Table of Contents

Cherry County……..2
Village of Cody……...20
Village of Crookston……34
Village of Kilgore……...45
Village of Nenzel……56
City of Valentine……67
Valentine Rural Fire District……86

County Profile

Cherry County

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table CCO.1: Cherry County Local Planning Team

Name	Title	Jurisdiction
Gary Weaver	Deputy County Emergency Manager	Cherry County
Martin DeNaeyer	Commissioner	Cherry County
Tanya Storer	Commissioner	Cherry County
James Ward	Commissioner	Cherry County

Location, Geography, and Climate

Cherry County is located in north-central Nebraska and is bordered by South Dakota and Sheridan, Grant, Hooker, Thomas, Blaine, Brown, and Keya Paha Counties. The total area of Cherry County is 6,009 square miles. The largest community and county seat is the City of Valentine. Cherry County also has six villages: Cody, Crookston, Kilgore, Merriman, Nenzel, and Wood Lake. The county is located in the Sandhills region of the state, which is characterized by a mixed-grass prairie on grass-stabilized sand dunes. The Niobrara, North Loup, Middle Loup, and Snake Rivers travel through the county. The Niobrara National Scenic River, which is managed by the National Park Service and Niobrara Council, starts and is partially located in northeastern Cherry County. The river draws tens of thousands of visitors each year to Cherry County for river-related activities. These visitors may be at an increased vulnerability to hazards as they may be unfamiliar with the area and sleeping in tents or campers. Also located in the county is the Fort Niobrara National Wildfire Refuge, Samuel R. McKelvie National Forest, and the Valentine National Wildlife Refuge.

Climate

The table below compares climate indicators with those of the entire state. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table CCO.2: Cherry County Climate

	Cherry County	State of Nebraska
July Normal High Temp[1]	87.7	87.4
January Normal Low Temp[1]	16	13.8
Annual Normal Precipitation[2]	21.7	23.8
Annual Normal Snowfall[2]	41	25.9

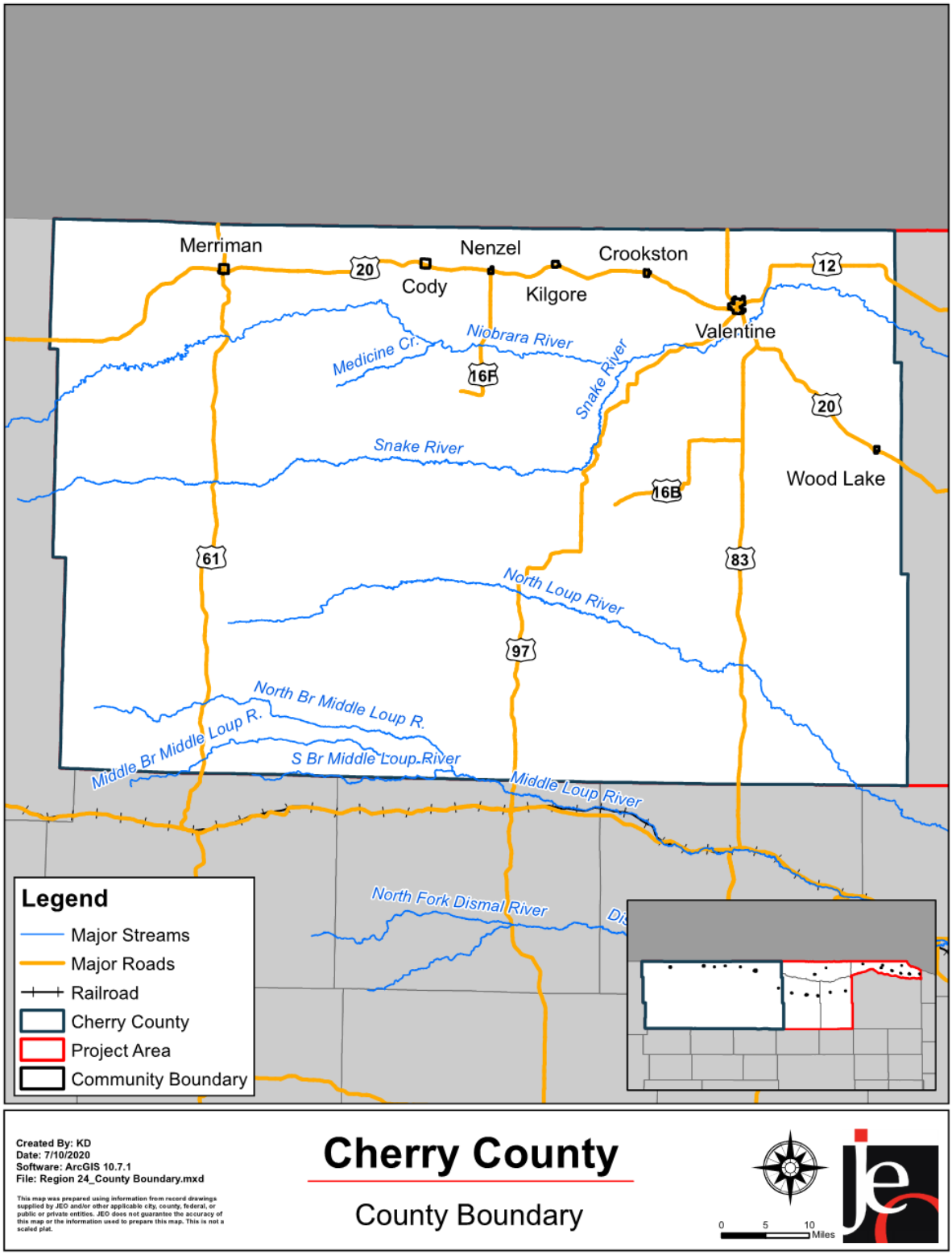
Source: NCEI Climate Normals[1], High Plains Regional Climate Center[2]
Precipitation includes all rain and melted snow and ice.

