Central Platte
Community Wildfire Protection Plan

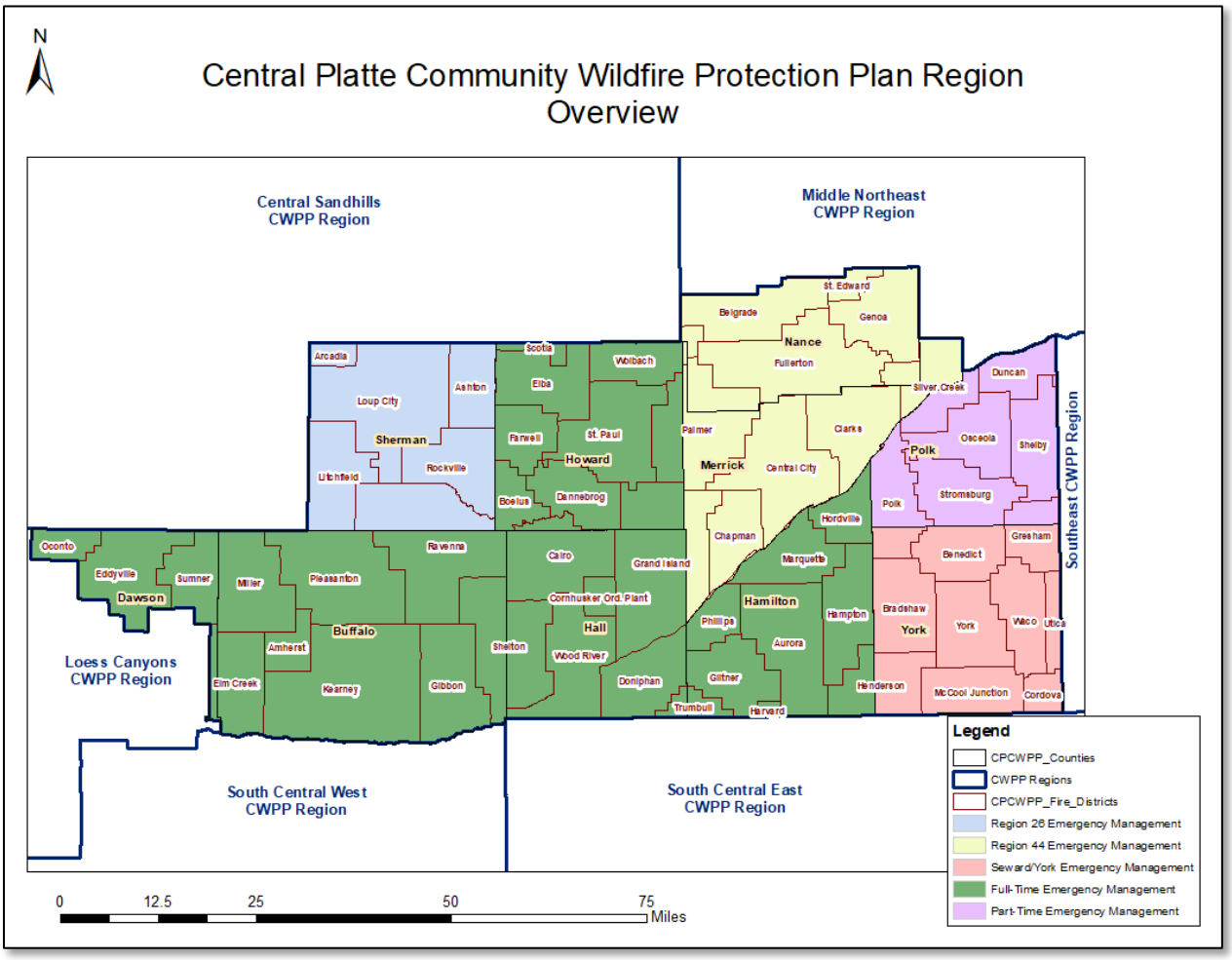
FOR THE COUNTIES OF BUFFALO, HALL, HAMILTON, HOWARD, MERRICK, NANCE, POLK, SHERMAN, YORK, AND PART OF DAWSON

Photo courtesy of Doug Whisenhunt

OCTOBER, 2019

NEBRASKA FOREST SERVICE University of Nebraska-Lincoln

University of Nebraska Lincoln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Central Platte Community Wildfire Protection Plan Region Overview
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Southeast CWPP Region
Loess Canyons CWPP Region
South Central West CWPP Region
South Central East CWPP Region
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CWPP Regions
CPCWPP_Fire_Districts
Region 26 Emergency Management
Region 44 Emergency Management
Seward/York Emergency Management
Full-Time Emergency Management
Part-Time Emergency Management
0
12.5
25
50
75
Miles

FACILITATED BY THE

Nebraska Forest Service

IN COLLABORATION AND COOPERATION WITH

BUFFALO, DAWSON, HALL, HAMILTON, HOWARD,
MERRICK,NANCE, POLK, SHERMAN, AND YORK COUNTIES

LOCAL VOLUNTEER FIRE DISTRICTS

REGION 26, REGION 44, AND YORK/SEWARD EMERGENCY MANAGEMENT AREAS
COUNTY EMERGENCY MANAGEMENT DIRECTORS
CENTRAL PLATTE CWPP STEERING COMMITTEE

LOCAL MUNICIPAL OFFICIALS

LOCAL, STATE, AND FEDERAL NATURAL RESOURCES AGENCIES

AREA LANDOWNERS

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Photo courtesy of Doug Whisenhunt

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Approved By:

Buffalo County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

Dawson County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

Hall County Board of Supervisors

Signature: _____ Title: _____

Name _____Date: _____

Hamilton County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

Howard County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

Merrick County Board of Supervisors

Signature: _____ Title: _____

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Nance County Board of Supervisors

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Polk County Board of Commissioners

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Sherman County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

York County Board of Commissioners

Signature: _____ Title: _____

Name _____Date: _____

Nebraska Forest Service

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Central Platte Community Wildfire Protection Plan Acronyms

Acronym	Meaning
BLM	Bureau of Land Management
BUL	Biologically Unique Landscape
CNPPID	Central Nebraska Public Power and Irrigation District
CWPP; CPCWPP	Community Wildfire Protection Plan; Central Platte Community Wildfire Protection Plan
FAP	Forest Action Plan
FEPP; FFP	Federal Excess Property Program; Firefighter Property
GIS	Geographic Information System
GPS	Global Positioning System
ID	Identification
LEOP	Local Emergency Operations Plan
MA or MAD	Mutual Aid District
MOU	Memorandum of Understanding
NE	Nebraska
NEMA	Nebraska Emergency Management Agency
NFS	Nebraska Forest Service
NGO	Non-Government Organization
NGPC	Nebraska Game and Parks Commission
NNLP	Nebraska Natural Legacy Project
NPPD	Nebraska Public Power District
NRCS	Natural Resources Conservation Service
NRD	Natural Resource District
NWS	National Weather Service
PPID	Public Power and Irrigation District
RA	Risk Assessment
RH	Relative Humidity
RPPD	Rural Public Power District
RPPID	Rural Public Power and Irrigation District
RR	Risk Reduction
SEAT	Single Engine Air Tanker
SHP	State Historical Park
SRA	State Recreation Area
SRIA	Structural Risk & Ignitability Analysis
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
VFD; RFD; FD	Volunteer Fire Department; Rural Fire District/Dept.; Fire District/Dept.
WMA	Wildlife Management Area
WUI	Wildland Urban Interface

Central Platte 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 Central Platte region 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.

Legislative Background

To be eligible for federal funding assistance, the federal government requires states to prepare action plans that lay out a strategy for forest and wildlife conservation. The Nebraska Game and Parks Commission (NGPC) first 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 Central Platte CWPP region lies within the Mixedgrass Prairie Ecoregion identified in the NNLP. Parts of the Central Loess Hills, Central Platte River, Lower Loup Rivers, and Rainwater Basin BULs are found within the CWPP boundary. (See Appendix B).

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). 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. Parts of the Central Platte River, Central Loess Hills, Loup River, and Little Blue River Priority Landscapes are located within the CWPP boundary. (See Appendix C).

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

Plan Integration

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.[1]

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 local 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 each local Emergency Management Agency to maintain the LEOP according to the guidance from the State.[1] Wildfire is not discussed in detail in most LEOPs. Each local LEOP contains an "Annex F" that covers fire services. This includes a listing of county fire departments and mutual aid partners, as well as equipment lists. Fire department information is listed in Appendix G of this CWPP. Mutual aid associations are listed in Appendix F.

Nebraska also has a state Hazard Mitigation Plan, which establishes the policies, plans, guidelines, and procedures for the Hazard Mitigation Program in Nebraska. NEMA coordinated with the Nebraska's Natural Resource Districts (NRDs) and counties to promote the creation and updates of multi-jurisdictional plans throughout the state.[2] Buffalo, Dawson, Hall, Merrick, and Polk Counties are included in the Central Platte NRD's

plan. Howard, Nance, and Sherman Counties are included in the Lower Loup NRD's plan. Hamilton and York Counties currently have their own plans, but they, along with Seward County, are in the process of combining their plan updates into the Upper Big Blue NRD's plan. Appendix E contains links to these plans.

This CWPP strives to coordinate with existing 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.

Goals and Objectives

State Action Plan Goals and Objectives

This CWPP and the results of its implementation relate directly to all of the FAP goals and objectives:

1 – Actively and sustainably manage forests
2 – Restore fire-adapted lands and reduce risk of wildfire impacts in forests and adjacent communities
3 – Identify, manage and reduce threats to forest and ecosystem health
4 – Protect and enhance water quality and quantity
5 – Improve air quality and conserve energy
6 – Assist communities in planning for and reducing wildfire risks
7 – Maintain and enhance the economic benefits and values of trees and forests
8 – Protect, conserve and enhance fish and wildlife habitat
9 – Connect people to trees and forests and engage them in environmental stewardship activities
10 – Manage and restore trees and forests to mitigate and adapt to global climate change

Sustainable forest management reduces wildfire impacts in the region's riparian forests and adjacent communities, and reduces threats to ecosystem health. Healthy forests and grasslands, in turn, protect air and water resources and fish and wildlife habitat, and these ecosystems are better able to cope with a changing climate. Communities that plan for and reduce wildfire risks and engage in environmental stewardship activities may also reap both the 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 a diversity of 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 other stakeholders identified the following goals and objectives for this CWPP:

1. Identify hazards and areas at risk
    a. Identify factors associated with wildfire risk
    b. Evaluate areas to determine risk
2. Reduce wildfire risk to identified areas
    a. Partner with landowners, land managers, fire personnel, and natural resources agencies and organizations to incorporate their concerns and objectives in fire management programs
    b. Identify, prioritize, and treat hazardous fuels
    c. Suppress unplanned ignitions to protect private property and natural and cultural resources from unacceptable impacts attributable to fire
    d. Support emergency response through training and acquisition of equipment
3. Promote wildfire prevention and education
    a. Increase public awareness of wildfire and damage from uncharacteristic wildfires

   b. Educate the public in *Firewise®* landscaping and construction techniques
   c. Reduce fire hazards through construction of defensible fuel spaces that protect communities and resources
   d. Encourage communities to develop strategies to reduce wildfire risk; provide communities with tools to address human-caused fires
   e. Encourage integration of fire prevention into schools; address accidental ignitions caused by children
4. Restore fire-adapted ecosystems
   a. Provide training to enable rapid assessments of burned lands and the implementation of stabilization techniques
   b. Encourage land managers to control non-native invasive plant species and to actively manage prolific and aggressive native species such as eastern redcedar
5. Enhance communications among fire departments, agencies, and organizations involved with fire management
   a. Train fire departments in the use of the V-TAC and UHF mutual aid radio channels
   b. 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
6. Establish 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

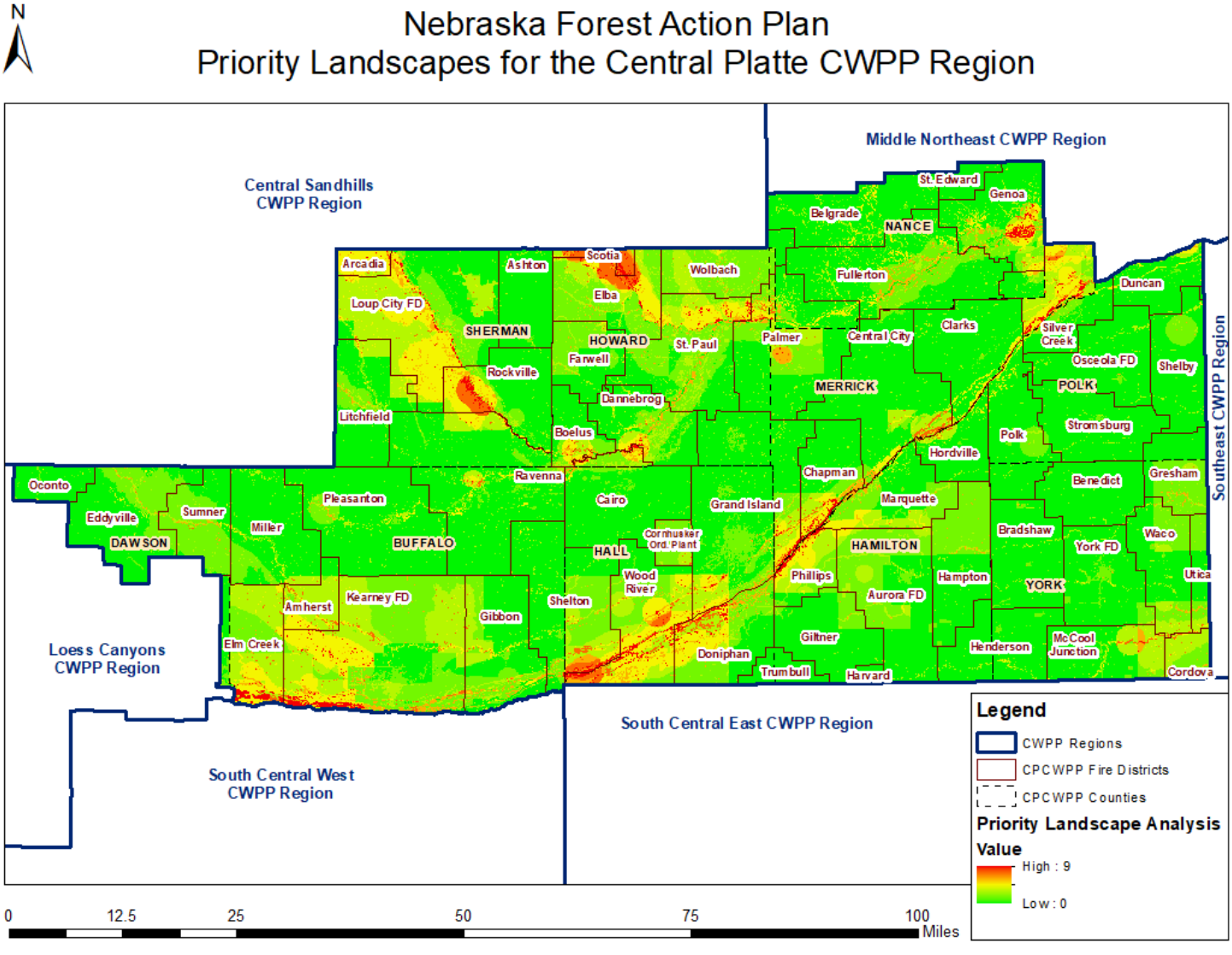
Priority Landscapes

At the state level, the FAP identified Priority Landscapes to help focus effort and funding on landscape-scale projects (Map 1). The area within the CWPP boundary contains a range of landscapes, including riparian woodlands, mixed grass prairie, and farmland. Within each county, local stakeholders have identified "Areas of Concern" – specific areas that are most at risk for wildfire within the larger landscapes. Maps of these Areas of Concern appear in Appendix A.

Some of the CWPP counties have experienced large, catastrophic wildfires. Between 2000 and 2018, CWPP area volunteer fire departments reported 44 fires greater than 99 acres in size that burned almost 23,000 acres. Because not all fire departments report every year, the actual numbers are likely much higher. In December, 2016, a fire that started in Valley County burned into Sherman County, charring about 5,000 acres and causing the north side of Sherman Reservoir to be evacuated. Thirteen fire departments responded.[3] In March, 2009, high winds fanned a fire that burned over 600 acres, destroying a critical 300-foot long trail bridge at Fort Kearney State Park and endangering surrounding recreational communities.[4]

These incidents demonstrate that intense fire behavior can start in remote 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 grant funding to cost-share fuels reduction treatments throughout the CWPP region.

Unnaturally dense and unhealthy woodlands and encroachment of eastern redcedar into grasslands continue to 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.



Map 1: The principal Priority Landscapes in this CWPP region are found in Buffalo, Hall, Howard, Nance, and Sherman Counties, but other parts of the CWPP region also contain areas in which hazard reduction activities can be targeted. Specific Areas of Concern maps are in Appendix A.

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 ten county boards 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 and emergency management personnel 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 includes representatives from local fire departments, local and state emergency management, NRDs, the NFS,

NEMA, the Natural Resources Conservation Service (NRCS), NGPC, the US Fish and Wildlife Service (USFWS), and the Bureau of Land Management (BLM).

The steering committee defined the region's WUI. For planning purposes, each county within the CWPP boundary is considered a WUI community. County officials, fire department personnel, and steering committee members designated areas of concern within each county that are particularly at-risk from wildfire. The committee established goals and objectives and provided the locally-focused framework for the CWPP.

The NFS sent a questionnaire to all of the fire departments in the CWPP region asking for current contact information, list of equipment, and pertinent issues, concerns, and priorities. Ten of the 60 fire departments returned the survey. Responses to this survey appear in Appendix G, 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 H.

A media release describing the planning process was sent to local newspapers and radio stations providing contact information and encouraging public input. Information was posted on social media pages and a flyer was posted 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 I.

Feedback from the initial outreach was incorporated into a draft document, along with background information, risk assessment, and an action plan. After review by the steering committee, the draft was released for a 30-day public review period. Comments on the draft CWPP were incorporated into the final document which was then sent to the county boards for signature. Copies of the final document were sent to each county for distribution to local officials. The plan is also available online at https://nfs.unl.edu/documents/CWPP/CentralPlatte.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 county sections.

Landforms, Climate and Weather

The Central Platte CWPP region lies partly within the Mixedgrass Prairie and Tallgrass Prairie Ecoregions. 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, with peaks about every six years. Extreme drought and wildfire years occurred in 1988, 1994, 2000, 2006 and 2012. In 2018, Nebraska did not follow that pattern, and was wetter and cooler than normal, with some areas producing a high amount of fine fuels that created heavier-than-normal fuel loads during the following months. Although Nebraska did not report large wildfires in 2018, many parts of the western United States did experience record heat and wildfires during the 2018 fire season.

Weather data was obtained from the University of Nebraska High Plains Regional Climate Center[5] and Iowa State University.[6] 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.

	April			July			October		
County	Max. Temp.	Precip.	Min. RH	Max. Temp.	Precip.	Min. RH	Max. Temp.	Precip.	Min. RH
Buffalo	62.36	2.34	34	86.86	3.39	54	64.67	1.92	39
Dawson	62.05	2.25	35.5	86.83	3.25	62.7	64.62	1.81	40.5
Hall	62.53	2.58	34.5	86.96	3.54	60	64.63	2.03	41
Hamilton	62.48	2.74	35	86.71	3.61	60.3	64.68	2.30	42.5
Howard	62.03	2.58	33.7	86.38	3.34	55	64.15	2.05	39
Merrick	62.08	2.70	35	86.27	3.39	61.5	64.23	2.15	43
Nance	61.68	2.73	34	85.97	3.25	55.7	63.85	2.05	40
Polk	62.32	2.77	35.3	86.37	3.40	61	64.60	2.08	43.5
Sherman	61.99	2.65	35.7	86.67	3.26	65.7	64.34	1.88	41.5
York	62.94	2.66	35.5	87.38	3.63	60.5	65.31	2.12	44

Table 1: Average maximum temperatures (degrees F), precipitation (inches) and median minimum relative humidity (percent) 1982-2018 for April, July, and October for Central Platte CWPP counties. RH data interpolated from selected weather stations.[5]

Wind is a prime 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 five stations in or near the plan area – Columbus, Grand Island, Kearney, Ord, and York – are in Appendix D.

Vegetation and Natural Communities

Native vegetation in the Central Platte CWPP Region is primarily mixed-grass prairie in the western two thirds and tallgrass prairie in the eastern third, with riparian deciduous forests in the drainages.[7] Eastern redcedar occurs along the Platte and Loup Rivers and in some areas has encroached into the prairies and deciduous woodlands, particularly in Dawson, Buffalo, Sherman, Howard, and Nance Counties. Agricultural fields occupy much of the eastern and southern parts of the region. A land cover map appears in Appendix A.

Land Use

There are about 2,727,040 acres (4,261 sq. mi.) in the Central Platte CWPP region, which includes all of Buffalo, Hall, Hamilton, Howard, Merrick, Nance, Polk, Sherman, and York Counties, and the northeast quarter of Dawson County. Public lands include 11,879 acres in 35 NGPC Wildlife Management Areas (WMAs); 4,281 acres in ten NGPC State Recreation Areas (SRAs); 3,352 acres in USFWS Waterfowl Protection Areas; 568 acres in ten NRD-managed tracts; and 6.6 acres in four scattered BLM parcels. There are also approximately 28,600 acres in Nebraska School Lands.[8] The US Environmental Protection Agency lists the Cornhusker Army Ammunition Plant (US Department of Defense) as a 12,042-acre Superfund site located near Grand Island. Kearney's Cottonmill Park is 110 acres. There are other county and municipal properties in the CPCWPP region. The remainder of the land in the region is privately owned.

The Central Platte River region is a prime migration stopover for both sandhill cranes and the endangered whooping cranes. Non-government conservation organization lands include 4,100 acres in ten Platte River Whooping Crane Maintenance Trust tracts; 3,460 acres in five parcels managed by The Nature Conservancy; 2,987 acres in nine Platte River Recovery Implementation Foundation tracts; 2,496 acres in six Audubon properties; 579 acres in Ducks Unlimited easements; and 392 acres held by the Prairie Plains Resource Institute. NRCS holds 79 Wetlands Reserve Program (WRP) easements on 8,141 acres.

Agriculture (crops and livestock) is the predominant use on private and school lands. Residential, commercial, manufacturing, and industrial land uses dominate the region's 56 incorporated cities and villages and their immediate surroundings. Land use is primarily agricultural in the region's 6 unincorporated communities. Rural residential land use exists in conjunction with agricultural operations. According to US census data, there are just over 160,600 permanent residents within the nine counties entirely within the CWPP region. There are an estimated 1,513 residents within the CWPP boundary in Dawson County.

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.

The primary recreational activities in the region are crane watching in the spring along the Platte River; boating, fishing, and camping at Sherman Reservoir; and hiking, biking, hunting, and fishing area-wide.

The CPNRD provided the following estimates for annual visitor usage at their sites: Gibbon Crane Deck: 10,000-12,000; Alda Crane Deck: 15,000; 1,000 use the crane sites annually to gain river access; Wood River Flood Control Hike/Bike Trail: 5,000; Eagle Scout Rec Area: 20,000; Central City Trail: 5,000. They also noted that in the Kearney area, the Fort Kearny trails complex and Cottonmill Park are both heavily used.

Fort Kearny SRA is open to fishing, swimming, hiking, camping, and crane watching and sees almost 71,000 visitors annually. Sherman Lake SRA hosts over 36,000 visitors annually. Well over 209,000 people visit NGPC SRA sites in the CWPP region each year.[9] Although no visitor numbers are available for state WMAs within the region, NGPC staff reports significant use by anglers and hunters. Hundreds of hunters visit private lands throughout the region annually.

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 Central Platte CWPP region, infrastructure includes county, state, and federal roads and bridges, communications systems, the power grid (including NPPD's hydroelectric plant at Kearney), 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.

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 or 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 Department of Homeland Security's website https://www.ready.gov/evacuating-yourself-and-your-family offers some ideas.

Irrigation Canals

Numerous irrigation canals lie all or partly within the Central Platte CWPP region and are shown on Map 5 in Appendix A. The Kearney Canal, operated by NPPD, runs 15.7 miles through the southern portion of Buffalo

County, north of the Platte River from the Kearney Diversion southeast of Elm Creek to just west of Kearney. The Loup Canal, operated by the Loup Power District, begins five miles southwest of Genoa and runs northeast along State Highway 22 in Nance County for about 8 miles before exiting the CWPP region into Platte County.

The Farwell Irrigation District Project includes parts of Sherman and Howard Counties. Water is diverted from the Middle Loup River by the Arcadia Diversion Dam northwest of Arcadia, and carried via the Sherman Feeder Canal (7.6 miles in north central Sherman County) to Sherman Reservoir, the storage facility for the District. Below the reservoir a system of canals, pumping plants, laterals and drains provide for irrigation of 53,414 acres in Sherman and Howard counties.[10] The Farwell Main Canal returns to the river in Howard County, near St. Paul.

Canals #3 and #4, operated by the Middle Loup Public Power and Irrigation District (PPID), enter northwest Sherman County from Valley County, and run along both sides of the Middle Loup River. These canals are supplied by the Arcadia Diversion Dam. Canal #3, with a capacity of 125 cfs, runs south of the river for approximately 16 miles in Sherman County, ending seven miles southeast of Loup City, where it returns to the river. Canal #4, with a capacity of 130 cfs, runs along the north side of the Middle Loup River for approximately 18 miles in Sherman County, ending 6.5 miles southeast of Loup City, where it returns to the river.[11]

Several canals operated by the Twin Loups Reclamation Irrigation District, headquartered at Scotia, run through parts of Howard and Nance Counties. The Fullerton Canal, with a capacity of 440 cfs, starts at the Davis Dam in Greeley County just north of the Howard County line and runs 46 miles west to Fullerton, where it returns to the Loup River. The Elba Canal, with an 80 cfs capacity, starts 12 miles downstream from the Fullerton Canal and runs 4 miles, ending above Elba, where it returns to Munson Creek. The last 1.5 miles of the Scotia Canal, with a capacity of 240 cfs, runs from Greeley County into Howard County, where it returns to the North Loup River five miles southeast of Scotia. [12]

Prescribed Fire and Prescribed Burn Associations

In recent years, prescribed fire has increased as a method of keeping eastern redcedar encroachment in check, particularly in grasslands. Practitioners include individual landowners, groups of landowners in organized prescribed burn associations, non-profit organizations, and public agencies.

The Nebraska Prescribed Burn Task Force has been active since 1995 in Custer, Lincoln, Dawson, and Buffalo Counties. The Central Nebraska Prescribed Burn Association operates in Greeley, Howard, and northeast Sherman Counties. The Central Platte Rangeland Alliance conducts prescribed burns in Dawson County. The now-defunct Buffalo-Sherman Prescribed Burn Association formerly operated in Buffalo and Sherman Counties.

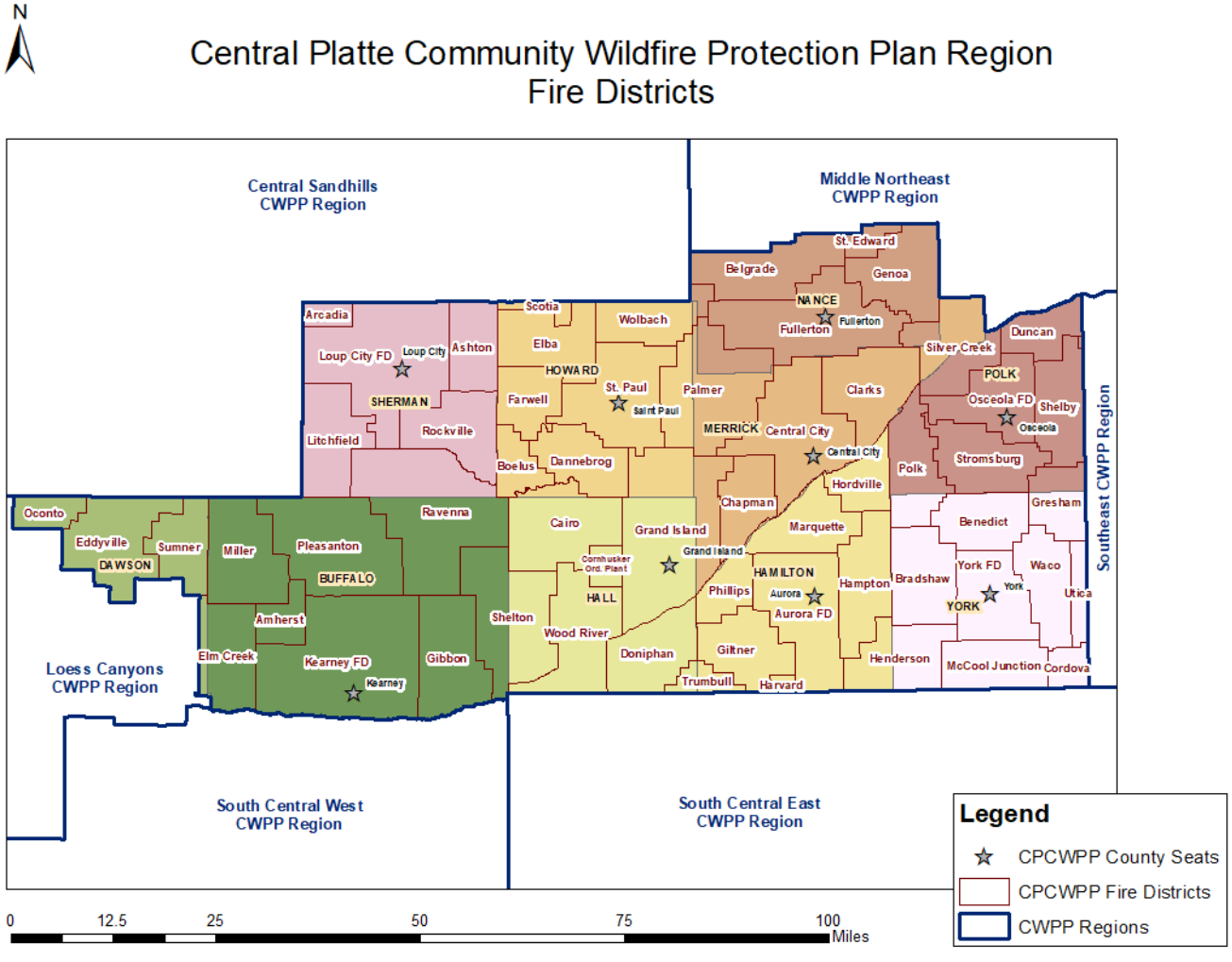
The Central Platte NRD values prescribed fire as a tool for maintaining and improving native grasslands. According to their website, when a prescribed fire is used along with appropriate grazing practices, the results are increased economic output and wildlife benefit. Fields that are moderately grazed and treated with periodic burns are more drought-tolerant, more diverse in plant and wildlife species, more productive in late summer, at less risk for devastating wildfire, and at less risk for runoff and erosion.[13]

Wildland Urban Interface

The WUI is defined as areas where homes and other structures are built near or on 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.

