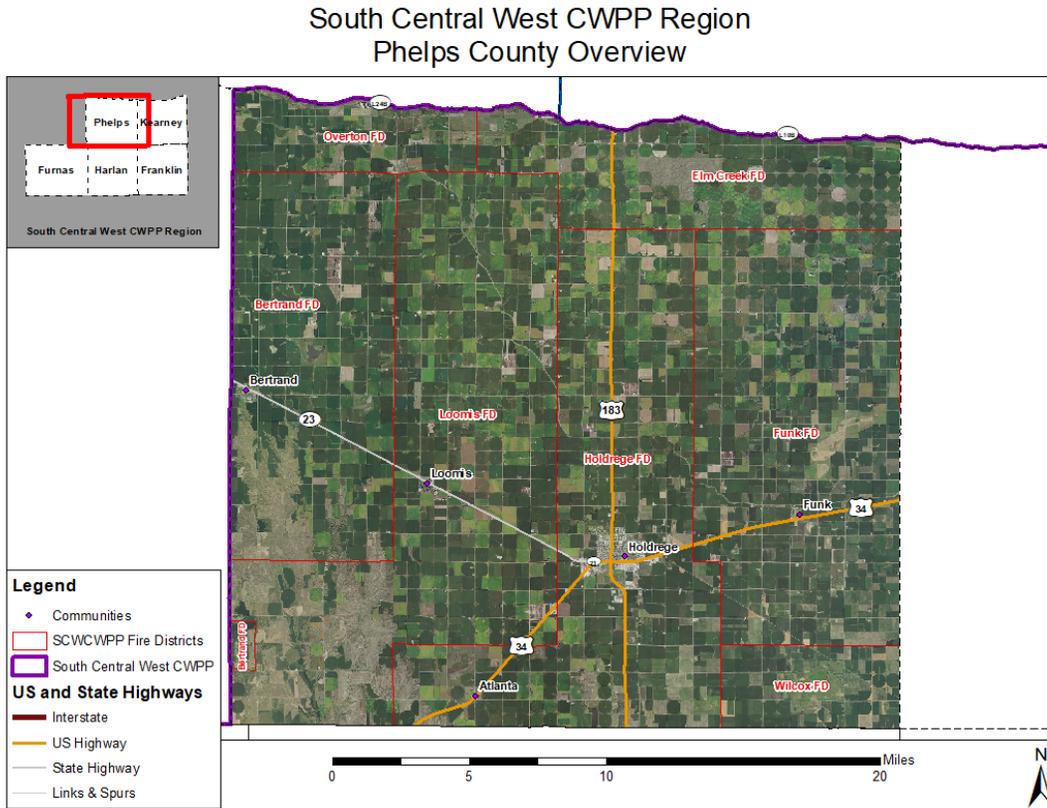
Department	Greatest Concerns
Axtell	None indicated
Campbell	Getting water quickly to rural areas; having enough EMTs & personnel to operate the trucks.
Gibbon	(survey not returned)
Hildreth	None indicated
Kearney	(survey not returned)
Kennesaw	(survey not returned)
Minden	None indicated
Wilcox	Manpower and water resources

# South Central West Community Wildfire Protection Plan

## PHELPS COUNTY

540 sq. miles

2018 population: 8,996



### Community Profile

Phelps County forms the northwest corner of the CWPP region. It is bounded on the east by Kearney County, on the south by Harlan County, on the west by Gosper County, and on the north by Dawson and Buffalo Counties. Incorporated municipalities include the county seat of Holdrege (pop. 5,405), Atlanta (pop. 129), Bertrand (pop. 700), Funk (pop. 183), and Loomis (pop. 371). There are no unincorporated communities in the county.

Federal lands in Phelps County include 4,596 acres in six USFWS Waterfowl Production Areas. State lands include 2,963 acres in three NGPC WMAs and one State Recreation Area; one 204-acre NRD property; and about 1,400 acres of state school lands. Non-profit conservation lands include 2,846 acres in nine Platte River Recovery Implementation Foundation tracts and one property managed by Ducks Unlimited.

Most of the Phelps County lies within the mixed-prairie vegetation zone. A strip of lowland tallgrass prairie with riparian deciduous forests follows the Platte River, which forms the county's northern border. Agriculture crop fields cover most of the county, except in the southeastern corner where grazing lands occupy rougher terrain. Most of Phelps County's woodlands are located along the rivers and streams.

Locations of special concern include population centers adjacent to wildlands and wooded areas along the rivers and streams. The Bertrand VFD identified the Village of Bertrand as an area of concern due to multiple structures and being completely surrounded by cropland. Areas of Concern identified by steering committee members, fire chiefs, or in the statewide Priority Lands analysis are shown on a map of in Appendix A. All of

## South Central West Community Wildfire Protection Plan

Phelps County's population centers, rural areas, and wooded waterways lie within the boundaries of the WUI as defined in the introduction to this CWPP.

### Protection Capabilities and Infrastructure

#### *Fire Districts and Emergency Management Area*

Seven fire districts lie all or partly within Phelps County: Bertrand, Elm Creek, Funk, Holdrege, Loomis, Overton, and Wilcox. The county has a full-time Emergency Manager.

#### *Water Sources*

The larger communities have municipal water systems. Farms and ranches are on wells. The Platte River is generally a reliable water source. The Phelps County Irrigation Canal enters from Gosper County in the northwest corner and runs southeast, exiting into Kearney County east of Funk. This canal and its laterals crisscross much of central Phelps County. Windmills can provide water when they are operational. There are small ponds and stock tanks on farms and ranches throughout the area. During drought conditions many ponds may not be reliable water sources.

#### *Utilities/Phone Service*

Electric service in Phelps County is provided by the Southern Power District. Both cellular and landline telephone services are available in the county.

#### *Roads and Bridges*

No specific information on roads or bridges was provided by Phelps County officials. The regional Hazard Mitigation Plan contains complete critical infrastructure lists; see HMP link in Appendix B.

#### *Greatest Concerns*

The fire departments were asked to list their greatest concerns for their district, shown in the table below:

<b>Department</b>	<b>Greatest Concerns</b>
Bertrand	None indicated
Elm Creek	(survey not returned)
Funk	(survey not returned)
Holdrege	(survey not returned)
Loomis	(survey not returned)
Overton	(survey not returned)
Wilcox	Manpower and water resources

# South Central West Community Wildfire Protection Plan

## Action Plan

This section of the CWPP addresses risk assessment, fire risk rating, treatment of structural ignitability, prioritization, and risk reduction and it recommends a plan of action for increasing emergency preparedness. The action plan includes wildfire risk reduction strategies, recommendations for increasing emergency preparedness, fuels mitigation practices, training, education, and maintenance. The final part of the action plan outlines a monitoring and evaluation process that can be used to track progress and periodically update the plan.

### Establish and Implement a Risk Assessment Procedure

Risk assessment is a systematic process for identifying and assessing the range of elements that could lead to undesirable outcomes for a specific situation. Quantitative risk assessments provide a method by which we can calculate risk based on measurements or estimates of various risk components such as likelihood of fire occurrence, intensity of fire should it occur, and susceptibility to fire of the various values being evaluated. Qualitative risk assessment is the application of judgment based in knowledge and experience when assessing wildfire risk, the potential for ignitions and recommendations regarding possible ways to mitigate the risk.<sup>16</sup>

It is important to understand the meaning of risk and hazard in relation to wildfire as it pertains to this CWPP. **Risk** is the chance or probability of occurrence of fire. **Hazard** is the exposure to risk; in a wildfire situation, those hazards can be related to either the natural or the human-made environment. Natural hazards include fuel type and amount of fuels, topography, and weather. Human-made hazards include the limited availability of water, limited access to structures, limited green space around structures, and the ignitability of structures. The capability of firefighting resources will be compromised by the severity of both natural and human-made hazards.<sup>17</sup>

Both the Quad Counties and Tri-Basin NRD Multi-Jurisdictional Hazard Mitigation Plans identify their planning areas as being at risk for wildfire. The plans include general wildfire risk assessments (but do not map specific at-risk areas) and some general mitigation alternatives. The Village of Hildreth, in Franklin County, listed wildfire as a top concern in relation to damage to property/crops. In Furnas County, wildfire was listed as a top concern for the communities of Arapaho, Holbrook, Oxford, and Wilsonville, as well as for Cambridge Public Schools. In Harlan County, Humphrey, Orleans, and Stamford listed wildfire as a hazard of greatest concern.

An assessment includes a review of the area's fire history, fuels/vegetation rating, topographic hazard analysis, weather hazard potential, access, water availability, defensible space, and structural ignitability. The Overview section of this plan contains information about the area's fire history, climate, weather, fuels/vegetation, and topography. Individual county sections provide details on water sources and access issues. Local fire department equipment lists appear in Appendix F. Defensible space and structural ignitability are addressed in this section of the plan.

#### *Fire Risk Rating and Ignitability*

Homes in both forested and non-forested settings can be at risk from wildfires. Quantitative structure risk ratings can be handled under location-specific plans for incorporated communities. Major components of structural ignitability include roofing materials, walls, windows and wooden attachments. Most of the CWPP region is rural/agricultural with widely spaced home locations. There is an opportunity to perform structural risk and ignitability analysis and treatment activities at rural residential and recreational home sites at the same time fuels mitigation work is being conducted in these areas.

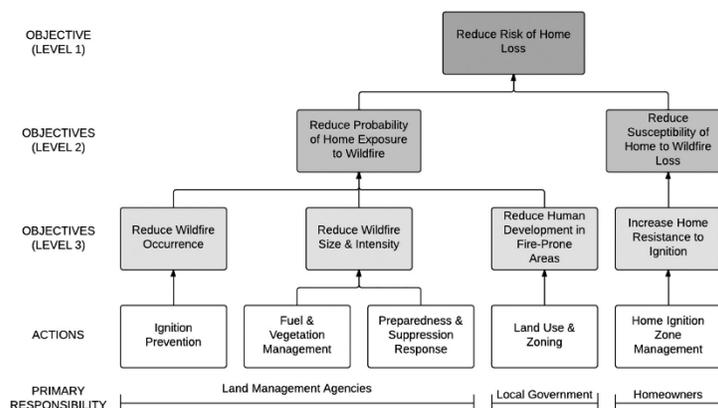
Overcoming perceptions of WUI fire disasters as a wildfire control problem rather than a home ignition problem, determined by ignition conditions, will reduce home loss. The following graphic illustrates the dual-pronged

# South Central West Community Wildfire Protection Plan

objectives of reducing the risk of home loss by both reducing the probability of exposure to wildfire AND reducing susceptibility to wildfire loss.<sup>18</sup>



Conceptual model highlighting the major fundamental objectives (level 1), means-based objectives (levels 2 and 3), and actions for reducing the risk of home loss as a result of wildfire.



David E. Calkin et al. PNAS 2014;111:2:746-751



©2014 by National Academy of Sciences

## Prioritization

The community sections in this document describe the WUI focus areas within each county. These can be further prioritized based on data gathered during risk assessment for individual neighborhoods. Eastern redcedar-encroached deciduous forests along the rivers and their tributaries have high priority for hazardous woody fuels reduction, as do areas with recreational and rural residential subdivisions, such as those near the Harlan County Reservoir. All of the population centers, unincorporated residential developments, and dispersed recreational developments in the CWPP region have high priority for fuels treatment and Firewise® preparation. Further assessments may identify additional priority areas.

Appendix A contains “Areas of Concern” maps depicting the parts of each county considered to be at the highest risk from wildfire. The locations were identified by local fire officials and the planning team. These include interface areas with neighborhoods directly adjacent to open spaces, intermix areas where homes are interspersed with natural fuels, and occluded interface areas where neighborhoods are isolated or surrounded by areas of natural fuels.<sup>19</sup>

The requirements and procedures to become recognized as a Firewise® Community require coordination among homeowners. However, when landowners implement fuels reduction treatments using NFS cost share programs, or if a landowner asks for suggestions, the NFS adheres to established Firewise® standards. Many homeowners who do not reside within an officially designated Firewise® Community have utilized those standards. NFS staff is available to help homeowners in areas at-risk from wildfire to establish formal Firewise® Communities.

Many actions can be taken to reduce the fire potential in both existing housing developments and planned new subdivisions. People can assess the potential of a structure located in a wildland environment to withstand an approaching wildfire without the intervention of firefighting personnel and equipment. Assessments focus on proactive, pre-fire preventative actions rather than reactive fire suppression plans. Several excellent fire hazard assessment methodologies are widely available. Below are excerpts from the National Wildland/Urban Interface Fire Protection Program’s methodology<sup>20</sup> publication:

# South Central West Community Wildfire Protection Plan

First, it is important to understand how three ignition sources (radiation, convection, and firebrands) can impact a structure located in a wildland environment and how they affect certain building components—roofs, eaves/overhangs, walls, windows, vents, and attachments. Fire potential can be reduced when building a structure or altering an existing structure by conducting mitigation measures on the structure itself and in the surrounding wildland area. The following is a five-step method for assessing the hazards of a WUI area:

Step 1: Select the area to be evaluated.

Step 2: Select the hazard components to be considered. These can include but are not limited to:

- Vegetative fuel hazards both in and beyond the immediate vicinity of the structure
- Structure density (lot size, structures per lot)
- Slope (steeper slopes are more hazardous)
- Weather patterns (temperature, humidity, winds, drought)
- Fire occurrence (increased fire probability where fires have occurred in the past)

Step 3: Rank the hazard components. Develop or use an existing system to define the significance of each component. The system, though subjective in nature, should be specific and consistent.

- Define a system to rank the hazard level of the components (e.g. low-medium-high or numeric)
- Evaluate and rank each individual component that is included in the assessment
- Develop an overall hazard rating system
- Calculate the overall hazard rating

Step 4: Compile the hazard rankings in a usable format that reveals the relationships between the individual hazards and categories of hazards. Three methods are often used to analyze the data collected:

- A geographic information system can define the hazards components and display each hazard on clear overlays, rather than on a single map, allowing analysis of various combinations of data
- A grid index system references specific points of interest on a map. The coordinates of the grid define the hazard rating of a specific property or area
- A matrix system describes the severity of each hazard for each area within the assessment

Step 5: Develop future actions—use the information developed to reduce fire loss potential in the WUI:

- Develop mitigation strategies to improve firefighter and public safety
- Develop fire response/evacuation plans
- Provide reference tools for planners, insurers, bankers, and local code adoption
- Develop region-wide cooperative fire protection agreements
- Perform cost/benefit analyses
- Implement or evaluate existing programs
- Strategically focus fuel reduction projects
- Distribute along with public fire safety education information to educate property owners, local and state governments and fire-service agencies

## Wildfire Risk Reduction

The goal of risk reduction is to reduce the potential loss to life and property. Understanding that wildfire is inevitable can help communities prepare for wildfires. Fire-adapted communities are knowledgeable, engaged communities where actions of residents and agencies in relation to infrastructure, buildings, landscaping, and the surrounding ecosystem lessen the need for extensive protection actions. This enables the community to safely accept fire as part of the surrounding landscape. A successful fire-adapted community approach has the potential to save lives, homes and communities, and millions of dollars in suppression costs annually.

## South Central West Community Wildfire Protection Plan

There is a range of actions communities can undertake to become more fire-adapted. In general, the more elements that a community has addressed, the more fire-adapted the community will become. Major elements of a fire-adapted community include vegetation management, ignition-resistant homes, increasing local responders' understanding of wildfire, cooperation between jurisdictional authorities, and fuels treatments on both private and public lands to reduce hazardous fuels and create fuels buffers.

Homeowners can undertake mitigation measures that can decrease the potential destructive effects a wildfire might have on their property. Some measures are designed to modify the vegetative environment surrounding a structure to decrease potential ignition sources. Others focus on modifying a structure (or changing its location) to make the structure more resistant to ignition. To reduce the risk for the long term, actions need to be maintained over time.

### *Common Practices*

- Actively managing vegetation near the home by reducing density, conducting landscaping maintenance, and replacing flammable vegetation with ignition-resistant components. Greater efforts are needed within close proximity of the structure and gradually decreasing efforts beyond that.
- Maintaining structures free of needles, leaves, and other organic debris from decks, roofs, and near the base of exterior walls.
- Increasing ignition resistance of structures by actions such as using ignition-resistant roofing and covering exterior openings of structures, such as attic vents, eaves, soffits, and crawl spaces, with non-flammable wire mesh screening.
- Removing flammable materials from beneath structures and decks.
- Locating firewood, fuel tanks, and propane tanks at a safe distance from structures.

Refer to Appendix I for an expanded list of common practices and a listing of several programs, such as "Firewise®" and "Ready Set Go," available to help homeowners and communities reduce wildfire risks.

### *Other Wildfire Mitigation Practices*

Additional wildfire-related mitigation practices are listed below. Some entities have implemented one or more of these. Planners may want to periodically review and implement or expand upon them, as appropriate.

- Acquire training and equipment for local fire departments
- Implement woody fuels reduction and defensible space projects
- Establish or expand wildfire prevention and education programs
- Participate in the Firewise® program
- Adopt a wildfire hazard identification and mitigation system (see Appendix I)
- Conduct maintenance to reduce risk (tree care and public landscape maintenance programs)
- Reduce risk through land use planning (landscaping and building ordinances)
- Require or encourage fire-resistant construction (the use of non-combustible materials)
- Incorporate wildfire mitigation into comprehensive planning
- Develop a wildland-urban interface code
- Expand water storage capacity/emergency water supplies/dry hydrants
- Upgrade rural water systems; improve well and water systems

Although funding limitations affect any jurisdiction's ability to implement some of these practices, identifying them as critical needs helps prioritize them for funding assistance opportunities such as the NFS fire equipment program described earlier in this plan.

### *Wildfire-Related Mitigation Practices Identified in HMP by Local Participants*

In the Quad Counties HMP, Alma, Orleans, Oxford, and Republican City listed "Civil Service Improvements" as a mitigation measure for their communities: "Improve emergency rescue and response equipment and facilities

## South Central West Community Wildfire Protection Plan

by providing additional, or updating existing emergency response equipment. This can include fire trucks, ATVs water tanks/trucks, etc. This can also include developing backup systems for emergency vehicles and identifying and training additional personnel for emergency response.”

The Tri-Basin NRD HMP participants did not list wildfire-related mitigation practices.

### Recommendations for Increasing Emergency Preparedness

#### *Communication*

Having and using a comprehensive communications plan is integral to maintaining smooth operations. Many jurisdictions in Nebraska have identified communications as a major issue when working under a mutual aid scenario. Various responders have different communications hardware, and often these are incompatible with one another. This is more than just a nuisance. Communication is vital to responder safety and to coordinating an effective response to wildfire. It is recommended that all entities in the region establish or review, and regularly update, their local communications plans.

#### *Coordination*

Coordination among responders is crucial in any emergency response situation. Local emergency managers must be able to tie in their responses with neighboring and outside assisting jurisdictions. The following opportunities have been identified to address common issues and concerns:

- 1) To protect firefighters, property owners, and structures, consider developing county-level standards for buildings in WUI areas.
- 2) Encourage communities to utilize the national Firewise® program to decrease risk in areas of concern.
- 3) Engage partners such as the NRCS, NGPC, and conservation organizations to implement WUI fuels reduction and thinning on a landscape basis through the use of NFS and other cost share programs.
- 4) Work with the NFS and other partners to implement a CWPP region-wide public education and awareness program to improve wildfire hazard conditions within the WUI.
- 5) Encourage VFDs in the CWPP region to continue to participate with the other agencies to facilitate interagency wildland fire training.
- 6) Cooperate with other agencies and property owners to develop long-term multi-unit, multi-year fuel hazard reduction projects, including prescribed burning.
- 7) Facilitate VFD monitoring of the federal wildland fire weather system indices.
- 8) Create a statewide “Mutual Aid Guide” that can be carried in each engine, including the engines operated by the federal and state agencies. This document would show what equipment each department, county, or agency has. A fire chief could then consult the guide to see what each department has and could order it for their fire, if needed.
- 9) Ensure quick notification and involvement process for assessment and assistance on fires, when needed (i.e. Wildfire Incident Response Assistance Team, Type 3 Team, FEMA and Type 1 or 2 teams).

#### *Aerial Support*

It is critical to maintain the SEAT program authorized through the Wildfire Control Act of 2013. Having a SEAT dedicated strictly to wildfire suppression during peak fire season provides quick initial attack on small fires, particularly those in difficult terrain, keeping them from growing into large catastrophic wildfires. The NFS SEAT Managers have made the following recommendations:

- 1) Having additional SEAT Managers throughout the state would increase response times. Currently there are four qualified managers; more would increase program capabilities.
- 2) Increase the number of aerial applicators within the CWPP region who cooperate with NFS and NEMA to provide aerial fire suppression to requesting fire departments. Having fewer applicators limits available options during wildfires.