Transportation

Cherry County's major transportation corridors include US Highway 20, 83 and Nebraska State Highways 12, 16F, 16B 61, 97. Highways 12, 20, and 83 are the transportation routes of most concern due to the high levels of traffic. Chemicals are transported on all highways, but no large spills or accidents have occurred. There are no rail lines traveling through the county. The county also has two air landing strips located near the City of Valentine and Village of Merriman.

1 National Centers for Environmental Information. "1981-2010 U.S. Climate Normals." Accessed July 2020. https://www.ncdc.noaa.gov/cdo-web/datatools.
2 High Plains Regional Climate Center. "Monthly Climate Normals 1946-2020 – Valentine NE." Accessed July 2020. http://climod.unl.edu/.

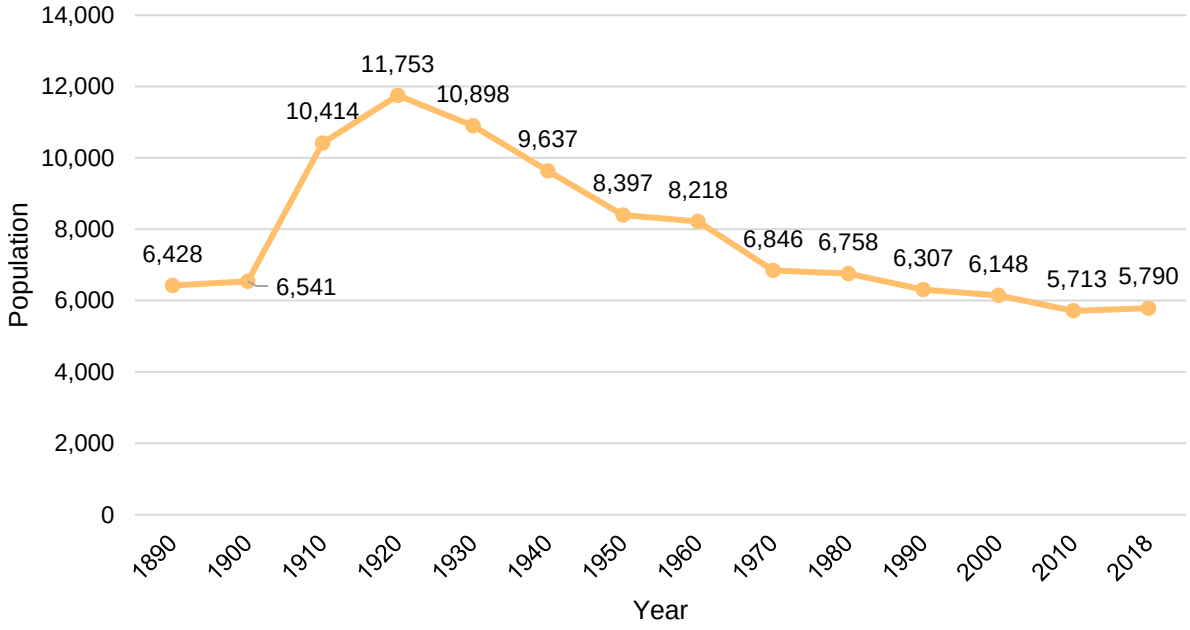
Figure CCO.1: Cherry County



Demographics, Economics, and Housing

The following figure displays the historical population trend from 1890 to 2018.[3] This figure indicates that the population of Cherry County has increased since 2010. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing the county to pursue additional mitigation projects.