Fire Districts

There are 60 rural fire districts all or partially within the CWPP boundary. These are shown on Map 2 below.



Map 2: Fire Districts all or partly within the Central Platte CWPP Region.

Wildfire Hazard: History and Impacts

Historic Role of Fire

Prior to European settlement, large fires (started by lightning or indigenous people) were common, and these fires kept the prairies free of most woody vegetation. Table 2 shows the prairies in the Central Platte region may have experienced a mean replacement fire interval of 5 to 15 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 encroached on prairies.

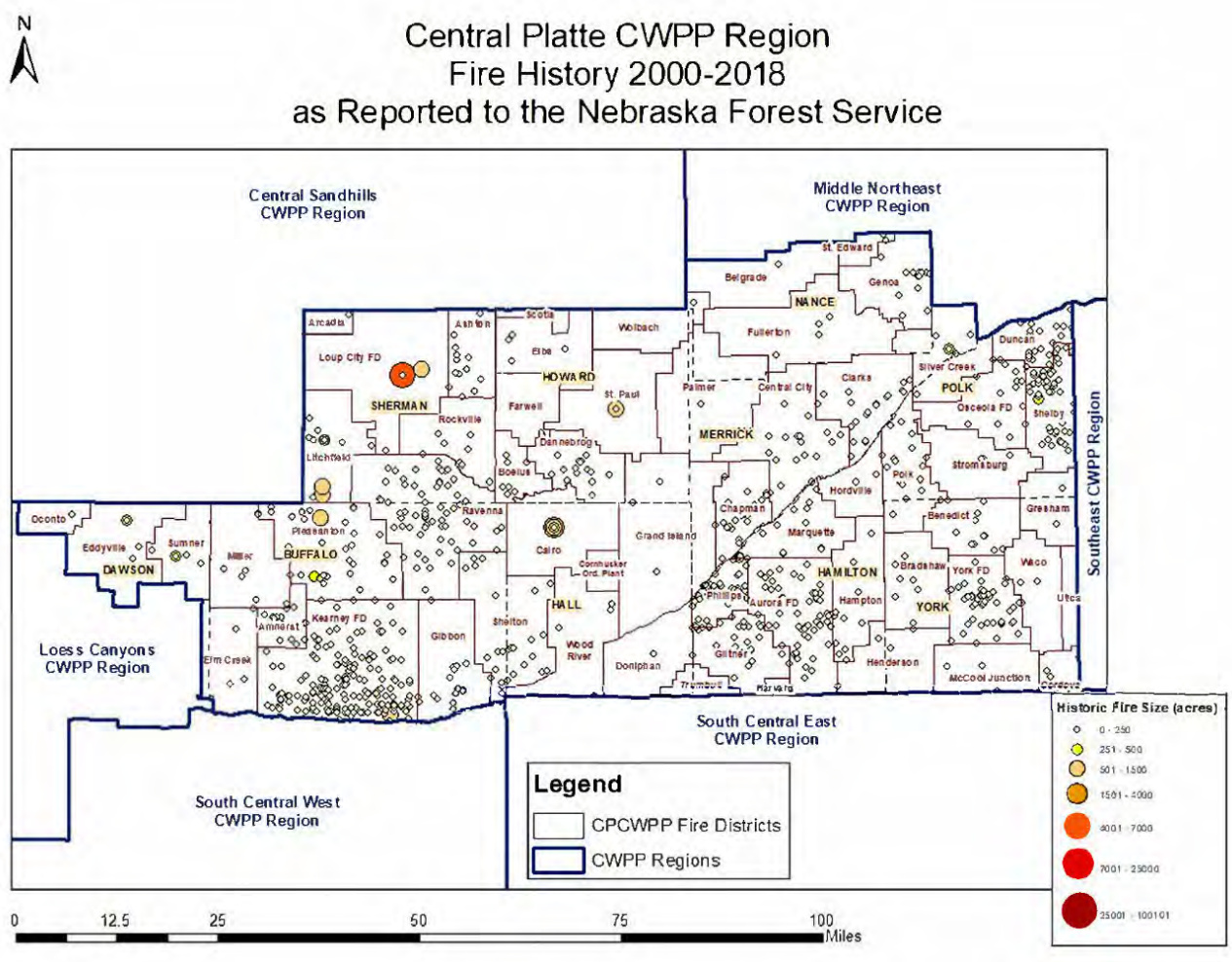
Local Fire History

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. Wildfires exceeding 200 acres in size have occurred in nearly all of the CWPP counties, and fires larger than 500 acres have occurred in about half of the counties. The largest fires reported to the NFS were 5,000 acres in Sherman County in December, 2016; 3,600 acres in Hall County in February, 2002; and 1,000 acres in Buffalo County in March, 2010. Map 3 shows the locations of some of the larger fires reported in the CWPP area since 2000.

		Fire Regime Characteristics			
Vegetation Community	**Fire Severity**	**% of Fires**	**Mean Interval (years)**	**Min. Interval (years)**	**Maximum Interval (years)**
Central Tallgrass Prairie	Replacement	75	5	3	5
	Mixed	11	34	1	100
	Surface or Low	13	28	1	50
Mixed Grass Prairie	Replacement	67	15	8	25
	Mixed	33	30	15	35
	Mixed	13	80	n/a	n/a

Table 2: Fire intervals for the Central Tallgrass Prairie and Mixed Grass Prairie types are shown above.[14]

In 2012, some local fire departments in the Central Platte CWPP area provided support for other large fires in Nebraska, including the Pine Ridge and the Niobrara Valley wildfire complexes that burned nearly half a million acres. As observed that year, and evidenced in historical research, rivers are not always a barrier to fire spread.[15]



Map 3: Some of the larger fires reported in the CWPP area since 2000 are shown in the map above. Departments reported 44 fires greater than 100 acres that burned nearly 23,000 acres.

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 to 2018.[16] Because the fire districts vary in their level of reporting, there is no accurate, comprehensive fire history available for the CWPP area.

Fires Reported 2000-2017							
Department	# Fires Human	# Acres Human	# Fires Lightning	# Acres Lightning	Total # Fires	Total # Acres	Mutual Aid Responses
Alda	2	1.1	0	0	2	1.1	1
Amherst	24	73.38	0	0	24	73.38	12
Arcadia	16	113	2	1.2	18	114.2	11
Ashton	39	276.66	16	146.4	55	423.06	8
Aurora	82	568.15	0	0	82	568.15	10
Belgrade	4	71.25	0	0	4	71.25	0
Benedict	18	124.55	0	0	18	124.55	0
Boelus	20	104.57	1	.001	21	104.571	22
Bradshaw	24	474.43	0	0	34	474.43	0
Cairo	6	4,936.01	0	0	6	4936.01	0
Central City	21	61	2	42	23	103	3
Chapman	51	46.44	0	0	51	46.44	2
Clarks	54	170.22	2	3	56	173.22	1
Cordova	9	111.5	0	0	9	111.5	1
Dannebrog	34	180.65	0	0	34	180.65	19
Doniphan	11	119	0	0	11	119	0
Duncan	99	717.97	0	0	99	717.97	0
Eddyville	7	836.01	0	0	7	836.01	1
Elba	3	243.29	1	1.71	4	245	4
Elm Creek	14	46.2	0	0	14	46.2	2
Fullerton	13	406	0	0	13	406	0
Genoa	105	1,287.39	2	40.5	107	1,327.89	5
Gibbon	82	222.64	0	0	82	222.64	1
Giltner	32	21.9	0	0	32	21.9	10
Grand Island Rural	32	191.66	0	0	32	191.66	0
Gresham	21	160.72	0	0	21	160.72	0
Hampton	10	219.2	0	0	10	219.2	1
Harvard	2	6.25	0	0	2	6.25	0
Henderson	31	349.5	0	0	31	349.5	7
Hordville	1	2	0	0	1	2	0
Kearney	260	1,499.04	0	0	260	1,499.04	11
Litchfield	10	1,056.97	0	0	10	1,056.97	4
Loup City	8	6,218.25	2	9	10	6,220.25	0
Marquette	34	170.07	0	0	34	170.07	1
McCool Junction	5	233	0	0	5	233	1
Miller	43	183.12	8	100.27	51	283.39	13
Oconto	26	2,642.11	4	127	30	2,769.11	14
Osceola	18	95.21	0	0	18	95.21	0
Palmer	12	33.12	0	0	12	33.12	0
Phillips	66	581.02	1	1	67	582.02	12
Pleasanton	36	1,373.2	0	0	36	1,373.2	5
Polk	18	107.54	3	5.1	21	112.64	7

Ravenna	112	1,591.16	1	.1	113	1,591.26	3
Rockville	9	42.2	0	0	9	42.2	4
Scotia	91	917.13	9	270.3	100	1,187.43	1
Shelby	47	372.64	1	1	48	373.64	4
Shelton	30	156.33	1	.2	31	156.53	3
Silver Creek	40	616.58	3	5.11	43	621.69	5
St. Edward	16	222.8	0	0	16	222.8	0
St. Libory	6	11.6	0	0	6	11.3	0
St. Paul	27	232.46	0	0	27	232.46	0
Stromsburg	11	42.7	0	0	11	42.7	1
Sumner	9	583.1	1	45	10	628.1	1
Trumbull	7	14.27	13	417.11	20	431.38	1
Utica	11	83.45	0	0	11	83.45	1
Waco	44	65.91	0	0	44	65.91	1
Wolbach	24	368.28	2	.02	26	368.3	2
Wood River	6	14.21	2	9	8	23.21	0
York	110	269.11	1	.01	111	269.12	14
Total	**2,013**	**31,944**	**77**	**1,218**	**2,090**	**33,162**	**230**

Table 3: Fires reported by Central Platte CWPP fire departments between 2000 and 2018. Departments reported a total of 51,135 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, limited forest management, and prolific regeneration of eastern redcedar have increased the fire danger in prairies and woodlands. This, combined with severe drought, created conditions conducive to the catastrophic wildfires of 2006 and 2012.

A statewide map of local mitigation planning areas is included in Appendix A. The Central Platte, Lower Loup, and Upper Big Blue NRDs are the designated local mitigation planning areas for the Central Platte CWPP area. Each of these planning units has its own Multi-Jurisdictional Hazard Mitigation Plan that includes a discussion of wildfire hazard. Appendix E contains links to these plans. This CWPP builds on these plans to address specific wildfire concerns.

Individual locations of particular concern are identified in each community-specific section of this CWPP. Planning team members and local fire departments identified specific areas of concern for the CWPP area. These locations include the edges of municipalities and wooded areas along rivers and creeks where there are homes and other structures. Many of these areas have limited access and/or water availability. The team identified area-wide high-risk ignition sources such as dense undergrowth and, depending on time of year, dry weather conditions when fires can start from lightning and hot farm machinery. They also underscored the importance of addressing fuel load reduction in community mitigation plans. See Appendix A for maps.

Economic Impacts

Excessive fuel loading can affect local economies in many ways. It reduces available forage, and therefore the pasture 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 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.

Emergency Operations

Responsibilities and Mutual Aid Agreements

Volunteer fire departments are the first line of defense against wildfires on private and state lands within each community. During large wildfires, they rely on mutual aid agreements with neighboring jurisdictions. The 60 fire departments in the CWPP area belong to one or more of the 16 mutual aid associations that overlap the region: Big 8, Buffalo Co., Central NE VF Assoc., Central Nebraska, Custer Co., Fillmore Co., Hamilton Co., Hastings Area, Loup Platte, Loup Platte #2, Loup Valley, Mid-Nebraska, Platte Valley, Seward Co., Twin Loups, and York Co. See Appendix F for a complete list of mutual aid associations and member fire departments.

Each county has an Emergency Management protocol. Merrick and Nance Counties are part of Region 44 Emergency Management. Sherman County is part of Region 26 Emergency Management. York County is part of the York/Seward Emergency Management Area. Buffalo, Dawson, Hall, Hamilton, Howard, and Polk Counties have their own emergency managers and are not affiliated with regional emergency management areas. A map of CPCWPP Local Emergency Management Areas appears in Appendix A.

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 emergency notification, including wildfire. This allows notification of a large geographical area or a group of people.

A state ID card system for emergency response personnel and equipment was introduced prior to the wildfires of 2012. 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 ID cards use bar codes that identify equipment, people and their qualifications, and can even 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 ID 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 are separated by wide 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 area locations, depending on the particular location of a wildfire. Safety zone locations 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 limit 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
The Pleasanton Fire Chief said they have access to data on infrastructure location via a secondary paging system called "I Am Responding." The Buffalo County Mutual Aid Association also uses this platform.

There were some radio compatibility issues that 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 responded to requests for information. Gaps in cellular service exist across parts of the CWPP region, particularly in the northern and western areas where topography is roughest.

Capabilities and Capacity
A listing of apparatus and staffing for each fire district is included in Appendix G. Some districts have agreements with outside agencies or county roads departments for assistance with heavy equipment.

Through the Federal Excess Property Program (FEPP), a cooperative effort with the U.S. Forest Service, the NFS acquires and reconditions fire vehicles which are no longer needed by the federal government. These vehicles are loaned to rural fire districts, which are responsible for maintenance. When no longer needed, the vehicles are returned to the NFS and are either re-assigned or sold, with the proceeds being returned to the US Treasury. In 2018 there were 821 pieces of FEPP equipment in use by 285 rural fire districts across Nebraska. In the counties covered by the Central Platte CWPP, there are 104 pieces of FEPP equipment, valued at $13,036,500 and housed at 37 fire stations and substations.

This program allows 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 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.

The Wildfire Control Act of 2013 enabled the establishment of Single Engine Air Tanker (SEAT) bases in Nebraska. Nebraska has a long history of utilizing aerial applicators for fire suppression, and the addition of permanent bases further enhances 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. The permanent SEAT bases are located at Valentine, Chadron, Alliance, Scottsbluff, and McCook. In addition, a mobile SEAT base to support operations at airports without a permanent base is completed and stationed at the Ogallala airport. The SEAT provides critical observation and access for remote areas. Tanker support is critical for locations away from towns and perennial water supplies such as lakes and rivers.

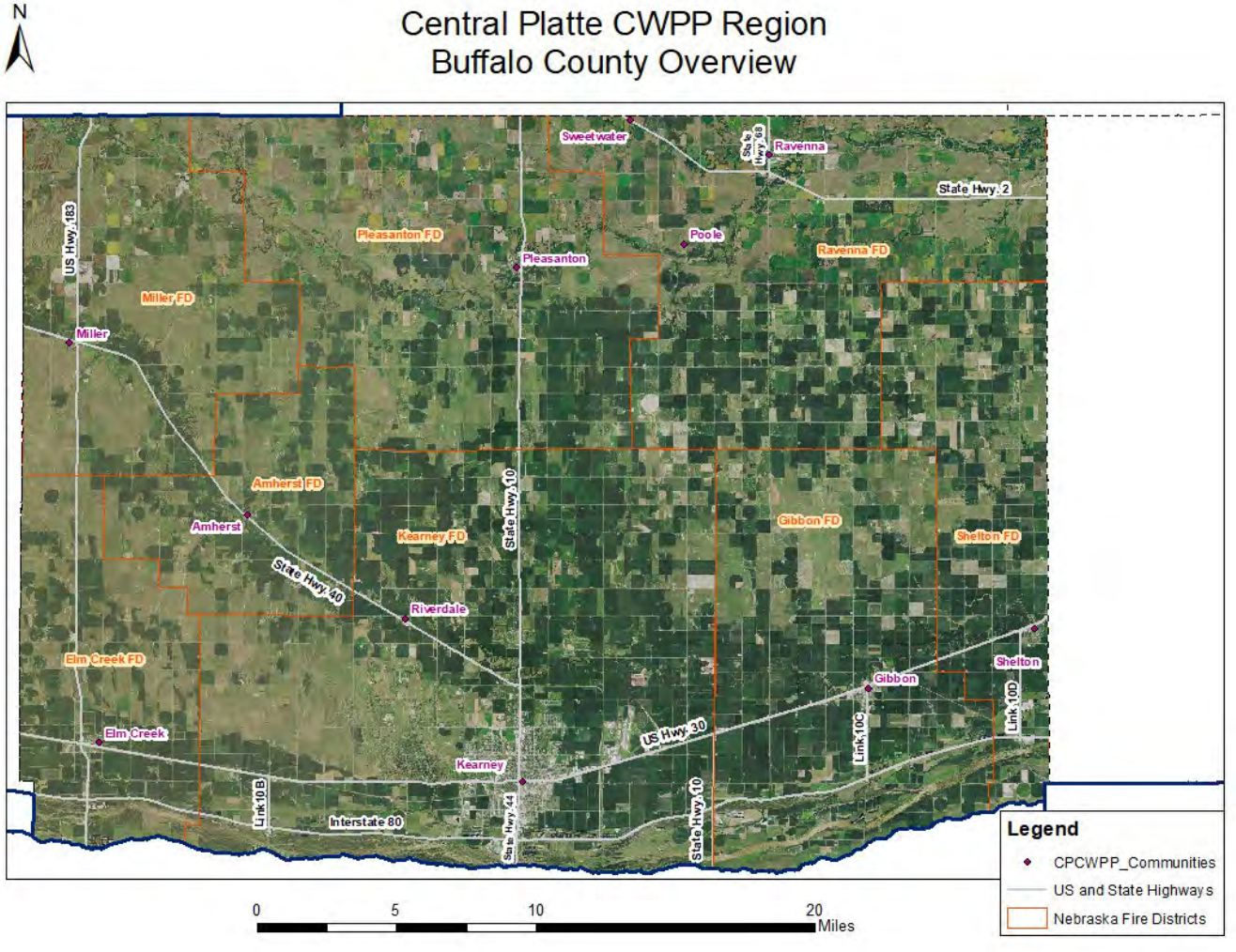
Training
The NFS and NEMA provide wildland fire training through classes in numerous communities across the state as well as mutual aid schools and State Fire School attended by thousands of people each year. In addition, the NFS sponsors the Nebraska Wildland Fire Academy, held annually in April at Fort Robinson SP. 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 and Firewise® landscaping and construction to leadership

and educating others about fire prevention. The classes offer flexibility and can be fine-tuned to meet the needs of local fire departments. NFS delivered and sponsored course hours grew from just 73 in 2007 to 91,421 in 2018. Wildland fire instructors are based in Ainsworth, Chadron, and Lincoln.

The Nebraska State Fire Marshal Training Division works in conjunction with the NFS in providing training to fire departments. For many years they have provided training to thousands of firefighters instructing S130/S190/S131/S290 NWCG classes.

Community-Specific Considerations

BUFFALO COUNTY
975 sq. miles
2017 population: 49,732



Community Profile

Buffalo County lies in the southwest part of the CWPP region. It is bounded on the west by Dawson County, on the north by Sherman and Custer Counties, on the east by Hall County, and on the south by Kearney and Phelps Counties. Incorporated municipalities include the county seat of Kearney (pop. 33,835), Amherst (pop. 267), Elm Creek (pop. 955), Gibbon (pop. 1890), Miller (pop. 135), Pleasanton (pop. 347), Ravenna (pop. 1,373), Riverdale (pop. 182), and Shelton (pop. 1061). Unincorporated communities include Poole (2010 pop. 19) and Sweetwater (no pop. data available).

Interstate Highway 80 crosses the south end of the county and US Highway 30 parallels it a few miles to the north. State Links 10B, 10C, and 10D connect the two highways. US Highway 183 crosses the west end of the county from south to north. State Highway 10 enters the north central part of the county from Sherman County and runs south to US 30 at Kearney, where it becomes State Highway 44 and continues south, exiting into Kearney County. State Highway 40 enters the east central part of the county from Dawson County, ending at State Highway 10 north of Kearney. State Highway 2 enters near Sweetwater from Sherman County and crosses

the northeast part of Buffalo County before exiting east into Hall County. State Highway 68 runs north from State Highway 2 through Ravenna, exiting into Sherman County.

Federal lands within the county include 438 acres in one USFWS Waterfowl Production Area and one 1.5-acre BLM tract. State lands include 1,445 acres in eight NGPC WMAs, 571 acres in five NGPC SRAs, and approximately 7,234 acres in school lands. The Central Platte NRD has one 4.5-acre crane viewing area. Non-profit conservation lands include 2,510 acres in five Platte River Recovery Implementation Foundation tracts, 2,426 acres in six National Audubon Society parcels, and 818 acres in three properties managed by The Nature Conservancy. There are 108 acres in two Ducks Unlimited easements and 70 acres in one NRCS Wetlands Reserve Program easement.

The entire county lies within the mixed grass prairie vegetation zone. Agriculture crop fields, hayland, and grazing lands cover much of the county. Residential and commercial land use is a focus in the Kearney area.

The areas most at-risk from wildfire are the lands surrounding municipalities, particularly the area west of Kearney where there are several subdivisions with multiple structures, a single way in and out, and areas with heavy fuels. The Pleasanton fire chief identified three subdivisions with only one way in and out, the worst of these being the Prairie Hills Golf Course at the south end of the district. There are several recreational and residential areas along the Platte River with heavy fuels and limited access. Areas of concern in Buffalo County were identified by planning team members, fire chiefs, or in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Buffalo 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 Buffalo County include Amherst, Elm Creek, Gibbon, Kearney, Miller, Pleasanton, Ravenna, and Shelton. The county has its own emergency management office.

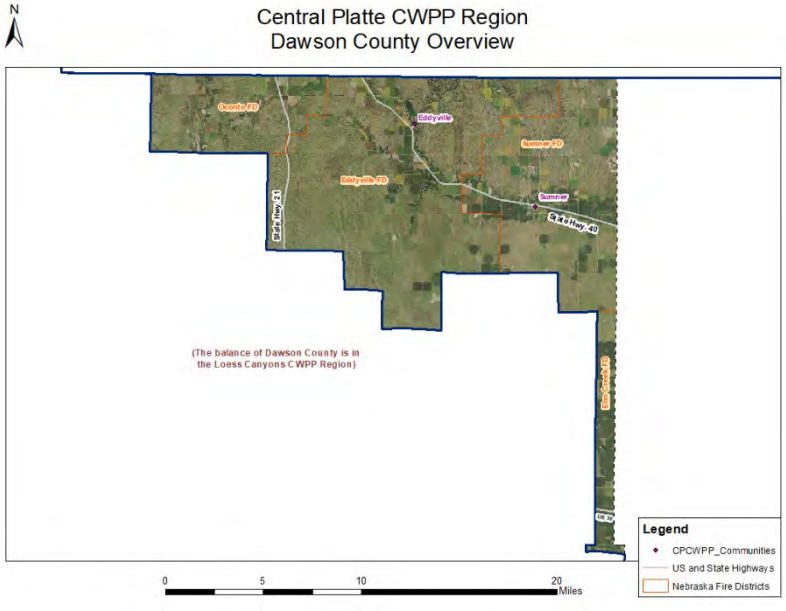
Water Sources
Most communities have municipal water systems. Farms and ranches are on wells. The Platte, South Loup, and Wood Rivers and their larger tributaries are reliable water sources. Windmills can provide water when they are operational. Ponds and stock tanks are located on farms and ranches throughout the county. During drought conditions some of the ponds may not be reliable sources of water.

Utilities/Phone Service
The Dawson Public Power District provides electric service to rural areas; most municipalities are served by the Nebraska Public 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 Buffalo County officials.

Greatest Concerns
The Pleasanton Fire Department noted that their greatest concerns are limited access and density of structures.

DAWSON COUNTY
228 sq. miles within CWPP boundary
2017 population: 1,513 within CWPP boundary



Community Profile

Part of eastern Dawson County forms the southwest corner of the CWPP area. It is bounded on the north by Custer County, on the east by Buffalo County, and on the south and west by the rest of Dawson County. Incorporated communities in this part of the county include Sumner (pop. 225) and Eddyville (pop. 95). There are no unincorporated communities.

US Highway 30 crosses the southeast corner from west to east. Nebraska Highway 21 crosses the west side of the area from north to south, and Nebraska Highway 40 enters from Custer County north of Eddyville and runs southeast through Sumner, exiting into Buffalo County.

The entire area lies within the mixed grass prairie vegetation zone. Hay and grazing lands cover much of the northern part where terrain is rougher, while agricultural fields are widespread along the Wood River and the southeastern edge of the region.

Other than municipal lands, there are no public lands in this part of Dawson County.

The lands most at-risk from wildfire are in the northern and western parts of the area, where topography is rough and eastern redcedar has encroached into grasslands, creating high fire hazard. These areas were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Dawson County lies within the WUI boundary as defined in the introduction to this CWPP.

Protection Capabilities and Infrastructure

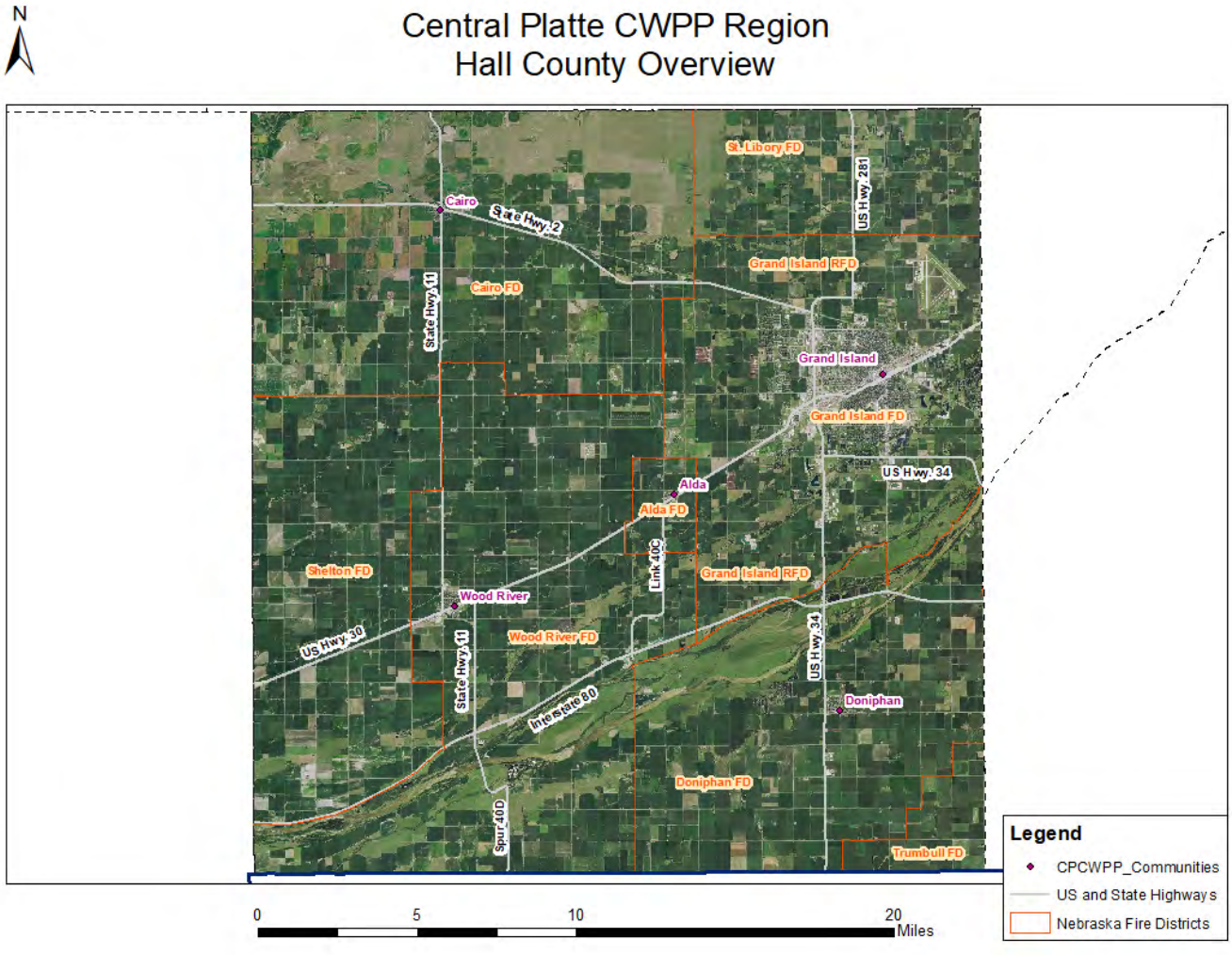
Fire Districts and Emergency Management Area
Volunteer fire departments all or partly within this part of Dawson County include Oconto, Eddyville, Sumner, and Elm Creek. The county has its own emergency management office.