## South Central West Community Wildfire Protection Plan

- 3) Sustain or increase the current level of cooperation with adjacent states and their aviation resources. Maintain clear paths of communication to ensure that neighboring jurisdictions are aware of available resources, times of planned contracted aviation availability, and enable the sharing of resources across state borders, when needed. Facilitate sharing managers and help trainees become qualified. Cooperation in sharing information, personnel, and resources will benefit all in creating effective operations.

### *Maps and Data*

Restricted Roads and Bridges: Some county roads and bridges have weight or width limitations, or both, that may inhibit use by emergency vehicles. Planners are urged to work with counties and fire departments to identify and map all roads and bridges, specifically identifying those that are restricted. Making this information available to fire departments and other emergency responders would facilitate route planning. This information could also be used to help prioritize fuel treatment areas. Since road conditions constantly change, this information should be monitored locally and updated as needed.

Incident Command Staging Areas: Local planners can address this by pre-identifying potential staging locations near areas of wildfire concern such as recreation areas and rural subdivisions. Staging areas must be far enough away from a fire to reduce congestion and confusion for incident managers, yet close enough to efficiently provide resources. When a resource is needed, it is deployed from the staging area, with a controlled entry into the hazard zone. Staging areas need to be of sufficient size to accommodate multiple fire crews, engines, tankers, support vehicles, and equipment storage. Sites should have good access, water and power availability, and be able to accommodate communications needs. The information gathered for potential staging areas in the most at-risk locations can be provided to emergency managers, fire chiefs, and others to help them decide where to establish the staging area for a particular incident.

Equipment: Non-fire equipment has proven useful in many wildfire situations. Counties may want to consider adding an inventory of non-fire department resources (such as county road graders) to a centralized document.

Geographic Information Systems (GIS): GIS technology can be incorporated into the action plan. A Global Positioning System (GPS) can be utilized to provide locations of tanks, water supplies, and other useful information in each fire district and made available for hand-held devices. Water hydrant systems at golf courses and other water sources could be mapped and added to this database. Other map data that would be useful, especially in a format that could be easily accessed by hand-held devices, include types and locations of pipelines and pumping stations, power substations, power lines, towers and antennas for air resources to avoid, flammable material storage areas, and overhead water refill access points.

There have been issues with sharing map layers between different applications. Many fire departments and natural resources agencies use a mobile map app that allows users to download geospatial-enabled pdf maps for offline use on a smart phone or tablet, using the device's built-in GPS to track their location, plot and record location information, measure distance and area, and more. There currently is no standardized protocol. Creating such standardization over time would likely prove useful.

Other: Counties can use technology to provide early detection systems and real-time fire weather information by retrofitting units and establishing new ones to complete the existing network.

### *Increase Fire Response Reporting for Increased Equipment Availability*

Comprehensive fire reporting helps VFDs demonstrate a need for fire equipment such as provided by the FEPP, Fire Fighter Property/State Fire Assistance, and Volunteer Firefighter Assistance programs described earlier in this document. Since reporting is voluntary for fire districts, not all fire districts consistently report their wildfire responses to the NFS. Because of this, limited information is available about the locations and sizes of historic wildfires within the CWPP counties. There is a risk that incomplete reporting might imply that there is no

## South Central West Community Wildfire Protection Plan

pressing need for this type of equipment. This could potentially put the status of the program in jeopardy. In response to this, NFS now offers an incentive to VFDs for participation. Only fire departments that report their responses are eligible to apply for this equipment.

Although reporting has increased recently, VFDs are urged to continue stepping up this effort. The information provides data to geographically focus grant assistance on those areas most prone to wildfire. The NFS has a database already in place to facilitate this. Planners and fire departments are urged to work together to gather and report wildfire data to assist fuels mitigation efforts and increase funding opportunities for fire equipment. Departments can report their wildfire responses online. From the NFS home page, [www.nfs.unl.edu](http://www.nfs.unl.edu), go to Programs, Wildland Fire, and navigate to the fire reporting tab. Follow the login instructions the NFS provided to your department (or email [trees@unl.edu](mailto:trees@unl.edu)), then follow the prompts to create the report.

### *WUI Protection*

Prepared communities reduce hazards, protect homes, and increase firefighter safety. Homeowners in WUI areas should be encouraged to establish and expand Firewise® Communities, Fire-Adapted Communities, and “Ready, Set, Go!” programs across the region. In a wildfire situation, responders often must quickly decide which homes have the best chance of being saved so they can focus their efforts on them. Some Nebraska fire departments have developed ‘triage’ documents to help firefighters quickly assess these homes and neighborhoods. Consider implementing this practice in the CWPP Areas of Concern. Preparation by property owners prior to a wildfire can contribute to firefighter safety and help them protect structures. See Appendix I.

Work with counties and municipalities to evaluate one-way-in/one-way-out subdivisions for potential addition of alternate ingress/egress routes. Estimate costs and identify potential grants or other financial assistance to address these issues.

County zoning plans can be strengthened to include provisions to limit new construction in areas such as canyon rims that are at high risk from wildfire. Counties may want to consider both the monetary costs to taxpayers and the danger to fire department personnel responding to wildfires in these areas. At the very least, setbacks from the canyon rims, adequate emergency access, and specific Firewise® practices should be considered for implementation in the areas at highest risk. Communities across the planning area can adopt more stringent building codes which may include regulations and requirements to reduce wildfire risk for residents and community buildings.

### *Firebreaks and Fuelbreaks*

Strategically placed firebreaks and fuelbreaks in the areas most at-risk from wildfire can give firefighters an edge when protecting WUI areas. These two terms are often confused, but it is important to understand the difference.

Generally narrower than a fuelbreak, a firebreak is a strip of land, 20 to 30 feet wide (or more), in which all vegetation is removed down to bare, mineral soil each year prior to fire season.<sup>21</sup> A firebreak is a discontinuity in vegetation. It may be a gravel road, a river, or a dozer line. A “green” firebreak uses grasses with high moisture content, such as winter rye or winter wheat to provide a break in the continuity of the fuel. A firebreak, if it is wide enough, will stop the spread of direct flame. However, embers can still be lofted into the air and travel across the line.<sup>22</sup>

A fuelbreak (or shaded fuelbreak) is an easily accessible strip of land of varying width (depending on fuel and terrain), in which fuel density is reduced, thus improving fire control opportunities. The forest is thinned, and remaining trees are pruned to remove ladder fuels. Brush, heavy ground fuels, snags, and dead trees are disposed of, leaving an open, park-like appearance.<sup>22</sup> Fuelbreaks are commonly used to surround a community

## South Central West Community Wildfire Protection Plan

and slow the spread of a wildfire. Decreasing the fuel load significantly reduces the risk of extreme fire behavior.<sup>22</sup>

Fuelbreaks provide quick access for wildfire suppression. Control activities can be conducted more safely due to low fuel volumes. Strategically located, they break up large, continuous tracts of dense timber, thus limiting uncontrolled spread of wildfire. This can aid firefighters greatly by slowing fire spread under normal burning conditions. However, under extreme conditions, even the best fuelbreaks stand little chance of arresting a large fire, regardless of firefighting efforts. Such fires, in a phenomenon called “spotting,” can drop firebrands ½ mile or more ahead of the main fire, causing very rapid fire spread. These types of large fires may continue until there is a major change in weather conditions, topography, or fuel type.<sup>21</sup>

It is critical to understand that both firebreaks and fuelbreaks are lines of defense. Homes and developments between the break and the fire may remain vulnerable.<sup>22</sup>

Communities are encouraged to identify the best locations for vegetation breaks to protect the WUI. Fuelbreaks are most effective when placed along a natural firebreak such as a road. Choosing a site along a road also allows easy access for equipment.

There are multiple methods of creating breaks, including mechanical, mulching, herbicide, grazing, prescribed fire, and dozer lines. Each treatment has pros and cons, and some may be better suited to a particular site than others. When choosing a method, consider topography, potential for erosion and other environmental effects, access, aesthetics, and costs.

Fuelbreaks and firebreaks are most effective when they are regularly maintained. Dead vegetation and re-sprouting trees should be removed during maintenance.

### Training and Education

#### *Firefighter Training*

All VFDs are encouraged to participate fully in wildland training opportunities provided through the NFS, the State Fire Marshal’s office, and NEMA. Some of the fire departments in the CWPP region are annual participants in the Nebraska Wildland Fire Academy held at Fort Robinson State Park near Crawford. A complete description of this is in the training overview earlier in this document. Those departments that do not currently participate can be encouraged to do so.

Although not all VFDs have mandatory fitness requirements, local departments can be encouraged to participate, both for safety and to lower insurance costs.

#### *Educational Opportunities for Property Owners and the Public*

The Firewise® and “Ready Set Go!” programs offer excellent guidelines for reducing the loss from wildfire for both in-town and rural structures. The NFS “Living with Fire” publications, for both prairie and woodland areas, are also valuable educational tools for property owners. Fire extinguisher inspections and operation training can be offered as part of Firewise® events that participating communities hold annually. Involving local communities in these voluntary programs increases public awareness regarding structure risk mitigation (see Appendix I).

When issuing building permits, county and municipal offices can distribute literature that includes recommended or required setbacks from canyon rims, lists of fire-resistant building materials, and fire-savvy landscaping suggestions. Service groups such as Rotary and Lions, and youth groups such as FFA, also may present opportunities for getting out wildfire planning information.

# South Central West Community Wildfire Protection Plan

## Fuels Mitigation Strategies

There are several approaches to reducing wildfire hazard through fuels management. In addition to active participation by property owners in the structural protection programs described above, practices such as prescribed grazing, prescribed fire, and mechanical fuels reduction can work together to provide protection over large areas containing a diversity of terrain and vegetative cover.

### *Prescribed Grazing*

Grazing keeps fine fuels such as grasses in check. But overgrazed pastures are problematic for range and livestock health, as well as for wildlife. Landowners can work with range and wildlife management professionals to develop grazing plans that will benefit livestock while protecting grasslands and wildlife and managing fine fuels to reduce wildfire hazard.

The University of Nebraska's Institute of Agriculture and Natural Resources and the Natural Resources Conservation Service have specialists available to help landowners develop grazing systems that will address these concerns.

### *Prescribed Fire*

Some federal and state agencies, non-profit organizations, and private landowners use prescribed fire as a land management tool. Prescribed fire can be extremely efficient for keeping eastern redcedar encroachment in check on grasslands. In forested settings, prescribed fire is more effective and safer when used to maintain dense woodlands after they have been mechanically thinned. When tree densities are reduced prior to burning, it is easier to keep the fire on the ground, where it cleans up downed woody fuels without harming many live trees. Crown fires are difficult to control, and they kill healthy trees.

One objective for many of these burns is to reduce heavy fuel loads. Land managers in the CWPP region plan prescribed fires of varying size each year, but weather and resources to conduct the burns impact how many they complete. Some VFDs assist with these efforts by sharing people and equipment to help with the burns, when agency or organizational regulations permit. It is recommended that VFDs continue with these cooperative efforts, as well as continuing to participate in the training available to help them do this safely and effectively.

### *Mechanical Fuels Reduction in High-Risk Wooded Settings*

High-risk forested settings within the CWPP boundary are found mostly in cedar-encroached riparian bottoms, wooded recreation areas, and wooded and shrubby areas surrounding population centers. Mechanical thinning will decrease tree density to healthy levels and reduce eastern redcedar encroachment in deciduous forests. Wooded recreational and residential areas add the hazards of seasonal congestion, sometimes-limited or difficult access, and structures adjacent to highly-flammable vegetation.

Slash (unusable limbs and tree tops left after thinning) can be chipped, mulched, or piled. Slash piles can present a fire hazard. Disposing of them by either burning during appropriate winter conditions or chipping on-site are acceptable means to mitigate this threat. Chips can help reduce soil erosion in disturbed areas. The chips should be spread, not piled, to allow vegetation to become established in these areas. Piles of chips not only prevent or delay revegetation, they can also be sources of spontaneous combustion.

The cost of mechanical fuels reduction depends on access, terrain, and tree density. Utilization of wood products generated by these treatments has the potential to offset the costs of doing the work. However, presently there is little local commercial market for this material. Researchers are currently working with the NFS to expand markets for wood products.

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The NFS administers several federal and state grants that provide cost share to landowners to defray the cost of fuels reduction. Information about these programs can be found online at <https://nfs.unl.edu/fuels-assistance>. Landowners in counties that have a CWPP in place are eligible for these cost share programs.

### *Fuels Reduction in High-Risk Non-Forested Settings*

Fuels management works best when it is conducted on a landscape basis. In addition to reducing woody fuels in forests, it is also important to manage the grass component on both wooded areas and grasslands. Well-planned grazing and prescribed fire can significantly reduce fire risk. Fuels treatments are only as effective as their weakest link. Unmanaged “islands” within managed areas pose a significant risk to the managed lands. Cost-share programs can encourage landowners to manage their non-forested lands. Property managers can check with the NRCS for cost share program information.

Another threat in grassland environments is the presence of unmanaged windbreaks intended to protect nearby structures. If those shelterbelts lie within the structures’ Firewise® zones, they are a direct threat to the buildings and they must be managed. NFS [foresters](#) can provide windbreak management recommendations.

Some communities have expressed concerns about fires jumping over highways that are not properly mowed or managed, and areas along railroad right-of-ways. Regular maintenance of these areas, especially during dry conditions, could help address these concerns.

Much of the fuels reduction activity outside forested areas will involve creating defensible space around rural homes and other structures. The same Firewise® guidelines that apply in forested settings also apply in non-forested settings.

## Maintenance

Reducing hazardous fuels is not a one-time event. Areas that have been treated by any method to reduce fuels must be maintained on a regular basis because the vegetation continues to grow. NFS fuels treatment agreements include a requirement that the work be maintained for a minimum of ten years after the project is completed. Treatment, particularly mechanical fuels reduction, can be costly, so continued maintenance by keeping regrowth in check not only prolongs the period of hazard protection, it also protects the monetary investment made by landowners and the cost-share program.

## Monitoring and Evaluation

Monitoring and evaluation are important components of any planning document because they provide information on how well the plan is performing and whether it is achieving its stated goals and objectives. This provides guidance for planning future activities, and is an important part of accountability to stakeholders and funding organizations. This section of the CWPP provides a discussion of monitoring considerations; a review of evaluation elements including suggested units of measure for assessing activities and projects; a proposed plan maintenance schedule; and a table summarizing the five-year action plan.

Continued public involvement is needed to accomplish many of these recommendations. It is important that the process allows for continued collaboration with stakeholders on how best to meet their needs, while at the same time achieving the objectives of this plan. Counties and fire departments can formally or informally monitor progress and coordinate with agency stakeholders who monitor their efforts according to their internal protocol, documenting accomplishments and redesigning strategies as needed.

Annual assessment of the identified tasks is very important to determine whether or not progress is being made. Each agency is encouraged to prepare an after-action report, either per event or annually, to assist in plan maintenance and updates. Units of measure to be considered when updating the plan for the purpose of reporting accomplishments can include, but are not limited to:

## South Central West Community Wildfire Protection Plan

1. Number of projects or activities accomplished which aid fire agency/emergency service response time
2. Number of transportation issues resolved that improve road systems for access, ingress/egress
3. Number of water sources added or upgraded to improve firefighting response
4. Number of pieces/types of fire equipment obtained; number of departments that received them
5. Number of firefighters and fire departments receiving training courses; course hours completed
6. Number of properties/acres treated for fuels reduction and type(s) of treatment used
7. Number of new or retrofitted ignition-resistant structures
8. Number of events with prevention message delivery, number of prevention courses attended/conducted, number of news releases or prevention campaigns conducted, and number of prevention team meetings held
9. Number of partners/agencies/groups cooperating on projects and activities
10. Number of people contacted (meetings, courses, etc.) and number of educational items distributed (brochures, etc.)

Each participating agency/organization can assess their activities and projects using units of measure such as those listed above to determine progress. This plan does not function as a means of bypassing the individual processes and regulations of the participating agencies. Each project must adhere to any pertinent local, state, and federal rules. The CWPP is a coordinating document for activities related to fire protection, fuels treatment, information development, and wildfire outreach and education.

### *Schedule*

The maintenance for this plan will be directed by the county boards in the CWPP region and coordinated with local fire officials and resource managers. Counties or their representatives will review the plan on an annual basis to evaluate progress, re-evaluate priorities for action items, and recommend updates as needed.

Review of the strategy recommendations will be necessary as various projects or tasks are accomplished and the at-risk areas decline in hazard rating. Review will also be needed as infrastructure needs change or are met and the review should include representation of stakeholders who participated in the development of this plan.

A complete update of the plan every five years is recommended because infrastructure needs, population, and land use can change, fuels reduction projects may be completed, emergency services in outlying areas may expand, data are updated, and areas of extreme wildfire hazard decline or increase. Counties are urged, when possible, to coordinate this process with their HMP updates. By aligning the update schedules of various planning mechanisms the goals, priorities, and actions identified can more easily be integrated into other plans.

### *Five-Year Action Plan*

The Action Plan summary table on the following pages is intended to assist planners implement, evaluate, and keep the CWPP up-to-date. It lists the actions identified in this section, suggests who might perform the tasks and when, provides benchmarks for evaluation, and identifies opportunities and limitations. When the CWPP is updated at the end of five years, a new action plan can be developed to accommodate new or expanded objectives for the ensuing five-years.

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*Table 4: The Five-Year Action Plan identifies actions, suggests who might perform each task and when, provides evaluation benchmarks, and identifies opportunities and limitations.*

<b>Five-Year Action Plan for the South Central West CWPP 2021-2025</b>				
<b>Task(s)</b>	<b>Who</b>	<b>When</b>	<b>Benchmark(s)</b>	<b>Opportunities/Limits</b>
<b>Reduce Wildfire Risk (Identify, Assess, Mitigate)</b>				
Identify/analyze Risk Assessment elements	Local officials, NFS	Done during CWPP process	Completed CWPP	n/a
Assess/prioritize areas based on vulnerability	Local officials & fire departments	2021-2022	Maps, checklist, report	Opportunity: further prioritize based on risk
Perform individual structure and neighborhood analyses	Fire depts., agencies, contractors, others	Ongoing	Checklist/report	Opportunity: Do during fuel reduction work. Limit: funding and staff availability.
Implement WUI fuels reduction	Agencies, landowners; local officials (public prop.)	Ongoing	# projects, # acres	Utilize existing & seek new cost share grants
Engage partners to develop long-term multi-unit, multi-year fuel hazard reduction projects	NFS, other agencies	Ongoing	# of participating entities, # of projects, # of acres treated	Leverage program effectiveness w/multiple agencies, adjacent projects to expand treated area on landscape scale
Increase # of ignition-resistant buildings	Homeowners, planning officials	Ongoing	# New bldgs. to code; # bldgs. retrofitted	Retrofits can be costly; best opp. is for new construction
<b>Support Emergency Response (Capacity, Readiness, Safety, Communications)</b>				
Assess local response capacity	Local planning staffs	2021-2022	# participating VFDs, # gaps/needs identified	Opportunity: involve VFDs more in community planning
Increase/update fire vehicles & equipment via increased reporting	VFDs, NFS	Ongoing	# VFDs assisted, # of pieces/types of fire equipment obtained	VFDs that report their fire response can utilize NFS FEPP & FFP programs
Increase participation in firefighter training and fitness programs	VFDs, agencies	Ongoing	# of departments and firefighters participating	Many training options available through NFS & NEMA
Facilitate VFD monitoring of fire weather system indices	VFDs, NFS	Ongoing	# of departments able to monitor indices	Opportunity: Weather apps can be used on the fireline. Limit: # of weather stations.
Increase the number of aerial applicators within the region	NFS, NEMA	Ongoing	# of new applicators recruited/trained	Increases options for responding to fires on non-federal lands
Identify/map restricted roads and bridges	Local officials, contractors, others	Ongoing	# of jurisdictions with road/bridge maps	May piggy back data collection with other tasks
Pre-identify potential staging locations & evacuation routes	Local officials, VFDs, emergency managers	2021-2022	# of locations / routes identified	Opportunity to expedite staging area placement and routing decisions
Evac. route treatments to improve access	Local officials, local planners	Ongoing	# of access routes treated	Limitation: Funding; opp. to pursue grant assistance
Develop "triage" guidelines	VFDs, agencies	2022-2023	# documents created, # of VFDs using them	Opportunity to increase firefighter safety
Enhance water resources	Refer to HMP	Ongoing	# water sources added or upgraded	Explore grant funding to address costs
Develop & adopt county or regional WUI standards	Local officials, VFDs; NFS can assist with WUI info	2023-2024	Creation of regional standards document; # of counties adopting it	Opportunity: HOAs can also adopt standards
Create a statewide "Mutual Aid Guide"	NFS, emergency managers, VFDs	2023-2024	Creation of document, # distributed	Enhances access to resources
Review communication plans; ensure dispatchers are trained on mutual aid channel notifications	Local and state officials	Annually	# of plan changes/updates, # of dispatchers trained	Opportunity to ensure mutual aid responders receive proper notifications for the use of V-TAC and UHF radio channels
Expand inter-jurisdictional cooperation; ensure all agreements are in place & current	Local, state, federal officials and planners	Ongoing	# of current agreements, MOUs	Explore MOUs with non-traditional partners, NGOs
Ensure prompt notification for assistance on fires (WIRAT, T-1, 2, 3 Teams)	Local and state officials	Ongoing	Checklist/report	Opportunity to expedite response