Figure CCO.2: Population 1890 - 2018



Source: U.S. Census Bureau

The following table indicates Cherry County has a higher percentage of people under the age of five and over the age of 64. This is relevant to hazard mitigation because the very young and elderly populations may be at greater risk from certain hazards than others. For a more elaborate discussion of this vulnerability, please see Section Four: Risk Assessment.

Table CCO.3: Population by Age

Age	Cherry County	State of Nebraska
<5	7.0%	6.9%
5-64	71.9%	78.1%
>64	21.1%	15.0%
Median	43.6	36.4

Source: U.S. Census Bureau[3]

The following table indicates that median household income and per capita income for the county are lower than the State of Nebraska. Median home value and rent are also both lower than the rest of the state. These economic indicators are relevant to hazard mitigation because they indicate the relative economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a county's level of resilience during hazardous events.

3 United States Census Bureau. 2018. "S0101: Age and Sex." [database file]. https://data.census.gov/cedsci/.

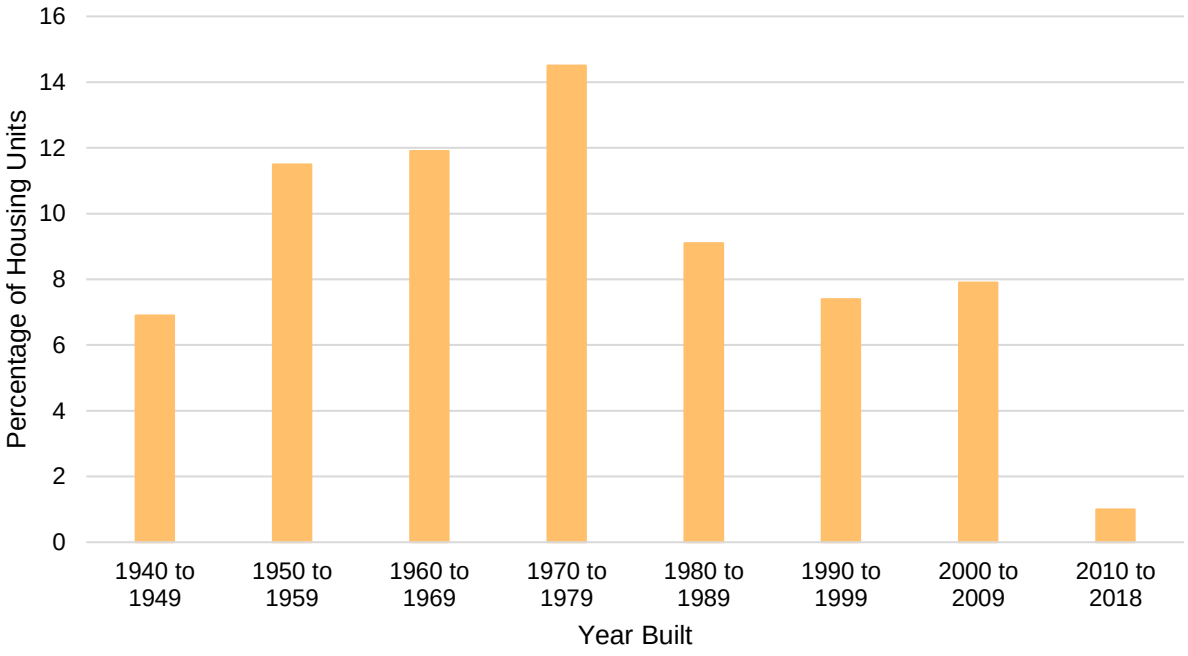
Table CCO.4: Housing and Income

	Cherry County	State of Nebraska
Median Household Income	$53,684	$59,116
Per Capita Income	$27,605	$31,101
Median Home Value	$120,700	$147,800
Median Rent	$675	$803

Source: U.S. Census Bureau[4,5]

The following figure indicates that the majority of housing in Cherry County was built between 1970 and 1979 (14.5%). According to 2018 ACS 5-year estimates, the county has 3,235 housing units with 79.3 percent of those units occupied. There are approximately 309 mobile homes in the county. Housing age can serve as an indicator of risk, as structures built prior to the development of state building codes may be at greater risk. Finally, residents that live in mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if not anchored correctly.

Figure CCO.3: Housing Units by Year Built



Source: U.S Census Bureau[4]

Table CCO.5: Housing Units

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cherry County	2,566	79.3%	669	20.7%	1,566	61%	1,000	39%
Nebraska	754,063	90.8%	76,686	9.2%	498,567	66.1%	255,496	33.9%

Source: U.S. Census Bureau[4]

4 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.
5 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.

Major Employers

According to 2016 Business Patterns Census Data, Cherry County had 227 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars.