Water Sources
Sumner has a municipal water system. Eddyville, ranches, and farms are on private wells. The Wood River and its larger tributaries are generally reliable water sources. Windmills can provide water when they are operational. There are small ponds and stock tanks on ranches and farms throughout the area. During drought conditions many ponds may not be reliable water sources. Some smaller streams have only intermittent flows and are not reliable. There are no irrigation canals in the CWPP portion of Dawson County.

Utilities/Phone Service
Rural electric service is provided by the Dawson Public Power District. Both cellular and landline telephone services are available in the county. There are gaps in cellular coverage in some areas.

Roads and Bridges
No specific information on roads or bridges was provided by Dawson County officials.

HALL COUNTY
552 sq. miles
2017 population: 61,519



Community Profile

Hall County lies on the south boundary of the CWPP region. It is bounded on the west by Buffalo County, on the north by Howard County, on the east by Merrick and Hamilton Counties, and on the south by Adams County. Incorporated communities include the county seat of Grand Island (pop. 51,390), Alda (pop. 660), Cairo (pop. 796), Doniphan (pop. 844) and Wood River (pop. 1,350). There are no unincorporated communities in the county.

Interstate 80 follows the Platte River in the southern part of the county from southwest to northeast. US Highway 30 parallels the interstate a few miles to the north. State Link 40C joins Interstate 80 to US 30 at Alda. US Highway 34 enters the southeast part of Hall County from Adams County and runs north to the Platte River, where it turns east and exits into Hamilton County. US Highway 281 enters the northeast part of the county from Howard County and runs south through Grand Island, joining US 34 and exiting into Adams County. Nebraska Highway 11 enters the northwest part of the county from Howard County and runs south through Cairo, ending at Interstate 80 south of the Platte River. State Highway 2 enters the northwest part of the county from Buffalo County and runs east and southeast through Cairo and Grand Island, joining Interstate 80 and exiting into Hamilton County. Nebraska 40D runs south from Interstate 80 south of Wood River, exiting into Adams County.

Federal lands within Hall County include 927 acres in two USFWS Waterfowl Production Areas. The Cornhusker Army Ammunition Plant is a 12,042-acre US Department of Defense Superfund site north of Alda. State lands include 1,113 acres in five NGPC WMAs, 199 acres in two NGPC SRAs, and approximately 2,323 acres in school lands. The Central Platte NRD has approximately 274 acres in three properties – a trail, a recreation area, and a crane viewing site. Non-profit conservation lands include 4,100 acres in ten Platte River Whooping Crane Maintenance Trust tracts, 477 acres in four Platte River Recovery Implementation Foundation tracts, 2,642 acres in two properties managed by The Nature Conservancy, and 305 acres in two tracts managed by Ducks Unlimited. There are 23 acres in two NRCS Wetlands Reserve Program easements.

The predominant vegetation zone in Hall County is mixed-grass prairie with lowland tallgrass prairie and riparian deciduous forest and woody wetlands along the Platte River. Agriculture crop fields are prevalent across the county.

Locations of special concern include population centers adjacent to grasslands and areas where eastern redcedar has encroached into grasslands, creating high fire hazard. The areas most at-risk from wildfire are located along the Platte and South Loup Rivers. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Hall 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 Alda, Cairo, Doniphan, Grand Island, Grand Island Rural, Shelton, St. Libory, Trumbull, and Wood River Fire Districts lie all or partly within Hall County. The county has its own emergency management office.

Water Sources

All of the villages and cities have municipal water systems. Farms, ranches, and rural homes are on private wells. Ponds and stock tanks are located on farms and ranches throughout the county. The Platte, South Loup, and Wood Rivers and their major tributaries are reliable water sources. During drought conditions some ponds are not reliable water sources. Some smaller streams have only intermittent flows and are not reliable. Windmills can provide water when they are operational. There are no major irrigation canals in Hall County.

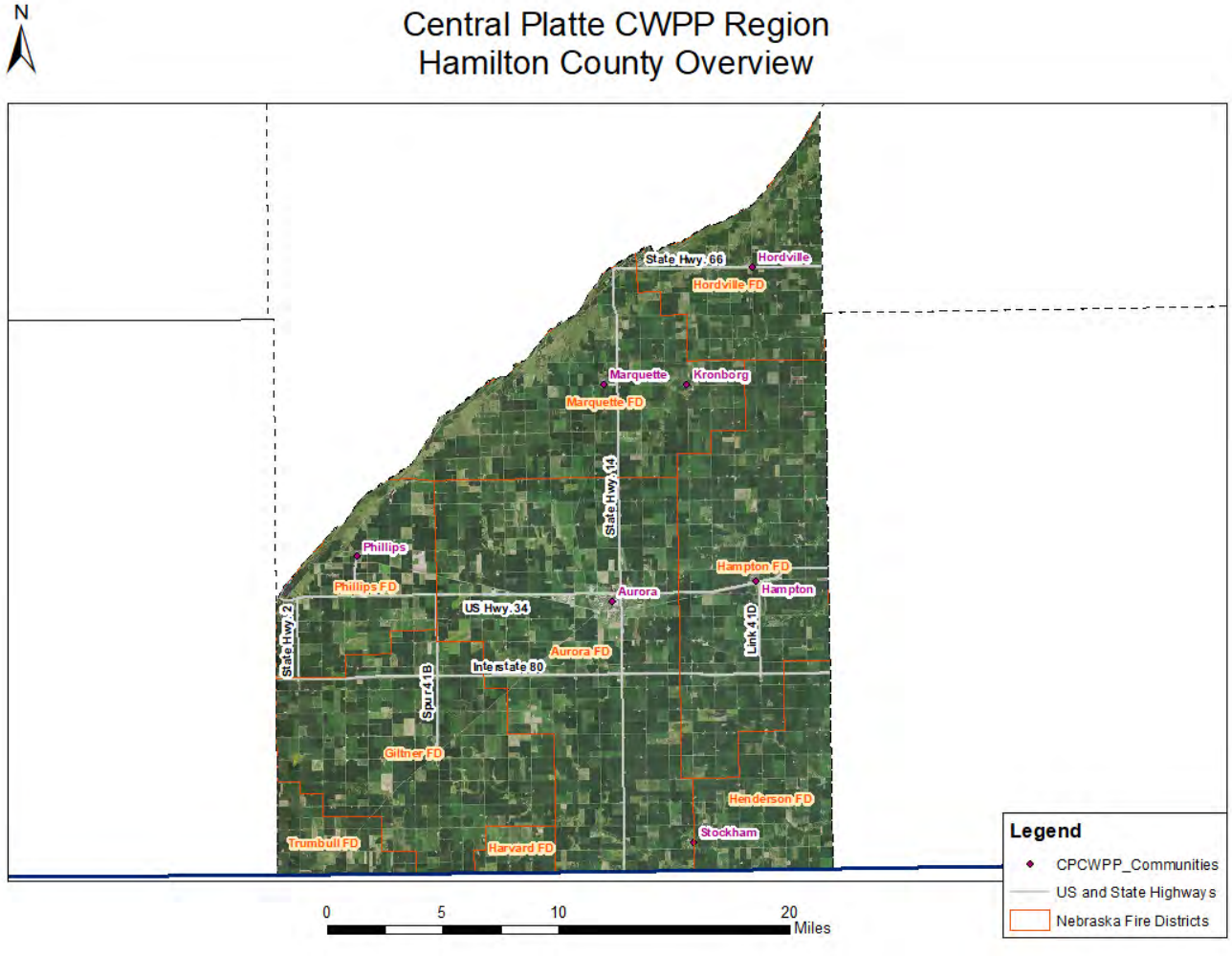
Utilities/Phone Service

Electric service to rural areas and the communities of Alda, Cairo, Doniphan, Hansen, and Wood River is provided by Southern Public Power District. Grand Island residents get power from their city utility department. Both cellular and landline telephone services are available in the county.

Roads and Bridges

No specific information on roads or bridges was provided by Hall County officials.

HAMILTON COUNTY
547 sq. miles
2017 population: 9,207



Community Profile

Hamilton County lies on the south central edge of the CWPP area. It is bounded on the west by Hall County, on the north by Merrick County, on the east by Polk and York Counties, and on the south by Clay County. Incorporated municipalities include the county seat of Aurora (pop. 4,488), Giltner (pop. 357), Hampton (pop. 430), Hordville (pop. 146), Marquette (pop. 232), Phillips (pop. 293), and Stockham (pop. 45). Overland (2010 pop. 153) and Kronburg (no pop. data available) are listed as unincorporated communities in the county.

Interstate Highway 80 crosses the central part of the county from west to east and US Highway 34 parallels it a few miles to the north. These two highways are connected by State Highway 2, State Spur 41B and State Link 41D. State Highway 14 enters the south central part of the county from Clay County, passes through Aurora and Marquette, and exits into Nance County. State Highway 66 runs east from Nebraska 14 at the Platte River into Polk County.

Federal lands within Hamilton County include 1,107 acres in three USFWS Waterfowl Production Areas. State lands include 808 acres in three NGPC WMAs. There are no school lands in the county. The Upper Big Blue NRD has approximately 96 acres in one property, Pioneer Trails. Non-profit conservation lands include 392 acres in

one Prairie Plains Resource Institute tract and 82 acres in one tract managed by Ducks Unlimited. There are 576 acres in ten NRCS Wetlands Reserve Program easements.

Vegetation zones include mixed-grass prairie in the west half of the county and upland tallgrass prairie in the east half. There are riparian deciduous woodlands along the Platte River and Big Blue Rivers and some of their major tributaries. Agriculture crop fields are prevalent across the county.

Locations of special concern include population centers adjacent to grasslands and wooded areas along the Platte River. A map of these areas is included in Appendix A. All of Hamilton 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

Volunteer fire departments all or partly within Hamilton County include Aurora, Giltner, Hampton, Harvard, Henderson, Hordville, Marquette, Phillips, and Trumbull. The county has its own emergency management office.

Water Sources

The larger communities have municipal water systems. Rural areas are on private wells. The Platte and Big Blue Rivers and their major tributaries are generally reliable water sources. Ponds and stock tanks are located on farms throughout the county. During drought conditions some of the ponds may not be reliable water sources. Some smaller streams have only intermittent flows and are not reliable. There are no irrigation canals in the county.

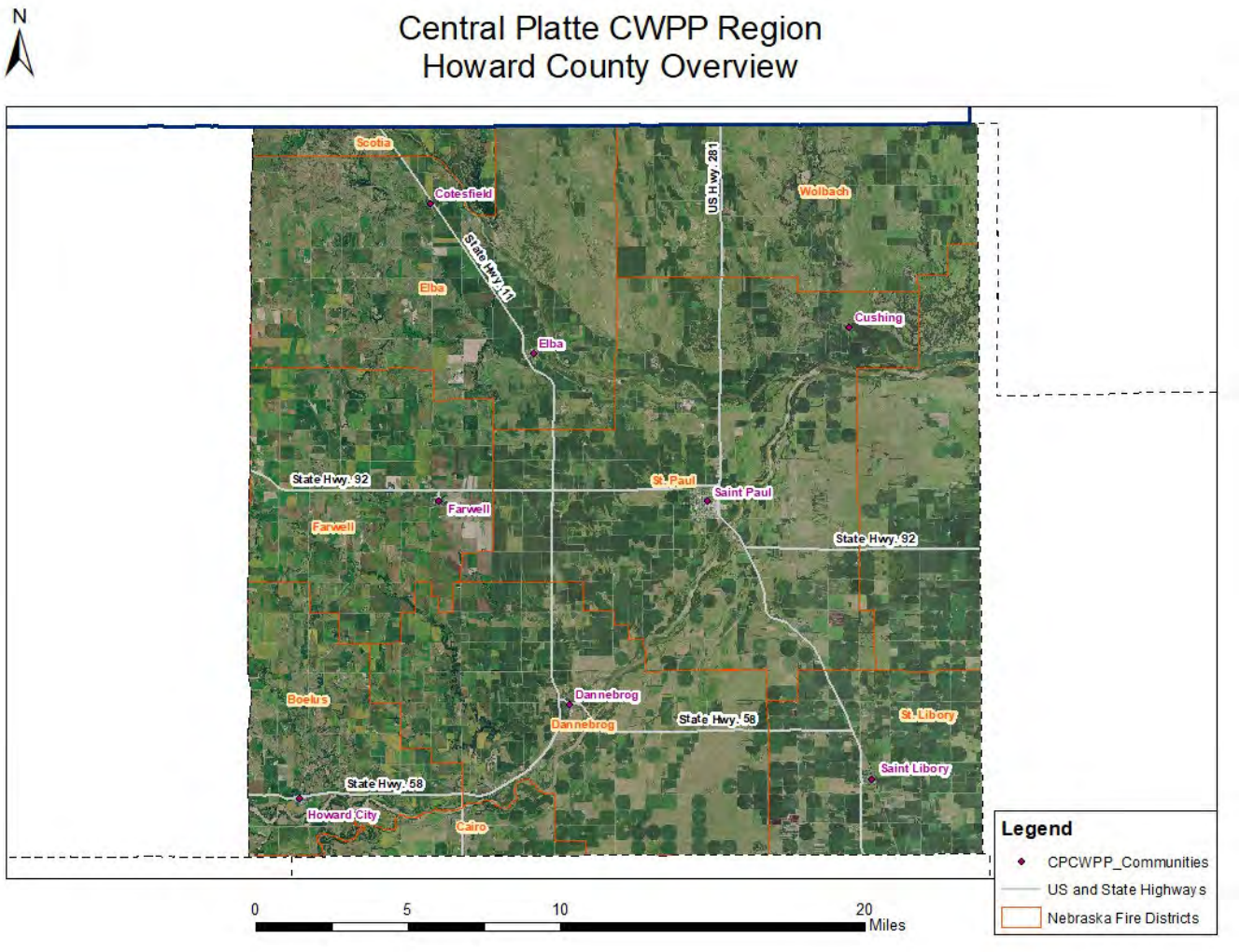
Utilities/Phone Service

Rural electric service in Hamilton County is provided by Southern Public 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 Hamilton County officials.

HOWARD COUNTY
576 sq. miles
2017 population: 6,437



Community Profile

Howard County is located on the north central edge of the CWPP region. It is bounded on the east by Nance and Merrick Counties, on the south by Hall County, on the west by Sherman County, and on the north by Greeley County. Incorporated communities include the county seat of St. Paul (pop. 2,342), Boelus/Howard City (pop. 188), Cotesfield (pop. 48), Cushing (pop. 33), Dannebrog (pop. 300), Elba (pop. 224), and Farwell (pop. 120). St. Libory (2010 pop. 264) is listed as an unincorporated community.

US Highway 281 crosses the eastern part of the county from north to south and State Highway 92 bisects it from west to east, with a jog to the south at St. Paul. State Highway 11 enters the northwest corner of the county from Greeley County and runs southeast and south through Cotesfield, Elba, and Dannebrog before exiting into Hall County. State Highway 58 enters the southwest corner from Sherman County and runs through Howard City and Dannebrog, ending at US 281.

Besides municipal lands, public lands in Howard County include 907 acres in four state WMAs and one SRA, two BLM parcels (approx. 3.2 acres total), and 3,907 acres of state school lands. There are 52 acres in eight NRCS Wetlands Reserve Program easements.

Most of the county is in the mixed-grass prairie vegetation zone, with lowland tallgrass prairie and riparian deciduous forests along the Loup Rivers. Agriculture crop fields are prevalent across the county.

Locations of special concern include population centers adjacent to grasslands and areas where eastern redcedar has encroached into deciduous woodlands and grasslands, creating high fire hazard. The Dannebrog fire chief identified areas northeast and southwest of Dannebrog as being of particular concern due to multiple structures, heavy fuels, difficult access, and only one way in and out. Many of the houses being built in these areas have narrow driveways, which makes access difficult, and often there is little room for fire trucks. The Elba and Scotia fire chiefs identified "Will's Washout" northwest of Cotesfield as an issue, with rough topography, multiple homes, heavy fuels, difficult access, and lack of water within effective distance. There are other areas at-risk from wildfire located along the Loup Rivers and in the rough terrain in the northern part of the county. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Howard 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

Volunteer fire departments all or partly within Howard County include Boelus, Cairo, Dannebrog, Elba, Farwell, Palmer, Scotia, St. Libory, St. Paul, and Wolbach. The county has its own emergency management office.

Water Sources

The larger population centers have municipal water systems. Rural areas are on private wells. The North, Middle, and South Loup Rivers and their major tributaries are reliable water sources. There are numerous ponds and stock tanks located throughout the county. During drought conditions some ponds may not be reliable sources of water. Windmills can provide water when they are operational. The Elba, Fullerton, and Scotia irrigation canals are located along the North Loup River. There are numerous Farwell Irrigation District canals and laterals in the central and western parts of the county between the North and Middle Loup Rivers.

Utilities/Phone Service

Rural electric service in Howard County is provided by the Howard Greeley Rural Public Power District. Both cellular and landline telephone services are available in the county. There are gaps in cellular coverage in some areas.

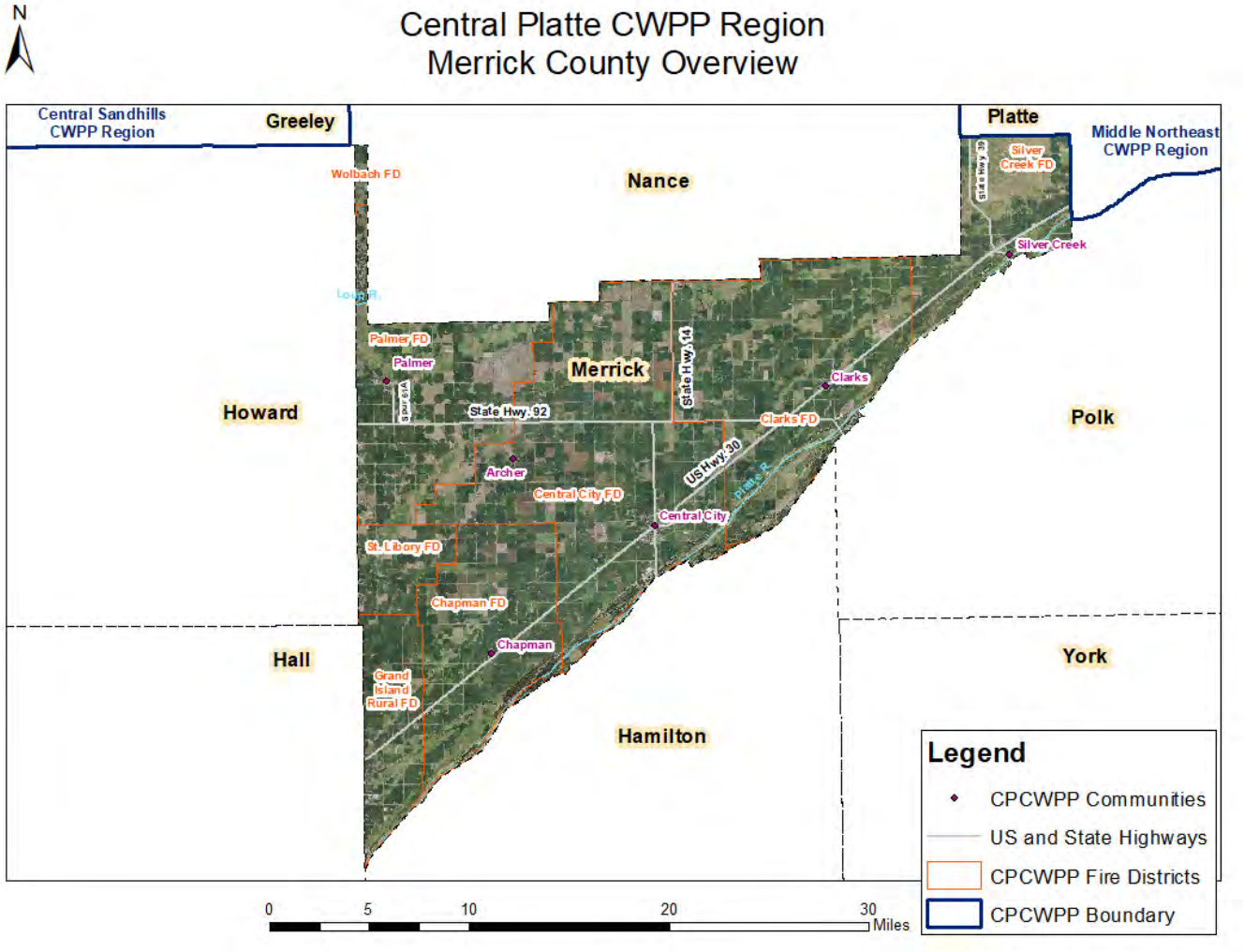
Roads and Bridges

The Elba fire chief stated that there are some bridges in the county that will not support the weight of fire equipment.

Greatest Concerns

The Dannebrog Fire Department noted that their greatest concerns are that so many of the houses being built in rural areas have narrow driveways and one way in and out. There is only room for one truck in the yard. Hazards associated with these homes include people leaving grass and shrubs close to the house, and some people still burn trash in burn barrels. The department is often short personnel during daytime hours. The Elba fire chief said their greatest concern is getting enough equipment and personnel to the scene in a timely manner. Farwell listed manpower and water supply as big concerns.

MERRICK COUNTY
494 sq. miles
2017 population: 7,882



Community Profile

Merrick County lies in the central part of the CWPP region. It is bounded on the north by Nance and Platte Counties, on the east by Platte and Polk Counties, on the south by Hamilton County, and on the west by Howard and Hall Counties. Incorporated communities include the county seat of Central City (pop. 2,920), Chapman (pop. 291), Clarks (pop. 354), Palmer (pop. 477) and Silver Creek (pop. 363). Archer (2010 pop. 81) is listed as an unincorporated community.

US Highway 30 enters the southwest corner of the county from Hall County and follows the Platte River northeast into Platte County. State Highway 92 enters from Howard County and crosses the central part of the county from west to east, exiting into Polk County. State Highway 14 enters the north central part of the county from Nance County, runs south to Nebraska 92, where it jogs west, then south through Central City and into Hamilton County. State Highway 39 cuts across the northeast corner of the county, connecting Polk and Platte Counties via Silver Creek. State Spur 61A connects Palmer to State Highway 92.

Besides municipal lands, public lands in Merrick County include 260 acres in two state WMAs, one BLM parcel (approx. 1.9 acres), and 2,546 acres of state school lands. There are 54 acres in four CPNRD easements.

The county contains a mosaic of vegetation types, including mixed-grass prairie, lowland tallgrass prairie, and riparian deciduous forests along the Platte River. Agriculture crop fields are prevalent across the county.

Locations of special concern include population centers adjacent to grasslands, areas with rough terrain and poor access, and wooded areas along the Platte River. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Merrick 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

Volunteer fire districts all or partly within Merrick County include Central City, Chapman, Clarks, Grand Island Rural, Palmer, Silver Creek, St. Libory, and Wolbach. Merrick County is part of the Region 44 Emergency Management Area.

Water Sources

The incorporated communities have municipal water systems. Rural areas are on private wells. The Platte and Wood Rivers and their larger tributaries are generally reliable water sources. Ponds and stock tanks are located throughout the county. During drought conditions some ponds are not reliable water sources. There are no irrigation canals in the county.

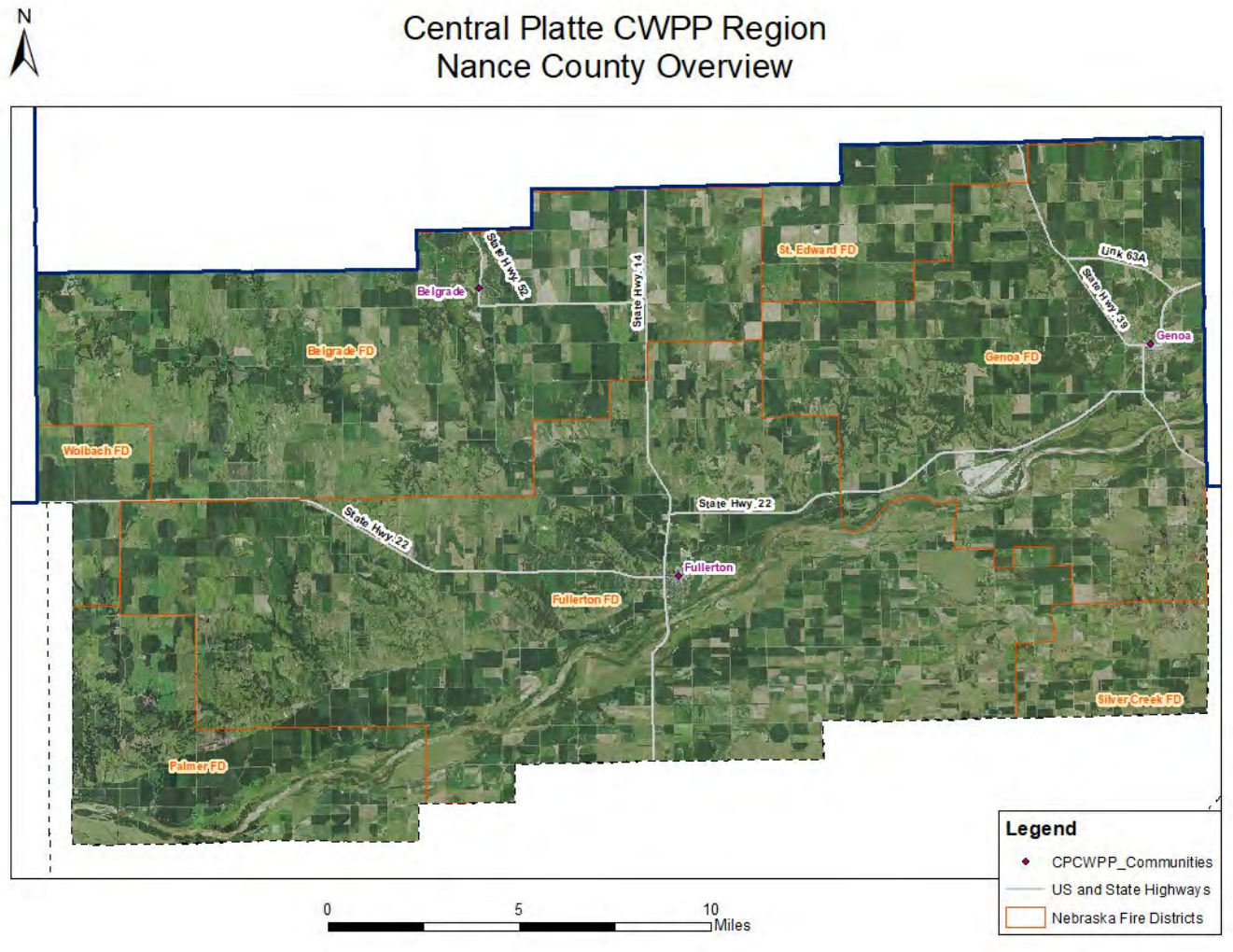
Utilities/Phone Service

Rural electric service in Merrick County is provided by the Southern Public Power and Polk County Public Power Districts. Both cellular and landline telephone services are available in the county.

Roads and Bridges

No specific information on roads or bridges was provided by Merrick County officials.

NANCE COUNTY
448 sq. miles
2017 population: 3,607



Community Profile

Nance County is the northeasternmost in the CWPP region. It is bounded on the south by Merrick County, on the west by Merrick and Greeley Counties, on the north by Boone County, and on the east by Platte and Merrick Counties. Incorporated communities in the county include the county seat of Fullerton (pop. 1,262), Belgrade (pop. 117), and Genoa (pop. 956). There are no unincorporated communities.