## South Central West Community Wildfire Protection Plan

<b>Task(s)</b>	<b>Who</b>	<b>When</b>	<b>Benchmark(s)</b>	<b>Opportunities/Limits</b>
Incorporate local concerns into fire management programs	Local, state, federal officials, agencies, NGOs	Ongoing	# programs updated	Opportunity to incorporate broad mitigations consistent with partners
Standardize map applications for VFD use	VFDs, emergency managers	Ongoing	# of VFDs using a standard map app	Cost depends on software and version.
Establish lists of non-fire equipment, i.e. road graders	Local officials, VFDs	Ongoing	# of jurisdictions with equipment lists created	Can be included in regional mutual aid guide
Acquire GIS layers for critical infrastructure, water sources, etc.	Local officials and planners	Ongoing	# of new layers created	Opportunity: Provide in format easily accessed by handheld devices
Realtime fire weather information	State, Local	Ongoing	# of units	Retrofit units and establish new to complete network
Provide early detection systems using technology	State, Local	Ongoing	# of units	May retrofit some units and establish new units
<b>Increase Public Awareness /Promote Citizen Engagement</b>				
Establish a region-wide public awareness program	Agencies, VFDs	2023-2024	# of participating entities; # of outreach activities	NFS can provide assistance
Increase awareness and publicize mitigation activities	Local officials, planners, agencies, VFDs	Ongoing	# of people reached via brochures, news releases, etc.	NFS has brochures & handouts for general use
Offer workshops, seminars, school presentations/activities	VFDs, agencies, NGOs, schools	Ongoing	# of events	NFS has info & materials, can help with planning
Implement Firewise® & other community protection programs	Local officials, homeowner groups	Ongoing	# of programs established	NFS has staff available to help communities with this
<b>Restore Fire-Adapted Ecosystems</b>				
Educate land managers in identification and control/mgmt. of non-native & aggressive native plant species	Agencies, NGOs	Ongoing	# land managers reached, # of landowners implementing control/management practices	Opportunities: Coordinate management across property boundaries; utilize cost share programs
Help land managers locate and obtain native plant species	Agencies	Ongoing	# acres improved, # of land mgrs replacing non-native w/native species	Opportunity to coordinate management across property boundaries
Safely incorporate RxB into fire-adapted ecosystems, using trained personnel and standard operating procedures	Agencies, prescribed fire practitioners	Ongoing	# acres treated safely, # of RxB practitioners trained	Opportunity to increase RxB practitioners' qualifications
<b>Enhance Post-Fire Recovery (Assess and Stabilize)</b>				
Provide training on post-fire assessments	Agencies	Ongoing	# of people trained	Enables rapid assessment of burned lands
Implement mitigation measures	Agencies, landowners	As needed	# of mitigation projects completed	Explore grant and cost share opportunities
<b>Establish/Implement Monitoring and Evaluation Process</b>				
Create evaluation framework	Planners, agencies	2022-2023	Checklist, process outline	Can structure to support grant applications
Evaluate progress and recommend changes	Local officials, planners, VFDs, agencies	Annually	# of activities implemented, # of changes recommended, # successful grant apps	Improve grant eligibility by keeping documents updated to reflect current activities and needs
Monitor selected projects to assess effectiveness	Agencies, planners, VFDs	Ongoing	# of activities & projects monitored, # deemed effective	Opportunity to adjust strategies and tactics

# South Central West Community Wildfire Protection Plan

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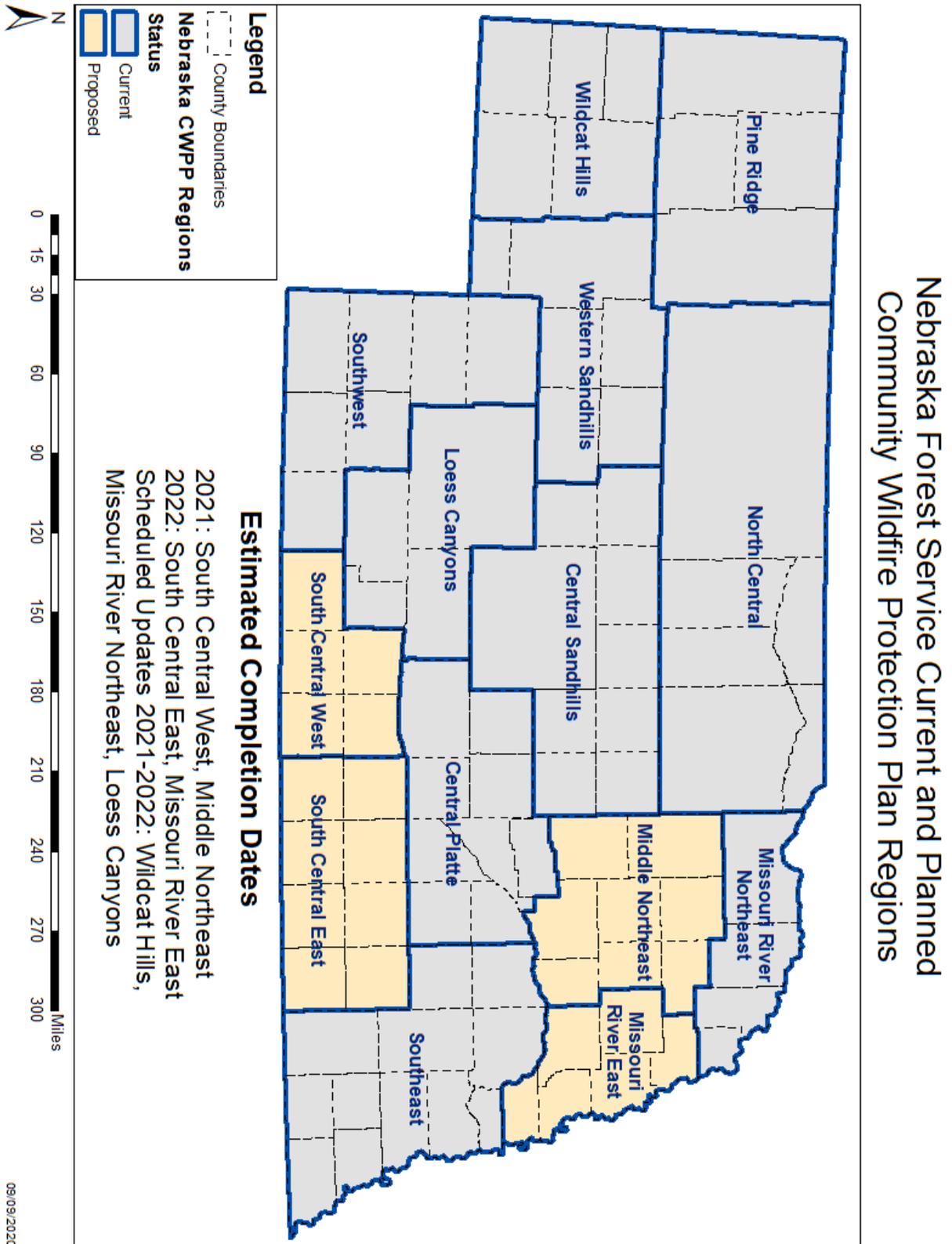
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# Appendix A

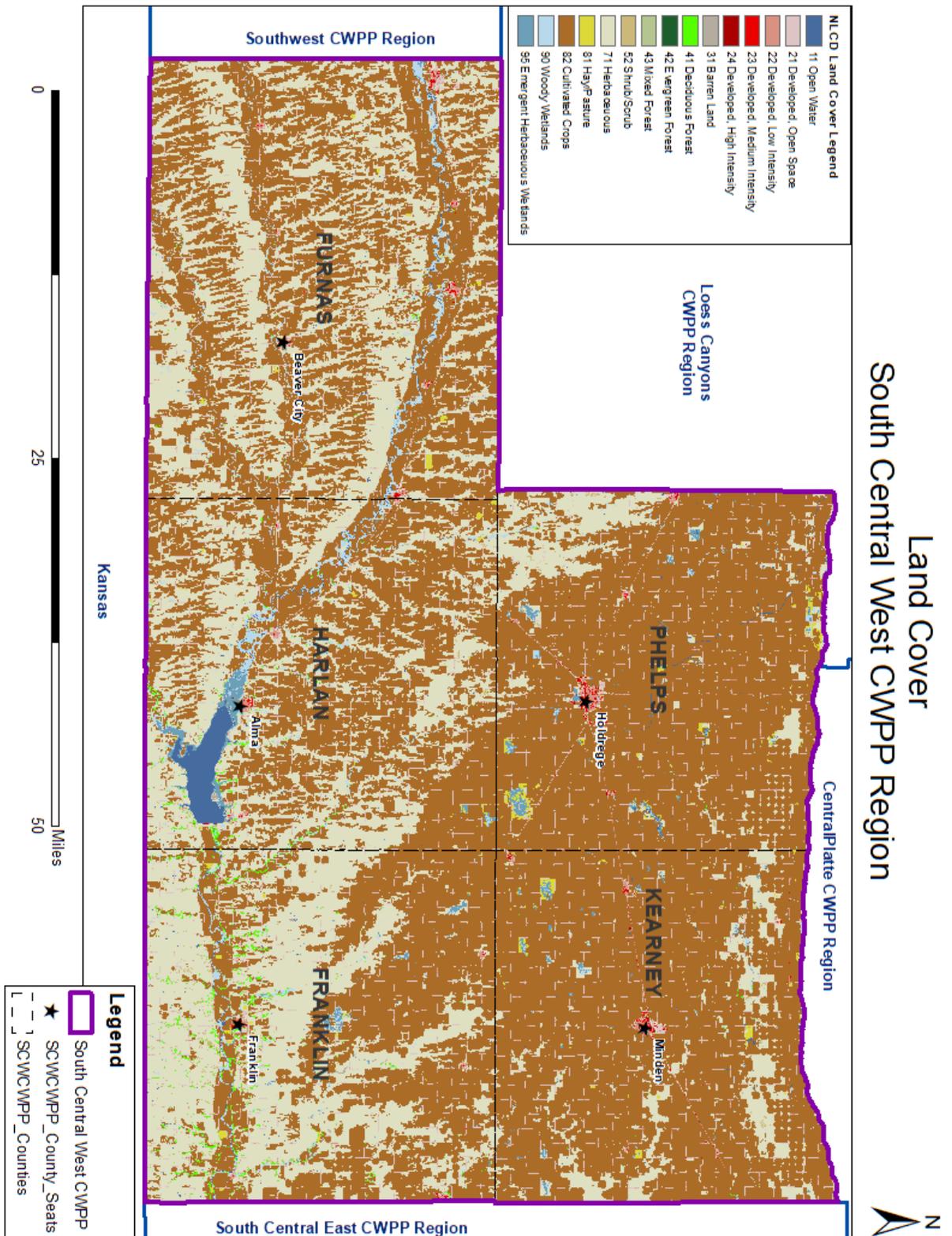
## Maps

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3. Biologically Unique Landscapes
4. Nebraska Local Mitigation Planning Areas
5. South Central West CWPP Region Areas of Concern
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  - b. Harlan and Phelps Counties
  - c. Franklin and Kearney Counties

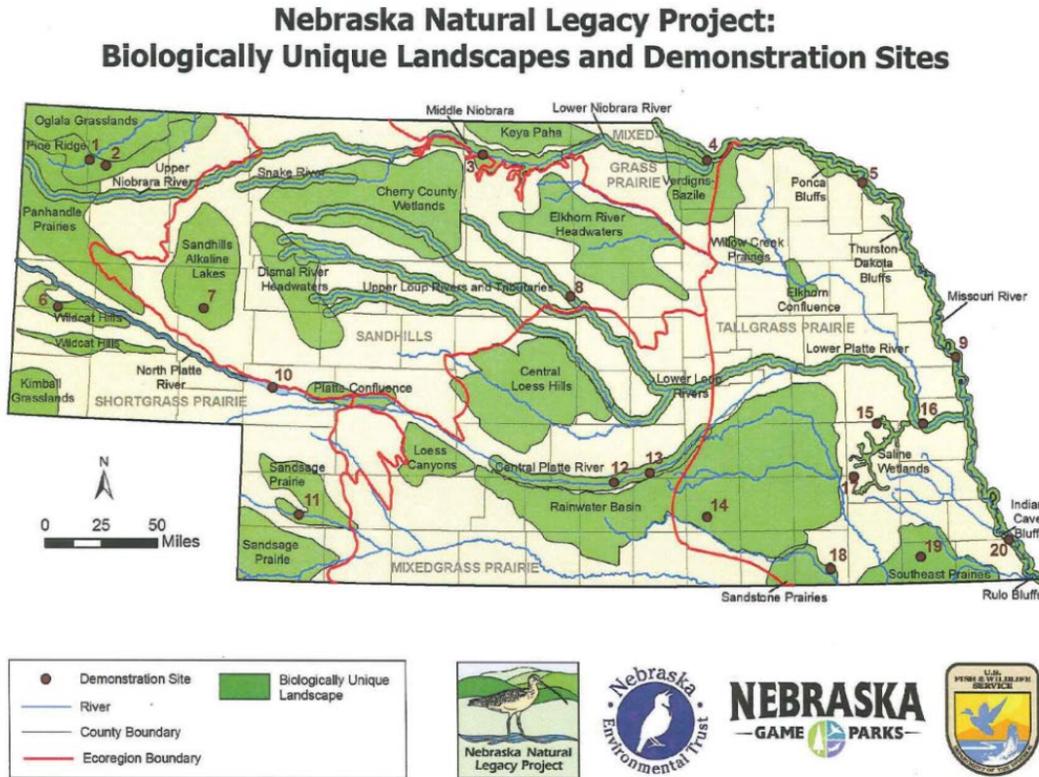
Map 1: Nebraska Community Wildfire Protection Plan Regions



Map 2: South Central West CWPP Region Land Cover



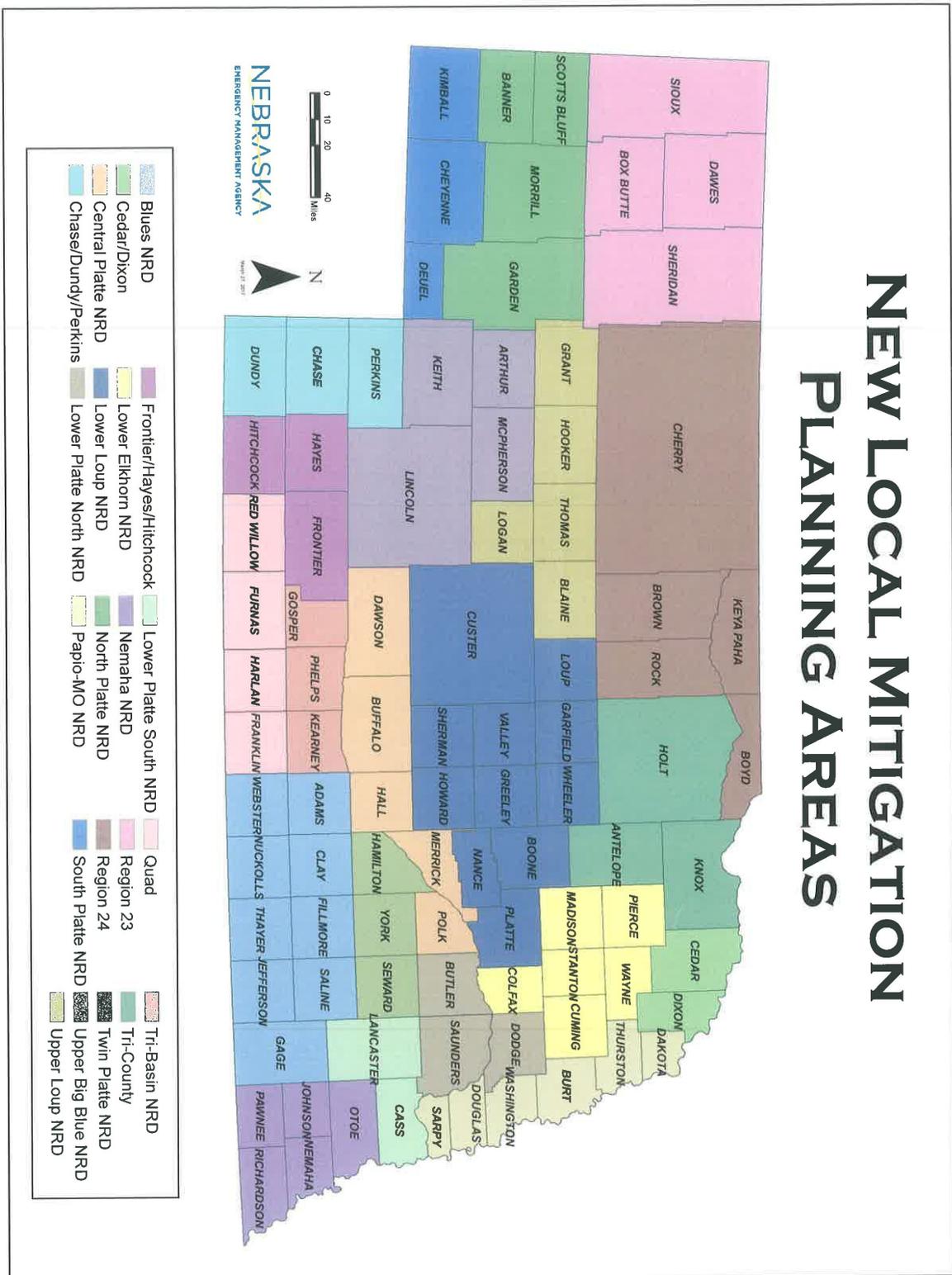
Map 3: Nebraska Natural Legacy Project: Biologically Unique Landscapes



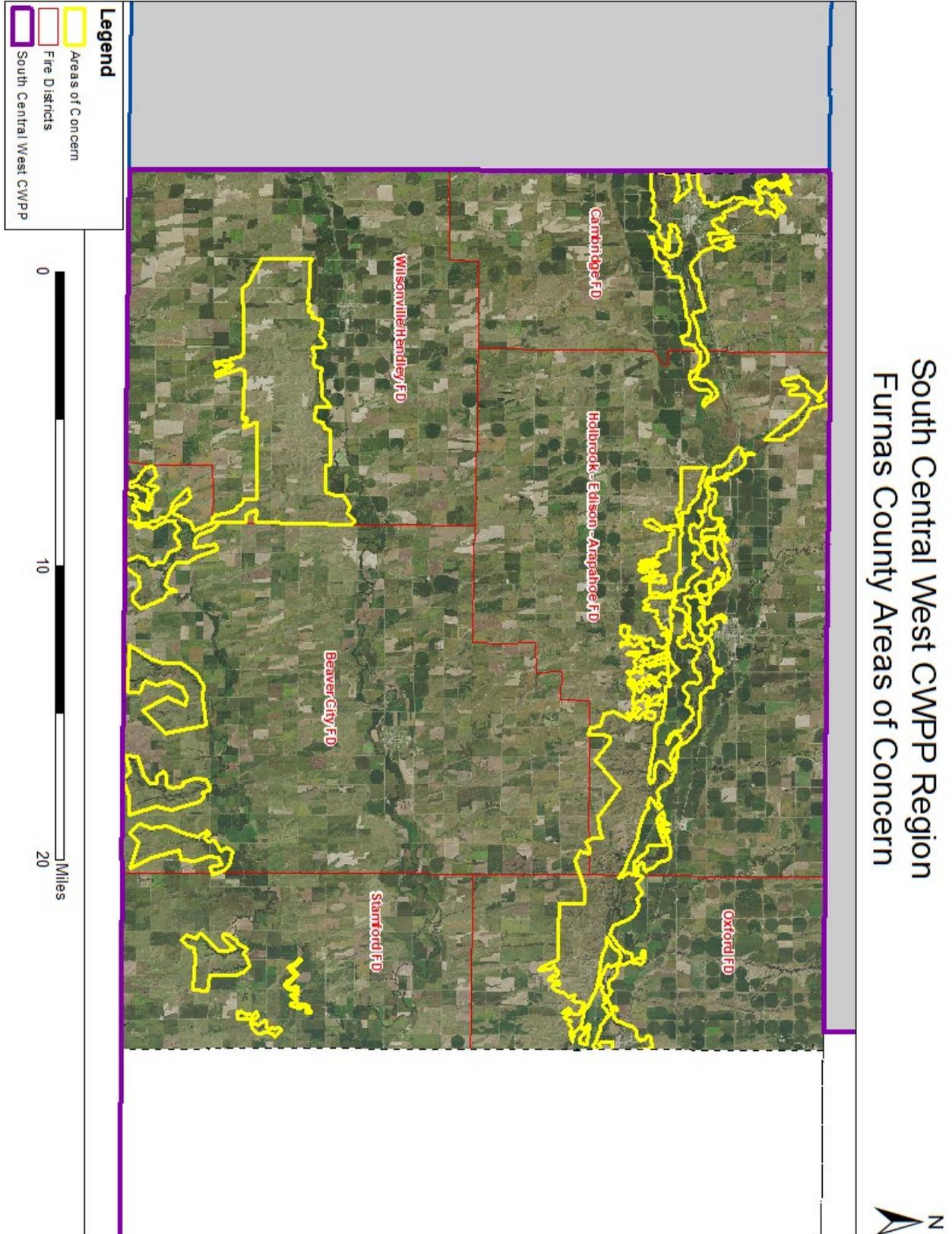
The full document is available at:

<http://outdoornebraska.gov/wp-content/uploads/2015/09/NebraskaNaturalLegacyProject2ndEdition.pdf>

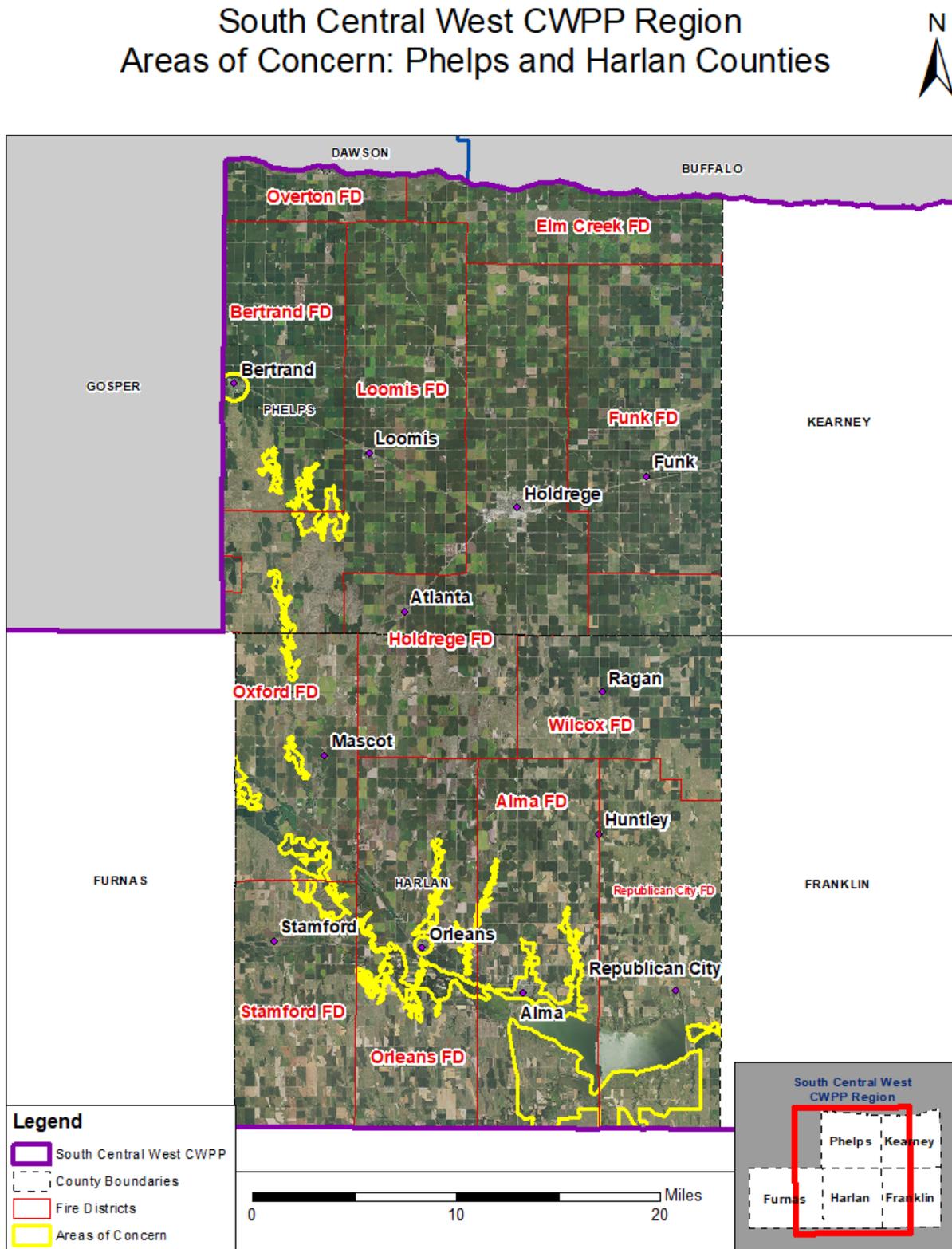
Map 4: Nebraska Local Mitigation Planning Areas



Map 5a: Furnas County Areas of Concern

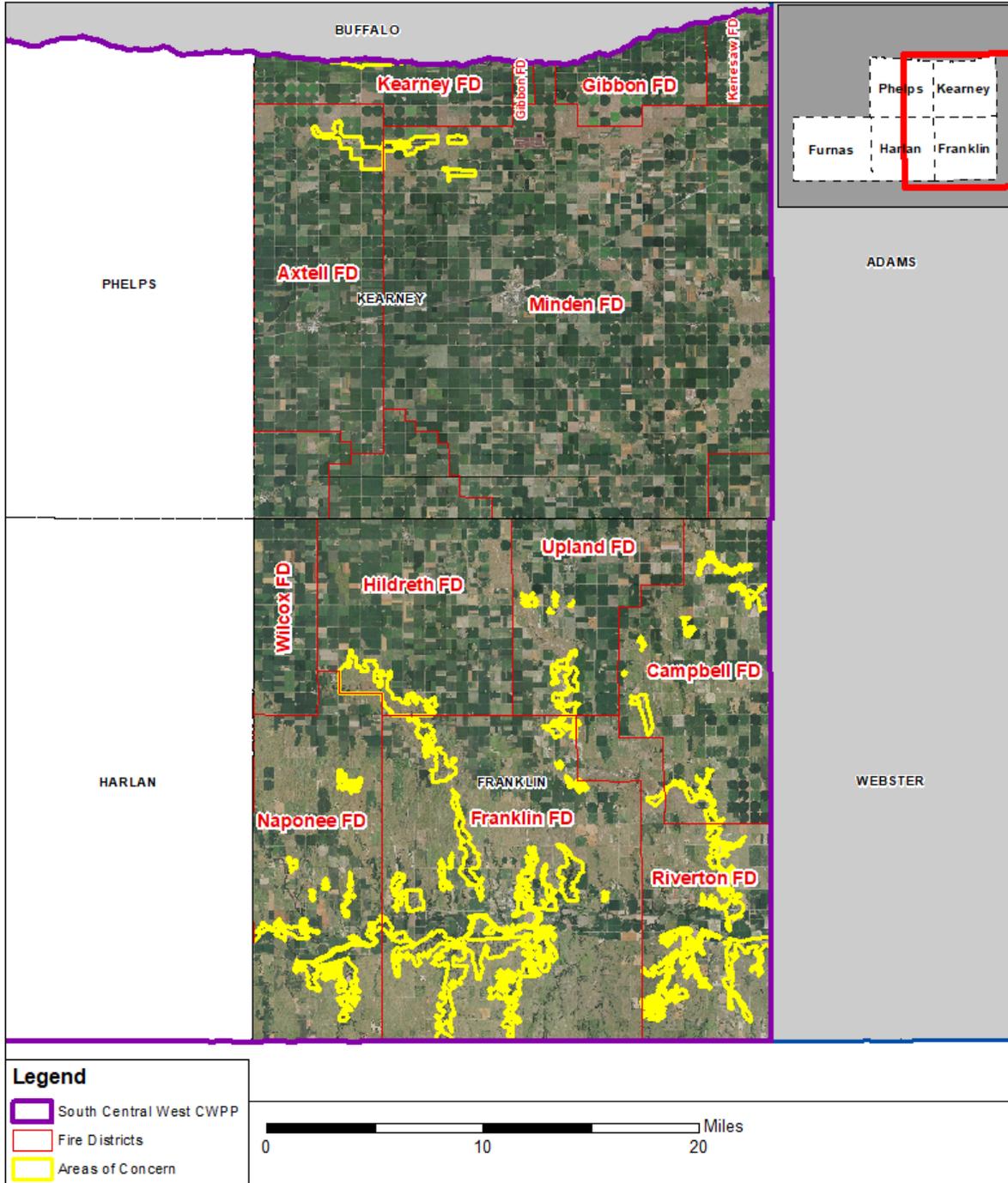


Map 5b: Harlan and Phelps Counties Areas of Concern



# Map 5c: Franklin and Kearney Counties Areas of Concern

## South Central West CWPP Region Areas of Concern: Franklin and Kearney Counties



# Appendix B

## Links to Other Planning Documents

*Due to their large file sizes, these documents are available only online*

### 1. Quad Counties HMP (Includes Franklin, Furnas, Harlan, and Red Willow Counties)

<https://jeo.com/sites/default/files/inline-files/Quad-Counties-Final-6.28.compressed.pdf>

### 2. Tri-Basin NRD HMP (Includes Phelps, Kearney, and Gosper Counties)

[https://jeo.com/sites/default/files/inline-files/1\\_Tri-Basin-NRD-HMP-Upfront.pdf](https://jeo.com/sites/default/files/inline-files/1_Tri-Basin-NRD-HMP-Upfront.pdf)

[https://jeo.com/sites/default/files/inline-files/3\\_Tri-Basin-NRD-HMP\\_Kearney-County-Appendix.pdf](https://jeo.com/sites/default/files/inline-files/3_Tri-Basin-NRD-HMP_Kearney-County-Appendix.pdf)

[https://jeo.com/sites/default/files/inline-files/4\\_Tri-Basin-NRD-HMP\\_Phelps-County-Appendix.pdf](https://jeo.com/sites/default/files/inline-files/4_Tri-Basin-NRD-HMP_Phelps-County-Appendix.pdf)

### 3. Nebraska Forest Action Plan

<https://nfs.unl.edu/statewide-forest-action-plan>

### 4. Nebraska Natural Legacy Project

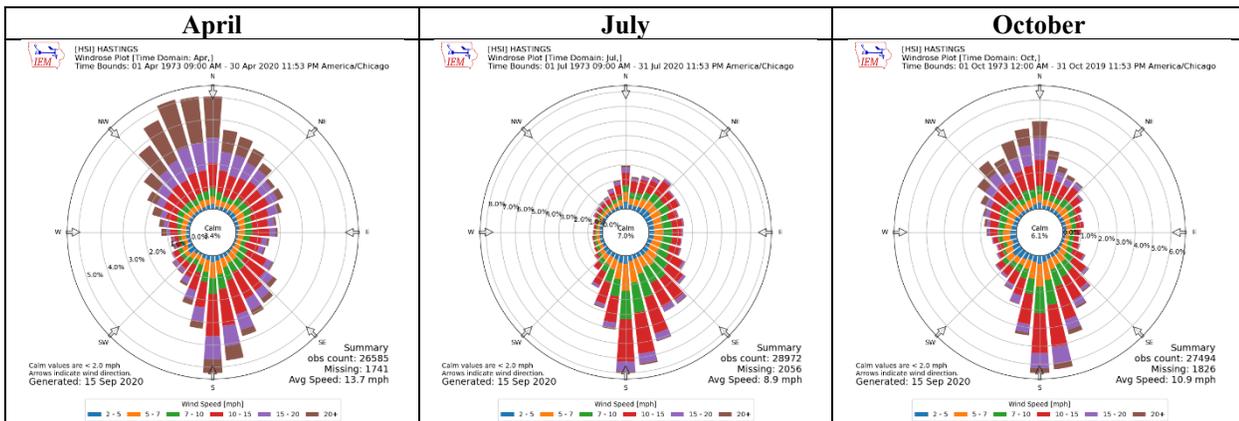
<http://outdoornebraska.gov/http://outdoornebraska.gov/wp-content/uploads/2015/09/NebraskaNaturalLegacyProject2ndEdition.pdf>

# Appendix C

## Wind Roses For Selected Cities in or near the South Central West CWPP Region

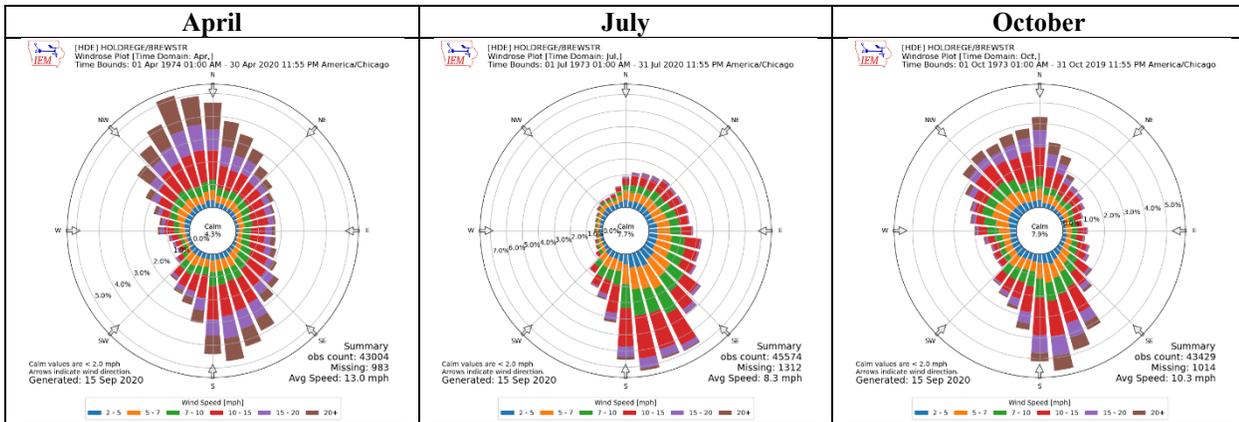
- a. Hastings
- b. Holdrege
- c. Kearney
- d. McCook

### Hastings, Nebraska Wind Direction and Speed 1973-2019

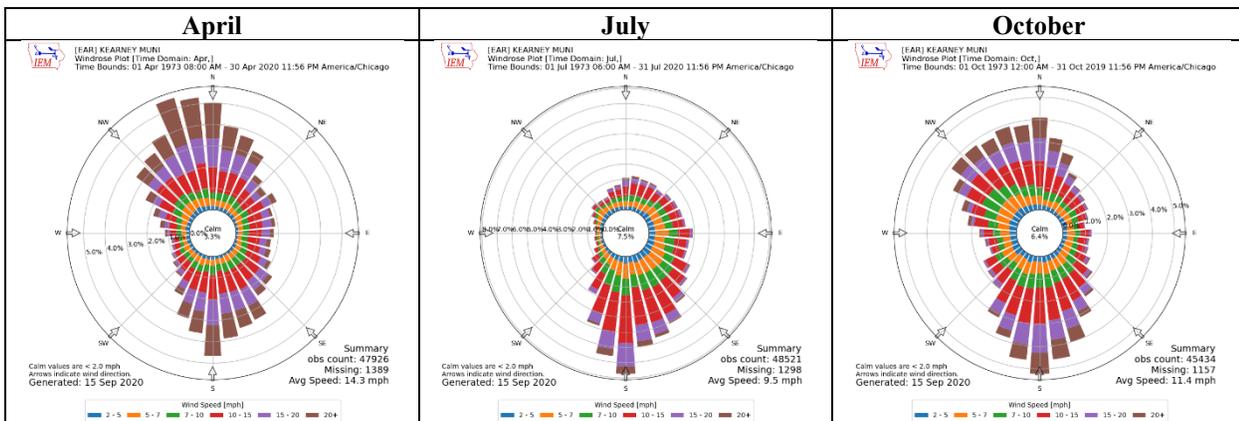


# South Central West Community Wildfire Protection Plan

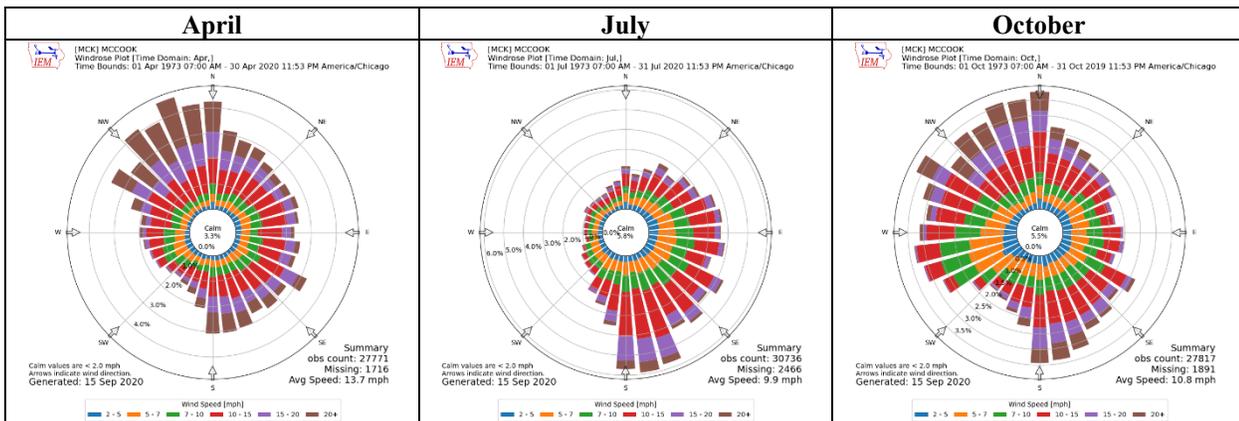
## Holdrege, Nebraska Wind Direction and Speed 1973-2019



## Kearney, Nebraska Wind Direction and Speed 1973-2019



## McCook, Nebraska Wind Direction and Speed 1973-2019



# Appendix D

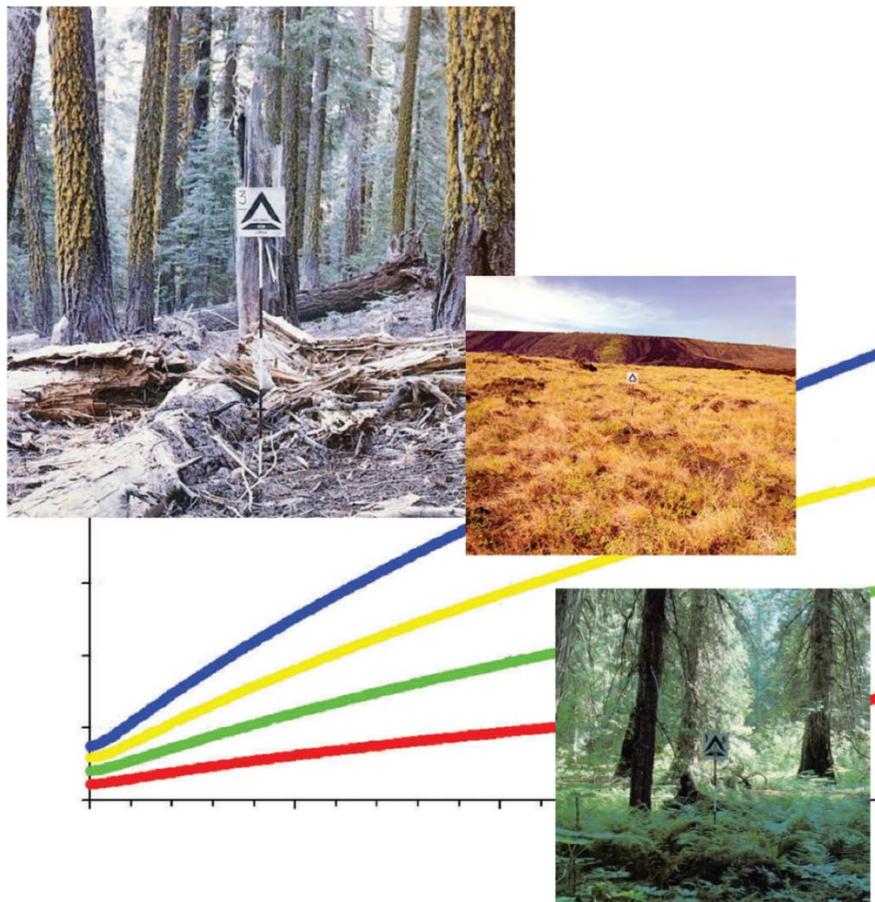
## Fuel Models for the South Central West CWPP Region

**USDA** United States  
Department  
of Agriculture  
Forest Service  
**Rocky Mountain  
Research Station**  
General Technical  
Report RMRS-GTR-153  
June 2005



### Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model

Joe H. Scott  
Robert E. Burgan

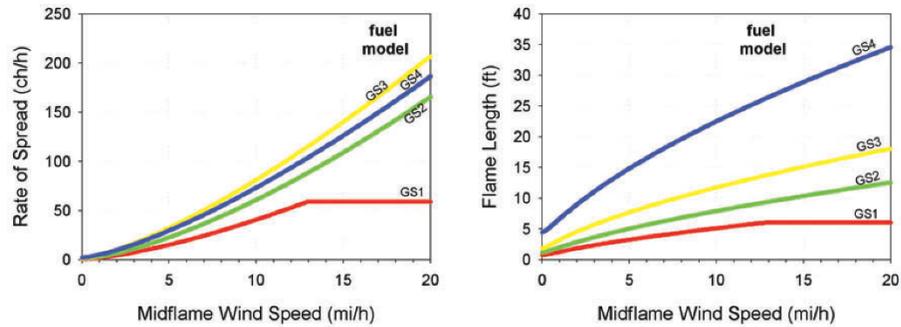


# South Central West Community Wildfire Protection Plan

## Grass-Shrub Fuel Type Models (GS)

The primary carrier of fire in the GS fuel models is grass and shrubs combined; both components are important in determining fire behavior.