Table CCO.6: Business in Cherry County

	Total Businesses	Number of Paid Employees	Annual Payroll
Total for All Sectors	227	1,574	$42,490,000

Source: U.S Census Bureau [6]

Agriculture is important to the economic fabric of the State of Nebraska. Cherry County's 359 farms cover 331,558 acres of land, about 8.6% of the county's total area. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute to agriculture by producing, processing and marketing farm products. These businesses generate income, employment and economic activity throughout the region.

Table CCO.7: Agricultural Inventory

	Agricultural Inventory
Number of Farms with Harvested Cropland	359
Acres of Harvested Cropland	331,558

Source: USDA Census of Agriculture, 2017 [7]

Future Development Trends

Over the past five years, two new golf courses, several homes, and a wind farm were built. In addition, campsites near the Merritt Reservoir and the Niobrara River were built. According to the 2018 American Community Survey estimates, Cherry County's population is growing. The local planning team attributes this to the ability for people to work from home and safe communities in the county. In the next five years, a hog farm is planned. No housing developments are planned in the unincorporated areas.

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table CCO.8: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in the Floodplain
3,003	$288,917,091	N/A	N/A	N/A

Source: County Assessor, 2018
N/A: The county does not have a mapped floodplain, so it is not known how many improvements are in the floodplain.

6 United States Census Bureau. "2016 County Business Patterns and 2016 Nonemployer Statistics" [database file]. https://data.census.gov/cedsci/.

7 U.S. Department of Agriculture. "2017 Census of Agriculture." https://www.nass.usda.gov/Publications/AgCensus/2017/.

Community Lifelines

Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are a total of 10 chemical storage sites throughout Cherry County. The following table lists the name, location, and whether they are in the floodplain. The county does not have a HazMat Team, which is a concern for the county. If a hazardous spill occurred, the county would likely need assistance from other counties or the state. Response times may be slow due to the large area of the county.

Table CCO.9: Chemical Storage Fixed Sites

Facility Name	Nearest Community	In Floodplain (Y/N)
CenturyLink	Valentine	N/A
Farmers/Ranchers Co-op Assn	Valentine	N/A
Farmers/Ranchers Co-op Assn	Valentine	N/A
Farmers/Ranchers Co-op Assn	Valentine	N/A
NDOT Merriman Yard	Merriman	N/A
NDOT Valentine 81400	Valentine	N/A
NDOT Valentine 81500	Valentine	N/A
Reese Propane & Appliance	Valentine	N/A
Reese Propane & Appliance	Valentine	N/A
Sandhill Oil Company Inc. Bulk	Valentine	N/A

Source: Nebraska Department of Environment and Energy, 2019[8]
N/A: The floodplain is not mapped, so it is not known if any of the facilities are located in the floodplain.