There are no federal highways in the county. State Highway 22 bisects the county from west to east, and State Highway 14 bisects it from north to south. State Highway 52 enters from Boone County north of Belgrade and runs south and east to join State Highway 14. State Highway 39 enters from Platte County in the northwest corner and runs through Genoa before exiting southeast into Platte County. State Link 63A connects State Highway 39 with State Highway 22 north of Genoa.

Besides municipal lands, public lands include 1,741 acres in four NGPC WMAs. There are no state school lands in the county.

Most of the western part of the county is in the mixed-grass prairie vegetation zone, while the eastern part of the county is mostly upland tallgrass prairie. There are riparian deciduous woodlands along the Loup and Cedar

Rivers and some of their tributaries. Deciduous forests are widespread north of the Loup River, mainly elm/ ash/cottonwood and bur oak forest types with eastern redcedar on wooded edges and in pockets where the hardwood canopy is fairly open or nonexistent. Some forest stand improvement work has been done in this area, mainly cedar removal. Agriculture crop fields are abundant south of the Loup River and along the major drainages north of the river.

The Genoa fire chief has identified river bottoms as of particular concern due to rough terrain, one way in and out, and heavy fuels. The St. Edward fire department noted that in general, multiple structures, along with difficult or limited access, rough terrain, and lack of water within an effective distance is problematic. Other at-risk areas are located around population centers and in rough, cedar-encroached terrain north of the Loup River. These areas were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Nance 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

Volunteer fire departments all or partly within Nance County include Belgrade, Fullerton, Genoa, Palmer, Silver Creek, St. Edward, and Wolbach. Nance County is part of the Region 44 Emergency Management Area.

Water Sources

The larger communities have municipal water systems. Rural areas are on private wells. The Loup and Cedar Rivers and their larger tributaries are generally reliable water sources. Ponds and stock tanks are located throughout the county. During drought conditions some ponds may not be reliable sources of water. Windmills can provide water when they are operational. The Fullerton and Loup River irrigation canals are located on the north side of the Loup River, west of Fullerton and Genoa, respectively.

Utilities/Phone Service

Rural electric service Nance County is provided by the Cornhusker Public Power District, Polk County Public Power District, and the Loup Power District. Both cellular and landline telephone services are available in the county. There are gaps in cellular coverage in some areas.

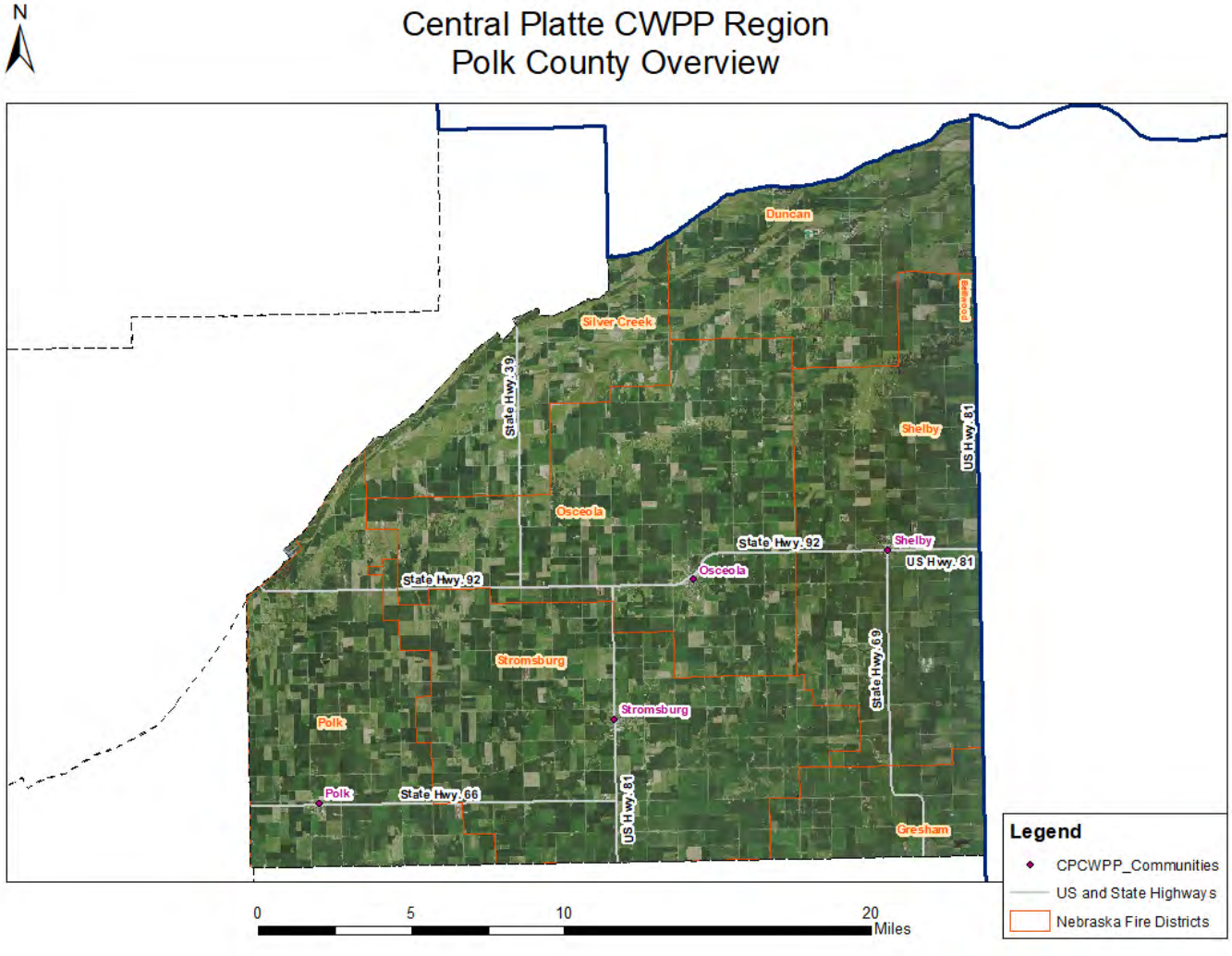
Roads and Bridges

The St. Edward Fire Chief stated that there are some bridges in the county that will not support the weight of fire equipment.

Greatest Concerns

The St. Edward Fire chief noted that wind is their greatest concern.

POLK COUNTY
441 sq. miles
2017 population: 5,328



Community Profile

Polk County forms the northeast corner of the CWPP region. It is bounded on the south by York County, on the west by Hamilton and Merrick Counties, on the north by Platte County, and on the east by Butler County. Incorporated communities include the county seat of Osceola (pop. 865), Polk (pop. 315), Shelby (pop. 315), and Stromsburg (pop. 1,158). There are no unincorporated communities in the County.

State Highway 92 crosses the center of the county from west to east. US Highway 81 enters the south central part of the county from York County, runs north through Stromsburg, then joins State Highway 92, following it east through Osceola and Shelby before turning north and following the east county line into Platte County. State Highway 66 enters the southwest corner of the county from Hamilton County, runs east through the village of Polk, ending at US 81. State Highway 39 enters from Merrick County south of Silver Creek and runs south, ending at State Highway 92. State Highway 69 enters from York County north of Gresham and runs north, ending at Shelby on US 81.

Besides municipal lands, public lands in Polk County include 80 acres in one NGPC WMA and 1,355 acres of state school lands. There are 190 acres in five NRCS Wetlands Reserve Program easements and 83 acres in one Ducks Unlimited parcel.

Almost all of the county lies within the upland tallgrass prairie vegetation zone. There are riparian deciduous woodlands along the Platte and Big Blue Rivers. Agriculture crop fields are prevalent across the county.

The Polk fire chief identified sandpit lakes as areas of concern, particularly Heron Point Lake, which is a large sandpit lake with multiple large single family dwellings and very poor access. The lake is surrounded by wildland and pasture. Other locations of special concern include population centers adjacent to grasslands, areas with rough terrain and poor access, and wooded areas along the rivers. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Polk County's population centers, rural areas, and wooded waterways lie within the boundaries of the WUI as defined in the introduction to this CWPP.

Infrastructure and Protection Capabilities

Fire Districts and Emergency Management Area

Volunteer fire departments all or partly within Polk County include Duncan, Gresham, Osceola, Polk, Shelby, Silver Creek, and Stromsburg. The county has its own emergency management office.

Water Sources

The incorporated communities have municipal water systems. Rural areas are on private wells. The Platte and Big Blue Rivers and their major tributaries are reliable water sources. Ponds and stock tanks are located throughout the county. During drought conditions some ponds may not be reliable sources of water. There are no irrigation canals in the county.

Utilities/Phone Service

Rural electric service in Polk County is provided by Polk County Public Power District. Both cellular and landline telephone services are available in the county.

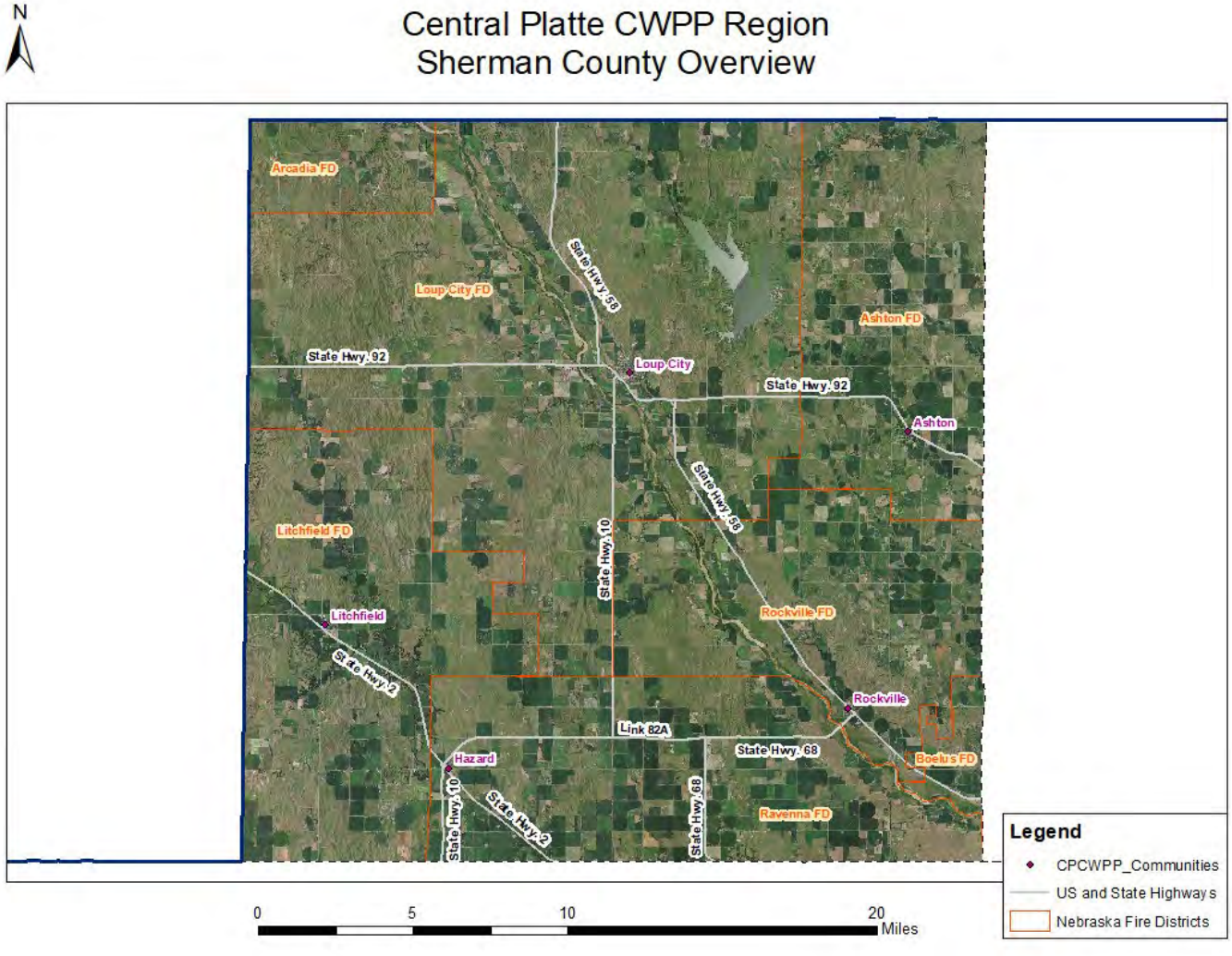
Roads and Bridges

The Polk Fire Chief stated that there are multiple bridges in the county that will not support their 6,000-gallon tanker.

Greatest Concerns

The Polk fire chief noted that quick response and available resources are their greatest concerns.

SHERMAN COUNTY
566 sq. miles
2017 population: 3,086



Community Profile

Sherman County forms the northwest corner of the CWPP region. It is bounded on the east by Howard County, on the south by Buffalo County, on the west by Custer County, and on the north by Valley County. Incorporated communities include the county seat of Loup City (pop. 1,009), Ashton (pop. 189), Hazard (pop. 68), Litchfield (pop. 256), and Rockville (pop. 104). There are no unincorporated communities in the County.

There are no federal highways in Sherman County. State Highway 92 crosses the north half of the county from west to east. State Highway 2 enters the southwest part of the county from Custer County and runs diagonally southeast through Hazard, exiting into Buffalo County. State Highway 10 enters Sherman County's southwest corner from Buffalo County and runs north, turning east at Hazard and north again to Loup City, where it ends at State Highway 92. State Highway 58 enters the north central part of the county from Valley County and runs south and east through Loup City and Rockville, exiting into Howard County southeast of Rockville. State Highway 68 enters the southeast part of the county from Buffalo County and runs north and east to Rockville, where it joins State Highway 58. State Link 82A connects State Highways 10 and 68 between Hazard and Rockville.

Besides municipal lands, public lands in Sherman County include 4,136 acres in NGPC's Sherman Reservoir WMA, 3,488 acres in NGPC's Sherman Reservoir and Bowman Lake SRAs, and 6,560 acres of state school lands.

Almost all of the county lies within the mixed-grass prairie vegetation zone. There are riparian deciduous woodlands along the Middle Loup River and some of the larger creeks. In some places eastern redcedar has encroached into grasslands and deciduous forests. Agriculture crop fields are concentrated mostly in the southern and eastern parts of the county. Recreational land use is a focus in the area surrounding Sherman Reservoir. There are homeowners' associations in two subdivisions adjacent to the reservoir.

The Rockville fire chief identified undergrazed pastureland as being a concern. Other areas of concern include population centers adjacent to grasslands, the area surrounding Sherman Reservoir and nearby subdivisions, areas with rough terrain and poor access, and wooded areas along the rivers. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of Sherman County's population centers, rural areas, and wooded waterways lie within the boundaries of the WUI as defined in the introduction to this CWPP.

Infrastructure and Protection Capabilities

Fire Districts and Emergency Management Area

Volunteer fire departments all or partly within Sherman County include Arcadia, Ashton, Boelus, Litchfield, Loup City, Rockville, and Ravenna. Merrick County is part of the Region 44 Emergency Management Area.

Water Sources

Larger communities have municipal water systems. Rural areas are on private wells. The Middle Loup Rivers and major creeks are reliable water sources. Ponds and stock tanks are located throughout the county. During drought conditions some ponds may not be reliable sources of water. Windmills can provide water when they are operational. Irrigation Canals #3 and #4, operated by the Middle Loup Public Power and Irrigation District (PPID), enter northwest Sherman County from Valley County, and run along both sides of the Middle Loup River. Several Farwell Irrigation District canals are located in the eastern part of Sherman County in the Ashton area.

Utilities/Phone Service

Rural electric service in Sherman County is provided by Dawson Public Power and the Nebraska Public Power District. Both cellular and landline telephone services are available in the county.

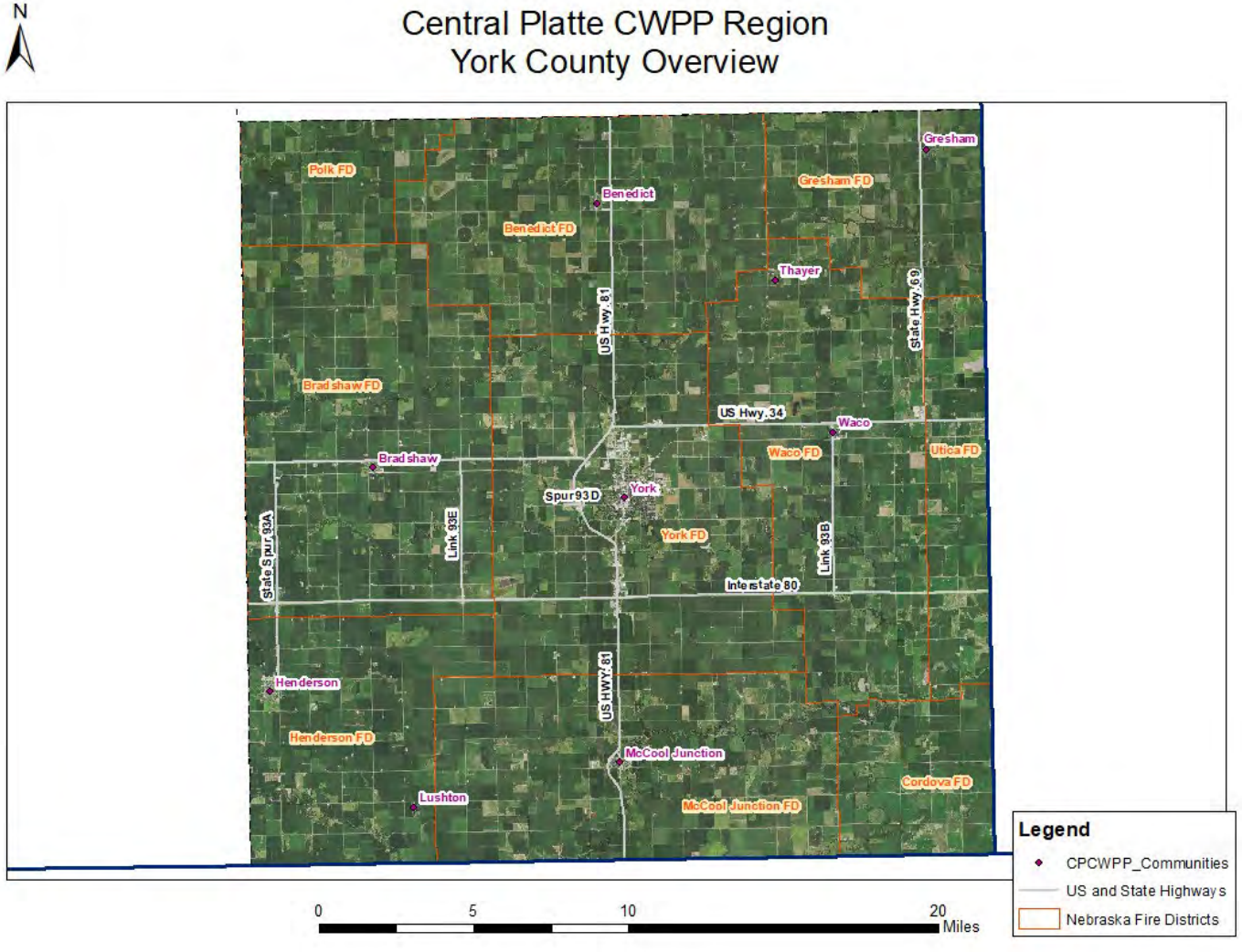
Roads and Bridges

The Rockville Fire Chief stated that there are no bridges in their district that will not support fire equipment.

Greatest Concerns

The Rockville fire chief noted that they are a very small department and understaffed. They have a need for newer and ISO-compliant equipment.

YORK COUNTY
576 sq. miles
2017 population: 13,806



Community Profile

York County forms the southeast corner of the CWPP region. It is bounded on the west by Hamilton County, on the north by Polk County, on the east by Seward County, and on the south by Fillmore County. Incorporated communities include the county seat of York (pop. 7,862), Benedict (pop. 232), Bradshaw (pop. 272), Gresham (pop. 217), Henderson (pop. 989), Lushton (pop. 30), McCool Junction (pop. 426), Thayer (pop. 61), and Waco (pop. 240). There are no unincorporated communities in the County.

Interstate 80 crosses the central part of the county from west to east, and US Highway 34 parallels it several miles to the north. The two routes are connected by State Links 93E and 93B. State Spur 93A connects Henderson with US 34. US Highway 81 bisects the county from north to south, with State Spur 93D bypassing the main route through York. State Highway 69 enters the northeast corner of the county from Polk County and runs south through Gresham, ending at US 34.

In addition to municipal lands, public lands in York County include 880 acres in one USFWS Waterfowl Production Area, 1,412 acres in six NGPC WMAs, and 833 acres of state school lands.

Almost all of the county lies within the upland tallgrass prairie vegetation zone. There are riparian deciduous woodlands along the Big Blue and West Fork Big Blue Rivers and their major tributaries. Agriculture crop fields are prevalent across the county.

Locations of special concern include population centers adjacent to grasslands, areas with rough terrain or poor access, and wooded areas along the rivers. These were identified in the statewide Priority Lands analysis; a map of them is included in Appendix A. All of York County's population centers, rural areas, and wooded waterways lie within the boundaries of the WUI as defined in the introduction to this CWPP.

Infrastructure and Protection Capabilities

Fire Districts and Emergency Management Area

Volunteer fire departments all or partly within York County include Benedict, Bradshaw, Cordova, Gresham, Henderson, McCool Junction, Polk, Waco, Utica, and York. The county is part of the York/Seward Emergency Management Area.

Water Sources

Larger population centers have municipal water systems. Rural areas are on private wells. The Big Blue and West Fork Big Blue Rivers and their major tributaries are reliable water sources. Ponds and stock tanks are located throughout the county. During drought conditions some ponds may not be reliable sources of water. There are no irrigation canals in the county.

Utilities/Phone Service

Rural electric service in York County is provided by the Perennial Public Power District, the Polk County Public Power District, and the Nebraska Public Power District. Both cellular and landline telephone services are available in the county.

Roads and Bridges

The Polk Fire Chief stated that there are multiple bridges that will not support their 6,000-gallon tanker.

Greatest Concerns

The Polk fire chief noted that quick response and available resources are their greatest concerns.

Action Plan

This section of the CWPP addresses risk assessment, fire risk rating, treatment of structural ignitability, prioritization, 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

The Central Platte NRD, Lower Loup NRD, and Hamilton and York Counties' Multi-Jurisdictional Hazard Mitigation Plans identify their planning areas as being 100 percent at risk of wildfire. Some of these fires can be expected to exceed 100 acres in size. The plans include general wildfire risk assessments (but do not map specific at-risk areas) and some general mitigation alternatives. The Hamilton and York County Plans identified Firewise® Community/ Defensible Space as a goal. In the Central Platte NRD plan, Buffalo County and the Kearney Fire District specifically identified hazardous fuels reduction as important. In the Lower Loup NRD plan, Sherman County and the NRD specifically identified reducing wildfire damage as an important goal. Most of the mitigation strategies identified by the planning teams have not been implemented.

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 assessment requires calculations of the two primary components of risk: the magnitude of the potential loss and the probability that the loss will occur. For the WUI, a risk assessment is a step that identifies any feature/element of the landscape and structures that could create potential harm to a homeowner or community.[17]

It is important to understand the meaning of risk and hazard in relation to wildfire. ***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.[18]

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 G. 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. With the exception of the largest population centers of Grand Island and Kearney, most of the Central Platte region is rural/agricultural with widely spaced home locations. There is an opportunity to perform structural risk and ignitability analysis and treatment activities in rural residential and recreational home sites at the same time fuels mitigation work is being conducted in these rural areas.

Prioritization

Appendix A of this plan contains maps depicting "Areas of Concern" that show the parts of each county considered to be at the highest risk from wildfire. The locations were identified by local fire officials, other stakeholders, and priority areas designated in the statewide FAP. 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. [19]

This document outlines WUI focus areas within each county. These can be further prioritized based on data gathered during risk assessment for individual neighborhoods. The woodlands along the Loup and Platte Rivers and their tributaries have high priority for hazardous woody fuels reduction, as do areas with recreational and rural residential subdivisions such as those west of Kearney, around Sherman Reservoir, and around sandpit lakes. All of the population centers, unincorporated residential developments, and dispersed recreational developments have high priority for fuels treatment and Firewise® preparation. Further assessments may identify additional priority areas.

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.

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. [19]

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 LPG tanks at a safe distance from structures.

Refer to Appendix J 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 for Nebraska

Listed below are some of the wildfire-related mitigation practices recommended in hazard mitigation plans for other parts of Nebraska. Hazard mitigation planners in the Central Platte CWPP Region may want to review these when their plans are updated.

- Acquire training and equipment for local fire departments
- Hazardous fuels reduction; Defensible space
- Fire prevention program; wildfire education
- Participate in the Firewise® program
- Wildfire hazard identification and mitigation system
- Conduct maintenance to reduce risk (tree care and public landscape maintenance programs)
- Reduce risk through land use planning (landscaping ordinances)
- Require or encourage fire-resistant construction (the use of non-combustible materials)
- Incorporate wildfire mitigation in comprehensive planning
- Develop a wildland-urban interface code
- Expand water storage capacity/emergency water supplies/dry hydrants
- Rural water district and system upgrades; Well and water system improvements

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.

Recommendations for Increasing Emergency Preparedness

Communication

Regularly review local communications plans, revising as needed. 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. After some major communications mishaps during the large wildfires of 2012 many local and state emergency managers worked to resolve the issue by updating protocol and equipment. Having and using a comprehensive communications plan is integral to maintaining smooth operations.

Coordination

Coordination between responders is crucial in any emergency response situation. Local emergency managers need to be able to tie in their responses with neighboring and outside assisting jurisdictions. This framework is already in place and used by local emergency managers. One of the gaps common to many LEOPs is the lack of wildfire-specific information in those documents. 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 and the local Multi-Jurisdictional Hazard Plans.

Aerial Support

It is critical to maintain the Single Engine Air Tanker program authorized through the Wildfire Control Act of 2013. Without this quick-response capacity, the danger of a small fire in difficult terrain growing into a large wildfire escalates rapidly.

Maps and Data

Some county roads and bridges have weight and/or width limitations that may inhibit use by emergency vehicles. If bridges were removed or are in poor condition, detours are needed. Planners can work with counties and fire departments to identify and map all roads and bridges, specifically identifying those with weight or width limits. Distributing this to fire departments and other emergency responders would facilitate route planning. This information could also be used to help prioritize fuel treatment areas.

Incident Command staging areas have been identified as an issue in some parts of Nebraska. Planners may be able to help with 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 controlled entry to the hazard zone. Staging areas must 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 handle communications needs. The information gathered for potential staging areas can be provided to emergency managers, fire chiefs, and others to help them decide where to establish the staging area for a particular incident. 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.

Municipal water hydrants could be mapped and made available to emergency responders. 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. GPS locations of stock tanks and other water sources on public lands could be provided to mutual aid responders.

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
Since reporting is voluntary for fire districts, not all fire districts report their wildfire responses to the NFS. Because of this, there is limited information available about the locations and sizes of historic wildfires within the CWPP counties. Increased reporting would provide data to geographically focus grant assistance on those areas most prone to wildfire. The NFS has a database already in place that could easily be used to help with 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.

Comprehensive fire reporting helps volunteer fire districts demonstrate a need for fire equipment such as that provided by the FEPP, Fire Fighter Property/State Fire Assistance, and Volunteer Firefighter Assistance programs described earlier in this document. There is a risk that incomplete reporting could imply that there is no pressing need for this type of equipment. This could potentially put the status of the program in jeopardy. As an incentive for participation, fire departments that report their responses are eligible to apply for this equipment.

Community Preparedness
Prepared communities reduce hazards, protect homes, and increase firefighter safety. Work with homeowners in WUI areas 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. Preparation by property owners prior to a wildfire can contribute to firefighter safety and help them protect structures. See Appendix J.

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 could 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.

Training and Education

Firefighter Training

All volunteer fire departments are encouraged to participate fully in wildland training opportunities provided through the NFS and NEMA. Refer to the training overview earlier in this document. Although not all volunteer fire departments have mandatory fitness requirements, local departments can be encouraged to participate, both for safety and lowering 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 could be offered as part of Firewise® events that participating communities hold annually. Involving local communities in these voluntary programs would increase public awareness regarding structure risk mitigation. See Appendix J.

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.

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

Several federal and state agencies, prescribed burn associations, and some individual landowners use prescribed fire as a land management tool on federal, state and private lands. On grasslands, prescribed fire can be extremely efficient for keeping eastern redcedar encroachment in check. In forested settings, prescribed fire is more effective and safer when used to maintain woodlands after dense areas 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 killing live trees. Crown fires are difficult to control, and they kill healthy trees.

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. Wooded recreational and residential areas add the hazards of seasonal congestion, sometimes-limited or difficult access, and structures adjacent to highly-flammable conifers. Mechanical thinning will decrease tree density to healthy levels and reduce eastern redcedar encroachment in deciduous forests.

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 also can 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 develop markets for wood products.