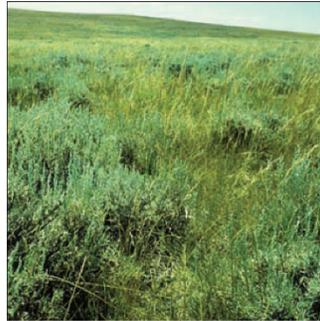
All GS fuel models are dynamic, meaning that their live herbaceous fuel load shifts from live to dead as a function of live herbaceous moisture content. The effect of live herbaceous moisture content on spread rate and intensity is strong and depends on the relative amount of grass and shrub load in the fuel model.



# South Central West Community Wildfire Protection Plan

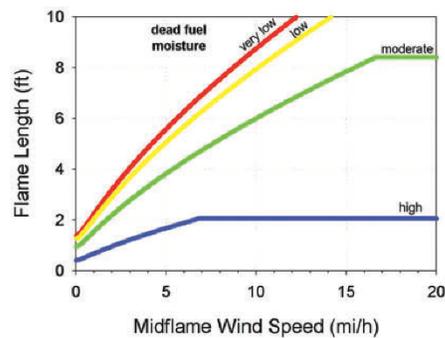
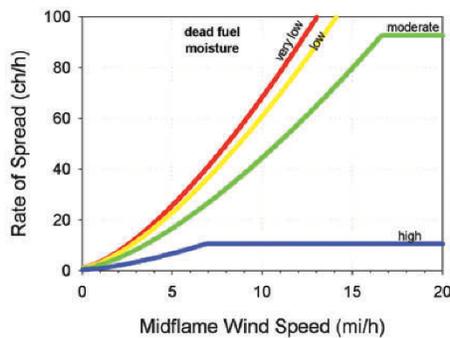
## GS2 (122)

### Moderate Load, Dry Climate Grass-Shrub (Dynamic)



**Description:** The primary carrier of fire in GS2 is grass and shrubs combined. Shrubs are 1 to 3 feet high, grass load is moderate. Spread rate is high; flame length moderate. Moisture of extinction is low.

Fine fuel load (t/ac)	2.1
Characteristic SAV (ft-1)	1827
Packing ratio (dimensionless)	0.00249
Extinction moisture content (percent)	15



# South Central West Community Wildfire Protection Plan

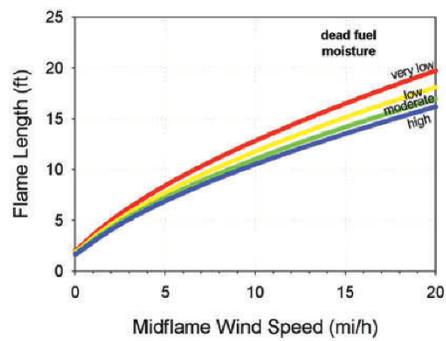
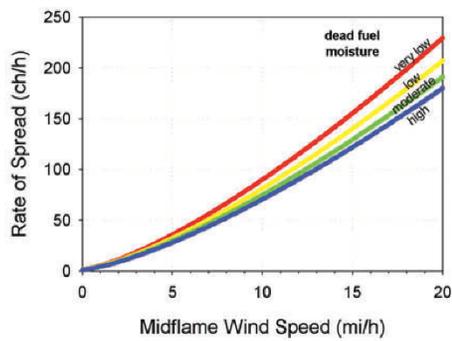
## GS3 (123)

### Moderate Load, Humid Climate Grass-Shrub (Dynamic)



**Description:** The primary carrier of fire in GS3 is grass and shrubs combined. Moderate grass/shrub load, average grass/shrub depth less than 2 feet. Spread rate is high; flame length moderate. Moisture of extinction is high.

Fine fuel load (t/ac)	3.0
Characteristic SAV (ft-1)	1614
Packing ratio (dimensionless)	0.00259
Extinction moisture content (percent)	40



# South Central West Community Wildfire Protection Plan

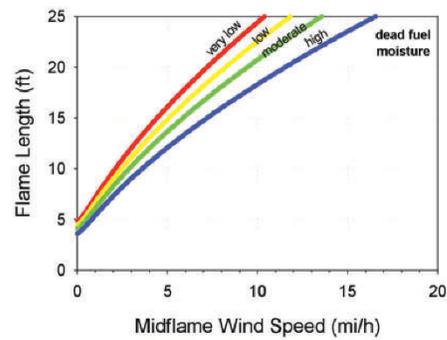
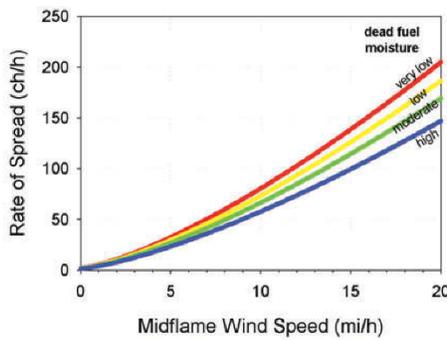
## GS4 (124)

### High Load, Humid Climate Grass-Shrub (Dynamic)



**Description:** The primary carrier of fire in GS4 is grass and shrubs combined. Heavy grass/shrub load, depth greater than 2 feet. Spread rate high; flame length very high. Moisture of extinction is high.

Fine fuel load (t/ac)	12.4
Characteristic SAV (ft-1)	1674
Packing ratio (dimensionless)	0.00874
Extinction moisture content (percent)	40



# Appendix E

## Nebraska Mutual Aid Associations

# South Central West Community Wildfire Protection Plan

## Nebraska Mutual Aid Associations

Updated 3/3/2021

### **3 & 33 MA**

Adams, Barneston, Beatrice, Beatrice RFD, Blue Springs, Clatonia, Cortland, Dewitt, Diller, Fairbury RFD, Filley, Jansen, Odell, Pickrell, Plymouth, Swanton, Wymore

### **40 - 12 MA**

Bloomfield, Brunswick, Creighton, Crofton, Magnet, Neligh, Niobrara, Orchard, Osmond, Page, Pierce, Plainview, Santee, Verdigre, Wausa

### **Big 8 MA**

Bellwood, Columbus, David City, Duncan, Osceola, Rising City, Shelby, Stromsburg

### **Big 9 MA**

Belden, Carroll, Coleridge, Concord, Crofton, Dixon, Fordyce, Hartington, Laurel, Magnet, Newcastle, Randolph, Wynot, Wausa

### **Boyd/Holt Counties MA**

Atkinson, Bartlett, Bristow, Butte, Chambers, Ewing, Lynch, Naper, O'Neill, Page, Spencer, Stuart

### **Buffalo County MA**

Amherst, Elm Creek, Gibbon, Kearney, Miller, Pleasanton, Ravenna, Shelton, Buffalo Co. Sheriff's Dept., Kearney Police Dept., Buffalo County EM, Good Samaritan Hospital EMS

### **Burt County MA**

Craig, Decatur, Lyons, Oakland, Tekamah

### **Butler Co. MA**

Abie, Bellwood, Brainerd, Bruno, David City, Dwight, Linwood, Rising City, Ulysses

### **Cass Co. MA**

Alvo, Ashland, Avoca, Cedar Creek, Eagle, Elmwood, Greenwood, Louisville, Murdock, Murray, Nehawka, Plattsmouth, Union, Weeping Water

### **Central Nebraska MA**

Ansley, Eddyville, Mason City, Miller, Oconto, Sumner

### **Central Nebraska Volunteer Fire Association MA**

Alma, Amherst, Arapahoe, Axtell, Bertrand, Elm Creek, Franklin, Funk, Gibbon, Hildreth, Holdrege, Kearney, Loomis, Miller, Minden, Naponee, Orleans, Overton, Oxford, Red Cloud, Republican City, Stamford, Upland, Wilcox

### **Central Panhandle MA**

Alliance, Banner Co., Bayard, Bridgeport, Broadwater, Dalton, Gurley, Heart of the Hills, Lisco/Garden Co., Oshkosh/Garden Co., Rackett, USFWS NP Refuge

### **Cherry County MA**

Ainsworth, Barley RFD, Cody, Colome SD, Kilgore, Merriman, Mid-Cherry RFD, Mission SD, Mullen, St. Francis SD, Thedford, US Fish and Wildlife, US Forest Service, Valentine, White River SD, Wood Lake

### **Colfax County MA**

Clarkson, Howells, Leigh, Schuyler

### **Cuming County MA**

Bancroft, Beemer, Pilger, West Point, Wisner

### **Custer County MA**

Anselmo, Ansley, Arnold, Broken Bow, Callaway, Comstock, Mason City, Merna, Oconto, Sargent

### **Dodge County MA**

Dodge, Fremont, Fremont Rural, Hooper, Nickerson, North Bend, Scribner, Snyder, Uehling

### **Elkhorn Valley MA**

Battle Creek, Carroll, Hadar, Hoskins, Madison, Meadow Grove, Norfolk, Pierce, Stanton, Wayne, Winside

# South Central West Community Wildfire Protection Plan

## **Fillmore County MA**

Bruning, Exeter, Fairmont, Geneva, Grafton, McCool Junction, Milligan, Ohiowa, Shickley, Sutton

## **Frenchman Valley MA**

Bartley, Beaver Valley (Danbury & Lebanon), Benkelman, Culbertson, Curtis, Haigler, Hayes Center, Imperial, Indianola, Lamar, Maywood/Wellfleet, McCook, Palisade, Red Willow Western, Stratton, Trenton, Wallace, Wauneta

## **Hamilton County MA**

Aurora, Giltner, Hampton, Hordville, Marquette, Phillips, Hamilton County EMS

## **Hastings Area MA**

Ayr (Hastings RFD), Bladen, Blue Hill, Campbell, Central Community College, Edgar, Fairfield, Glenville, Harvard, Hastings, Hastings CD, Holstein, Juniata, Kenesaw, Lawrence, Hruska MARC, Roseland, Trumbull

## **KBR&C MA**

Ainsworth, Bassett, Calamus, Johnstown, Long Pine, Newport, Raven, Springview, Wood Lake

## **Lancaster County MA**

Alvo, Ashland, Bennet, Ceresco, Clatonia, Cortland, Crete, Douglas, Eagle, Firth, Greenwood, Hallam, Hickman, Lincoln, Malcolm, NE Air Guard, Palmyra, Pleasant Dale, Raymond, Rural Metro, Southeast RFD, Southwest RFD, Valparaiso, Waverly

## **Loup Platte MA**

Arcadia, Ashton, Litchfield, Loup City, Ravenna, Rockville

## **Loup Platte #2 MA**

Central City, Chapman, Clarks, Fullerton, Hordville, Marquette, Osceola, Palmer, Polk, Shelby, Silver Creek, Stromsburg

## **Loup Valley MA**

Arcadia, Bartlett, Burwell, Elba, Ericson, Greeley, North Loup, Ord, Primrose, Scotia, Spalding, Wolbach

## **Mid-Nebraska MA**

Albion, Belgrade, Cedar Rapids, Columbus, Columbus RFD, Creston, Duncan, Fullerton, Genoa, Humphrey, Leigh, Lindsay, Madison, Monroe, Newman Grove, Platte Center, Silver Creek, St. Edward

## **Mid Plains MA**

Arnold, Brady, Curtis, Hershey, Maywood, Maxwell, North Platte, Stapleton, Sutherland, Tyron, Wallace, Wellfleet

## **Nemaha County MA**

Brock FD, Brownville FD / Rescue, Johnson FD, Julian FD, Nemaha FD / Rescue, Peru FD / Rescue, Nemaha County Emergency Management, Cooper Nuclear Station, Auburn Police Dept., Nemaha County Sheriff's Office

## **Northeast MA**

Allen, Bancroft, Concord, Dakota City, Dixon, Emerson, Homer, Martinsburg, Newcastle, Pender, Ponca, Rosalie, South Sioux City, Thurston, Wakefield, Walthill, Wayne, Winnebago

## **Northeast Fireman's Association**

Antelope Co., Burt Co., Butler Co., Cedar Co., Colfax Co., Cuming Co., Dakota Co., Dixon Co., Dodge Co., Douglas Co., Knox Co., Madison Co., Pierce Co., Platte Co., Stanton Co., Sarpy Co., Thurston Co., Washington Co., Wayne Co., Saunders Co.

## **Otoe County MA**

Burr, Cook, Douglas, Dunbar, Nebraska City, Otoe, Palmyra, Syracuse, Talmage, Unadilla

**Phelps County MA:** Bertrand, Funk, Holdrege, Holdrege RFD, Loomis

## **Pine Ridge MA**

Alliance, Ardmore SD, Chadron, Crawford, Gordon, Harrison, Hay Springs, Hemingford, Merriman, Rushville, US Forest Service

## **Platte Valley MA (was GI Area MA)**

Alda, Cairo, Chapman, Doniphan, Grand Island, Grand Island SFD, Phillips, Wood River

# South Central West Community Wildfire Protection Plan

## **Quad Cities MA (includes former Franklin Co. MA)**

Alma, Axtell, Bloomington, Campbell, Franklin, Hildreth, Minden, Naponee, Republican City, Riverton, Upland, Wilcox, Kearney Co. EMA

## **Richardson County MA**

Dawson, Falls City, Falls City RFD, Humboldt, Rulo, Salem, Shubert, Stella, Verdon

## **Saline County MA**

Crete, DeWitt, Dorchester, Friend, Swanton, Tobias, Western, Wilbur, Saline County Sheriff, Saline County Emergency Management

## **Sandhills MA**

Anselmo, Arnold, Arthur, Brewster, Dunning, Halsey, Hyannis, Keystone-Lemoyne, McPherson Co., Mid-Cherry, Mullen, Purdum, Stapleton, Thedford, US Fish & Wildlife, US Forest Service

## **Saunders County MA**

Ashland, Cedar Bluffs, Ceresco, Colon, Ithaca, Malmo, Mead, Morse Bluff, Prague, Valparaiso, Wahoo, Weston, Yutan

## **Scottsbluff County MA**

Banner Co., Gering/Gering Rural, Lyman/Kiowa, McGrew, Minatare-Melbeta, Mitchell, Morrill (includes former Henry VFD), Scottsbluff, Scottsbluff RFD, Western Nebraska Regional Airport Fire Dept., Torrington WY, US Fish & Wildlife Service, Scotts Bluff County Communications Center, Region 22 Emergency Management, Hemingford VFD (Box Butte Co.), Bayard VFD (Morrill Co.)

## **Seward County MA**

Beaver Crossing, Bee, Cordova, Garland, Goehner, Milford, Pleasant Dale, Seward, Staplehurst, Tamora, Utica

## **South Central Nebraska MA**

Brady, Cozad, Curtis, Elwood, Eustis, Farnam, Gothenburg, Johnson Lake EMS, Lexington, Overton

## **South Central #2 MA**

Clay Center, Davenport, Edgar, Fairfield, Glenvil, Hardy, Lawrence, Nelson, Ong, Ruskin, Shickley, Superior, Sutton, Clay County EM

## **Southeast MA**

Adams, Burchard, Cook, Du Bois, Elk Creek, Johnson, Pawnee City, Steinauer, Sterling, Summerfield (KS), Table Rock, Tecumseh

## **Southwest MA**

Arthur, Big Springs, Blue Creek, Brule, Chappell, Elsie, Grant, Imperial, Keystone-Lemoyne, Lamar, Lisco, Madrid, Ogallala, Oshkosh, Paxton, Sutherland, Venango, Wallace

## **Stateline MA**

Bladen, Blue Hill, Campbell, Guide Rock, Lawrence, Red Cloud, Riverton, Superior

## **Thayer County MA**

Alexandria, Belvidere, Bruning, Byron, Carlton, Chester, Davenport, Deshler, Eustis, Gilead, Hebron, Hubbell

## **Tri-Mutual Aid**

Arlington, Bellevue, Bennington, Blair, Boys Town, Carter Lake, Cedar Bluffs, Elkhorn, Eppley Airport, Fremont, Ft. Calhoun, Gretna, Irvington, Kennard, LaVista, Louisville, Millard, Offutt AFB, Omaha FD, Papillion, Plattsmouth, Ponca Hills, Ralston, Springfield, Valley, Waterloo, Yutan

## **Tri-Valley MA**

Arapahoe, Bartley, Beaver City, Cambridge, Edison, Holbrook, Oxford, Stamford, Wilsonville

## **Twin Loups MA**

Ashton, Boelus, Dannebrog, Elba, Farwell, Rockville, St. Libory, St. Paul

## **Washington County MA**

Arlington, Blair, Ft. Calhoun, Herman, Kennard

## **York County MA**

Benedict, Bradshaw, Gresham, Henderson, McCool Junction, Waco, York

# Appendix F

## Fire Department Equipment and Contact Information for the South Central West CWPP Region

*This section includes Annex F from county Local Emergency Operations Plans plus additional information from the departments that responded to the CWPP questionnaire*

# South Central West Community Wildfire Protection Plan

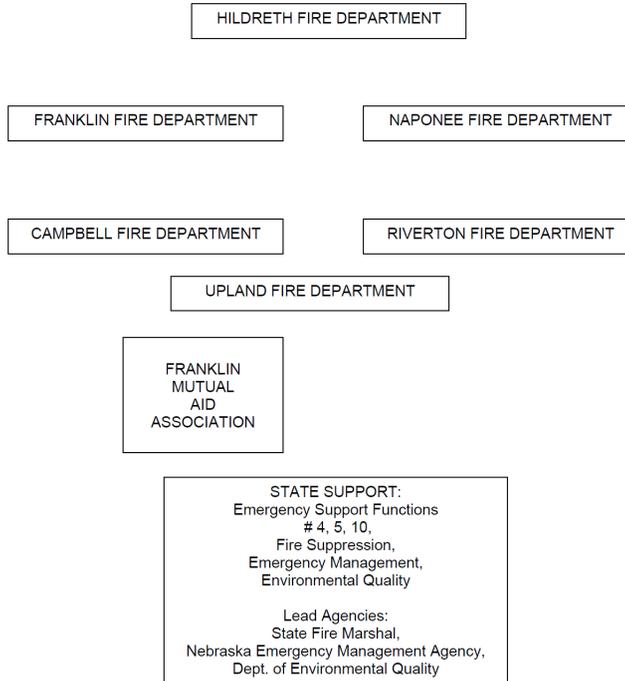
## Franklin County

Information from Franklin Co. LEOP, Annex F:

FRANKLIN COUNTY LEOP

ANNEX F

### FIRE SERVICES



F-1

2017

### FRANKLIN COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/TANKER	GRASS/WEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/SPECIAL TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes/No
FRANKLIN	911		2	1		2	1	2			
CAMPBELL	911		2	2		2	1	2			
HILDRETH	911		1	2		2		2			
NAPONEE	911		1	2		3	3				
RIVERTON	911		1	2		1					
UPLAND	911		1	2		1					
Nearest HAZMAT Response Team											
HASTINGS FIRE	402-461-2350										

F-11

2017

FRANKLIN COUNTY LEOP

ANNEX F  
ATTACHMENT 1

# South Central West Community Wildfire Protection Plan

## Survey Responses from Franklin County Fire Departments:

**Department Name:** Campbell Rural Fire Protection  
**Counties:** Franklin, Kearney, Webster  
**Street Address:** 712 Broad St. **Mailing Address:** PO Box 337, Campbell, NE 68932  
**Chief:** Ron Pankoke; 402-984-4730c, 402-756-8435h  
**Ass't. Chief:** Greg Choquette; 402-469-1968c, 402-756-8353h  
**Sec/Treas.:** Jenny Pankoke

### Personnel

28 **Vol.:**

**MAD(s):** Hastings Area MA, Franklin Co. MA, Kansas-Nebraska State Line MA  
**Other MA agreements:** Campbell and Bladen Fire Departments are working together because of volunteer fireman and EMT issues. We also cover Upland for ambulance services.