Critical Facilities

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

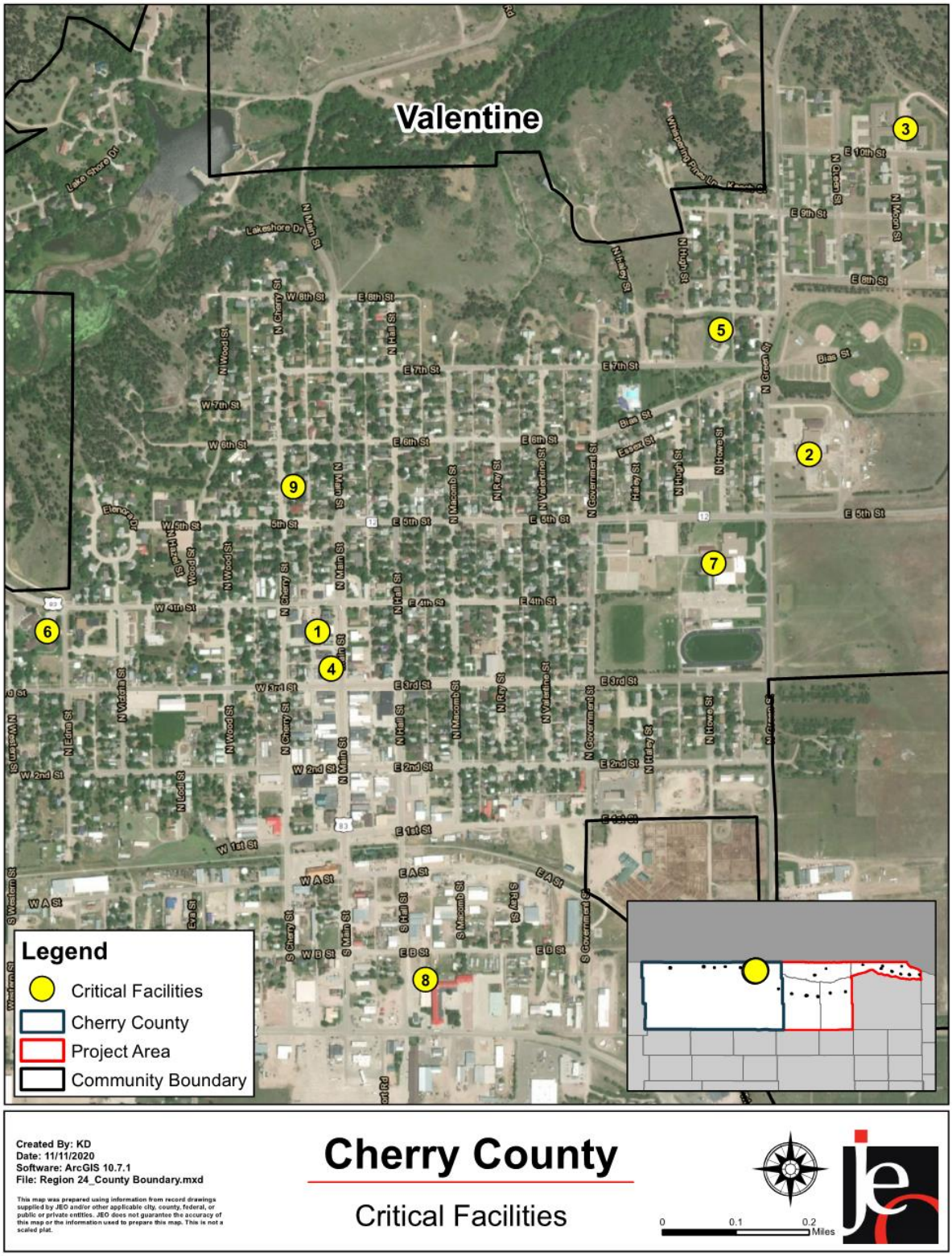
Table CCO.10: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Cherry County Courthouse / Valentine Police Department / Sheriff Department	N	Y	N/A
2	Cherry County Hospital and Clinic	N	Y	N/A
3	Cherry Hills Assisted Living	N	Y	N/A
4	City of Valentine Offices	N	N	N/A
5	Oakwood Assisted Living	N	Y	N/A
6	Pine View Good Samaritan	N	Y	N/A
7	Valentine Community Schools	Y	N	N/A
8	Valentine Fire Department	N	Y	N/A
9	Valentine Medical Clinic	N	N	N/A

N/A: The floodplain is not mapped, so it is not known if any of the facilities are located in the floodplain.

8 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed July 2020. https://deq-iis.ne.gov/tier2/tier2Download.html.

Figure CCO.4: Critical Facilities



Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the county. The property damages from the NCEI Storm Events Database (January 1996 – March 2020) should be considered only as broad estimates. Crop damages reports come from the USDA Risk Management Agency for Cherry County between 2000 and June 2020.

Table CCO.11: County Hazard Loss History

Hazard Type		Count	Property Damage	Crop Damage[2]
Agricultural Disease	Animal Disease[1]	15	2,613 animals	N/A
	Plant Disease[2]	2	N/A	$28,224
Chemical and Radiological Hazards (Fixed Site)[3]		0	$0	N/A
Chemical and Radiological Hazards (Transportation)[4]		2	$0	N/A
Civil Disorder		0	N/A	N/A
Dam Failure[5,6]		3	N/A	N/A
Drought[7]		432 of 1,502 months	$10,000,000	$1,281,677
Earthquakes[17]		11	$0	N/A
Extreme Heat[8]		Avg. 3 days a year	N/A	$1,136,010
Flooding[9]	Flash Flood	10	$52,000	$37,347
	Flood	2	$160,000	
Grass/Wildfires[10]		357	29,879 acres	$0
Hail[9] Average: 1.22 inches Range: .75 – 5 inches		734	$1,388,000	$8,882,753
High Wind[9] Average: 58 mph Range: 40 – 77 mph		41	$31,000	$462,205
Landslides[15]		0	$0	N/A
Levee Failure[16]		0	$0	N/A
Public Health Emergency		2	N/A	N/A
Severe Thunderstorms[9]	Thunderstorm Wind Average: 66 mph Range: 58 – 100 mph	244	$566,100	$2,432,834
	Heavy Rain	8	$0	
	Lightning 1 Injury	3	$1,000	
Severe Winter Storms[9]	Blizzard	26	$135,000	$1,723,171
	Extreme Cold/Wind chill	35	$0	
	Heavy Snow	10	$0	
	Ice Storm	0	$0	
	Winter Storm	82	$10,122,000	
	Winter Weather	0	$0	
Terrorism[14]		0	$0	N/A
Tornadoes[9] Average: EF0 Range: EF0 – EF3		56	$743,750	$0