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 forested areas, it is also important to manage the grass component on both forested areas and grasslands. Well-planned grazing 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 forested and non-forested lands.

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 treatment, can be costly, so continued maintenance (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

The objective of fuels mitigation treatments in forested settings is to reduce the stand density to levels which will remain effective for 20 to 30 years. The NFS maintains a database that quantifies the time and level of treatment performed under NFS agreements on forested properties statewide. This helps resource managers to evaluate when and where resources for future fuel treatments should be directed.

The extreme fire behavior in Nebraska during 2012 tested many of the fuels reduction treatments that were previously implemented. Wildfires provided an opportunity to observe the effectiveness of various types and intensities of treatments. Lessons learned from the 2012 fire season strengthened resource managers' ability to plan suitable fuels mitigation treatments for Nebraska's landscapes.

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 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.

Monitoring
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. Agency stakeholders will monitor their efforts according to their internal protocol, documenting accomplishments and redesigning strategies as needed.

Evaluation
Annual assessment of the identified tasks is very important to determine whether or not progress is being made. Units of measure to be considered when updating the plan in the future for the purpose of reporting accomplishments are listed below:

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 equipment obtained
5. Number of firefighters and fire departments receiving training courses
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 involved
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 the units of measure 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 education and outreach, information development, fire protection, and fuels treatment.

Five-Year Action Plan

The Action Plan proposed on the following page is intended to assist planners implement, evaluate, and keep the CWPP up to date. It lists the objectives developed by the planning team and the associated tasks needed to achieve each objective, 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.

Five-Year Action Plan for the Western Sandhills CWPP 2019-2024					
Objective	**Task(s)**	**Who**	**When**	**Benchmark(s)**	**Opportunities/Limits**
Risk Assessment (RA)	Identify/analyze elements	Local officials with NFS	Done	Checklist/Report	n/a
Structural Risk & Ignitability Analysis (SRIA)	Individual or neighborhood analysis for rural areas	Contractors, fire depts., others.	Ongoing	Checklist/Report	Opportunity to do this during fuel reduction projects or other site visits. Limits: funding and staff availability.
Prioritization of Areas of Concern	Assess/prioritize AOCs based on vulnerability	Local Officials & fire departments	2019-2021	Maps Checklist Report	Opportunity to further prioritize based on RA & SRIA data
Risk Reduction (RR)	Identify practices	Local Officials with NFS	Done	Checklist/Report	n/a
	Vegetation Management	Homeowners & landowners; local officials (for public property)	Ongoing	# Acres or Properties Treated	Agency cost share programs available
	Ignition-Resistant buildings	Homeowners, planning officials	Ongoing	# New buildings to code; # bldgs. retrofitted	Retrofits can be costly; opportunity for new construction
	Jurisdictional Cooperation	Local, state, federal officials	Ongoing	# of Mutual Aid Agreements, MOUs, etc.	Explore MOUs with non-traditional partners, NGOs, etc.
Increase Communications Effectiveness	Review Local Communications Plans	Local and state officials	Annually	Document changes/updates	n/a
Increase Data Availability	Map county roads/bridges with weight or width limits; other data	Local officials, contractors?	2019-2024	Completed maps by jurisdiction	May be able to piggy back data collection with other tasks
	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
Increase Available VFD Equipment	Increase fire response reporting	Fire chiefs	Ongoing	# of Departments reporting	Opportunity for VFDs to acquire additional equipment
Increase Community Preparedness	Implement homeowner and community programs	Local officials, homeowner groups	Ongoing	# of programs established or expanded	NFS has staff available to help communities with this
	Evaluate subdivision in/out access	Local officials, VFDs, developers	2019-2021	Report/cost estimates	Explore grant funding to address costs
	Review County Zoning Plans for treatment of high fire risk areas	Local planning staffs	2019-2021	Recommendations to county officials	Consider canyon setbacks, access, building materials
Increase Response Effectiveness	Participate in firefighter training	VFDs	Ongoing	# of departments and firefighters receiving training	Many training options available through NFS & NEMA
Increase Public Awareness	News releases; Hold workshops, information sessions, etc.	Local officials, planners, VFDs	Ongoing	# of people reached	NFS has info & materials, can help with planning
	Provide literature to homeowners, developers, others	Local officials, planners, VFDs	Ongoing	# of people reached	NFS has brochures & handouts for general use

Endnotes

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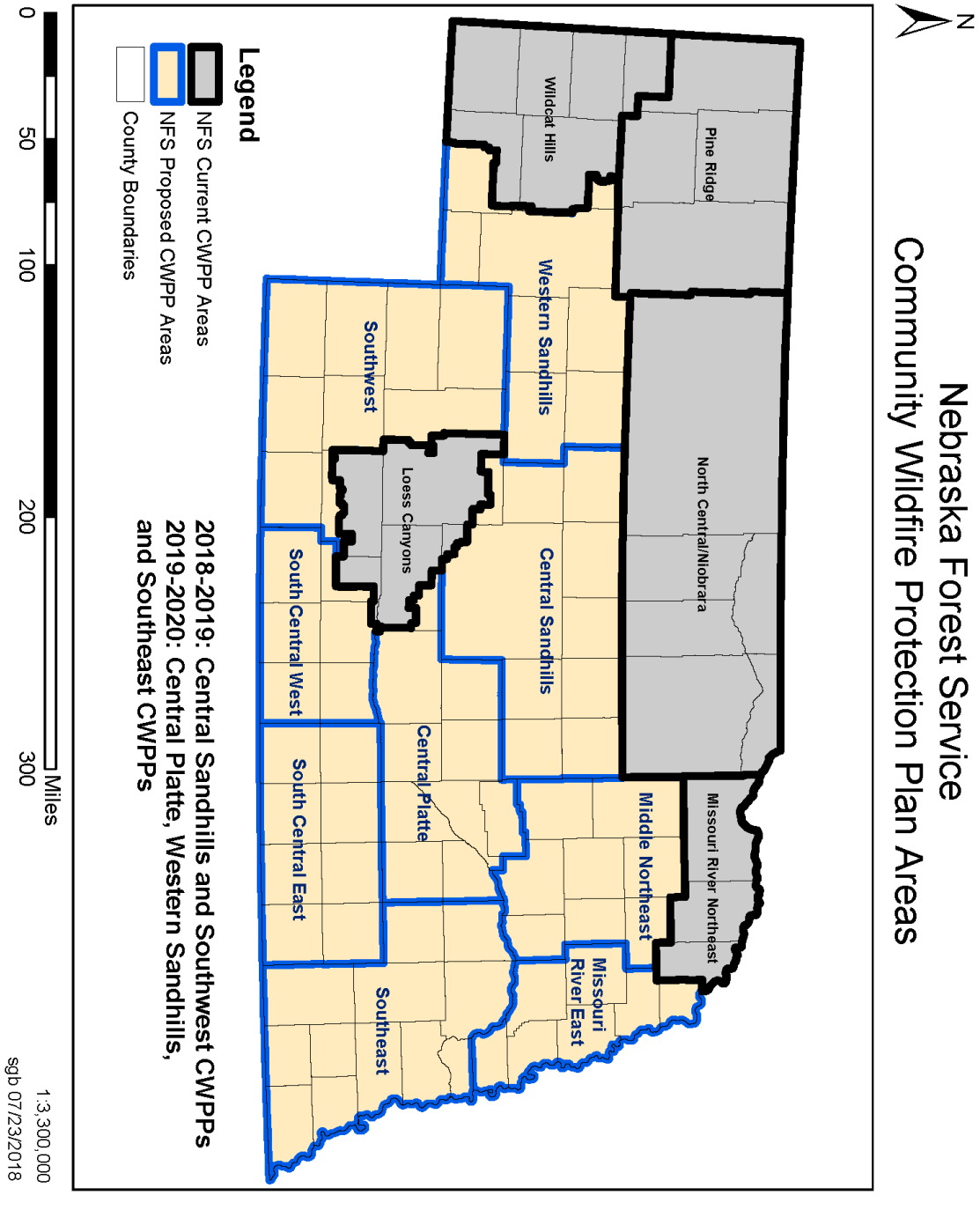
List of Appendices

Appendix A

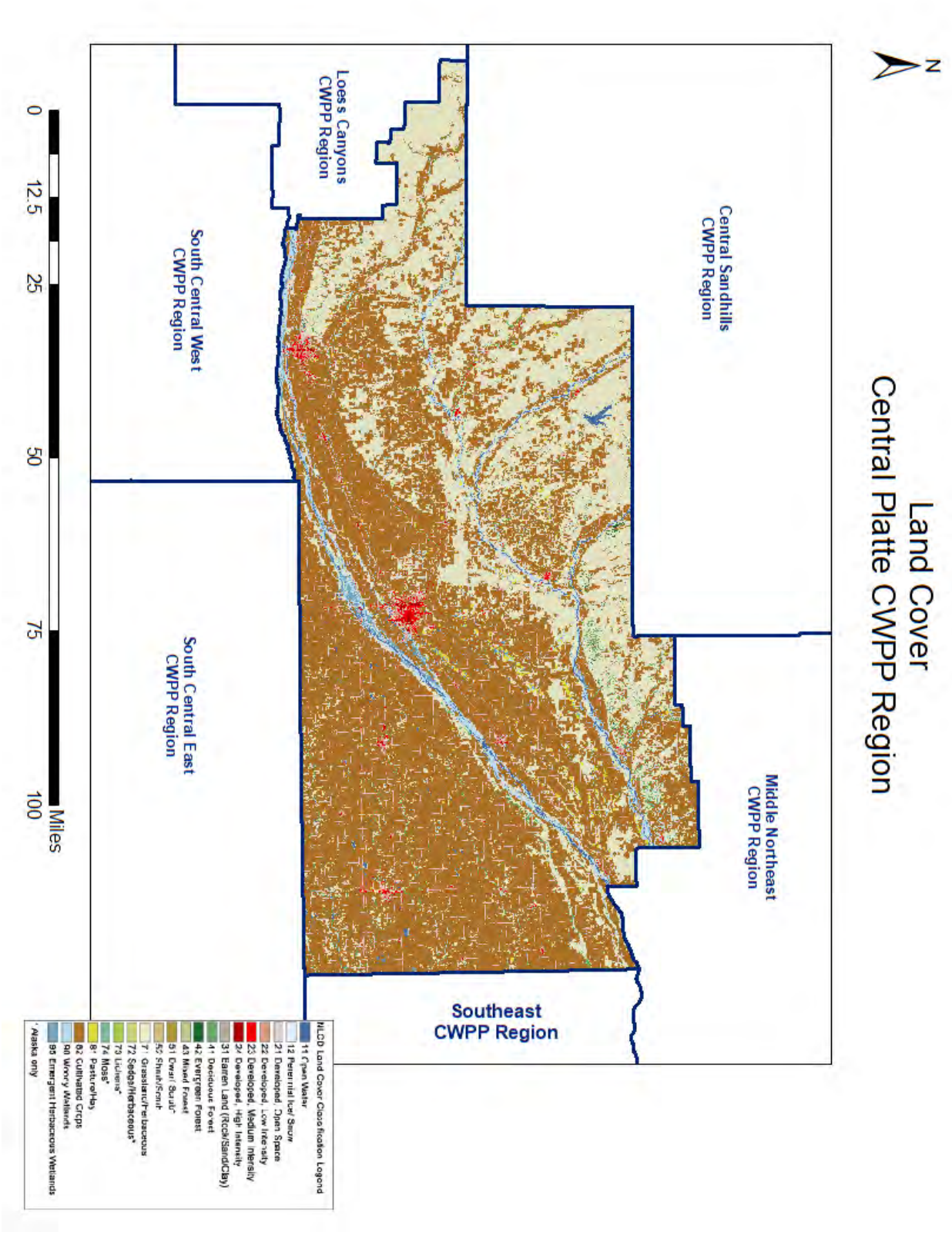
Maps

1. Nebraska CWPP Regions
2. Central Platte CWPP Region Land Cover
3. Nebraska Local Mitigation Planning Areas
4. Central Platte CWPP Local Emergency Management Areas
5. Central Platte CWPP Irrigation Canals
6. Central Platte CWPP Areas of Concern (West)
7. Central Platte CWPP Areas of Concern (East)

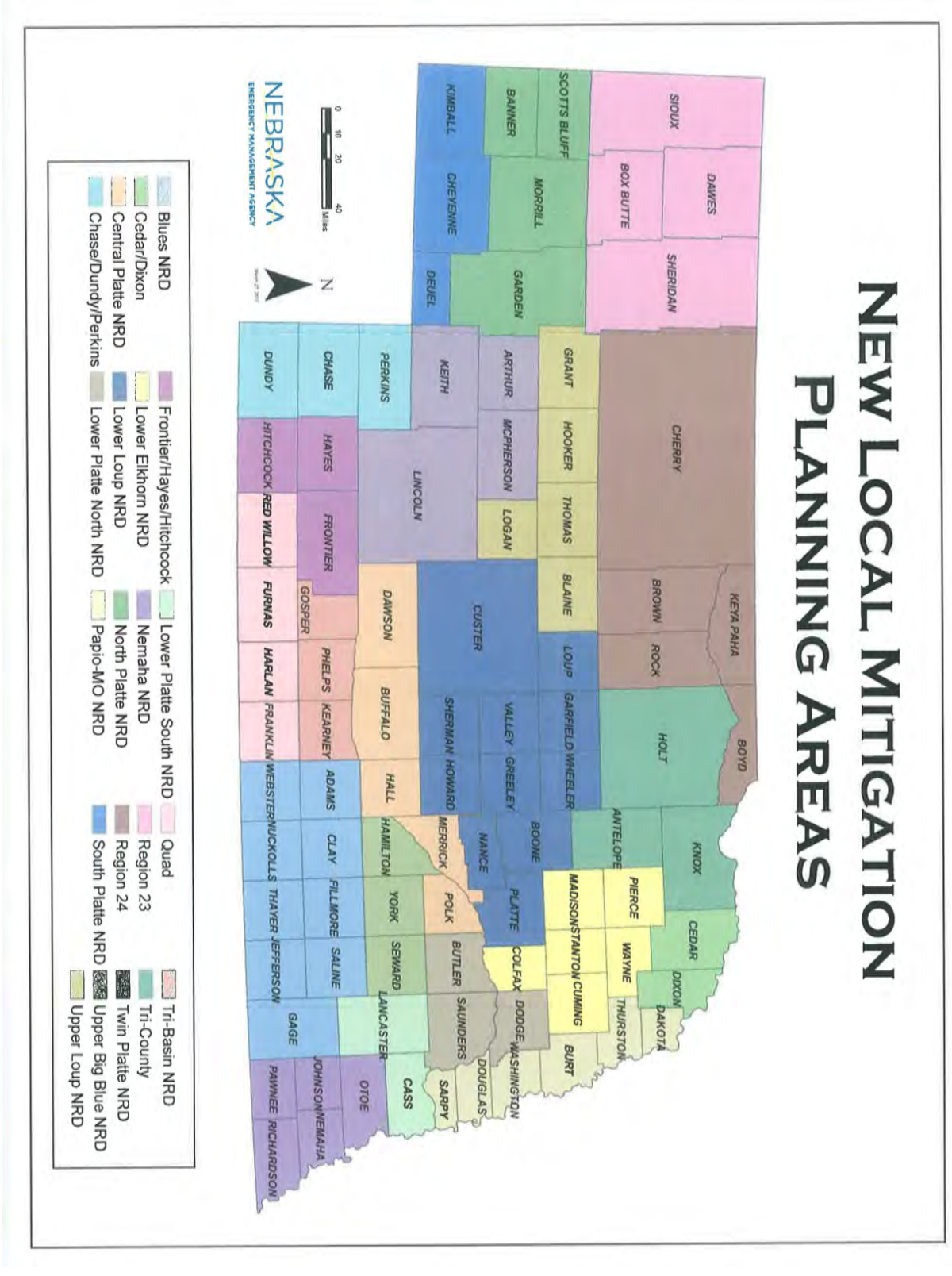
Map 1: Nebraska Community Wildfire Protection Plan Regions



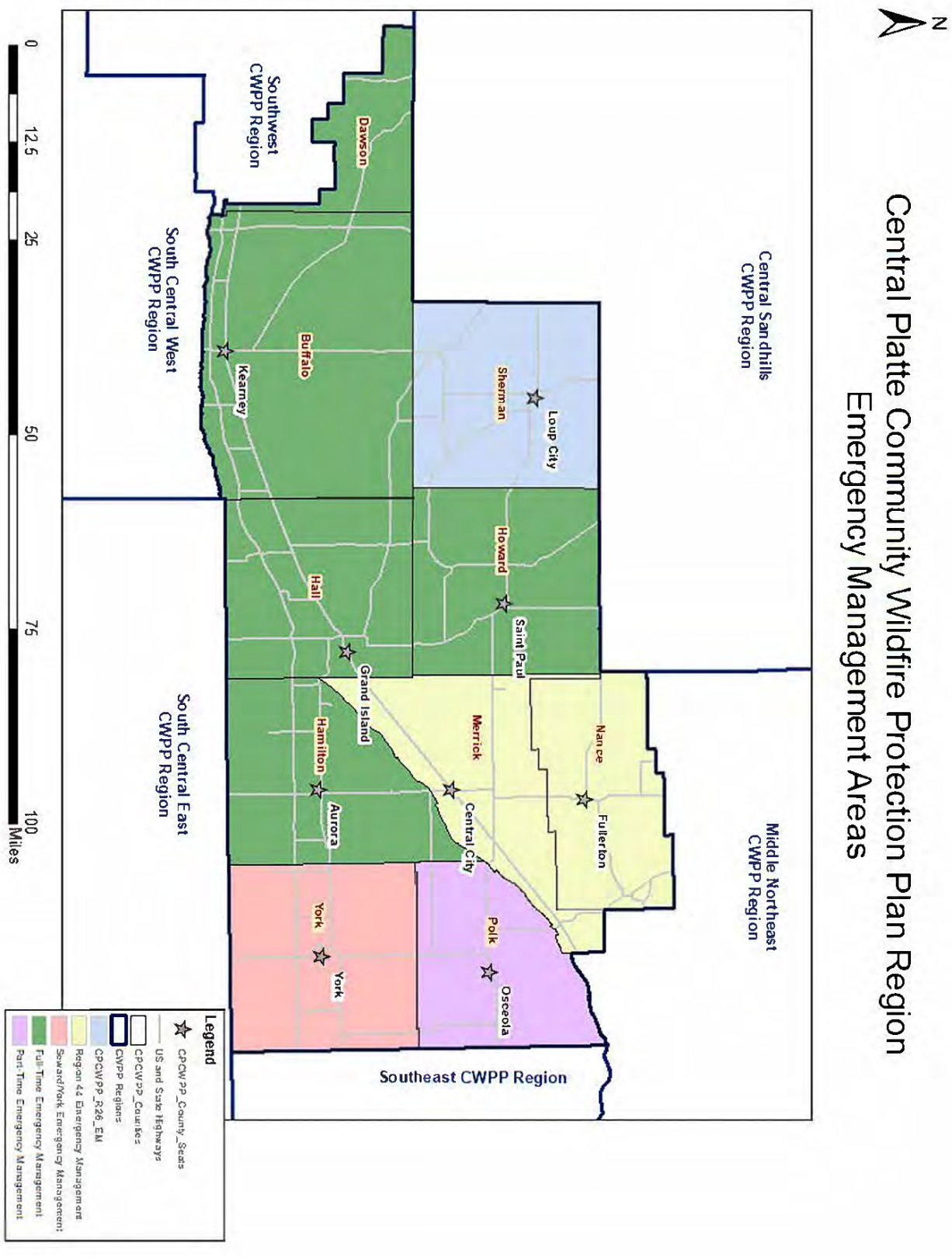
Map 2: Central Platte CWPP Region Land Cover



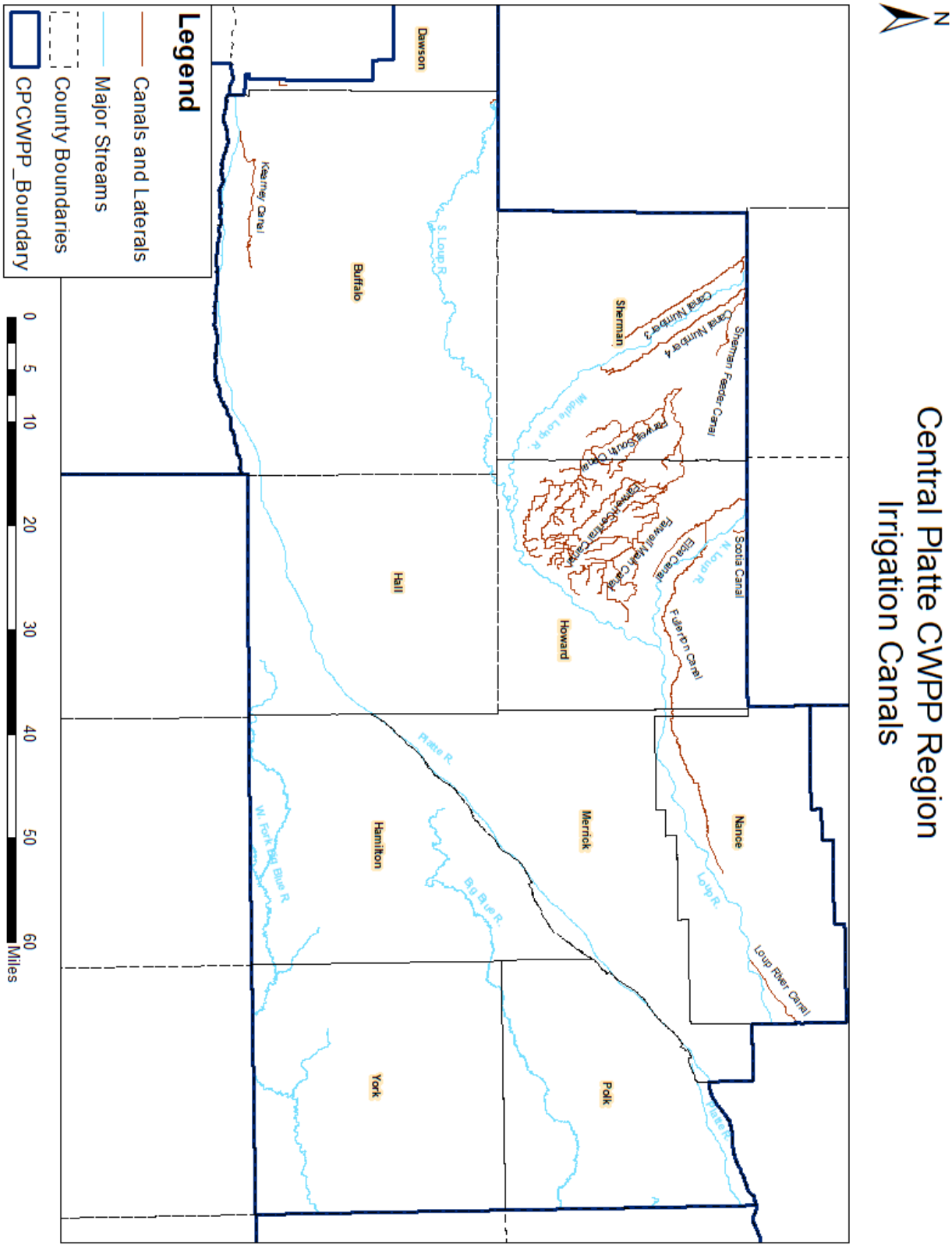
Map 3: Nebraska Local Mitigation Planning Areas



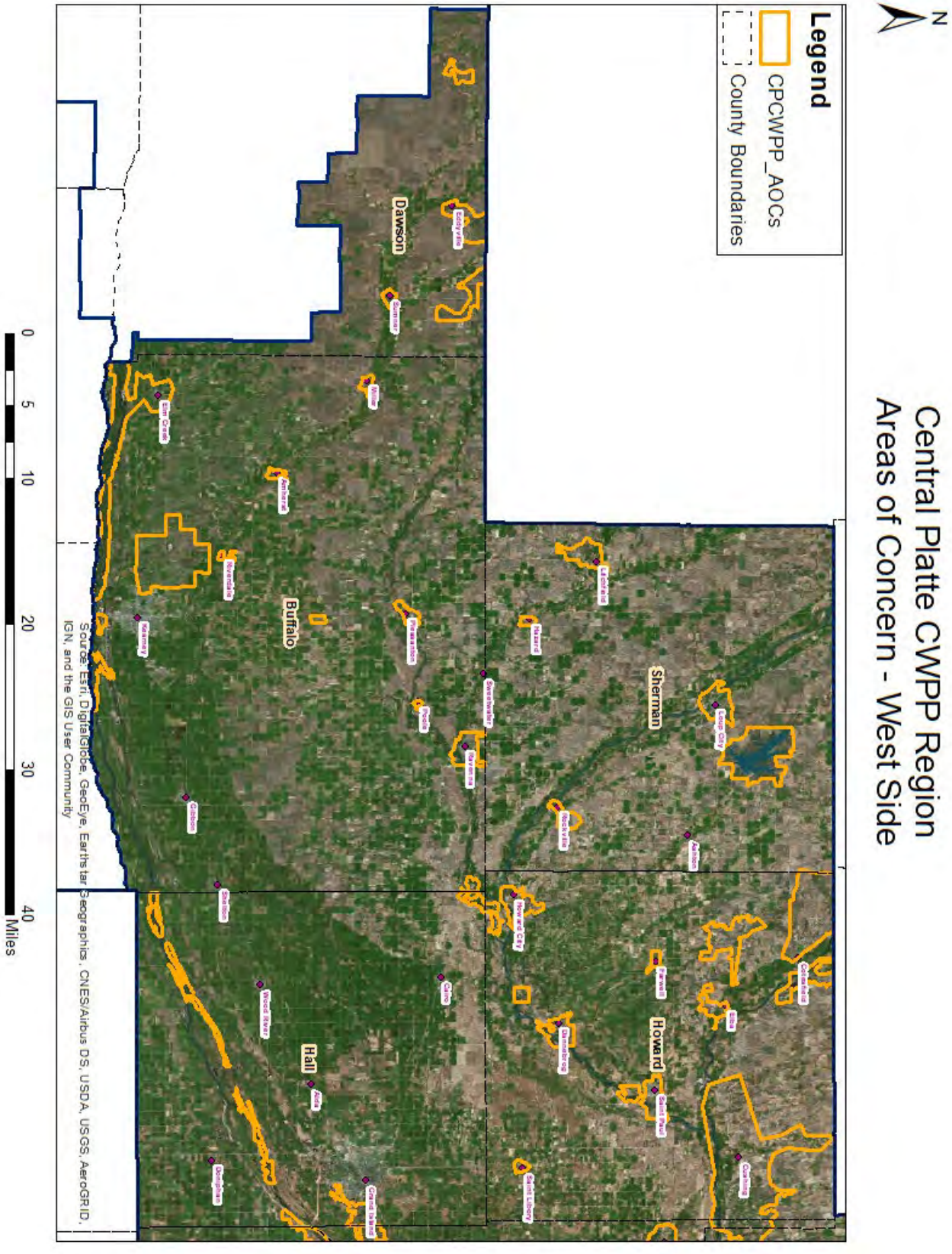
Map 4: Local Emergency Management Areas



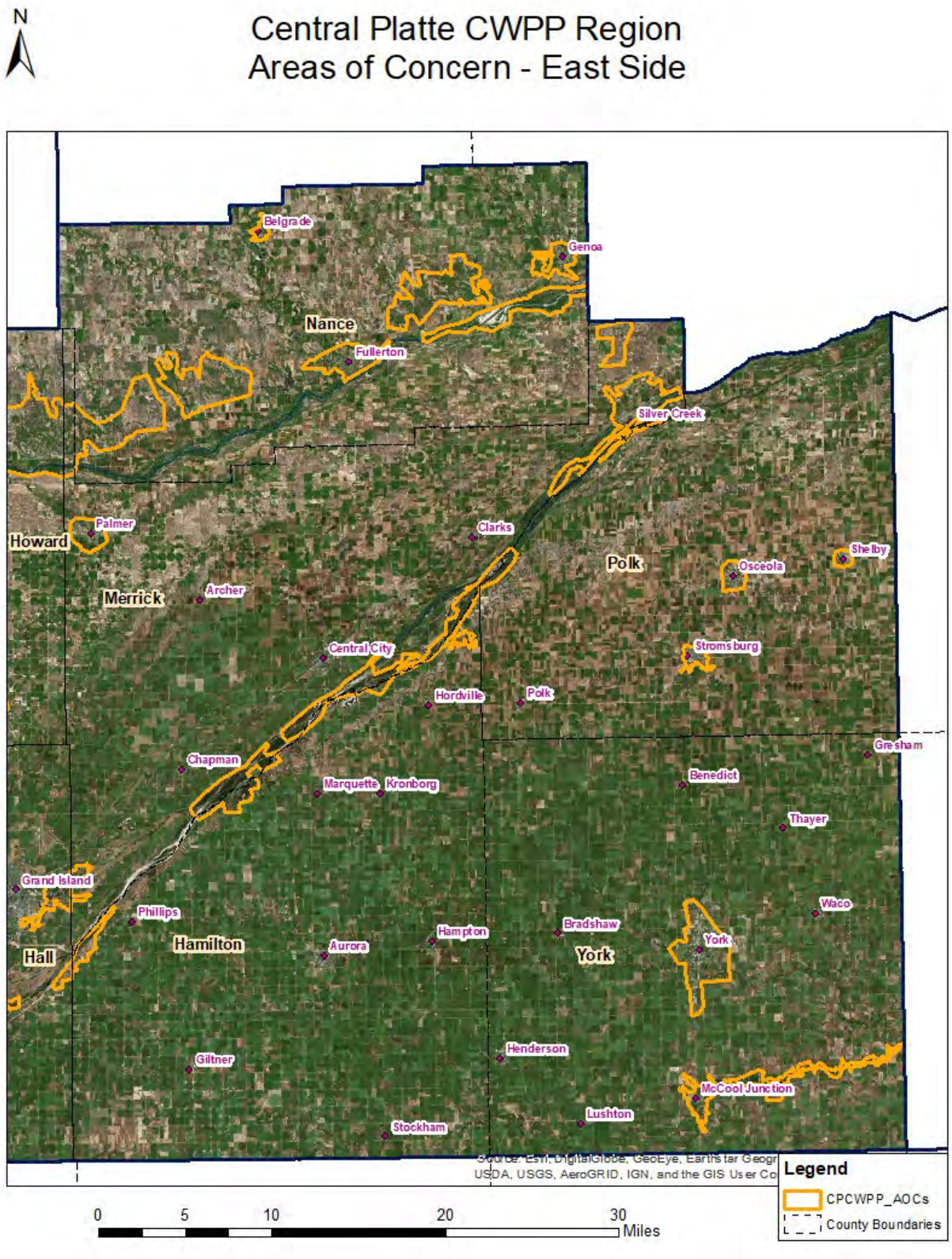
Map 5: Central Platte CWPP Irrigation Canals