### Equipment

#### *Engines*

2 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members  
2 Type 5: Wildland: 50 GPM, 400 gal. capacity, two crew members

#### *Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-2 (support): 200 GPM pump, 2,500 gallon capacity, 1 crew member  
1 S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member

#### *Other*

1 Equipment trucks trailer  
2 Other (describe): ambulances  
1 Other (describe): chief vehicle

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**  
Yes

**Location1:** T4N R13W Sec. 25, Hall's Oil, Inc. Fuel retail location with about 2000,000 gal. of gas and diesel on hand, about 20,000 gal. of propane, and a warehouse full of oil and supplies. The closest water hydrant is across Highway 4.

#### **Issues:**

x Multiple structures  
x 1 way in/out  
x Heavy fuels  
x Lack of water within effective distance

**Location2:** T4N R13W Sec. 25. CPI Grain is a local elevator with grain and fuel storage. Closest hydrant is across Highway 4.

#### **Issues:**

x Multiple structures  
x Heavy fuels  
x Lack of water within effective distance

**Bridges that won't support equipment weight:** Yes. The bridges out in the county roads are not in good enough shape to support our tanker trucks.

**GIS layer & contact info:** Yes, Ron Pankoke, 402-984-4730.

**Greatest concerns:** Being able to get to water fast enough to rural areas, and having enough personnel to operate the trucks.

# South Central West Community Wildfire Protection Plan

## Rank:

- 5 Housing
- 4 Infrastructure
- 2 Bridge limits
- 3 Hydrants
- 1 Other water sources – getting water to rural areas

**Comments:** We are having a problem with getting active personnel, especially EMTs.

**Department Name:** Franklin VFD: *(Survey not returned)*

**Department Name:** Hildreth Rural Fire District

**Counties:** Franklin

**Street Address:** 248 Commercial **Mailing Address:** PO Box 277, Hildreth, NE 68947

**Dept. Phone:** 308-938-2471 **Dept. Email:** hildrethvfd911@yahoo.com

**Chief:** Joel Panter; 308-991-4003; joel.panter@yahoo.com

**Ass't. Chief:** Mike Garrett; 308-470-1627; mgarrett@cpicoop.com

**Sec/Treas.:** Elizabeth Burki; 308-991-7999; elizabethburki@gmail.com

## Personnel

32 Vol.:

**MAD(s):** Quad Cities

## Equipment

### *Engines*

- 1 Type 1 Structural: ~~1,000~~ 1,250 GPM, ~~300~~ 100 gal. capacity, four crew members
- 3 Type 3 Wildland: ~~150~~ 200 GPM, ~~500~~ 2-250 & 1-600 gal. capacity, three crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

- 1 S-2 (support): 200 GPM pump, ~~2,500~~ 3,400 gallon capacity, 1 crew member

### *Other*

- 1 Other (Describe): Suburban
- 0 Road Dept. Equip. (describe):

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes.

**Location:** South part of fire district is hills, valleys, and canyons with limited entrances.

### **Issues:**

- x Rough terrain
- x 1 way in/out
- x Heavy fuels
- x Lack of water within effective distance

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** Yes. EDS 911 Franklin County, 308-425-6231

## Rank:

- 2 Housing
- 3 Infrastructure
- 5 Bridge limits
- 4 Hydrants
- 1 Other water sources

# South Central West Community Wildfire Protection Plan

**Department Name:** Naponee VFD: *(Survey not returned)*

**Department Name:** Riverton VFD: *(Survey not returned)*

**Department Name:** Upland Fire Dept.

**Counties:** Franklin

**Mailing Address:** PO Box 125, Upland, NE 68981

**Chief:** Jeff Linner; 402-756-0799

**Ass't. Chief:** Caes Linner

**Sec/Treas.:** Belinda Tolle; themomtolle@yahoo.com

## Personnel

**Vol.:** (circled Volunteer, but left the number blank)

**MAD(s):** Quad City – Mid Rivers

**Other MA agreements:** Franklin, Hildreth, Wilcox, Axtell, Minden, Campbell, Riverton

## Equipment

### *Engines*

1 Type 4: Wildland: 50 GPM, 750 gal. capacity, two crew members

1 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

### *Other*

Other (Describe): Engines, 1250, 3000 gal. capacity

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location:** Thompson Creek (west branch, south of Upland)

### **Issues:**

- x Multiple structures (our towns)
- x Difficult access
- x Rough terrain
- x 1 way in/out (to the fires)
- x Lack of water within effective distance
- x Other: Resources, people

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Personnel and equipment

### **Rank:**

- 4 **Housing**
- 3 **Infrastructure**
- 5 **Bridge limits**
- 1 **Hydrants**
- 2 **Other water sources**

**Department Name:** Wilcox Rural Fire Protection District: *(See listing under Kearney County)*

# South Central West Community Wildfire Protection Plan

## Furnas County

Information from Furnas Co. LEOP, Annex F:

FURNAS COUNTY LEOP

ANNEX F

### FIRE SERVICES

HEA FIRE DEPARTMENT

BEAVER CITY FIRE DEPARTMENT

CAMBRIDGE FIRE DEPARTMENT

OXFORD FIRE DEPARTMENT

WILSONVILLE FIRE DEPARTMENT

TRI VALLEY  
MUTUAL  
AID  
ASSOCIATION

STATE SUPPORT:  
Emergency Support Functions  
# 4, 5, 10,  
Fire Suppression,  
Emergency Management,  
Environmental Quality  
  
Lead Agencies:  
State Fire Marshal  
Nebraska Emergency Management Agency,

F-1

2019

### FURNAS COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/TANKER	GRASS-WEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/SPECIAL-TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
(HEA) ARAPAHOE	962-7605		2	1		3	1	2			YES
(HEA) EDISON			1	1		1					YES
(HEA) HOLBROOK	493-5683		1	1		1					YES
BEAVER CITY	268-2222		2	2		3	1	2			YES
CAMBRIDGE	697-3328	1	2	1		3	1	2			YES
OXFORD	824-3527		2	1		3	1	2	WATER RESCUE TEAM		YES
WILSONVILLE / HENDLEY	349-1019		1		1	3					NO
SOUTH CENTRAL ROPE RESCUE									ROPE RESCUE TEAM	TRAILER EQUIP STORED IN OXFORD	
Nearest HAZMAT Response Team / RED WILLOW WESTERN MCCOOK	345-3450										

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FURNAS COUNTY LEOP

ANNEX

# South Central West Community Wildfire Protection Plan

## Survey Responses from Furnas County Fire Departments:

**Department Name:** Arapaho VFD: *(Survey not returned)*

**Department Name:** Beaver City Rural Fire **Counties:** Furnas

**Street Address:** 301 10<sup>th</sup> St.; **Mailing Address:** PO Box 185, Beaver City, NE 68926 **Dept. Phone:** 308-268-2145

**Chief:** Lee Strayer; 308-655-1866

**Ass't. Chief:** Kale Shafer; 402-540-0020; shaferkale@yahoo.com

**Secretary:** Ben Ellis; 308-655-1722

**Treasurer:** Travis Theobald; 308-991-2017

### Personnel

17 **Vol.:**

**MAD(s):** Tri Valley MA

### Equipment

#### *Engines*

1 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members

4 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-1 (support): 300 GPM pump, 4,000 gallon capacity, 1 crew member

1 S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member

#### *Other*

1 Equipment trucks

Road Dept. Equip. (describe): County Road Dept./contractors

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location:** Exterior rural residential areas

**Issues:**

Rough terrain

Heavy fuels

Lack of water within effective distance

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Lack of water

**Rank:**

4 **Housing**

3 **Infrastructure**

5 **Bridge limits**

2 **Hydrants**

1 **Other water sources**

**Department Name:** Cambridge VFD

**Counties:** Furnas, Red Willow, Frontier

**Street Address:** 209 Nelson St. **Mailing Address:** PO Box Q, Cambridge, NE 69022 **Dept. Phone:** 308-697-3328

**Chief:** Delaine Soucie; 308-340-3848; delaine\_soucie@live.com

**Ass't. Chief:** Darren Wulf; 308-737-1110; dwulf1@swnebr.net

**Sec/Treas.:** Chris Rich; 3402-690-1101; chrisr@sandryfire.com

# South Central West Community Wildfire Protection Plan

## Personnel

25 Vol.:

MAD(s): Tri-Valley MA

## Equipment

### *Engines*

3 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

3 Type 5: Wildland: 50 GPM, 400 300 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 T-1 (tactical): 250 GPM pump, ~~2,000~~ 3,000 gallon capacity, 2 crew members

### *Other*

1 Other (Describe): Incident command Suburban, air trailer with scene lights

**Equipment housed away from main barn?** Yes. 80' aerial truck (Cambridge airport); equipment trailer—Ropel grain bin rescue equipment

## **Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location1:** Ethanol plant, SE edge of Cambridge

### **Issues:**

x Multiple structures

x Heavy fuels

**Location2:** SW corner of T4N R25W

### **Issues:**

x Multiple structures

x Difficult access

x Rough terrain

x 1 way in/out

x Heavy fuels

**Location3:** Harry Strunk Lake Area – housing areas – trails 1, 3, 5

### **Issues:**

x Multiple structures

x Difficult access

x Rough terrain

x 1 way in/out

x Heavy fuels

**Location4:** New housing development east side of Cambridge. New hotel, truck stop, and fueling station.

### **Issues:**

x Multiple structures

**Bridges that won't support equipment weight:** Yes. Road 411 & 728 vicinity; Road 731 crossing Deer Creek.

**GIS layer & contact info:** No

**Greatest concerns:** Communication; incident command staging

### **Rank:**

1 **Housing**

2 **Infrastructure**

3 **Bridge limits**

4 **Hydrants**

5 **Other water sources**

Department Name: Edison Vol. Fire Dept.

**Counties:** Furnas, Gosper, Frontier

**Street Address:** 208 2<sup>nd</sup> St. **Mailing Address:** 42974 Road 721, Edison, NE 68936

**Chief:** Tim Chapman; 308-962-7009; tim.chapman2335@icloud.com

**Ass't. Chief:** Mike Sieja, Jr.; 308-962-4258; msiejajr@agvalley.com

**Sec/Treas.:** Arlan Leising; 308-962-4258; fivelfarms@frontiernet.net

# South Central West Community Wildfire Protection Plan

## Personnel

6 Vol.:

**MAD(s):** Tri-Valley MA

**Other MA agreements:** Elwood, Bertrand

## Equipment

### *Engines*

1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members

1 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

No but the following issues were checked:

### **Issues:**

x Difficult access

x Rough terrain

x Heavy fuels

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Manpower

### **Rank:**

5 **Housing**

4 **Infrastructure**

3 **Bridge limits**

1 **Hydrants**

2 **Other water sources**

**Department Name:** Holbrook Volunteer Fire Department

**Counties:** Furnas, Gosper, Frontier

**Street Address:** 304 Center Ave. **Mailing Address:** PO Box 123, Holbrook, NE 68948

**Dept. Email:** holbrookfiredept@gmail.com

**Chief:** Wesley Hock; 308-279-1777, 308-697-8624; Wesley.hock2@gmail.com

**Ass't. Chief:** Jesse Hamel; 308-962-4581; crazyallis@hotmail.com

**Treasurer:** Dale Long; 308-962-6728

## Personnel

13 Vol.:

**MAD(s):** Tri-Valley MA

## Equipment

### *Engines*

1 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members

1 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 T-2 (tactical): 250 GPM pump, ~~1,000~~ 1,200 gallon capacity, 6x6, 2 crew members

### *Other*

1 Other (Describe): Suburban; support or incident command

**Equipment housed away from main barn?** No

# South Central West Community Wildfire Protection Plan

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location:** Northwest sections of fire district: grassland, trees, rough with few access points. Water refill points are few and a distance away.

**Issues:**

- x Difficult access
- x Rough terrain
- x Heavy fuels
- x Lack of water within effective distance

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Personnel and water

**Rank:**

- 4 **Housing**
- 3 **Infrastructure**
- 5 **Bridge limits**
- 2 **Hydrants**
- 1 **Other water sources**

Department Name: Oxford Vol. Fire & Rescue

**Counties:** Furnas, Harlan, Gosper

**Street & Mailing Address:** 310 Odell, Oxford, NE 68967 **Dept. Email:** oxfordfire1@gmail.com

**Chief:** Bill Grossnicklaus; 308-962-4266; billg@fyr-tek.com

**Ass't. Chief:** Taylor Lueking; 308-991-0695

**Secretary:** Nichole Bose; 308-991-1800

**Treasurer:** Michelle Haag; 308-991-6850; mhaag@agvalley.com

## Personnel

30 **Vol.:**

**MAD(s):** Tri-Valley MA

**Other MA agreements:** South Central Rope Rescue, Alma, Minden, Wilcox, Franklin

## Equipment

*Engines*

2 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

2 Type 3 Wildland: 150 GPM, 500 gal. capacity, three crew members

1 Type 5: Wildland: 50 GPM, 400 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-1 (support): 300 GPM pump, 4,000 gallon capacity, 1 crew member

*Other*

1 Equipment trucks

1 Other: Swift Water/Ice/Urban Flood/Dive Command trailer; High angle rope rescue trailer  
Road Dept. Equip. (describe): Emergency highway signs

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

No

**Location:** Limited access to southern half of our district due to lack of bridges

**Issues:**

- x 1 way in/out

**Bridges that won't support equipment weight:** No

# South Central West Community Wildfire Protection Plan

**GIS layer & contact info:** No

**Greatest concerns:** Rural water supply

**Rank:**

- 1      **Housing**
- 3      **Infrastructure**
- 5      **Bridge limits**
- 4      **Hydrants**
- 2      **Other water sources**

**Department Name:** Stamford Rural Fire District: *(See listing under Harlan County)*

**Department Name:** Wilsonville/Hendley RFD

**Counties:** Furnas

**Street Address:** Main St. **Mailing Address:** PO Box 126, Wilsonville, NE 69046

**Chief:** Justin Mowry; 308-350-0369; mowry40@hotmail.com

**Ass't. Chief:** Steve Rice; 308-695-4231

**Secretary:** Mallory Palmer; 308-737-1845

## Personnel

16      **Vol.:**

**MAD(s):** Furnas Co. MA, Tri-Valley MA

## Equipment

### *Engines*

- 1      Type 1    Structural: 1,000 GPM, 300 gal. capacity, four crew members
- 1      Type 2    Structural: 500 GPM, 300 gal. capacity, three crew members
- 2      Type 5:    Wildland: 50 GPM, 400 gal. capacity, two crew members
- 1      Type 6:    Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders                    (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

- 1      S-2 (support):    200 GPM pump, 2,500 gallon capacity, 1 crew member

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes.

**Location:** Southeast part of district: lack of water, big pasture, rough ground.

**Issues:**

- x      Difficult access
- x      Rough terrain
- x      Heavy fuels
- x      Lack of water within effective distance

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Water supply

**Rank:**

- 3      **Housing**
- 4      **Infrastructure**
- 5      **Bridge limits**
- 2      **Hydrants**
- 1      **Other water sources**

# South Central West Community Wildfire Protection Plan

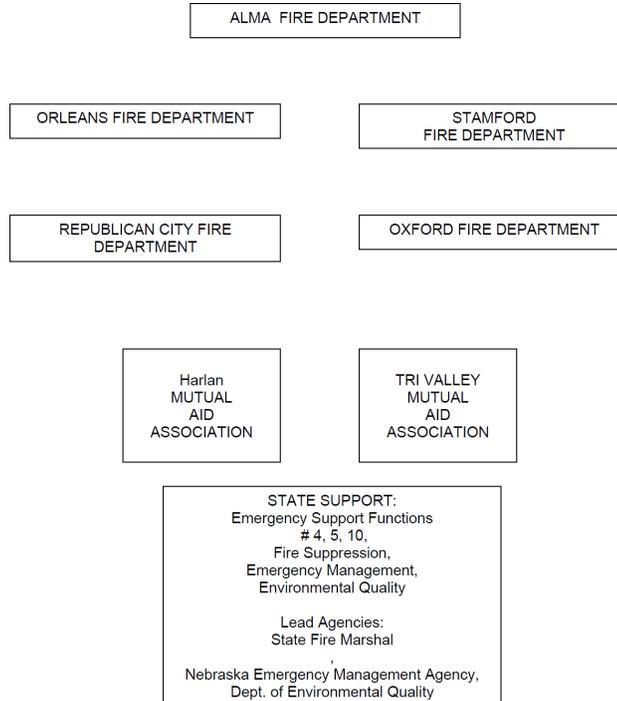
## Harlan County

Information from Harlan Co. LEOP, Annex F:

HARLAN COUNTY LEOP

ANNEX F

### FIRE SERVICES



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2018

### HARLAN COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/TANKER	GRASSWEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/SPECIAL-TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
Alma	911			3	2	3	1	2		ATV	Y
Orleans	911			2	2	2		1			Y
Stamford	911			2	2	2		1			Y
Republican City	911			2	2	2		1		ATV	Y
Oxford	911			3	2	3		2			y
Nearest HAZMAT Response Team	McCook Hastings										

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HARLAN COUNTY LEOP

ANNEX F ATTACHMENT 1

# South Central West Community Wildfire Protection Plan

## Survey Responses from Harlan County Fire Departments:

**Department Name:** Alma Rural Fire Protection Dist. **Counties:** Harlan  
**Street Address:** 509 W. Main St. **Mailing Address:** PO Box 680, Alma, NE 68920 **Dept. Email:** almafire51@gmail.com  
**Chief:** Brian Seyler; 308-920-1117; b.seyler1973@gmail.com  
**Ass't. Chief:** Tim Stuhmer; 308-920-0871; tstuhmer@usbr.gov  
**Secretary:** Jacquie Moulton; 308-920-1059; militty\_5877@hotmail.com  
**Treasurer:** David (Doc) Fleischmann; 308-920-0886; docfleischmann@gmail.com

### Personnel

33 **Vol.:**  
**MAD(s):** Tri-Valley MA  
**Other MA agreements:** Holdrege

### Equipment

#### *Engines*

3 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 T-1 (tactical): 250 GPM pump, 2,000 gallon capacity, 2 crew members

#### *Other*

1 Equipment trucks

1 Other (Describe): Ford Excursion Command

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location:** Harlan County Lake, US Corps of Engineers property

#### **Issues:**

- x Difficult access
- x Rough terrain
- x Heavy fuels
- x Lack of water within effective distance

**Bridges that won't support equipment weight:** Yes, minimum maintenance roads

**GIS layer & contact info:** No

**Greatest concerns:** Rough terrain.

#### **Rank:**

- 4 **Housing**
- 5 **Infrastructure**
- 2 **Bridge limits**
- 3 **Hydrants**
- 1 **Other water sources**

**Department Name:** Holdrege VFD: *(Survey not returned)*

**Department Name:** Orleans Fire & Rescue **Counties:** Harlan  
**Street Address:** 501 S Nebraska Ave. **Mailing Address:** PO Box 398, Orleans, NE 68966  
**Dept. Phone:** 308-473-7100 **Dept. Email:** Orleansfire@frontier.com  
**Chief:** Matt Massey; 308-991-2383; hcmp@frontiernet.net  
**Ass't. Chief:** Tim Burgeson; 308-991-5303  
**Sec/Treas.:** Sabrina Cooper; 308-991-7080; sabrinacems@yahoo.com