Hazard Type		Count	Property Damage	Crop Damage[2]
Transportation Incidents	Auto[11] 32 Fatalities, 498 Injuries	1,012	N/A	N/A
	Aviation[12] 5 Fatalities, 11 Injuries	26	N/A	N/A
	Highway Rail[13] 9 Injuries	16	$20,900	N/A
Total		**2,695**	**$23,219,750**	**$15,984,221**

N/A: Data not available
1 - NDA, 2014 – March 2020
2 - USDA RMA, 2000 – June 2020
3 - NRC, 1990 – February 2020
4 - PHSMA, 1971 – June 2020
5 - Stanford NPDP, 1890 – 2018
6 – DNR Dam Inventory, July 2020
7 - NOAA, 1895 – May 2020
8 – NOAA Regional Climate Center, 1893 – May 2020
9 – NCEI, 1996 – March 2020
10 – NFS, 2000 – April 2020
11 – NDOT, 2006 – 2018
12 – NTSB, 1962 – June 2020
13 – DOT FRA, 1975 – 2020
14 – University of Maryland, 1970 – 2018
15 – University of Nebraska, 1960 – 2013
16 – USACE NLN, 1900 – June 2020
17 – USGS, 1900 – June 2020

The following table provides a summary of hazards that have or have the potential to affect each participating jurisdiction in Cherry County. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the 20 hazards profiled in this plan. The evaluation process was based on data collected and summarized in Table CCO.11; previous impacts or the potential for impacts to infrastructure, critical facilities, people, and the economy; and the proximity to certain hazards such as dams and levees.

Table CCO.12: Cherry County and Community Hazard Matrix

Hazard	Cherry County	Village of Cody	Village of Crookston	Village of Kilgore	Village of Nenzel	City of Valentine	Valentine Rural Fire District
Ag. Disease	X	X	X	X	X	X	
Chemical (Fixed Site)	X					X	X
Chemical (Transportation)	X	X	X	X	X	X	X
Civil Disorder	X	X	X	X	X	X	X
Dam Failure	X		X			X	X
Drought	X	X	X	X	X	X	X
Earthquakes	X	X	X	X	X	X	X
Extreme Heat	X	X	X	X	X	X	X
Flooding	X	X	X	X	X	X	X
Grass/Wildfires	X	X	X	X	X	X	X
Hail	X	X	X	X	X	X	X
High Wind	X	X	X	X	X	X	X
Landslides	X	X	X	X	X	X	X
Levee Failure							
Public Health Emergency	X	X	X	X	X	X	X
Severe Thunderstorms	X	X	X	X	X	X	X
Severe Winter Storms	X	X	X	X	X	X	X
Terrorism	X	X	X	X	X	X	X
Tornadoes	X	X	X	X	X	X	X

Hazard	Cherry County	Village of Cody	Village of Crookston	Village of Kilgore	Village of Nenzel	City of Valentine	Valentine Rural Fire District
Transportation Incidents	X	X	X	X	X	X	X

County Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the county. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the county's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Dam Failure

Although not identified as a top hazard of concern by the local planning team, there is one high hazard dam located in the county. The Merritt Dam was built in 1964 and has a maximum storage of 78,375-acre feet. There has been no record of failure in the past, however, if it were to fail it would most likely flood areas along the Snake River and the Niobrara River. Figure CCO.5 shows the location of all the dams in the county.