Map 6: Central Platte CWPP Areas of Concern – West



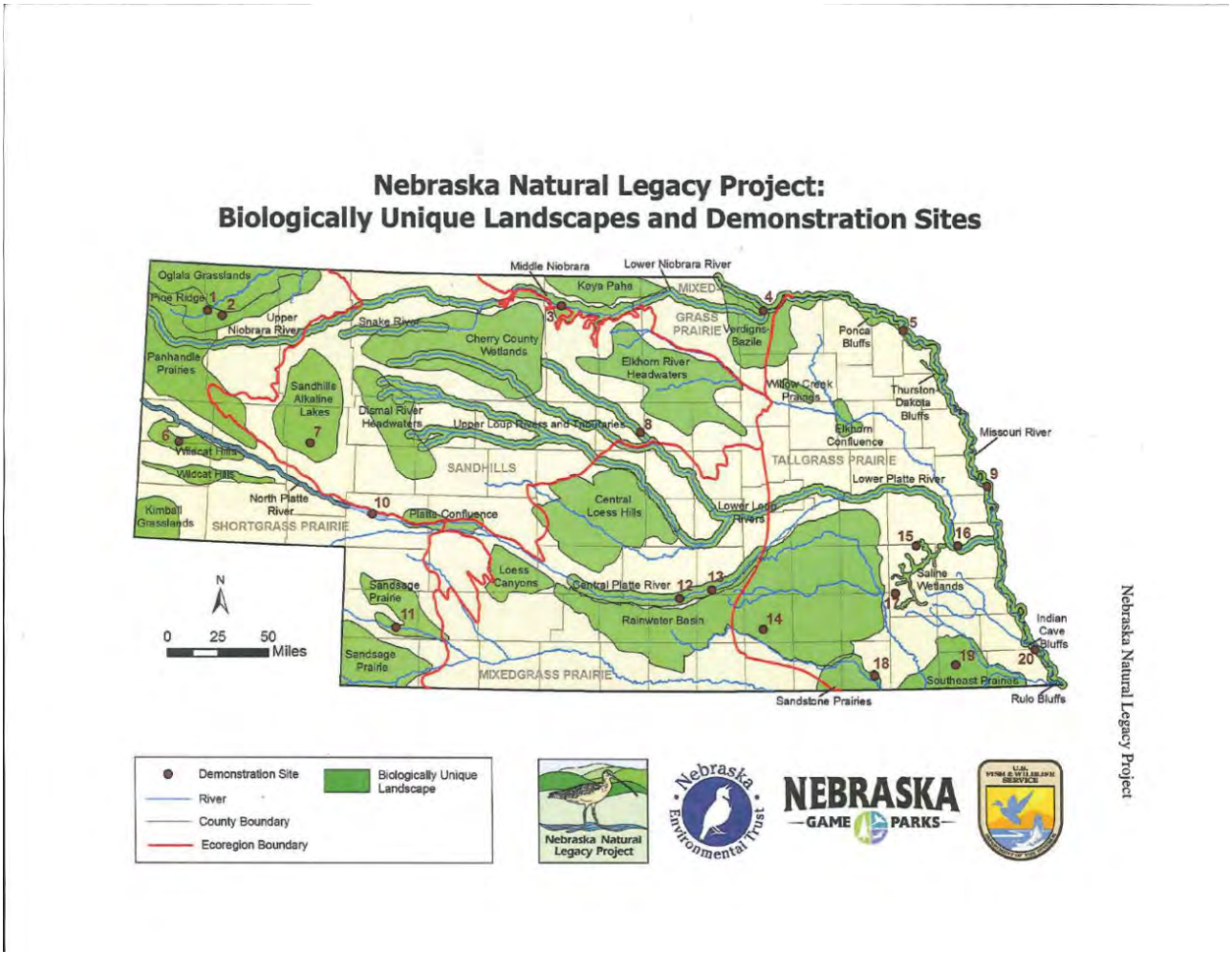
Map 7: Central Platte CWPP Areas of Concern – East



Appendix B

Map of Biologically Unique Landscapes in Nebraska
Nebraska Natural Legacy Project

The full document is available at:
http://outdoornebraska.gov/wp-content/uploads/2015/09/NebraskaNaturalLegacyProject2ndEdition.pdf



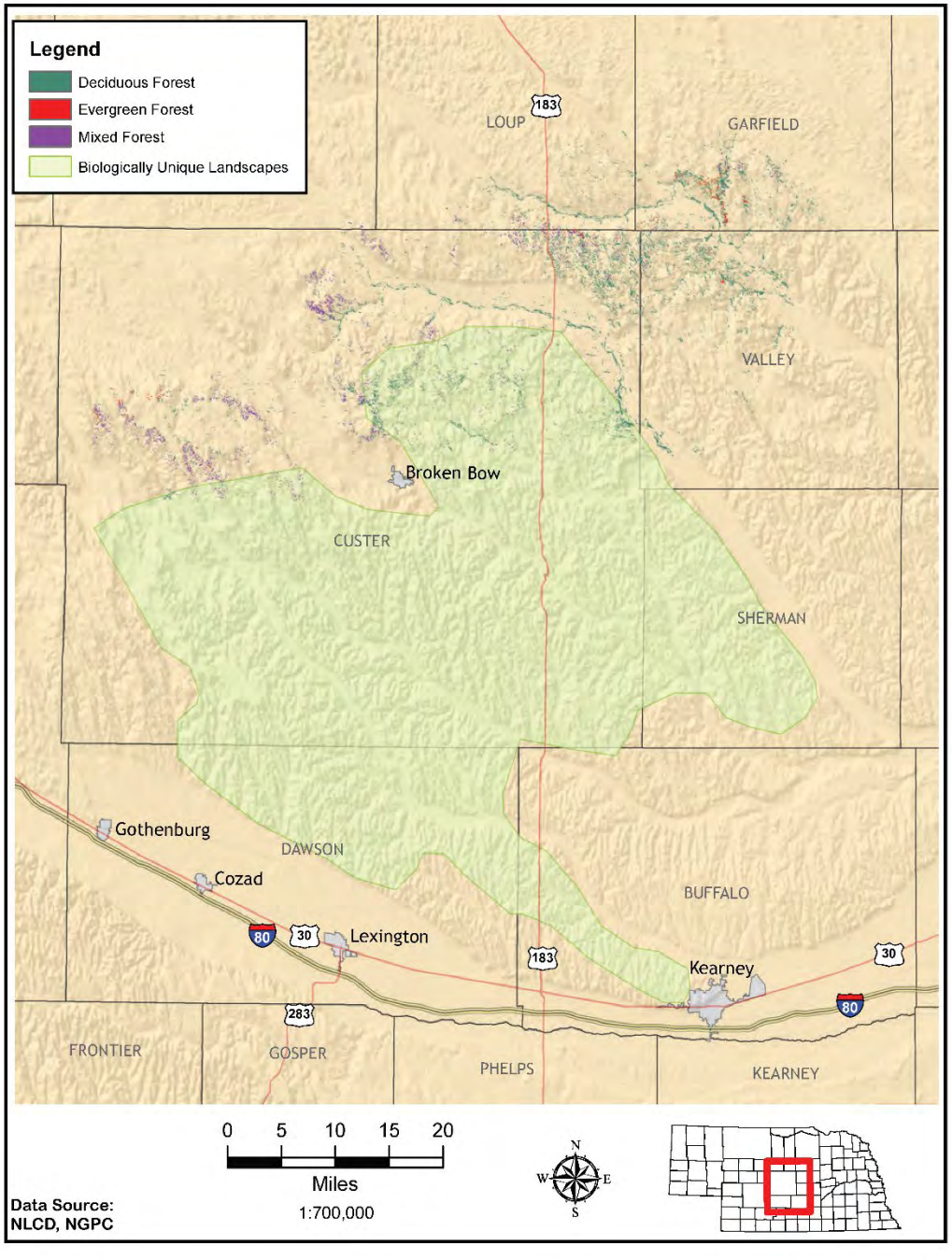
Appendix C

Priority Landscapes in the Central Platte CWPP Region include parts of the Central Loess Hills, Central Platte River, Little Blue River, and Loup River Landscapes

A full description of Nebraska's Priority Landscapes is found in the Nebraska Forest Action Plan
https://nfs.unl.edu/statewide-forest-action-plan

Central Loess Hills Priority Landscape

Priority Forest Landscape: Central Loess Hills



Central Platte River Priority Landscape

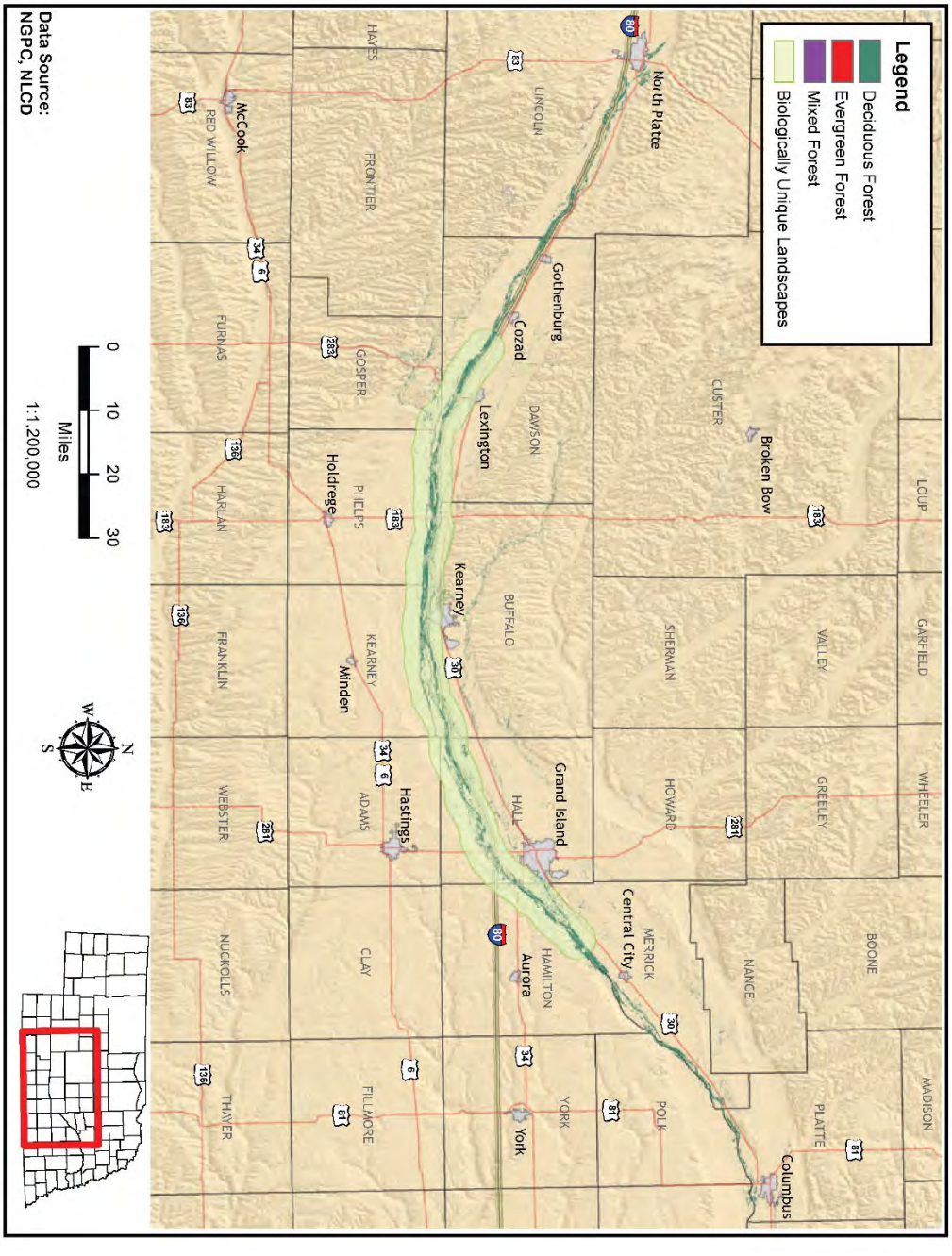
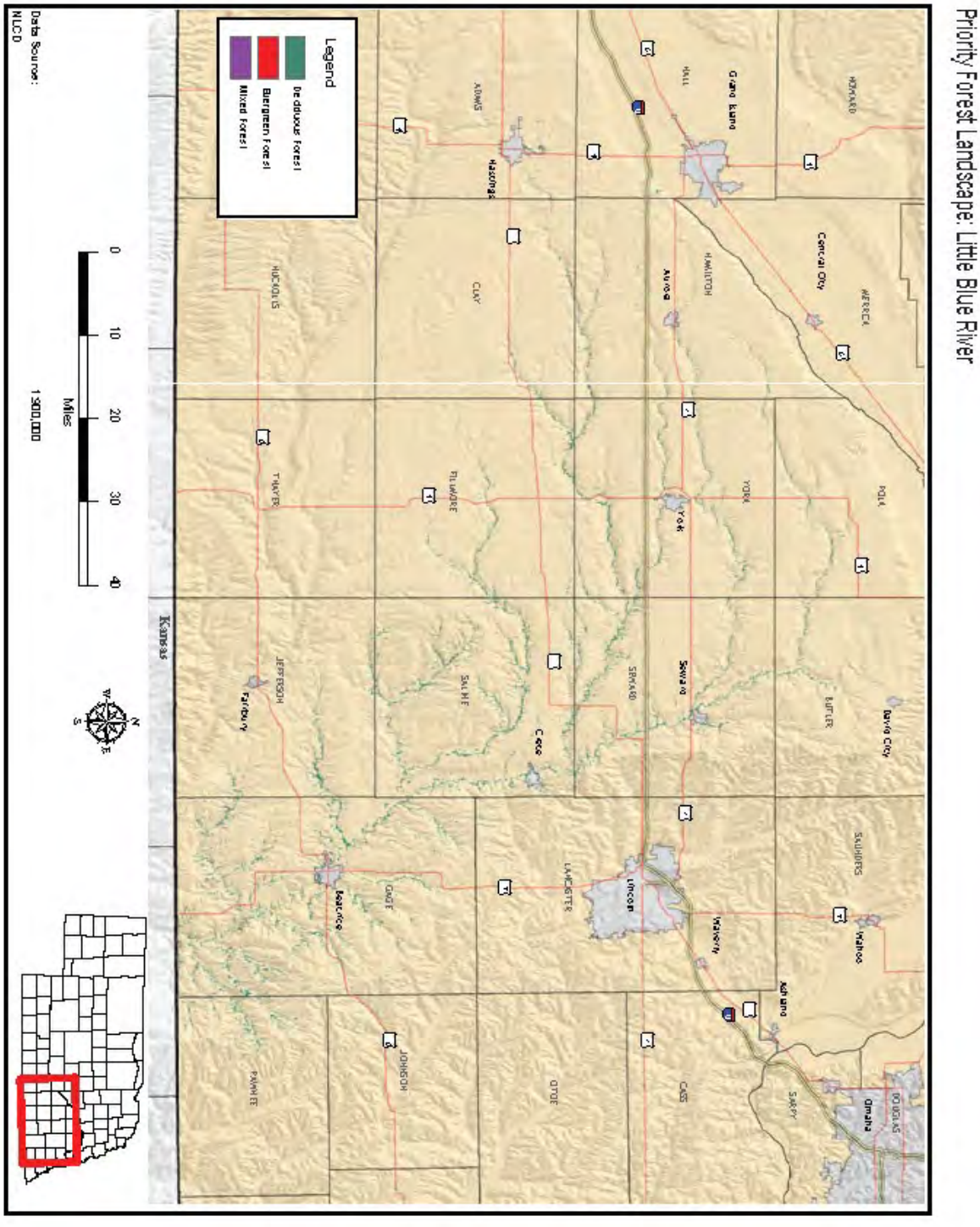
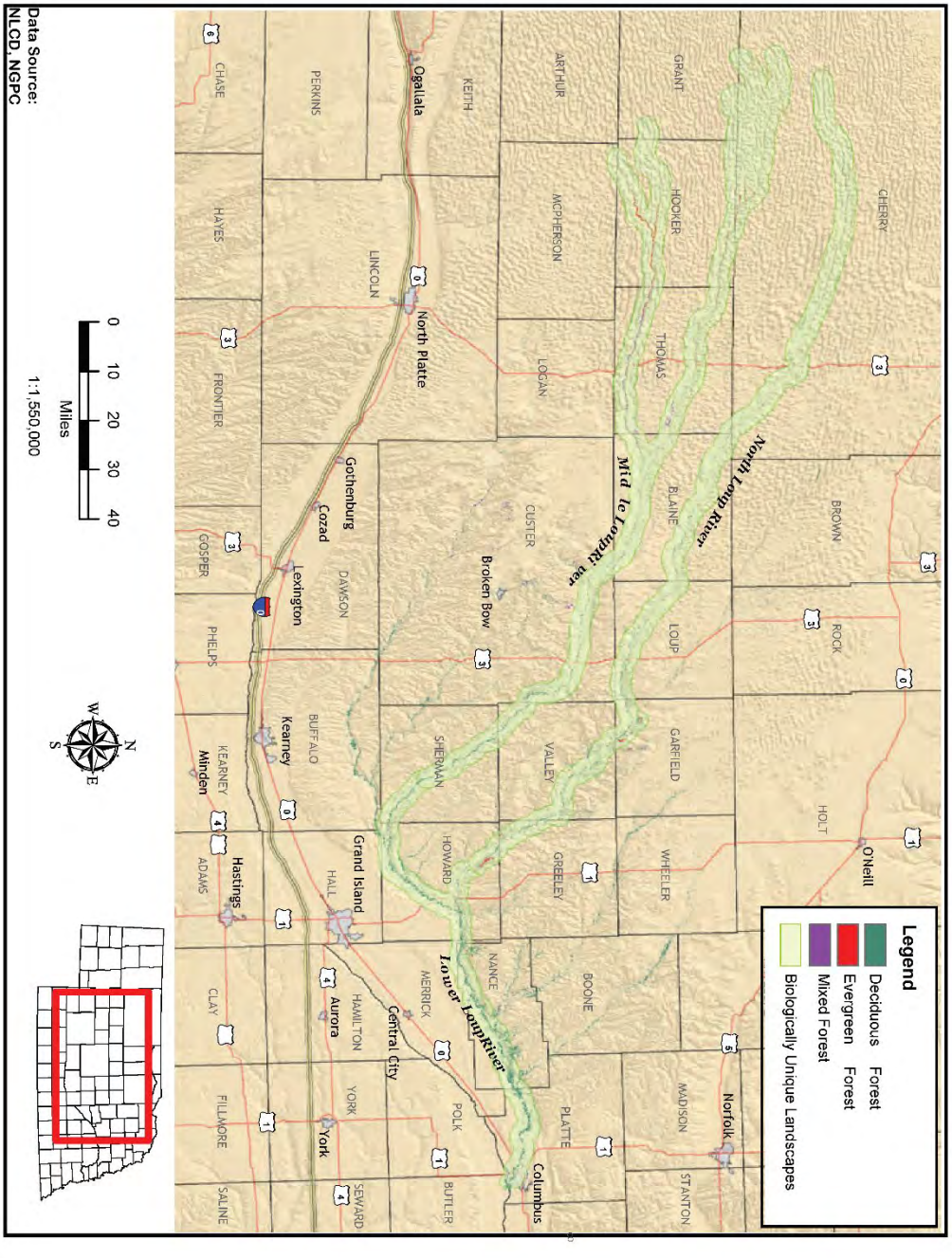


Figure 48. Priority Forest Landscape: Central Platte River

Little Blue River Priority Landscape



Loup River Priority Landscape



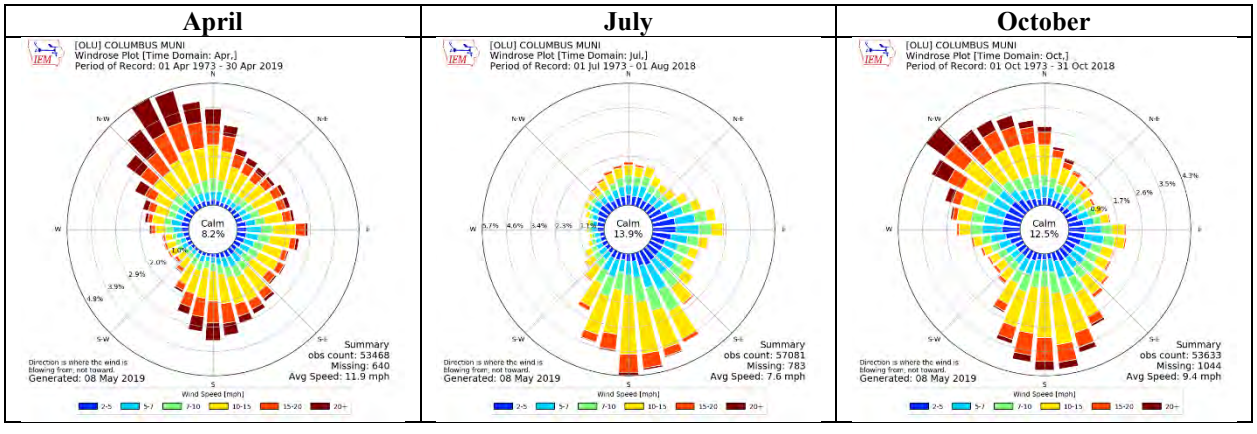
Appendix D

Wind Roses
For Selected Cities
in or near the Central Platte CWPP Region

a. Columbus
b. Grand Island
c. Kearney
d. Ord
e. York

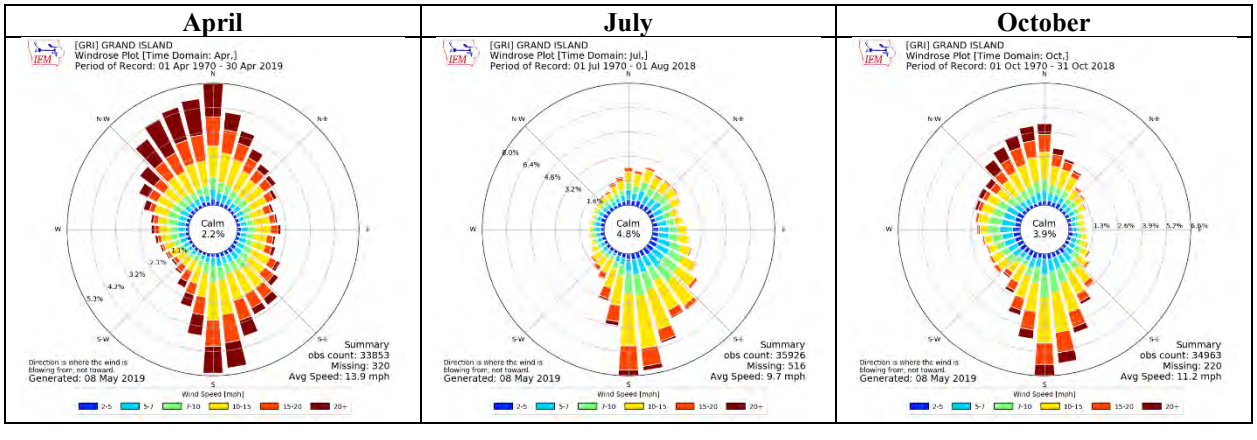
Columbus, Nebraska

Wind Direction and Speed 1973-2018



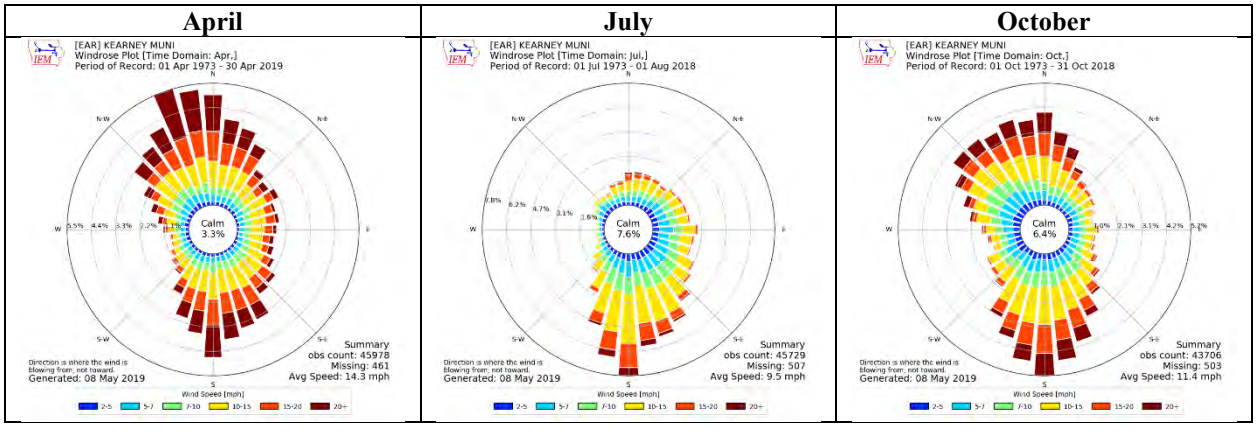
Grand Island, Nebraska

Wind Direction and Speed 1973-2018



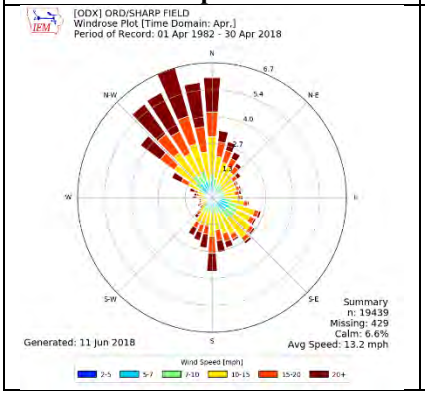
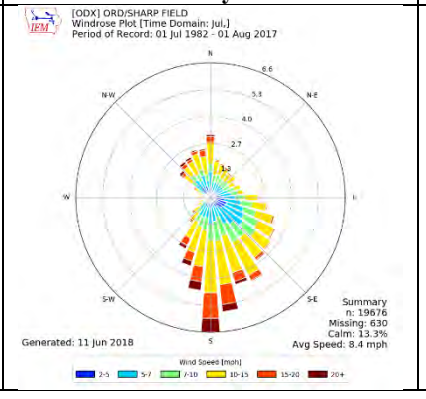
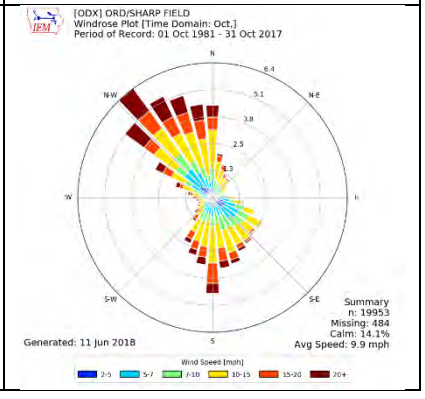
Kearney, Nebraska