### Personnel

21 **Vol.:**  
**MAD(s):** Tri-Valley MA

# South Central West Community Wildfire Protection Plan

## Equipment

### *Engines*

2 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

1 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-2 (support): 200 GPM pump, 2,500 gallon capacity, 1 crew member

S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member

### *Other*

2 Equipment trucks

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

No

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** None

### **Rank:**

5 **Housing**

4 **Infrastructure**

3 **Bridge limits**

2 **Hydrants**

1 **Other water sources**

**Department Name:** Oxford Vol. Fire & Rescue: *(See listing under Furnas County)*

**Department Name:** Republican City Volunteer Fire Dept. **Counties:** Harlan

**Street Address:** 102 Truman Ave. **Mailing Address:** PO Box 36, Republican City, NE 68971

**Chief:** Brad Wolfe; 308-991-0940; wolfee2@frontiernet.net

**Ass't. Chief:** Jake Waggoner; 308-470-0157 **Sec/Treas.:** Evan Schluntz; 308-920-2615; ejschluntz@gmail.com

## Personnel

25 **Vol.:**

**MAD(s):** Harlan County-Alma

## Equipment

### *Engines*

1 Type 1 Structural: ~~1,000~~ 1,250 GPM, ~~300~~ 1,000 gal. capacity, four crew members

1 Type 2 Structural: ~~500~~ 750 GPM, ~~300~~ 1,000 gal. capacity, three crew members

3 Type 6: Wildland: 50 GPM, ~~150~~ 250 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-2 (support): 200 GPM pump, 2,500 gallon capacity, 1 crew member

**Equipment housed away from main barn?** Yes, Unit 21, 250 gal. grass rig housed in Huntley, NE

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location1:** T1N R21W Sec. 21, South side of Harlan Co. Reservoir, west of Patterson Harbor

### **Issues:**

x Multiple structures

x Difficult access

x Rough terrain

x 1 way in/out

x Heavy fuels

x Lack of water within effective distance

**Location2:** T1N R21W Sec. 20, South side of Harlan Co. Reservoir

### **Issues:**

## South Central West Community Wildfire Protection Plan

- x Difficult access
- x Rough terrain
- x 1 way in/out
- x Heavy fuels
- x Lack of water within effective distance

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Rank:**

- 3 **Housing**
- 4 **Infrastructure**
- 5 **Bridge limits**
- 2 **Hydrants**
- 1 **Other water sources**

**Department Name:** Stamford Rural Fire District **Counties:** Harlan, Furnas

**Street Address:** 212 N Main **Mailing Address:** PO Box 114, Stamford, NE 68977

**Chief:** Michael Shaw; 308-920-0469; shaw2489@gmail.com

**Ass't. Chief:** James Bose; 308-920-1247; jamesb\_2008@hotmail.com

**Treasurer:** Tresadi Preitauer; 308-991-6755; trespreit@gmail.com

### Personnel

27 **Vol.:**

**MAD(s):** Tri-Valley

### Equipment

#### *Engines*

- 1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
- 1 Type 4: Wildland: 50 GPM, 750 gal. capacity, two crew members
- 2 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

- 1 T-1 (tactical): 250 GPM pump, 2,000 gallon capacity, 2 crew members

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

No

**Location:** No specific location identified, but the following issues were checked:

**Issues:**

- x Rough terrain
- x Lack of water within effective distance

**Bridges that won't support equipment weight:** Yes. Rural district with minimum maintenance roads.

**GIS layer & contact info:** No

**Greatest concerns:** Rural water supply, proper wildland gear and equipment

**Rank:**

- 3 **Housing**
- 5 **Infrastructure**
- 4 **Bridge limits**
- 2 **Hydrants**
- 1 **Other water sources**

**Comments:** I do not know the specs of my trucks yet so I made the best guess I could. We also have an aerial applicator who is on the department and uses his plane when available and needed.

**Department Name:** Wilcox Rural Fire Protection District: *(See listing under Kearney County)*

# South Central West Community Wildfire Protection Plan

## Kearney County

Information from Kearney Co. LEOP, Annex F:

KEARNEY COUNTY LEOP

ANNEX F

### FIRE SERVICES

AXTELL FIRE DEPARTMENT

MINDEN FIRE DEPARTMENT

WILCOX FIRE DEPARTMENT

KEARNEY COUNTY EMERGENCY  
MANAGEMENT AGENCY  
NON-TRANSPORT BLS SERVICE

QUAD CITIES  
MUTUAL  
AID  
ASSOCIATION

CENTRAL  
NEBRASKA  
MUTUAL  
AID  
ASSOCIATION

STATE SUPPORT:  
Emergency Support Functions  
# 4, 5, 10,  
Fire Suppression,  
Emergency Management,  
Environmental Quality  
  
Lead Agencies:  
State Fire Marshal  
  
Nebraska Emergency Management Agency.

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2018

### KEARNEY COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/ TANKER	GRASS-WEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/ SPECIAL- TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO- LOGICAL EQUIPMENT Yes / No
AXTELL	743-2601	1	2	1	1	2		2	1		YES
MINDEN	832-2122	1	1	1		2	1	2	2		YES
WILCOX	478-5500		2	3		1	1	1	1		YES
HILDRETH	425-6231		2	2		2		2			
KEARNEY	233-5200	1	6	3		3	1		2		YES
GIBBON	468-5555		2	1		2		2			
CAMPBELL	756-8823		2	2		2		1			
KENESAW	461-2364		2	2		2		2			
EMERGENCY MGT.	830-1569							1			YES
Nearest HAZMAT Response Team KEARNEY	233-5200										
HASTINGS	461-2353										

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2018

KEARNEY COUNTY LEOP

ANNEX F  
ATTACHMENT 1

# South Central West Community Wildfire Protection Plan

## Survey Responses from Kearney County Fire Departments:

**Department Name:** Axtell Vol. Fire & Rescue **Counties:** Kearney  
**Street Address:** 202 E 6<sup>th</sup> St. **Mailing Address:** PO Box 96, Axtell, NE 68924  
**Dept. Phone:** 308-743-2601 **Dept. Email:** jeff.england@fmb-axtell.com  
**Chief:** Jeff England; 308-830-1569, 308-743-2442; jeff.england@fmb-axtell.com  
**Ass't. Chief:** Shawn Soderquist; 308-830-0080, 308-743-2328; soda6402@gmail.com  
**Sec/Treas.:** Jeff Haffey

### Personnel

23 **Vol.:**

**MAD(s):** Quad Cities MA

**Other MA agreements:** Kearney Fire, Funk Fire

### Equipment

#### *Engines*

3 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

2 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members

1 Other: Tender/Pumper: 1,000 GPM pump, 3,000 gallon capacity, 2 crew members

#### *Other*

1 Other (Describe): Crew/equipment hauler

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

*(No answer)*

**Location:** No location specified but the following issue was checked: Difficult access

*(The rest of the survey was left blank)*

**Department Name:** Gibbon VFD: *(Survey not returned)*

**Department Name:** Hildreth Rural Fire District: *(See listing under Franklin County)*

**Department Name:** Kearney VFD: *(Survey not returned)*

**Department Name:** Kennesaw VFD: *(Survey not returned)*

**Department Name:** Minden Fire Department **Counties:** Kearney  
**Street/Mailing Address:** 325 W Colorado, Minden NE 68959  
**Dept. Phone:** 308-832-2059 **Dept. Email:** mindenfire@gmail.com  
**Chief:** Tom Brown; 402-984-5463; 308-830-1048; thomas.brown@blackhillscorp.com  
**Ass't. Chief:** Dan Schoone; 308-832-7264; danschoone@gmail.com  
**Secretary:** Riley Space; 308-830-9070; rspace88@gmail.com

### Personnel

38 **Vol.:**

**MAD(s):** Quad Cities

### Equipment

#### *Engines*

2 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

2 Type 5: Wildland: 50 GPM, 400 gal. capacity, two crew members

1 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

# South Central West Community Wildfire Protection Plan

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

1 S-1 (support): 300 GPM pump, 4,000 gallon capacity, 1 crew member

*Other*

1 Equipment trucks

1 Other (Describe): Ladder truck

**Equipment housed away from main barn? No**

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location1:** T7N R15W Sec. 3; 29<sup>th</sup> and S Rds.

**Issues:**

x Multiple structures

x Difficult access

x 1 way in/out

x Heavy fuels

x Lack of water within effective distance

**Location2:** T7N R15W Sec. 15; 29<sup>th</sup> and R Rds.

**Issues:**

x Multiple structures

x Difficult access

x Rough terrain

x 1 way in/out

x Heavy fuels

x Lack of water within effective distance

**Bridges that won't support equipment weight: No**

**GIS layer & contact info: No**

**Rank:**

x **Infrastructure**

x **Other water sources**

**Department Name:** Wilcox Rural Fire Protection District **Counties:** Harlan, Franklin, Phelps, Kearney

**Street Address:** 112 S Main, Wilcox, NE 68982

**Mailing Address:** PO Box 29, Wilcox, NE 68982 **Dept. Phone:** 308-478-5499; **Dept. Email:** wilcoxfiredept@outlook.com

**Chief:** Steven Borgman; 308-991-2826, 308-995-7760; firechick@yahoo.com

**Ass't. Chief:** Blake Groothuis; 308-999-1595

**Secretary:** Amanda Klein; 308-830-2584; kleinamanda80@gmail.com

**Treasurer:** Jessica Harrold; 308-293-8667

## Personnel

29 **Vol.:**

**MAD(s):** Quad City Mutual Aid

## Equipment

*Engines*

2 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members

1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members

2 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

2 T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members

1 S-2 (support): 200 GPM pump, 2,500 gallon capacity, 1 crew member

*Other*

1 Equipment trucks

1 Other (Describe): Personnel carrier

# South Central West Community Wildfire Protection Plan

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**  
No

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Manpower and water resources

**Rank:**

- 3      **Housing**
- 4      **Infrastructure**
- 5      **Bridge limits**
- 2      **Hydrants**
- 1      **Other water sources**

# South Central West Community Wildfire Protection Plan

## Phelps County

Information from Phelps Co. LEOP, Annex F:

PHELPS COUNTY LEOP

ANNEX F

### FIRE SERVICES

HOLDREGE FIRE DEPARTMENT

BERTRAND FIRE DEPARTMENT

LOOMIS FIRE DEPARTMENT

FUNK FIRE DEPARTMENT

PHELPS COUNTY  
MUTUAL  
AID  
ASSOCIATION

CENTRAL  
NEBRASKA  
VOLUNTEER  
FIREFIGHTERS  
ASSOCIATION

STATE SUPPORT:  
Emergency Support Functions  
# 4, 5, 10,  
Fire Suppression,  
Emergency Management,  
Environmental Quality  
  
Lead Agencies:  
State Fire Marshal  
Nebraska Emergency Management Agency,

F-1

2017

### PHELPS COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	GRASS-WEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/SPECIAL-TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
Bertrand Fire	472-5003		2	1	2	1	2		Jaws/light tower/cascade/air bags	
Loomis Fire	876-2323		1	1	2	1	1		Jaws/Air bags	
Funk Fire	263-3931		1	1	2		1			
Holdrege Fire	995-8141	1	5	1	2	1	1		Jaws/Cascades/light plants/Air bags/ Grain bin extrication trailer, Exhaust fans	
<b>Nearest HAZMAT Response Team</b>										
Red Willow Western	308-345-4333					3		Chief	Bill Elliott	
Hastings Fire Dept.	402-461-2353					1		Capt.	Darin Clark	

F-11

2017

PHELPS COUNTY LEOP

ANNEX F  
ATTACHMENT 1

# South Central West Community Wildfire Protection Plan

## Survey Responses from Phelps County Fire Departments:

Department Name: Bertrand VFD **Counties:** Phelps-Gosper  
**Street Address:** 516 Minor Ave. **Mailing Address:** 317 Minor Ave., Bertrand, NE 68927  
**Dept. Phone:** 308-991-4574 **Dept. Email:** bertrandfireman@gmail.com  
**Chief:** Kevin Stehl; 308-991-4574; bertrandfireman@gmail.com  
**Ass't. Chief:** Brian Schroeder; 308-325-5229; schroederheating@gmail.com  
**Sec/Treas.:** Tom Wilcox; 308-999-2004; tjwilcox@charter.net

### Personnel

26 **Vol.:**

**MAD(s):** Phelps County Mutual Aid Association

**Other MA agreements:** Verbal agreements with Overton, Lexington, Elwood, and Arapahoe

### Equipment

#### *Engines*

- 1 Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members
- 1 Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
- 1 Type 3 Wildland: 150 GPM, 500 gal. capacity, three crew members
- 2 Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members

*Tenders (Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive)*

- 1 T-1 (tactical): 250 GPM pump, 2,000 gallon capacity, 2 crew members

#### *Other*

- 2 Other (Describe): 1 portable SCBA cascade; 1 portable light tower-generator

**Equipment housed away from main barn?** No

**Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?**

Yes

**Location:** Village of Bertrand

**Issues:**

Multiple structures

Other: Completely surrounded by cropland

**Bridges that won't support equipment weight:** No

**GIS layer & contact info:** No

**Greatest concerns:** Having enough manpower

**Rank:**

- 1 **Housing**
- 2 **Infrastructure**
- 5 **Bridge limits**
- 3 **Hydrants**
- 4 **Other water sources**

**Department Name:** Elm Creek VFD: *(Survey not returned)*

**Department Name:** Funk VFD: *(Survey not returned)*

**Department Name:** Holdrege VFD: *(Survey not returned)*

**Department Name:** Loomis VFD: *(Survey not returned)*

**Department Name:** Overton VFD: *(Survey not returned)*

**Department Name:** Wilcox Rural Fire Protection District: *(See listing under Harlan County)*

# Appendix G

## Fire Department Distribution List and Survey

### Fire Department Survey Distribution List

Alma	Funk	Orleans
Arapaho	Gibbon	Overton
Axtell	Hildreth	Oxford
Beaver City	Holbrook	Republican City
Bertrand	Holdrege	Riverton
Cambridge	Kearney	Stamford
Campbell	Kennesaw	Upland
Edison	Loomis	Wilcox
Elm Creek	Minden	Wilsonville-Hendley
Franklin	Naponee	

South Central West Community Wildfire Protection Plan

Fire Department Survey

Distributed to all departments in the CWPP Region 10/13/2020

Nebraska Fire Department Survey

Contact Information:

Department Name	County(s)
Street Address	Mailing Address
Dept. Phone	Dept. Email
Chief Name:	Best Phone
Email:	Alt. Phone
Assistant Chief Name:	Best Phone
Email:	Alt. Phone
Secretary Name:	Best Phone
Email:	Alt. Phone
Treasurer Name:	Best Phone
Email:	Alt. Phone

Personnel:

Number	Type
	Volunteer
	Part-time
	Full-time

What Mutual Aid District(s) is your department in? \_\_\_\_\_

If you have mutual aid agreements outside of formal MA districts please name the departments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## South Central West Community Wildfire Protection Plan

Equipment:

Engines (Fill in number of each type of equipment below)

Number	Type	Description
	Type 1	Structural: 1,000 GPM, 300 gal. capacity, four crew members
	Type 2	Structural: 500 GPM, 300 gal. capacity, three crew members
	Type 3	Wildland: 150 GPM, 500 gal. capacity, three crew members
	Type 4	Wildland: 50 GPM, 750 gal. capacity, two crew members
	Type 5	Wildland: 50 GPM, 400 gal. capacity, two crew members
	Type 6	Wildland: 50 GPM, 150 gal. capacity, two crew members
	Type 7	Wildland: 10 GPM, 50 gal. capacity, two crew members

Tenders (see below) Definition: Tactical Tenders: 4x4, 6x6, 8x8 all-wheel drive

Number	Type	Description
	T-1 (tactical)	250 GPM pump, 2,000 gallon capacity, 2 crew members
	T-2 (tactical)	250 GPM pump, 1,000 gallon capacity, 2 crew members
	S-1 (support)	300 GPM pump, 4,000 gallon capacity, 1 crew member
	S-2 (support)	200 GPM pump, 2,500 gallon capacity, 1 crew member
	S-3 (support)	200 GPM pump, 1,000 gallon capacity, 1 crew member

Other

Number	Type
	Equipment trucks
	Other (Describe):
	Road Dept. Equipment (describe)

Yes/No (Circle)	Is any equipment housed away from the main fire barn?	Describe:

# South Central West Community Wildfire Protection Plan

Have you identified any areas in your district that you are more concerned about than others if a wildfire starts nearby?  Yes  No

If yes, please describe where and why:

Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ Local Name: \_\_\_\_\_

Location Description:

Issues (check all that apply):

- Multiple Structures
- Difficult Access
- Rough Terrain
- One way in and out
- Heavy fuels
- Lack of water within effective distance
- Other (specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Additional areas:

Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ Local Name: \_\_\_\_\_

Location Description:

Issues (check all that apply):

- Multiple Structures
- Difficult Access
- Rough Terrain
- One way in and out
- Heavy fuels
- Lack of water within effective distance
- Other (specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# South Central West Community Wildfire Protection Plan

Are there bridges in your jurisdiction that won't support equipment weight?  Yes  No  
If yes, please describe:

Are there other areas in your jurisdiction with high home density, infrastructure or other resources at high risk, or populated areas with one way in/out?  Yes  No  
If yes, please describe:

What are your greatest concerns if a wildfire were to start in or enter your jurisdiction?

Does your jurisdiction have GIS layer(s) that show housing, infrastructure, bridge limits, hydrants and other water sources (other than the county assessor's GIS information)?  Yes  No

If yes, please provide contact information:

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Which of these is of greatest concern in your jurisdiction?  
(Please rank 1 to 5 with 1 being most important)

- \_\_\_\_\_ Housing
- \_\_\_\_\_ Infrastructure
- \_\_\_\_\_ Bridge limits
- \_\_\_\_\_ Hydrants
- \_\_\_\_\_ Other water sources

Is there anything else you think we should know? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for providing this information.

Please email a scan of the completed form to [sbenson4@unl.edu](mailto:sbenson4@unl.edu) or mail a hard copy to:

**Nebraska Forest Service (Attn: Sandy Benson)**  
PO Box 0815  
Lincoln, NE 68583-0815

# Appendix H

## Public Engagement

*This section includes outreach documents,  
media releases, and stakeholders list*

# South Central West Community Wildfire Protection Plan

## Outreach Documents

### **County Boards and Emergency Managers**

*(sent via e-mail 9/8/2020 and 8/25/2020)*

The Nebraska Forest Service (NFS) is in the early stages of preparing a **Community Wildfire Protection Plan (CWPP)** for the South Central West region of Nebraska, which includes your county. This plan is a wildfire-specific resource that coordinates with local emergency plans and allows local landowners and others to apply for federal and state cost-share funds for vegetative fuels reduction and other hazard mitigation efforts within the CWPP region. There is no cost to counties.

#### **What is a CWPP?**

A CWPP is one of the most successful tools for addressing the challenges and responsibilities that arise from living in a wildfire-prone environment. CWPPs specifically define wildfire risk areas within and adjacent to communities, the measures necessary to mitigate those risks, and a plan of action to implement these measures.

The collaborative CWPP process is effective in maximizing coordination and communication between emergency response agencies and the community. Developing a CWPP helps clarify priorities to protect life, property, infrastructure, and valued resources. Protecting communities and resources from wildfire is a team effort that cannot be accomplished by any one person or entity.

The CWPP works in conjunction with your local emergency operations plan. It specifically addresses wildfire concerns including risk assessment, critical infrastructure, and preparedness. It also recommends an action plan to increase the overall safety and effectiveness of wildfire protection planning within your community. Local officials collaborate with planners to establish a steering committee to guide the process.

#### **Some background**

After the large wildfires in 2012, the state legislature passed the Wildfire Control Act of 2013, which provided funding for single-engine air tanker bases, cost share for hazardous fuels reduction, and expansion of programs to provide volunteer fire districts with more fire suppression equipment. As these programs were implemented, the Nebraska Forest Service realized there were very few Community Wildfire Protection Plans in place across the state. CWPPs are needed for an area to qualify for many wildfire-related grants and cost-share programs.

The NFS is preparing CWPPs for 14 areas in Nebraska to create a statewide CWPP network. We have completed ten of them and are now beginning the process for your area, which includes Franklin, Furnas, Harlan, Kearney, and Phelps Counties, in the South Central West CWPP Region.