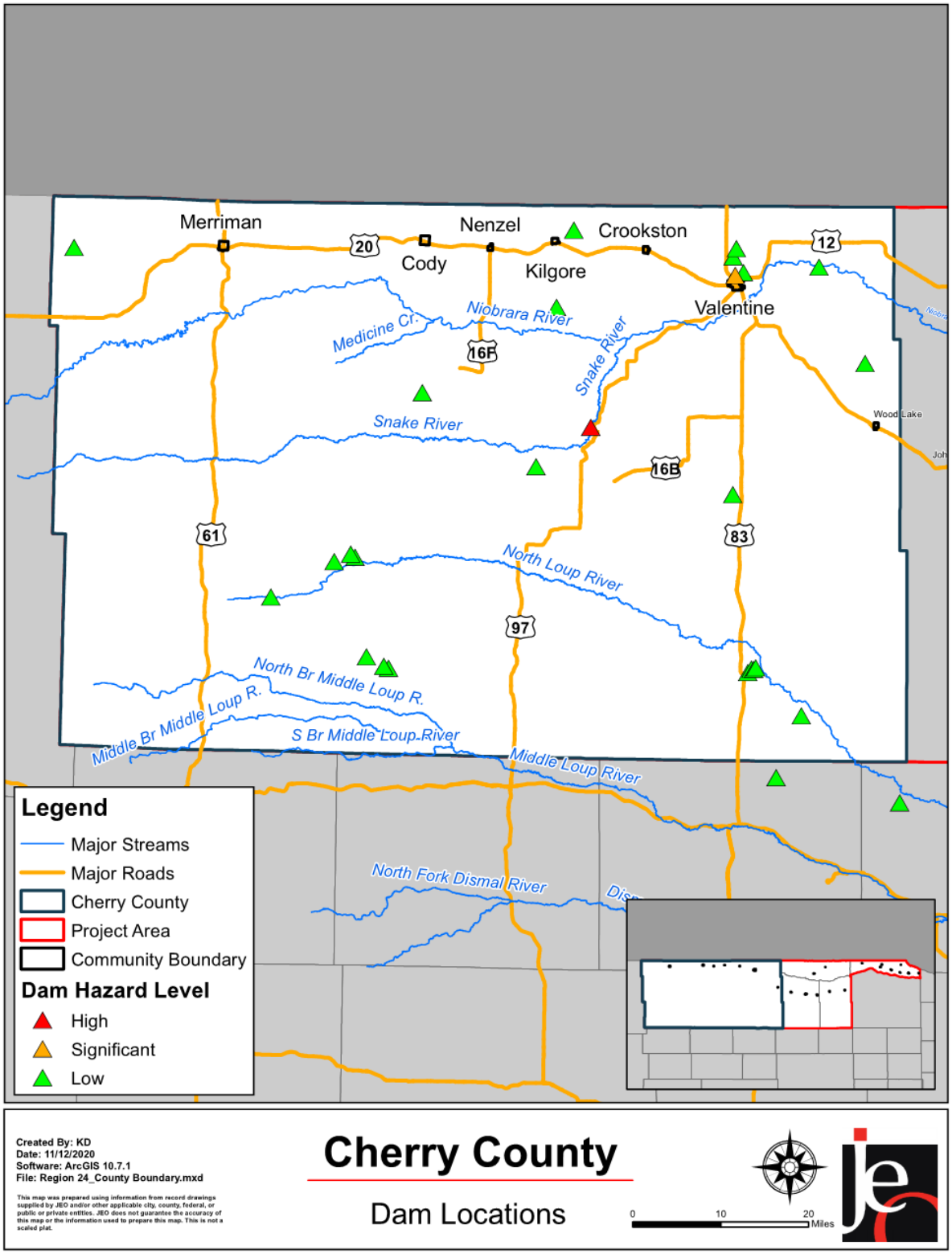
Grass/Wildfire

In 2012 the county experienced its largest recorded wildfire. Approximately 6,717 acres burned, resulting in $96,000 in damages. Specific areas of concern include wooded bluffs along the Niobrara and Snake Rivers, homes at the edges of Valentine, and any canyon lands in the county. These areas have seen increased fire loads from eastern redcedars and can be difficult to access. The county has 14 fire departments dispersed throughout the county. These fire departments, as well as the Nebraska Forest Service, regularly conduct education and outreach initiative to mitigate the impacts of wildfire. The majority of the county's offices are located in Valentine, which is a Firewise Community and regularly conducts wildfire mitigation measures, such as debris removal and other educational initiatives in coordination with the Nebraska Forest Service. A permanent Single Engine Air Tanker base for support in areas with difficult terrain is located in the City of Valentine.

Severe Thunderstorms

The county uses surge protection at its critical facilities and also has a tree board. There are weather radios at the hospital, at the schools, and at Pineview Nursing Home. The county indicated that it has education programs which discuss severe thunderstorms. The county also offers emergency text alerts for severe weather through Code Red. Cherry County officials identified the food supply, water supply, and school closure as having the greatest impact from prolonged power outages. Cherry County receives its power from NPPD, the City of Valentine, KBR REA, Cherry Todd REA, and Panhandle REA. Approximately 10 percent of the county's power lines are buried. The county indicated that the power supply is sufficient to meet current demand. The county has backup generators at the Justice Center/Courthouse, the hospital, and at the communication towers.

Figure CC0.5: Dam Locations



Tornadoes

According to NCEI data, there have been 56 tornadoes since 1996 in Cherry County. The most damaging event occurred in 2001 when and EF0 tornado caused $115,000 in damages to a home and irrigation systems. The county has safe rooms at the schools, the hospital, and the courthouse. The county does have mobile home parks, which may be particularly vulnerable to these hazards. The county has mutual aid agreements with neighboring counties. New sirens were added to the villages of Wood Lake, Cody, and Kilgore. In addition, Page My Cell was also implemented for first responders. The county would like to add sirens at the Merritt Dam Reservoir and along the Niobrara River.