Wind Direction and Speed 1973-2018



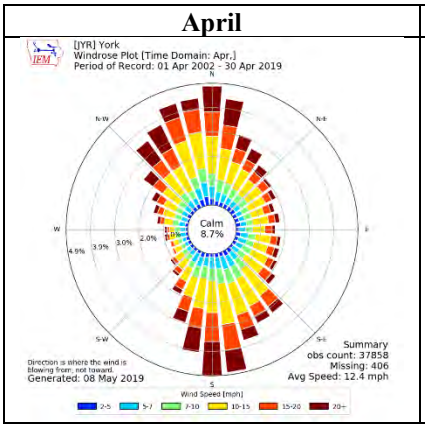
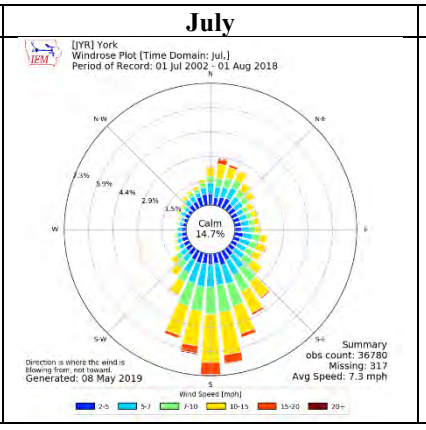
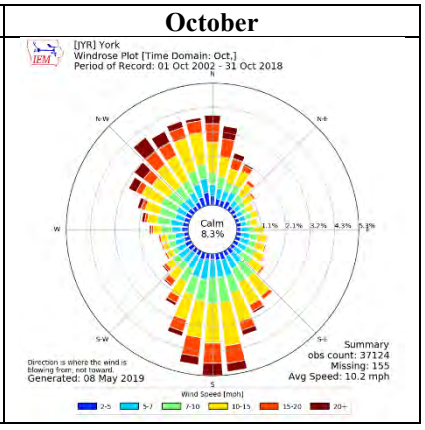
Ord, Nebraska

Wind Direction and Speed 1973-2018

April	July	October
		

York, Nebraska

Wind Direction and Speed 1973-2018

April	July	October
		

Appendix E

The Multi-Jurisdictional Hazard Mitigation Plans covering the Central Platte CWPP counties can be viewed at the following online locations:

a. Central Platte NRD
   https://jeo.com/sites/default/files/inline-files/1-Central-Platte-Upfront.pdf
b. Lower Loup NRD
   https://www.llnrd.org/assets/site/1.%20Upfront.pdf
c. Hamilton County
   https://jeo.com/sites/default/files/inline-files/Hamilton-County-HMP.pdf
d. York County
   https://jeo.com/sites/default/files/inline-files/York-County-HMP.pdf
e. Upper Big Blue NRD (in-progress for Hamilton, Seward & York Counties)
   https://jeo.com/upper-big-blue-hazard-mitigation-plan

Appendix F

Nebraska Mutual Aid Districts

Nebraska Mutual Aid Associations

Updated 1/11/2019

3 & 33 MA	**40 - 12 MA**	**Big 8 MA**	**Big 9 MA**
Adams Barneston Beatrice Beatrice RFD Blue Springs Clatonia Cortland Dewitt Diller Fairbury RFD Filley Jansen Odell Pickrell Plymouth Swanton Wymore	Bloomfield Brunswick Creighton Crofton Magnet Neligh Niobrara Orchard Osmond Page Pierce Plainview Santee Verdigre Wausa	Bellwood Columbus David City Duncan Osceola Rising City Shelby Stromsburg	Belden Carroll Coleridge Concord Crofton Dixon Fordyce Hartington Laurel Magnet Newcastle Randolph Wynot Wausa
Boyd/Holt Counties MA	**Buffalo County MA**	**Burt County MA**	**Butler Co. MA**
Atkinson Bartlett Bristow Butte Chambers Ewing Lynch Naper O'Neill Page Spencer Stuart	Amherst Elm Creek Gibbon Kearney Miller Pleasanton Ravenna Shelton Buffalo Co. Sheriff's Dept. Kearney Police Dept. Buffalo County EM Good Samaritan Hospital EMS	Craig Decatur Lyons Oakland Tekamah	Abie Bellwood Brainerd Bruno David City Dwight Linwood Rising City Ulysses
Cass Co. MA	**Central Nebraska MA**	**Central Neb. VF Assoc. MA**	**Central Panhandle MA**
Alvo Ashland Avoca Cedar Creek Eagle Elmwood Greenwood Louisville Murdock Murray Nehawka Plattsmouth Union Weeping Water	Ansley Eddyville Mason City Miller Oconto Sumner	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	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	**Colfax County MA**	**Cuming County MA**	**Custer County MA**
Ainsworth	Clarkson	Bancroft	Anselmo
Barley RFD	Howells	Beemer	Ansley
Cody	Leigh	Pilger	Arnold
Colome, SD	Schuyler	West Point	Broken Bow
Kilgore		Wisner	Callaway
Merriman			Comstock
Mid-Cherry RFD			Mason City
Mission, SD			Merna
Mullen			Oconto
St. Francis, SD			Sargent
Thedford			
US Fish and Wildlife			
US Forest Service			
Valentine			
White River, SD			
Wood Lake			
Dodge County MA	**Elkhorn Valley MA**	**Fillmore County MA**	**Frenchman Valley MA**
Dodge	Battle Creek	Bruning	Bartley
Fremont	Carroll	Exeter	Beaver Valley (Danbury & Lebanon)
Fremont Rural	Hadar	Fairmont	Benkelman
Hooper	Hoskins	Geneva	Culbertson
Nickerson	Madison	Grafton	Curtis
North Bend	Meadow Grove	McCool Junction	Haigler
Scribner	Norfolk	Milligan	Hayes Center
Snyder	Pierce	Ohiowa	Imperial
Uehling	Stanton	Shickley	Indianola
	Wayne	Sutton	Lamar
	Winside		Maywood/Wellfleet
			McCook
			Palisade
			Red Willow Western
			Stratton
			Trenton
			Wallace
			Wauneta
Hamilton County MA	**Hastings Area MA**	**KBR&C MA**	**Lancaster County MA**
Aurora	Ayr (Hastings RFD)	Ainsworth	Alvo
Giltner	Bladen	Bassett	Ashland
Hampton	Blue Hill	Calamus	Bennet
Hordville	Campbell	Johnstown	Ceresco
Marquette	Central Community College	Long Pine	Clatonia
Phillips	Edgar	Newport	Cortland
Hamilton County EMS	Fairfield	Raven	Crete
	Glenville	Springview	Douglas
	Harvard	Wood Lake	Eagle
	Hastings		Firth
	Hastings CD		Greenwood
	Holstein		Hallam
	Juniata		Hickman
	Kenesaw		Lincoln
	Lawrence		Malcolm
	Hruska MARC		NE Air Guard
	Roseland		Palmyra
	Trumbull		Pleasant Dale
			Raymond
			Rural Metro
			Southeast RFD
			Southwest RFD
			Valparaiso
			Waverly

Loup Platte MA	**Loup Platte #2 MA**	**Loup Valley MA**	**Mid-Nebraska MA**
Arcadia	Central City	Arcadia	Albion
Ashton	Chapman	Bartlett	Belgrade
Litchfield	Clarks	Burwell	Cedar Rapids
Loup City	Fullerton	Elba	Columbus
Ravenna	Hordville	Ericson	Columbus RFD
Rockville	Marquette	Greeley	Creston
	Osceola	North Loup	Duncan
	Palmer	Ord	Fullerton
	Polk	Primrose	Genoa
	Shelby	Scotia	Humphrey
	Silver Creek	Spalding	Leigh
	Stromsburg	Wolbach	Lindsay
			Madison
			Monroe
			Newman Grove
			Platte Center
			Silver Creek
			St. Edward
Mid Plains MA	**Nemaha County MA**	**Northeast MA**	**Northeast Fireman's Association**
Arnold	Brock FD	Allen	Antelope Co.
Brady	Brownville FD / Rescue	Bancroft	Burt Co.
Curtis	Johnson FD	Concord	Butler Co.
Hershey	Julian FD	Dakota City	Cedar Co.
Maywood	Nemaha FD / Rescue	Dixon	Colfax Co.
Maxwell	Peru FD / Rescue	Emerson	Cuming Co.
North Platte	Nemaha County Emergency Management	Homer	Dakota Co.
Stapleton	Cooper Nuclear Station	Martinsburg	Dixon Co.
Sutherland	Auburn Police Dept.	Newcastle	Dodge Co.
Tyron	Nemaha County Sheriff's Office	Pender	Douglas Co.
Wallace		Ponca	Knox Co.
Wellfleet		Rosalie	Madison Co.
		South Sioux City	Pierce Co.
		Thurston	Platte Co.
		Wakefield	Stanton Co.
		Walthill	Sarpy Co.
		Wayne	Thurston Co.
		Winnebago	Washington Co.
			Wayne Co.
			Saunders Co.
Otoe County MA	**Phelps County MA**	**Pine Ridge MA**	**Platte Valley MA (was GI Area MA)**
Burr	Bertrand	Alliance	Alda
Cook	Funk	Ardmore, SD 57715	Cairo
Douglas	Holdrege	Chadron	Chapman
Dunbar	Holdrege RFD	Crawford	Doniphan
Nebraska City	Loomis	Gordon	Grand Island
Otoe		Harrison	Grand Island SFD
Palmyra		Hay Springs	Phillips
Syracuse		Hemingford	Wood River
Talmage		Merriman	
Unadilla		Rushville	
		US Forest Service	

Quad Cities MA	**Richardson County MA**	**Saline County MA**	**Sandhills MA**
Alma	Dawson	Crete	Anselmo
Axtell	Falls City	DeWitt	Arnold
Bloomington	Falls City RFD	Dorchester	Arthur
Campbell	Humboldt	Friend	Brewster
Franklin	Rulo	Swanton	Dunning
Hildreth	Salem	Tobias	Halsey
Minden	Shubert	Western	Hyannis
Naponee	Stella	Wilbur	Keystone-Lemoyne
Republican City	Verdon	Saline County Sheriff	McPherson Co.
Riverton		Saline County Emergency Management	Mid-Cherry
Upland			Mullen
Wilcox			Purdum
Kearney County EMA			Stapleton
			Thedford
			US Fish & Wildlife
			US Forest Service
Saunders County MA	**Scottsbluff County MA**	**Seward County MA**	**South Central Nebraska MA**
Ashland	Banner Co.	Beaver Crossing	Brady
Cedar Bluffs	Gering	Bee	Cozad
Ceresco	Henry	Cordova	Curtis
Colon	Lyman	Garland	Elwood
Ithaca	McGrew	Goehner	Eustis
Malmo	Minatare-Melbeta	Milford	Farnam
Mead	Mitchell	Pleasant Dale	Gothenburg
Morse Bluff	Morrill	Seward	Johnson Lake EMS
Prague	Scottsbluff	Staplehurst	Lexington
Valparaiso	Scottsbluff RFD	Tamora	Overton
Wahoo	Scottsbluff Co. Airport	Utica	
Weston	Torrington, WY		
Yutan	US Fish & Wildlife Service		
South Central #2 MA	**Southeast MA**	**Southwest MA**	**Stateline MA**
Clay Center	Adams	Arthur	Bladen
Davenport	Burchard	Big Springs	Blue Hill
Edgar	Cook	Blue Creek	Campbell
Fairfield	Debois	Brule	Guide Rock
Glenvil	Elk Creek	Chappell	Lawrence
Hardy	Johnson	Elsie	Red Cloud
Lawrence	Pawnee City	Grant	Riverton
Nelson	Steinauer	Imperial	Superior
Ong	Sterling	Keystone-Lemoyne	
Ruskin	Table Rock	Lamar	
Shickley	Tecumseh	Lisco	
Superior		Madrid	
Sutton		Ogallala	
Clay County Emergency Management		Oshkosh	
		Paxton	
		Sutherland	
		Venango	
		Wallace	

Thayer County MA	**Tri-Mutual Aid**	**Tri-Valley MA**	**Twin Loups MA**
Alexandria	Arlington	Arapahoe	Ashton
Belvidere	Bellevue	Bartley	Boelus
Bruning	Bennington	Beaver City	Dannebrog
Byron	Blair	Cambridge	Elba
Carlton	Boys Town	Edison	Farwell
Chester	Carter Lake	Holbrook	Rockville
Davenport	Cedar Bluffs	Oxford	St. Libory
Deshler	Elkhorn	Stamford	St. Paul
Eustis	Eppley Airport	Wilsonville	
Gilead	Fremont		
Hebron	Ft. Calhoun		
Hubbell	Gretna		
	Irvington		
	Kennard		
	LaVista		
	Louisville		
	Millard		
	Offutt AFB		
	Omaha FD		
	Papillion		
	Plattsmouth		
	Ponca Hills		
	Ralston		
	Springfield		
	Valley		
	Waterloo		
	Yutan		
Washington County MA	**York County MA**		
Arlington	Benedict		
Blair	Bradshaw		
Ft. Calhoun	Gresham		
Herman	Henderson		
Kennard	McCool Junction		
	Waco		
	York		

Appendix G

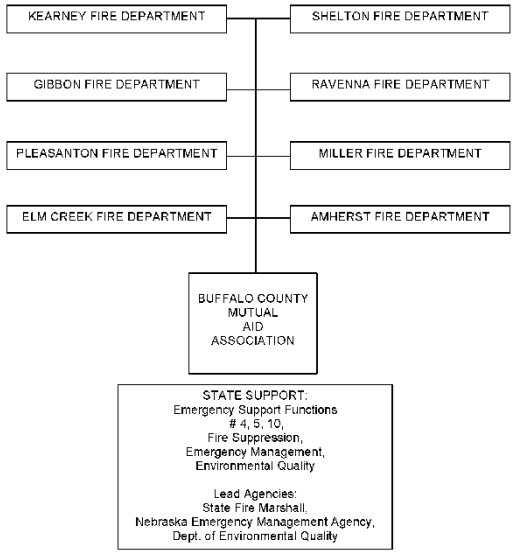
Fire Department Equipment and Contact Information for the Central Platte CWPP Region

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

Buffalo County

Information from Buffalo Co. LEOP, Annex F:

FIRE SERVICES



BUFFALO COUNTY FIRE RESOURCES

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
Amherst	826-2345	0	1	1	0	2	1	1	0	Portable Light trailer	0
Elm Creek	856-4197	0	1		1	2	1	1	0	Cascade Trailer	0
Gibbon	468-6118	0	3	2	0	3	0	2	Hazmat EMS	Hazmat and Command trailers	6
Kearney	233-3226	2	6	3	0	4	6	1	Dive/ hazmat	Decon Dive trailer	6
Miller	457-3795	0	1	1	0	2	1	0	0	Air Tank Trailer 6 tanks	0
Pleasanton	388-2076	0	1	1	1	2	0	1	0	0	0
Ravenna	452-4373	0	2	1	0	2	0	2	0	0	0
Shelton	647-6772	0	2	3	0	2	0	2	0	0	0
Buffalo Co Mutual Aid HAZMAT Team	911										
Hastings Hazmat Team	402-471-7421										
Grand Island Hazmat Team	402-471-7421										

Survey Responses from Buffalo County Fire Departments:

Pleasanton Volunteer Fire Department:

County	Buffalo			
Station Location	105 W. Elm		PO Box 127, Pleasanton, NE 68866	
Dept. phone & email	308-388-2076		pleasantonfire@gmail.com	
Chief	Chad Dixon	308-327-5864	308-388-3004	cdixon@miller-engineers.com
Asst. Chief	Michael Unick	308-627-5310		firefarmer@gmail.com
Secretary	Angie Kucera	308-440-0301		askucera5@gmail.com
Treasurer	Dean Smith	308-440-3774		smithdean@hotmail.com

Personnel

Number	Type
32	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 1: minimum 1,000 GPM, 400 gal. cap., 4 crew members
2	Engine Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members
1	Engine Type 7: Wildland: 10 GPM, 50 gal. capacity, two crew members
1	T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members
2	Other (describe): 1-1300 gal. tanker & 1 ambulance

Mutual Aid District(s): Buffalo County

Areas of concern: We have at least 3 subdivisions with only 1 road. The worst is at Prairie Hills Golf Course at the south end of our district. Issues: Multiple structures, difficult access, rough terrain, 1 way in/out, heavy fuels, lack of water within effective distance.

Bridges that won't support equipment weight: None.

Greatest concerns: Limited access and density of structures.

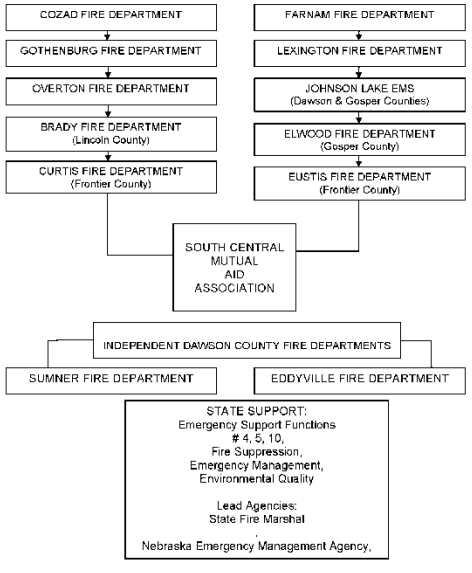
Rank:

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

Dawson County (Northeast part includes Sumner & Eddyville)

Information from Dawson Co. LEOP, Annex F:

FIRE SERVICES



DAWSON COUNTY FIRE RESOURCES
(List numbers of equipment)

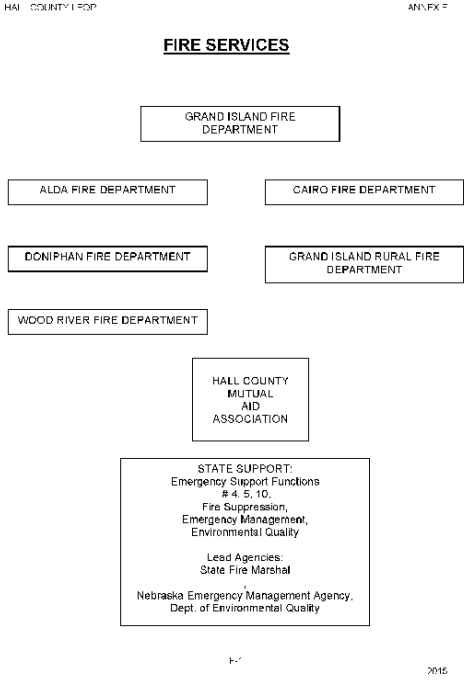
FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/ TANKER	GRASS-WEED TRUCK	UTILITY TRUCK	RESCUE UNITS	KINDS/TYPES/ SPECIAL-TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
Cozad	784-2366	0	2	1	1	2	1	2	0	Light tower, cascade system	Yes
Eddyville	858-4602	0	1	1	0	2	0	2	0		Yes
Farnam	569-2525	0	2	0	2	0	1	2	0	Light tower	Yes
Gothenburg	537-3608	0	4	2	0	2	1	2	Rope rescue		Yes
Lexington	324-2317	0	3	2	0	2	1	2		Hazmat trailer	Yes
Overton	987-2371	0	1	1	0	1	0	1	0		Yes
Sumner	752-2345	0	1	1	0	1	0	1			Yes
*Johnson Lake EMS								1			No
Nearest HAZMAT Response Team	535-6762	1									

Survey Responses from Dawson County Fire Departments:

(None received)

Hall County

Information from Hall Co. LEOP, Annex F:



HALL COUNTY LEOP

HALL COUNTY FIRE RESOURCES

(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER TANKER	GRASS TRUCK	UTILITY TRUCK	RESCUE UNITS	Other	
Grand Island Fire Dept.	385-0220 385-5300 385-5310 385-5337 385-5387	1	5	0	0	1	6 cars Truck	2 Heavy Rescue	Hazmat Trailer Command Trailer Boat, Rescue Trailer	7 Amb.
Grand Island Rural	385-8451		2		2	2	1	1 Heavy Rescue	1 EMS Quick Response	
Alda	384-6170		2	2		1	1			
Cairo	485-4400		2	3		2			Quick Response	
Doniphan	845-6647		2	2		2		1	Quick Response	
Wood River	563-2541		3	1		2			2 Ambulances UTV with Fire & ESM Skid	
Airport Authority	385-5170					Fire Boss Chem Retardant				
Grand Island Dive Rescue Team	Rural Fire 385-5370									
Total		1	13	7	3	9	2	1	9 Amb; 2 QRT; 1 Hazmat	

F-11

2015

ANNEX F ATTACHMENT 1

Survey Responses from Hall County Fire Departments:

Trumbull Rural Volunteer Fire Department:

County	Hall, Hamilton, Adams, Clay			
Station Location	(left blank)		PO Box 86, Trumbull, NE 68980	
Dept. phone & email	402-743-2311		trumbullvfd@gmail.com	
Chief	Jovey Olena	402-460-7398	402-461-9781	joveyntrista@yahoo.com
Asst. Chief	Clinton Hinrichs	402-461-9781		
Sec./Treas.	Mandy Wright	402-743-2496		theconstructionman@yahoo.com

Personnel

Number	Type
12	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 3 Wildland: 150 GPM, 500 gal. capacity, three crew members
1	Tender S-1 (support): 300 GPM pump, 4,000 gallon capacity, 1 crew member
1	Equipment truck
2	Other (Describe): 1 tanker truck and 1 squad

Mutual Aid District(s): Hastings Area MA
Other Mutual Aid agreements: Giltner FD

Areas of concern:
Location was left blank, but they identified the following issues: Difficult access, rough terrain, 1 way in/out, lack of water within effective distance.

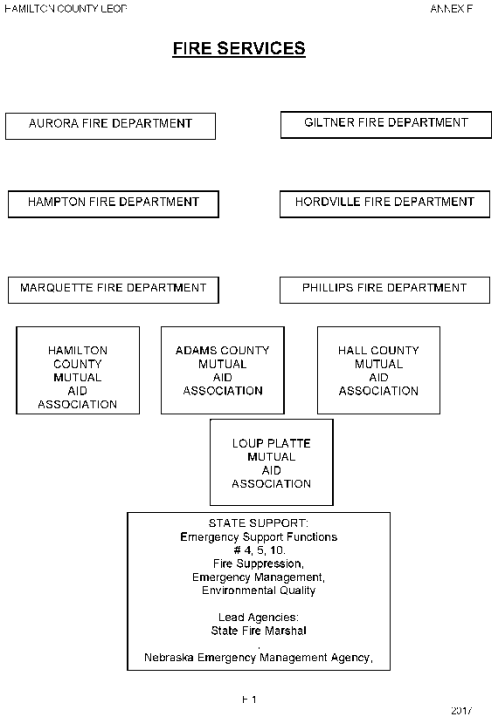
Greatest Concerns: Field fires – having a truck capable of going in field.

Rank:

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

Hamilton County

Information from Hamilton Co. LEOP, Annex F:



HAMILTON COUNTY LEOP

HAMILTON COUNTY FIRE RESOURCES
(List numbers of equipment)

FIRE DEPARTMENT	PHONE	AERIAL	PUMPER	TANKER	PUMPER/ TANKER	GRASS-WEED TRUCK	UTILITY TRUCK	HEAVY RESCUE UNITS	KINDS/TYPES/ SPECIAL-TEAMS	KINDS/TYPES SPECIAL EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
Aurora Fire	402-694-3855	1	2	2		3	1	1		Heavy Rescue/ Decon	yes
Giltner Fire	402-849-2999/402-631-3387		1	1		2		1		Light Rescue/Jaws/Grain Bin rescue tube	no
Hampton Fire											
Hordville Fire	308-940-1204		2	1		2					Yes
Marquette Fire	402-854-3131		1	2	1	2				Gator with 60gal tank/with foam	
Phillips Fire											
Nearest HAZMAT Response Team											
GIFD, Hastings Fire											

F-11

2017

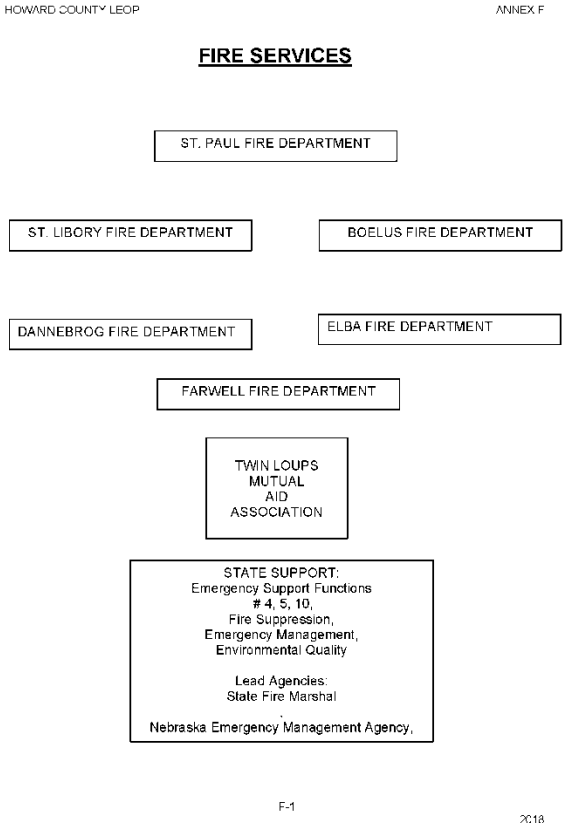
ANNEX F
ATTACHMENT 1

Survey Responses from Hamilton County Fire Departments:

(See Trumbull VFD response under Hall County. FD overlaps these counties.)

Howard County

Information from Howard Co. LEOP, Annex F:



HOWARD COUNTY FIRE RESOURCES

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
BOELUS	308-750-4765		1	1	1	2	1	1	Thermal Imager	Jaws Air bags	no
DANNEBROG	308-750-3317		1	1	1	2		1	30 KW Portable Generator w/ 3 phase	Cascade	Gas Monitor Tripod wrench
ELBA	308-383-0163		1	1		2		1	Air bags	2 sets jaws	Monitor
FARWELL	308-571-0083		1	1	2	1	1	1	Jaws Thermal Imager	6500 watt Light Generator	no
ST. LIBORY	308-370-7655		1	2		2		1	Thermal Imager 60 KW Generator portable	Portable Cascade Mini Grass/ gator	Gas Monitor
ST. PAUL	308-750-3161	1	1	2		2		2	Portable cascade		no
MUTUAL AID ASHTON	308-750-4153		1	1		2					
MUTUAL AID ROCKVILLE	308-383-5299		1	1		1					
Nearest HAZMAT Response Team											
GRAND ISLAND	308-383-5370										

Survey Responses from Howard County Fire Departments:

Dannebrog Volunteer Fire & Rescue:

County	Howard			
Station Location	114 E. Oak St.		PO Box 125, Dannebrog, NE 68831	
Dept. phone & email				
Chief	Terry Webb	308-750-3317	308-226-2422	twvillage601@gmail.com
Asst. Chief	Bob Carroll	308-380-6492	308-226-2592	boringbob@nctc.net
Sec./Treas.	Roger Grim	308-750-4191	308-226-2578	

Personnel

Number	Type
18	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
2	Engine Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members
2	Engine Type 6: Wildland: 50 GPM, ~~150~~ 300 gal. capacity, two crew members
1	Tender T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members

Mutual Aid District(s): Twin Loup MA
Other mutual aid agreements: Centura School MA, Cairo FD, Dannebrog FD, Boelus FD

Areas of concern:

1) T13 R11W Sec. 1, the Null & Whispering Pine; NE of Dannebrog. Issues: Multiple structures, difficult access, heavy fuels.
2) T13 R11W Sec. 21; on Loup River SW of Dannebrog. Issues: Multiple structures, 1 way in/outs, heavy fuels.

Comments: So many of the houses being built in rural areas have narrow driveways, one way in and out. There is only room for one truck in the yard. Leaving grass and shrubs close to house. Some still burn trash in burn barrels. Short personnel during daytime hours.

Rank:

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

Elba Volunteer Fire & Rescue:

County	Howard			
Station Location	712 13th St.		PO Box 174, Elba, NE 68835	
Dept. phone & email				
Chief	Randy Faaborg	308-383-0163		rfaaborg@telsysne.net
Asst. Chief	Russ Spilinek			
Sec./Treas.				

Personnel

Number	Type
32	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members
1	Engine Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
4	Engine Type 6: Wildland: 50 GPM, 150 gal. capacity, two crew members
1	Tender S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member

Mutual Aid District(s): Twin Loup MA & Loup Valley MA

Areas of concern:
The Washout, T16N, R11W, Sec. 17 and T16N R11W Sec. 21. Issues: Multiple structures, difficult access, rough terrain, 1 way in/out, heavy fuels, lack of water within effective distance.

Bridges that won't support equipment weight: Yes, there may be some bridges that may not stand up to the heavier tenders.

Greatest Concerns: Getting enough equipment and personnel to the scene in a timely manner.