#### **Why should we have a CWPP?**

- Past wildfires throughout Nebraska have presented many challenges and issues
- A CWPP is a mitigation and preparedness plan to reduce wildfire risk
- It establishes a collaborative relationship among entities BEFORE a fire occurs
- It develops a pre-attack plan to maximize firefighter readiness and safety
- It increases grant application success by documenting wildfire planning and projects
- Fuels reduction grant funds are only available for areas that have a CWPP

#### **Community benefits**

- Define planning boundaries that address local concerns
- Identify and prioritize areas for hazardous fuel reduction treatments
- Recommend treatment methods
- Strengthen local efforts to reduce structural ignitability
- Enhance emergency management and communication
- Foster public education/action to reduce wildfire risk

#### **How much does it cost?**

The Nebraska Forest Service is covering the costs associated with preparing the CWPP. Counties will not be asked for monetary contributions.

#### **How does it work?**

The first step is to put together a steering committee to guide the process and ensure that local issues are front and center in developing the plan. Because of the geographic distances involved, the steering committee will meet via conference call, and only as needed. It would be helpful if your county would recommend a local representative to serve on the committee. The committee will define the priority areas, specify topics and issues important to local emergency responders, and provide general guidance as the plan is prepared.

# South Central West Community Wildfire Protection Plan

Once we have gathered the information, we will prepare a draft plan for review, incorporate edits and changes, then finalize the plan and make it available to all. This process usually takes about a year. Counties are invited to sign the plans, which will be updated as needed.

It is important that local officials participate in this planning effort to ensure it addresses unique local considerations. Please share this memo with your emergency planning staff, sheriff, and others who may wish to participate. We will also invite fire departments to participate.

Please recommend individuals who may be willing to serve on the CWPP steering committee. Participation does not require a hefty time commitment (we estimate less than six hours total, spread out over the planning period), and it ensures local input and guidance for the planning process.

Please email steering committee recommendations to [sbenson4@unl.edu](mailto:sbenson4@unl.edu) or call Sandy Benson at 402-684-2290.

## **Fire Departments**

*(This was sent via e-mail 10/13/2020 along with the survey in Appendix G)*

To: Fire Departments

cc: Emergency Managers

From: Sandy Benson, Nebraska Forest Service

Subject line: Fire Dept. Info - Community Wildfire Protection Plan - Please respond!

Attachments: VFD Survey, Background Info for VFDs, Map of NFS CWPP areas

Fire Departments: Please use the attached form to update your fire department info as we prepare the regional Community Wildfire Protection Plan for your area. Use whichever format of the attached document that works best for you. Return as soon as possible via scan/email reply to this message (preferred) or snail mail to the address on the last page of the form. Thank you!

## **Community Wildfire Protection Plans**

The Nebraska Forest Service (NFS) is in the early stages of preparing a **Community Wildfire Protection Plan (CWPP)** for the South Central West region of Nebraska, which includes all or part of your fire district. This plan is a wildfire-specific resource that coordinates with local emergency plans and allows local landowners and others to apply for federal and state cost-share funds for fuels reduction and other hazard mitigation efforts within the CWPP region. There is no cost to fire departments or counties.

### **What is a CWPP?**

A CWPP is one of the most successful tools for addressing the challenges and responsibilities that arise from living in a wildfire-prone environment. CWPPs specifically define wildfire risk areas within and adjacent to communities, the measures necessary to mitigate those risks, and a plan of action to implement these measures.

The collaborative CWPP process helps maximize coordination and communication between emergency responders and the community. Developing a CWPP helps clarify priorities to protect life, property, infrastructure, and valued resources. Protecting communities from wildfire is a team effort.

The CWPP works in conjunction with your local emergency operations plan. It specifically addresses wildfire concerns including risk assessment, critical infrastructure, and preparedness. It recommends an action plan to increase the overall safety and effectiveness of wildfire protection planning within your community. Local officials collaborate with planners to guide the process.

### **Some background**

After the large wildfires of 2012, the state legislature passed the Wildfire Control Act of 2013, which provided funding for single-engine air tanker bases, cost share for hazardous fuels reduction, and expansion of programs that provide volunteer fire districts with more fire suppression equipment. As these programs were implemented, the NFS realized there were very few Community Wildfire Protection Plans in the state. CWPPs are needed for an area to qualify for many wildfire-related grants and cost-share programs.

The NFS is preparing CWPPs for 14 areas in Nebraska to create a statewide CWPP network. We have completed ten of them and are now beginning the process for your area, which includes Franklin, Furnas, Harlan, Kearney, and Phelps Counties, in the South Central West CWPP Region.

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- Foster public education/action to reduce wildfire risk

## How much does it cost?

The Nebraska Forest Service is covering the costs associated with preparing the CWPP. Counties and fire departments will not be asked for monetary contributions.

## How does it work?

Local officials participate in the planning effort to ensure it addresses unique local considerations. The first step is to put together a steering committee to guide the process and ensure that local issues are front and center in developing the plan. The committee identifies priority areas, specifies issues important to local emergency responders, and provides general guidance as the plan is prepared.

Including up-to-date information from local fire departments is important. Please complete and return the attached questionnaire. It helps identify your department's needs and concerns and provides a current listing of your capacity. It can also be downloaded here: [https://nfs.unl.edu/documents/CWPP/CWPP\\_VFD\\_Questionnaire.pdf](https://nfs.unl.edu/documents/CWPP/CWPP_VFD_Questionnaire.pdf)

Once we have gathered the information, we will prepare a draft plan for review, incorporate edits and changes, then finalize the plan and make it available to all. This process usually takes less than a year. Counties are invited to adopt the plans, which will be updated as needed.

Please address questions to [sbenson4@unl.edu](mailto:sbenson4@unl.edu) or call Sandy Benson at 402-684-2290.

## Cities and Villages

Villages and cities were emailed outreach flyers on September 16, 2020.

## Other Stakeholders

NRDs, state and federal natural resources agencies, NGOs, and state and federal legislators were emailed outreach flyers in September and October, 2020 during the steering committee outreach process. In addition, general news releases provided public input outreach and notification of the draft public review and comment period.

# South Central West Community Wildfire Protection Plan

## Media Releases

### Print Media and Radio

*An invitation to participate was published in all of the local newspapers and put on the radio stations on September 16, 2020:*

### **Local input needed for community wildfire protection plan**

Local counties are working with the Nebraska Forest Service to create a Community Wildfire Protection Plan (CWPP) to enhance collaboration and communication among the various agencies and organizations that manage fire in western south central Nebraska, and to help them effectively prepare for and respond to wildfire. People who work with land management, fire, community preparedness, and others are invited to provide input.

The CWPP area includes Franklin, Furnas, Harlan, Kearney, and Phelps Counties. Landowners in counties that adopt the plan will be eligible to apply for federal and state cost-share funds for vegetative fuels reduction and other hazard mitigation efforts in at-risk areas within the CWPP boundary. The plan may also provide increased opportunities for counties, municipalities, and rural fire districts to seek grant funding for other activities related to fire protection.

The plan, part of a statewide network of Community Wildfire Protection Plans, provides information useful to local emergency responders and those from outside the area who provide mutual aid. The CWPP consolidates and relays critical information needed for responders in unfamiliar terrain. Each county can include details vital to protecting its first responders, residents, and property.

A CWPP is a tool for fire departments, agencies, emergency managers, public officials, and land managers to use when addressing wildfire concerns. It contains a fire mitigation plan for each county that includes:

- Community profile (area description, roads, land use, location of at-risk areas)
- Wildfire risk assessment (fire history, fire hazard, protection capabilities, infrastructure)
- Structure analysis (fire risk rating and ignitability)
- Hazardous fuels reduction recommendations
- Emergency operations (responsibilities, capabilities, partners, mutual aid agreements)
- Recommendations for improving community preparedness
- Contact information and equipment lists for rural fire departments

Feedback from local residents may include topics such as identification of ingress/egress routes and safe zones for citizens, structures and critical infrastructure (highways, cell towers, bridges, schools, etc.), areas with homes or developments in high-risk areas, and high-risk ignition sources.

People may have additional concerns or suggestions. All ideas are welcome. For further information or to provide comments, call 402-684-2290 or email [sbenson4@unl.edu](mailto:sbenson4@unl.edu)

\* \* \*

### Follow-up News Releases

Media releases for draft review and publication of final plan were distributed in 2021.

# South Central West Community Wildfire Protection Plan

## **Online Outreach**

On August 26, 2020, NFS staff added information about the South Central West CWPP to the Nebraska Forest Service website: <https://nfs.unl.edu/community-wildfire-protection-plan>. During the planning process, staff posted periodic updates on the page, including links to the draft and final documents.

On September 21, 2020, NFS staff posted the public outreach news release for the South Central West CWPP on the Nebraska CWPP Facebook page: <https://www.facebook.com/groups/451134565293952/>. During the planning process, staff posted periodic updates to this page, including milestones reached and links to the draft and final documents.

## **Stakeholders List**

**County Boards and Emergency Management**  
Franklin, Furnas, Harlan, Kearney, Phelps

**Fire Departments**  
See Appendix G

**Natural Resources Districts**  
Lower Republican, Tri-Basin

**State Agencies**  
Nebraska Forest Service, Nebraska Game and Parks Commission, Nebraska State Fire Marshal's Office, Board of Educational Lands and Funds, Nebraska Emergency Management Agency

**Federal Agencies**  
Natural Resources Conservation Service, US Army Corps of Engineers, US Fish and Wildlife Service

**Non-Government Conservation Organizations**  
The Nature Conservancy

**Municipalities**  
In the counties of Franklin, Furnas, Harlan, Kearney, Phelps

**Prescribed Fire Associations**  
South Central Nebraska PBA

**State Legislators**  
Districts 34, 38

**Federal Legislators**  
Senators Deb Fischer and Ben Sasse; Rep. Adrian Smith

**Interested Individuals**

# Appendix I

- Wildland Urban Interface Mitigation Strategies
- Structural Ignitability Reduction Practices
- Firewise® Landscaping
- Nebraska Fire-Resistant Plant List

# South Central West Community Wildfire Protection Plan

## Wildland Urban Interface Mitigation Strategies and Structural Ignitability Reduction Practices

- 1) Develop a program to increase awareness of Firewise® standards for community defensibility and designate, for firefighter safety, which homes and/or parts of communities are not defensible
- 2) Introduce and expand the understanding of the “Home Ignition Zone” and emphasize how survivability depends on maintenance necessary to reduce and manage home ignition potential
- 3) Create guidelines for developers and property owners who intend to construct roads, driveways and dwellings to provide the following:
  - a. Name, address, and GPS location for each road, driveway, and building site
  - b. Fuel treatment standards for the areas between building sites
  - c. Evidence that Firewise® building standards and defensible space information has been provided to every lot and homebuyer or develop Firewise® based requirements for new building construction standards
  - d. Road construction and maintenance standards that accommodate emergency equipment
  - e. Require at least two access routes for developed areas and subdivisions
  - f. Designate locations for maintained safety zones and water facilities
- 4) Subdivision residents can work together to improve defensibility of their whole subdivision; this could include connecting home site defensible space areas and/or fuel hazard reduction and thinning 150 to 200 feet from buildings
- 5) Develop accurate maps for subdivisions and access roads
- 6) Treat fuels along strategic roads
- 7) Long driveways in wooded areas should be graveled and provided with terminus turnaround that has at least a 45-foot radius or a pull-in and pull-out facility
- 8) Mark driveways without turnaround or with steep slopes with a sign indicating limitations
- 9) Mark safety zones and helispots where fuel continuity is dense and zones are not obvious
- 10) Develop and implement a standard for signing roads and addressing and marking homes for more efficient emergency access

### Web Sources: Wildfire Preparedness

FEMA: Local Mitigation Planning: <https://www.fema.gov/local-mitigation-planning-resources>

Fire-Adapted Communities®: <http://www.fireadapted.org/>

Firewise® Communities: <http://www.firewise.org/>

Firewise Guide to Landscaping and Construction: <https://www.nfpa.org/-/media/Files/Firewise/Brochures-and-Guides/FirewiseGuideToLandscapeandConstruction.ashx>

I Am Responding (Emergency responder supplemental dispatch notification system): <https://iamresponding.com/v3/Pages/Default.aspx>

Nebraska Forest Service Wildland Fire Protection Program: <https://nfs.unl.edu/fires-nebraska>

Ready, Set, Go! <http://www.wildlandfirersg.org/>

Wildfire Risk to Communities interactive website: <https://wildfirerisk.org/>

# South Central West Community Wildfire Protection Plan

## Firewise® Landscaping and Nebraska Fire-Resistant Plant List

### Firewise® Landscapes

Homeowners value landscapes for the natural beauty, privacy, shade and recreation they offer and frequently select properties that include or are near woodlands or other natural areas to visually expand the landscape. One of the risks of properties adjoined to natural areas, however, is that they can be more vulnerable to wildfires.

#### Creating Defensible Space

In fire-prone areas, property owners can take measures to minimize the risk of wildfire damage by creating a “defensible space” around the home or other buildings. Some of the ways to create more Firewise® landscapes include:

- Planting lower-growing plants or groundcovers near the home to form low, dense mats with strong root systems
- Avoiding the use of tall grasses close to buildings since they can ignite easily and burn rapidly
- Mulching with rocks, gravel or other hardscaping around the foundation instead of bark, pine needles or other flammable mulches
- Paving patio areas and creating raised beds to create firebreaks
- Planting low-growing succulent shrubs rather than taller, resinous evergreen shrubs
- Spacing trees so that tree crowns are 10 feet from each other
- Pruning dead limbs
- Removing dried annuals or perennials
- Raking leaves and litter as they build up
- Placing screens beneath decks to keep leaves or woody debris from collecting underneath
- Keeping wood piles at least 30 feet away from the house
- Providing open access for firefighting equipment that is not limited by fences, trees, or other obstructions
- Keeping propane tanks a good distance from buildings, and taking care when refueling garden equipment
- Using non-flammable outdoor furniture

#### Selecting Firewise Plant Materials

No plant species is entirely fireproof. Virtually any vegetation can fuel a fire, but some species are more resistant than others. The following information can help property owners select more fire-resistant plant materials, but where they are planted and how they are cared for can be just as important as the plants themselves.

- Planting a variety of sizes and species of plants in small, irregular clusters creates a better barrier than large masses of a single species
- Groundcovers or other plants that grow close to the ground offer less fuel
- Conifers or other plants are high in very flammable resin, so it’s best to keep them thinned and pruned—especially close to the ground
- Conifers with thick bark and long needles are more able to withstand fire
- Salt-tolerant plants tend to be somewhat more fire-resistant
- Deciduous plants have higher moisture content, are less flammable and, when dormant, offer less fuel
- Drought-tolerant plants tend to be more fire-resistant as they are likely to contain lots of moisture (succulents) or to shed leaves or needles during extreme drought
- Plants with open, loose branches and minimal vegetation (such as currant and mountain mahogany) are less of a hazard, as are plants that grow slowly and need little pruning
- Plants, like aspen, that can resprout following a fire will more quickly rejuvenate a landscape

#### Using Native Prairie Plants

In Nebraska it is often the case that a “Firewise” landscape should also be a “waterwise” landscape where drought-tolerant plants are an important part of the mix. Obviously our native plants have evolved to grow under natural moisture conditions and many of them are suitable for both a “waterwise” and a “Firewise” landscape. Just a little water here and there can go a long way to keeping such plants green and viable. Another important aspect of using native plants is that they play a vitally important role in supporting biodiversity and all the benefits derived from it. We strongly recommend that native plants be utilized within any landscape, including the Firewise landscape. The trick is to use them appropriately, especially near the home.

## South Central West Community Wildfire Protection Plan

Although native prairie grasses and forbs make a lot of sense in a “water-wise” landscape, they can also be highly combustible when they are brown and dry. For a Firewise landscape, prairie plants, especially taller grasses, should be used sparingly and judiciously within the 30 foot “Lean, Clean and Green Zone” nearest the home. A few scattered here and there for ornamental affect are fine, but they should not be massed tightly close to the home. A prairie meadow or thick border planting should be reserved for those areas farther away from important structures.

### Lawn and Groundcover

One of the best ways to defend a structure against wildfire is to maintain a closely-cropped green zone near the home. This typically means the maintenance of a green lawn, but turf grass is not the only choice. Cool-season lawn grasses such as Kentucky bluegrass and tall fescue are good choices, although they can require significant amounts of supplemental irrigation to keep green in dry weather. For sunny areas, a good alternative is buffalo grass, which requires much less moisture than other lawn grasses. Our native blue grama can also be used as a turf alternative, however it will need to be mowed higher – at 8-10” while green and then mowed short when dormant. Recent years has brought the advent of many sedge species as lawn alternatives especially for more shady zones.

Groundcovers don’t need to be grasses or grass-like plants requiring mowing. There are several species of “Firewise” groundcover perennials that make sense including such things as vinca, bergenia, hosta, bugleweed, geranium, sedum, primrose, pussytoes, snow in summer, Virginia creeper, wild strawberry and yarrow.

### Introduced Perennials and Ornamental Grasses

As with native plants, there are many great non-native species that can be used in a “Firewise” landscape that is also “waterwise.” The trick is to place them appropriately and cut them back (clean them up) when they die back late in the season. Some of our favorites include sedum, geranium, coral bells, daylily, lambs ear, feather reed grass, Korean reed grass, and fountain grass.

### Trees and Shrubs

Although nearly any tree or shrub could burn in a severe fire, it is the highly volatile evergreen species including pine, spruce, fir, juniper, and cedar that pose the most risk when growing near homes or other structures. Within the area nearest the home (30-foot interior zone) it is advisable to exclude volatile evergreens entirely. However, because deciduous trees are so important at casting shade and cooling the home and its surroundings, and because they are not nearly as prone to burning, they can be utilized relatively close to the home. Keep in mind that any branches directly overhanging the roof should be removed. Some of the best deciduous trees for planting near homes include our tough native species including hackberry, bur oak, coffeetree, and honeylocust.

Most deciduous shrubs are acceptable for use in a Firewise landscape. Nearest the home, the shrubs should be kept lower than 30 inches and they should not be massed in tight groupings. Beyond the 30-foot interior zone, the shrubs can be taller and more tightly spaced, however grouping should still be kept relatively small until at least 50 feet from the home. Native species will do the most for biodiversity. Species to consider include mountain mahogany, rabbit brush, sumac, serviceberry, currant, snowberry, gooseberry, plum, and chokecherry.

# South Central West Community Wildfire Protection Plan

## Firewise Plants for Nebraska

### Perennials & Groundcovers

*Artemisia*  
*Bergenia*  
Blanket flower, *Gaillardia*  
Bugleweed, *Ajuga*  
Candytuft, *Iberis*  
Catmint, *Nepeta*  
Coneflowers, *Rudbeckia*  
Columbine, *Aquilegia*  
Coral bells, *Heuchera*  
*Coreopsis*  
Daylily, *Hemerocallis*  
Flax, *Linum*  
*Geranium*  
Hens and chicks, *Sempervivum*  
*Iris*  
Lambs ear, *Stachys*  
*Penstemon*  
Pinks, *Dianthus*  
Primrose, *Oenothera*  
Pussytoes, *Antennaria*  
Sage, *Salvia*  
*Sedum*  
Snow-in-summer, *Cerastium*  
Violets, *Viola*  
Virginia creeper, *Parthenocissus*  
Wild ginger, *Asarum*  
Wild strawberry, *Fragaria*  
Yarrow, *Achillea*

### Shrubs

Buffaloberry, *Shepherdia*  
Cherry and plum, *Prunus*  
Cinquefoil, *Potentilla*  
Coralberry, snowberry, *Symphoricarpos*  
*Cotoneaster*  
Currant and gooseberry, *Ribes*  
Dogwood, *Cornus*  
Lilac, *Syringa*  
*Mahonia*  
Mock orange, *Philadelphus*  
Mountain mahogany, *Cercocarpus*  
Ninebark, *Physocarpus*  
Rose, *Rosa*  
Sumac, *Rhus*

### Trees

Aspen, cottonwood and poplar, *Populus*  
Birch, *Betula*  
Black cherry, *Prunus*  
Boxelder, *Acer*  
Bur, Gambel, Chinkapin oak, *Quercus*  
Hackberry, *Celtis*  
Maple and boxelder, *Acer*  
Ohio buckeye, *Aesculus*  
Willow, *Salix*

# Appendix J

Link to the Nebraska Forest Service “Yellow Book”  
Emergency Assistance for Wildfire Control

<https://nfs.unl.edu/documents/Yellowbook.pdf>

This reference is a “must have” for Nebraska’s emergency responders. It contains:

- Contact information for state, federal and private agencies that have emergency suppression resources or can provide technical expertise in the suppression of wildfires
- Aerial Applicator and Foam Retardant Directory
- Deployment procedures and forms needed to order a Single Engine Air Tanker (SEAT)
- Map of cooperating aerial applicators and SEAT base locations