Rank:

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

Farwell Volunteer Fire & Rescue:

County	Howard			
Station Location	300 South Road		PO Box 21, Farwell, NE 68838	
Dept. phone & email	308-336-3241		LMAwoitalewicz@yahoo.com	
Chief	Larry Woitalewicz	308-571-0083	308-336-324	LMAwoitalewicz@yahoo.com
Asst. Chief	Tim Koperski	308-571-3351		
Secretary	Phil Lukasiewicz	308-336-3320	308-754-8368	
Treasurer	Don Gorecki	308-336-3351		

Personnel

Number	Type
25	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members
1	Engine Type 3 Wildland: 150 GPM, 500 gal. capacity, three crew members
1	Tender T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members
1	Tender S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member
1	Equipment Truck
1	Non-transport rescue

Mutual Aid District(s): Twin Loup MA

Areas of concern:
Location was left blank, but these issues were checked: Multiple structures, difficult access, rough terrain, 1 way in/out, heavy fuels, lack of water within effective distance.

Bridges that won't support equipment weight: No.

Greatest Concerns: Manpower and water supply.

Rank:

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

Scotia Rural Fire Protection District:

County	Greeley, Howard			
Station Location	304 S Main, Scotia		PO Box 191, Scotia, NE 68875	
Dept. phone & email	308-245-3310		cj2mo4u@yahoo.com	
Chief	Jay T. Meyer	308-750-0673		cj2mo4u@yahoo.com
Asst. Chief	Donald Roy	308-750-5328		
Secretary/Treasurer	Rick Vlach	308-219-0072		

Personnel

Number	Type
32	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 2: minimum 500 GPM, 400 gal. cap., 3 crew members
2	Tender Type 2: minimum 2,000 gal. cap.: 1-2,000 gal. & 1-1,200 gal.
1	Equipment Truck
3+	Road Dept. Equipment (describe): Motor graders, loaders, water truck
4	Other (describe): 3 pickups w/250 gal. skids, 1 Jeep w/70 gal. tank & pump

Mutual Aid District(s): Loup Valley MA

Areas of concern: Will's Washout – 2 mi. northeast of Cotesfield – Howard Co.: homes, hazard, ingress/egress issues, topography, lack of water within effective distance.
Areas isolated from water sources: Northern part of district 10 miles min.

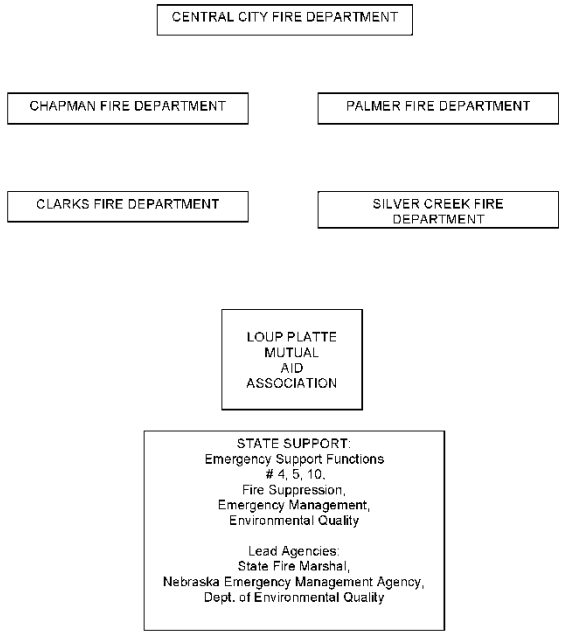
Rank:

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

Merrick County

Information from Merrick Co. LEOP, Annex F:

FIRE SERVICES



MERRICK COUNTY FIRE RESOURCES

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
Central City	308-946-2412		2	3	2	2	1	2	HazMat Ops	Hazmat/ Decon Trailer	No
Chapman			1	2	1	2		1			No
Clarks			2	1	1	2		1			No
Palmer			1	1		3	1	1		Jaws of Life (2)	No
Silver Creek			1	1		4		1		Jaws of Life	No
Nearest HAZMAT Response Team											
Grand Island	308.385 .5444									HAZMAT Trailer, Command Trailer	
Columbus	402.564 .6127									Response Trailer, DECON, Trailer, 6X6 UTV	

Survey Responses from Merrick County Fire Departments:

(None received)

Nance County

Information from Nance Co. LEOP, Annex F:

FIRE SERVICES

FULLERTON FIRE DEPARTMENT

BELGRADE FIRE DEPARTMENT

GENOA FIRE DEPARTMENT

Mid-Nebraska MUTUAL AID ASSOCIATION

Loup Platte 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,

NANCE 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
Fullerton	308-550-1511		2	3		3	1	2		Jaws of Life*	Yes
Genoa	308-536-3354		2	2		2	1	2		Jaws of Life/ Cascade System	Yes
Belgrade	308-357-1238		1	2		3	0	0		Jaws of Life	Yes
Nearest HAZMAT Response Team											
Columbus (FD part of Mid-Nebraska Mutual Aid)	402-564-8127					1				Response Trailer, DeCon Trailer, 6X6 UTV	
Grand Island	308-385-5444									Hazmat trailer Command trailer	

* Fullerton also has a low~pressure cascade system

Survey Responses from Nance County Fire Departments:

Genoa Volunteer Fire Department:

County	Nance			
Station Location	514 ½ Willard		PO Box 279, Genoa, NE 68640	
Dept. phone & email	402-993-2330		cgenoa@eaglecom.net	
Chief	Shawn Strain	402-276-2517		srs94@hotmail.com
Asst. Chief	Robert Green	402-750-6573		robgreen3@hotmail.com
Sec./Treas.	Jolene M. Andreasen	402-948-0213	402-993-2330	

Personnel

Number	Type
30	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
2	Engine Type 1 Structural: 1,000 GPM, ~~300~~ 1200 gal. capacity, four crew members
1	Engine Type 5 Wildland: 50 GPM, 400 gal. capacity, ~~two~~ 4 crew members
1	Engine Type 6 Wildland: 50 GPM, ~~150~~ 250 gal. capacity, ~~two~~ 4 crew members
1	Equipment truck
1	Other (describe): Tanker truck, 3,500 gallon capacity, 6x6

Mutual Aid District(s): Mid-Nebraska Mutual Aid

Areas of concern: River bottoms. Issues: Rough terrain, 1 way in/out, heavy fuels.
Rank:

4 *Housing*
4 *Infrastructure*
4 *Bridge limits*
5 *Hydrants*
4 *Other water sources*

St. Edward Fire Department:

County	Nance, Boone, Platte			
Station Location	1302 State Hwy. 39		PO Box 124, St. Edward, NE 68660	
Dept. phone & email	402-678-2277			
Chief	Gary Thompson	402-678-2277		gtsales@gpcom.net
Asst. Chief	Richard Good	402-649-6118		
Secretary	Karlyn Billings	402-678-2853		
Treasurer	Brian Andreasen	402-608-0058		bwandck@gmail.com

Personnel

Number	Type
37	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 5 Wildland: 50 GPM, 400 gal. capacity, two crew members
1	Engine Type 6 Wildland: 50 GPM, 150 gal. capacity, two crew members
1	Tender T-2 (tactical): 250 GPM pump, 1,000 gallon capacity, 2 crew members
1	Tender S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member
1	Equipment truck
1	Other (describe): Light truck

Mutual Aid District(s): Mid-Nebraska Mutual Aid

Areas of concern: Location was left blank, but the following issues were checked: Multiple structures, difficult access, rough terrain, 1 way in/out, lack of water within effective distance.

Bridges that won't support equipment weight: Yes, old bridges.

Greatest concern: Wind.

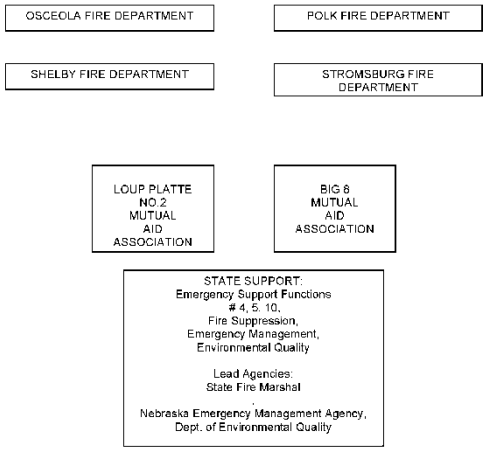
Rank:

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

Polk County

Information from Polk Co. LEOP, Annex F:

FIRE SERVICES



POLK 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
OSCEOLA	911	1	1	1	1	1	2	1	No	Class A & B Foam	No
SHELBY	911		1	2		1		1	Rope Rescue, Grain Bin Rescue	Jaws, RAMS, 3 Airbags	No
STROMSBURG	911	1	1	1	1	2		2	No	Rope Rescue Equip.	No
POLK	911	1	1	3		1		1	No	No	No
Nearest HAZMAT Response Team	(308)385-6000 (NSP Grand Isalnd)										
COLUMBUS											

Survey Responses from Polk County Fire Departments:

Polk Fire and Rescue:

County	Polk, York			
Station Location	290 N Main, Polk, NE 68654		PO Box 74, Polk, NE 68654	
Dept. phone & email	402-765-2961		PatM.PolkFire@outlook.com	
Chief	Pat McNaught	308-325-7045		PatM.PolkFire@outlook.com
Asst. Chief	Trent Stevens	402-366-9826		
Secretary	Dave Person	402-366-3039		daveperson27@windstream.net
Treasurer	Rod Hanquist	402-764-0016		rodandgail@eaglecom.net

Personnel

Number	Type
30	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 1 Structural: 1,000 GPM, 300 gal. capacity, four crew members
1	Engine Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
1	Engine Type 6 Wildland: 50 GPM, 150 gal. capacity, two crew members
1	Tender T-1 (tactical): 250 GPM pump, 2,000 gallon capacity, 2 crew members
1	Semi Tanker – 6,000 gallons, 600 gpm pump
1	Equipment truck: Heavy rescue

Mutual Aid District(s): Loup Platte

Areas of concern: Platte Township Section 8: Heron Point Lake. Large sandpit lake with multiple large single family dwellings with very poor access. The lake is surrounded by wildland and pasture. *Issues*: multiple structures, difficult access, rough terrain, one way in/out, heavy fuels.

Other locations of concern: We have several sand pit lake communities within our fire district.

Bridges that won't support equipment weight: Yes. Multiple bridges will not support our 6,000-gallon tanker.

Greatest concerns: Quick response and available resources.

Rank:

4 *Housing*
4 *Infrastructure*
4 *Bridge limits*
5 *Hydrants*
4 *Other water sources*

Duncan Volunteer Fire:

County	Polk, Platte		
Station Location	921 8th St., Duncan, NE 68634		PO Box 249, Duncan, NE 68634
Dept. phone & email	402-897-2111		dncnvfd@gmail.com
Chief	Ed Schacher	402-897-2485	
Asst. Chief	Josh Dahlberg	402-270-1648	dahlbergj13@gmail.com
Secretary	Dallas Thelen	402-276-7616	dallas@c21rt.com
Treasurer	Kurtis Augustine	402-363-1518	

Personnel

Number	Type
29	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
2	Engine Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
1	Engine Type 6 Wildland: 50 GPM, 150 gal. capacity, two crew members
1	Tender T-1 (tactical): 250 GPM pump, 2,000 gallon capacity, 2 crew members
2	S-3 (support): 200 GPM pump, 1,000 gallon capacity, 1 crew member
1	Equipment truck – 8 passenger suburban

Mutual Aid District(s): Big 8, Mid-Nebraska

Other locations of concern: Duncan Lakes.

Bridges that won't support equipment weight: Prairie Creek bridge just north of Highway 30.

Sherman County

Information from Sherman Co. LEOP, Annex F:

FIRE SERVICES

ASHTON FIRE DEPARTMENT

HAZARD FIRE DEPARTMENT

LITCHFIELD FIRE DEPARTMENT

LOUP CITY FIRE DEPARTMENT

ROCKVILLE FIRE DEPARTMENT

LOUP-PLATTE
MUTUAL
AID
ASSOCIATION

Loup City Fire, Ashton Fire, Hazard Fire, Ashton Fire, Hazard Fire, Rockville Fire, Litchfield Fire, Arcadia Fire, North Loup Fire, Ravenna Fire, Mason City Fire and Ansley Fire

STATE SUPPORT:
Emergency Support Functions
4, 5, 10,
Fire Suppression,
Emergency Management,
Environmental Quality

Lead Agencies:
State Fire Marshal

Nebraska Emergency Management Agency.

SHERMAN COUNTY FIRE RESOURCES

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
Loup City	911	0	3	3		2	2	2		Air Cascade	Yes
Litchfield	911	0	1	2		2		1		Hazmat and Decon Trailer	no
Ashton	911	0	1	2		2				60&5kw Generator	no
Hazard	911	0				2					no
Rockville	911	0	1	1		1					no
Mutual Aid to Sherman County											
Arcadia	911	0	2	2		1		1			no
North Loup	911	0	2	2		1					no
Ravenna	911	0	2	1		2	1	2			No
Ansley	911	0									
Mason City	911	0	1	1		3		1			no
Nearest HAZMAT Response Team											

Survey Responses from Sherman County Fire Departments:

Rockville Volunteer Fire Department:

County	Sherman			
Station Location	135 N Ley		PO Box 153, Rockville, NE 68871	
Dept. phone & email				
Chief	Tim Kusek	308-383-5299		musicmasters3@hotmail.com
Asst. Chief	Mitch Becker	308-258-0756		
Secretary	Joyce Kusek	308-750-4162		
Treasurer	Jason Jakob	308-390-5418		

Personnel

Number	Type
5	Volunteer

Equipment (housed at fire dept. or county equipment barn)

Number	Type
1	Engine Type 2 Structural: 500 GPM, 300 gal. capacity, three crew members
1	Engine Type 5 Wildland: 50 GPM, 400 gal. capacity, two crew members
1	Engine Type 7 Wildland: 10 GPM, 50 gal. capacity, two crew members

Mutual Aid District(s): Twin Loups, Loup Platte

Areas of concern: Pasture land undergrazed.

Comments: Very small department and understaffed. Need for newer equipment and ISO compliant equipment.

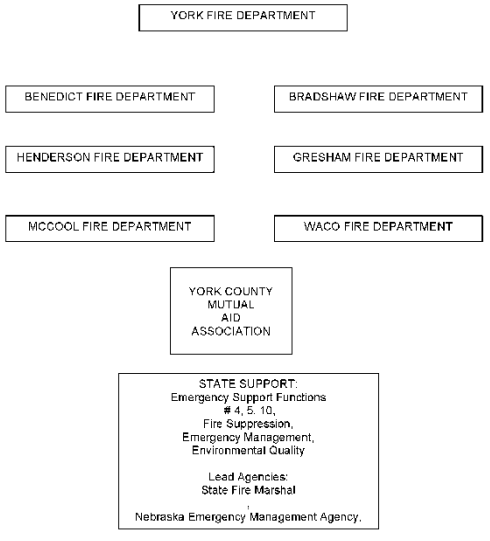
Rank:

1 *Hydrants*

York County

Information from York Co. LEOP, Annex F:

FIRE SERVICES



York 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 EQUIPMENT	RADIO-LOGICAL EQUIPMENT Yes / No
YORK	363-2610	1 2000	2 1500	2 2000		1 300	2	3 ALS	Rope/Confined Spaces	YES
HENDERSON	723-4796		1 1250	2 1500 1800		1 250	1	1	Gel	YES
BENEDICT	732-6666		2 1200 1000	2 1500 1200	1 1000	1 250	1	1		YES
BRADSHAW	736-4638		1 1250	1 2100		1 300	1		Jaws, Air bags, Air Bottles	YES
GRESHAM	735-7224		2 1,000 850	2 1,880 2,000		1 225	1 Equip Van	1		YES
McCOOL JCT.			1 1,000	1 2,300		2 250		1st Response		YES
WACO	728-5271			2 1,000 2,000	1 1,000	1 250 Foam		1st Response	Air Bags Thermal Image Camera	YES
EMERGENCY MANAGEMENT	643-5761								JOHN DEERE GATOR MASS CASUALTY TRAILER (2)LIGHT TRAILER/ GENERATOR	YES

Survey Responses from York County Fire Departments:

(None received)

Appendix H

Fire Department Survey and Distribution List

Fire Department Survey

Distributed to all departments in the CWPP Region 3/5/2019

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:

_____

_____

_____

1

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:

2

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): _____
_____
_____

3

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 or mail a hard copy to:

Nebraska Forest Service (Attn: Sandy Benson)
113 N. Woodward St., Ste. A
Ainsworth, NE 69210

4

Fire Department Survey Distribution List

Alda
Amherst
Arcadia
Ashton
Aurora
Belgrade
Benedict
Boelus
Bradshaw
Cairo
Central City
Chapman
Clarks
Cordova
Dannebrog
Doniphan
Duncan
Eddyville
Elba
Elm Creek
Farwell
Fullerton
Genoa
Gibbon
Giltner
Grand Island Rural
Gresham
Hampton
Harvard
Henderson
Hordville
Kearney
Litchfield
Loup City
Marquette
McCool Junction
Miller
Oconto
Osceola
Palmer
Phillips
Pleasanton
Polk
Ravenna
Rockville
Scotia
Shelby
Shelton
Silver Creek
St. Edward
St. Libory
St. Paul
Stromsburg
Sumner
Trumbull
Utica
Waco
Wolbach
Wood River
York

Appendix I

Public Engagement

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

Outreach Documents

County Boards

(sent via e-mail 2/4/2019 to county boards; they shared it with the emergency managers)
To: County Boards
From: Sandy Benson, Nebraska Forest Service
Subject line: Community Wildfire Protection Plan Steering Committee Designation - Please respond!

My name is Sandy Benson, and I am a fuels management specialist with the Nebraska Forest Service (NFS). I work with communities and landowners in wildfire preparation efforts throughout the state. The NFS is developing Community Wildfire Protection Plans (CWPPs) statewide to help obtain funding for wildfire mitigation, maximize safety, bolster communications between local and state resources, and help communities understand the evolving role fire plays in Nebraska's landscape. Landowners in counties that have a CWPP in place are eligible to apply for a fuels reduction cost-share program that helps defray the costs of protecting structures and emergency access routes from wildfire.

Your county is all or partly within the Central Platte regional planning area, and we invite you to designate one or more individuals to participate on the steering committee to help identify local issues important to your citizens. Some counties have designated emergency management staff. Others have selected fire department personnel or others with expertise in wildfire response. Due to the large size of the planning area and everyone's busy schedules, travel will not be required, and we estimate a maximum of six hours of committee members' time would be needed over the course of the entire planning process, which should take about a year. Committee work is designed to occur via teleconference and email.

The attached document explains the details of this process. County boards will be invited to review and provide feedback on the draft plan. When it is finalized, county boards will have an opportunity to adopt it.

It is important that local officials are aware of the planning process and we welcome your county's participation. Most county boards are pleased to find out that there is no cost to counties associated with CWPP preparation. The primary reasons for having a CWPP are:

- Create a wildfire-specific resource that coordinates with the local emergency plan and neighboring plans
- CWPP regions are eligible for cost-share funding

If you have questions, please contact me at 402-684-2290 or sbenson4@unl.edu. If you would like to speak to me by phone during your board meeting, please let me know the date and time so I can be available.

Thank you.
***
Attachment:

Community Wildfire Protection Plans

The Nebraska Forest Service (NFS) is in the early stages of preparing a **Community Wildfire Protection Plan (CWPP)** for the Central Platte 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 prepared CWPPs for the Pine Ridge, North Central, Loess Canyons, Wildcat Hills, and Missouri River Northeast. Now we are preparing CWPPs for the Central Platte, Central Sandhills, Western Sandhills, Southwest, and Southeast areas.

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.

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 or call Sandy Benson at 402-684-2290.

Fire Departments

(This was sent via e-mail March 5, 2019 along with the survey in Appendix H)
Subject line: Community Wildfire Protection Plan - Please respond!

My name is Sandy Benson, and I am a fuels management specialist with the Nebraska Forest Service (NFS). I work with communities and landowners in wildfire preparation efforts throughout the state. The NFS is developing Community Wildfire Protection Plans (CWPPs) statewide to help obtain funding for wildfire mitigation, maximize safety, bolster communications between local and state resources, and help communities understand the evolving role fire plays in Nebraska's landscape. Landowners in counties that have a CWPP in place are eligible to apply for a fuels reduction cost-share program that helps defray the costs of protecting structures and emergency access routes from wildfire.

The attached background information provides details about the function of Community Wildfire Protection Plans. The primary reasons for having a CWPP are:

- Create a wildfire-specific resource that coordinates with the local emergency plan and neighboring plans
- CWPP regions are eligible for wildfire mitigation cost-share funding

Your fire district is all or partially within the Central Platte regional planning area. Your participation will help identify local issues important to your fire department and help guide the planning efforts. Some of you may have already been contacted by your county boards about this. Later we will be sending out a map of fire districts and asking you to provide any boundary corrections or updates that may be needed.

Please fill out and return the attached questionnaire as soon as possible, to ensure that the CWPP will contain the most current information available. Completed questionnaires can be scanned and sent to me via a reply to this email, or returned by regular mail to the address shown on the last page of the form. Feel free to email sbenson4@unl.edu or call me with any questions at 402-684-2290.

Cities and Villages

Villages and cities were contacted individually by telephone during the contact list compilation in February and March, 2019. They provided current mailing and email addresses and were provided outreach flyers on April 4, 2019.

Media Releases and General Outreach

Print Media and Radio

An invitation to participate was published in all of the local newspapers and put on the radio stations on April 18, 2019:

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 who manage fire in the Central Platte region, and to help them effectively prepare for and respond to wildfire. Everyone who works with land management, fire, and community preparedness has an opportunity to provide input.

The CWPP area includes all of Buffalo, Hall, Hamilton, Howard, Merrick, Nance, Polk, Sherman, and York Counties, and the northeast part of Dawson County. 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 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 Fuel 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

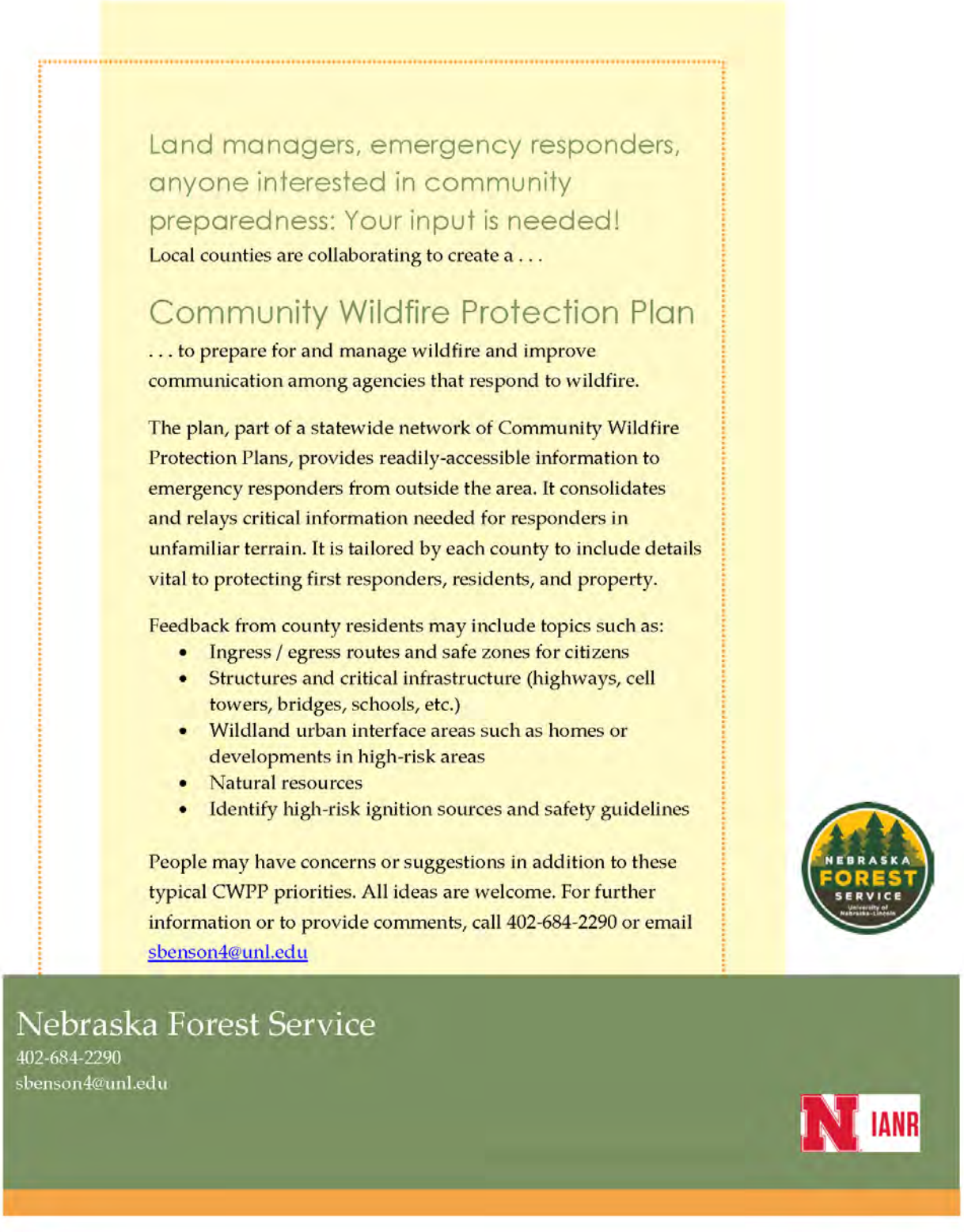
* * *

Follow-up News Releases

Media releases for draft review and publication of final plan are scheduled for 2019.

Flyers Posted

On April 1, 2019 these flyers were distributed to county and municipal offices and sent to the steering committee for general distribution:



Online Outreach

Information about the Central Platte CWPP planning process was included on the Nebraska Forest Service website page https://nfs.unl.edu/community-wildfire-protection-plan that was established November 26, 2018. During the planning process periodic updates were posted on the page, as were the draft and final documents.

A Nebraska CWPP Facebook page was created: https://www.facebook.com/groups/451134565293952/ on November 15, 2018. Central Platte CWPP milestones were posted to this page.

Stakeholders List

County Boards	**Natural Resources Districts**	**Municipalities, cont.**
Buffalo	Central Platte NRD	Elba
Dawson	Lower Loupe	Elm Creek
Hall	Upper Big Blue NRD	Farwell
Hamilton		Fullerton
Howard	**State Agencies**	Genoa
Merrick	Nebraska Game and Parks Commission	Gibbon
Nance	Nebraska Forest Service	Giltner
Polk	Nebraska State Fire Marshal's Office	Grand Island
Sherman	Board of Educational Lands and Funds	Gresham
York	Nebraska Emergency Management Agency	Hampton
		Hazard
Local Emergency	**Federal Agencies**	Henderson
Managers	NRCS - Grand Island, North Platte, Ord, Thedford	Hordville
Region 26 (Sherman Co.)	BLM – Casper, WY Dist. Office handles Nebraska	Kearney
Region 44 (Merrick, Nance)		Litchfield
York/Seward EM	**Prescribed Fire Associations**	Loup City
Buffalo Co. EM	Central Nebraska Prescribed Burn Association	Lushton
Dawson Co. EM	Central Platte Rangeland Alliance	Marquette
Hall Co. EM		McCool Junction
Hamilton Co. EM	**Fire Depts.** – see Appendix H	Miller
Howard Co. EM		Osceola
Polk Co. EM	**Municipalities**	Palmer
	Alda	Phillips
State Legislators	Amherst	Pleasanton
District 24	Ashton	Polk
District 33	Aurora	Ravenna
District 34	Belgrade	Riverdale
District 35	Benedict	Rockville
District 37	Boelus/Howard City	Saint Paul
District 41	Bradshaw	Shelby
	Cairo	Shelton
Federal Legislators	Central City	Silver Creek
Sen. Deb Fischer	Chapman	Stockham
Sen. Ben Sasse	Clarks	Stromsburg
Rep. Adrian Smith (Dist. 3)	Cotesfield	Sumner
Rep. Jeff Fortenberry (Dist. 2)	Cushing	Thayer
	Dannebrog	Waco
Homeowner Associations	Doniphan	Wood River
Sherman Lake Home Corp.	Eddyville	York

Appendix J

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

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/

Fire-Resistant Plants: http://blog.davey.com/2017/08/fireproof-landscapes-with-fire-resistant-plants-trees-and-shrubs/

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/

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.

Although native prairie grasses and forbs make a lot of sense in a "waterwise" 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.

Firewise Plants for Nebraska

Perennials & Groundcovers
Artemisia
Bergenia
Blanket flower, *Gaillardia*
Bugleweed, *Ajuga*
Candytuft, *Iberis*
Catmint, *Nepeta*
*C*oneflowers, *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, *Fragraria*
Yarrow, *Achillea*

Shrubs
Buffaloberry, *Shepherdia*
Cherry and plum, *Prunus*
Cinquefoil*, Potentilla*
*C*oralberry, snowberry*, Symphoricarpos*
Cotoneaster
Currant and gooseberry, *Ribes*
Dogwood*, Cornus*
Honeysuckle*, Lonicera*
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 K

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 you will need to follow to order a Single Engine Air Tanker (SEAT)
- Map of cooperating aerial applicators and SEAT base locations