Governance

The county's governmental structure impacts its capability to implement mitigation actions. Cherry County is governed by a board of supervisors. The county also has the following offices and departments:

- County Clerk
- County Assessor
- County Treasurer
- County Attorney
- Emergency Manager
- Highway Superintendent
- Planning & Zoning
- Sheriff
- Surveyor
- Weed Superintendent
- Roads Department

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the county's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table CCO.13: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	No
	National Flood Insurance Program	No

Survey Components/Subcomponents		Yes/No
	Community Rating System	No
	Other (if any)	Community Wildfire Protection Plan
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess County's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	High
Staff/expertise to implement projects	High
Public support to implement projects	High
Time to devote to hazard mitigation	High

Plan Integration

Cherry County has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. In addition to these plans, the county is currently creating a capital improvements plan. No other documents were identified in the planning process. The county will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Cherry County Local Emergency Operations Plan (2017)

The local emergency operations plan establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years.

Comprehensive Plan (2000)

The comprehensive plan is designed to guide the future actions of the county. It contains goals and objectives aimed at safe growth, directs development away from known flood areas, directs housing and vulnerable population away from major transportation routes, encourage infill development, and encourages clustering of development insensitive areas. Plans are in place to update the document by the end of 2021. The update will include the preservation of open space in known hazardous areas and identify areas that need emergency shelters.

North Central Nebraska Community Wildfire Protection Plan (2020)

The purpose of the North Central Nebraska Community Wildfire Protection Plan (CWPP) is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years and has been integrated with the current hazard mitigation plan.

Zoning Ordinance and Subdivision Regulations

The county's zoning ordinance and subdivision regulations outline where and how development should occur in the future. They discourage development near chemical storage sites and discourage housing development along major transportation routes.

Mitigation Strategy

Cherry County's funds are sufficient to pursue new capital projects and have slightly increased with the cost of living. A large portion of funds are currently dedicated to a road bond from the 2019 flood event. Even with sufficient funds, the county will likely pursue grants to help pay for many of the mitigation actions listed below. The county has experience applying for grants and has been awarded grants in the past.

Continued Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$15,000+
Funding	County Fund
Timeline	2-5 Years
Priority	Low
Lead Agency	County Board, Region 24 Emergency Management Agency
Status	In Progress. New sirens were added in the villages of Wood Lake, Cody, and Kilgore. Sirens are still needed at the Merritt Dam Reservoir and along the Niobrara River.

Mitigation Action	Backup and Emergency Generators
Description	Provide a portable or stationary source of backup power to redundant power supplies, county wells, lift stations, and other critical facilities and shelters. Cherry County currently has generators at the courthouse and communication towers but would like additional generators at other critical facilities.
Hazard(s) Addressed	All Hazards
Estimated Cost	$15,000 - $30,000+ per generator
Funding	County Fund
Timeline	1 Year
Priority	Medium
Lead Agency	County Board, Region 24 Emergency Management Agency
Status	In Progress. The county is working with local businesses to add emergency generators.

Mitigation Action	Emergency Communications
Description	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inner-operable communications.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Funding	County Fund
Timeline	1 Year
Priority	High
Lead Agency	Region 24 Emergency Management Agency, County Board
Status	Not Started

Mitigation Action	Public Awareness / Education
Description	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods, evacuation plans, etc. In addition, purchasing education equipment such as overhead projectors and laptops.
Hazard(s) Addressed	All Hazards
Estimated Cost	$0 - $5,000+
Funding	County Fund
Timeline	1 Year
Priority	Low
Lead Agency	Niobrara Council, Region 24 Emergency Management Agency, County Board
Status	Not Started

Mitigation Action	Safe Rooms and Storm Shelters
Description	Assess, design and construct fully supplied safe rooms in highly vulnerable urban and rural areas such as mobile home parks, campgrounds, schools, and other such areas throughout the planning area. Assess the adequacy of current public buildings to be used as safe rooms. Construct safe rooms in areas of greatest need, either as new construction or retrofitting.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$200 - $300 per square foot
Funding	County Fund
Timeline	1 Year
Priority	Medium
Lead Agency	Niobrara Council, Region 24 Emergency Management Agency, County Board
Status	In Progress. The county is currently working with local organization.

Mitigation Action	Stabilize/Anchor Fertilizer, Fuel, and Propane Tanks
Description	Anchor fuel tanks to prevent movement. If left unanchored, tanks could present a major threat to property and safety in tornado or high wind event.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$1,000+
Funding	County Fund
Timeline	1 Year
Priority	Medium
Lead Agency	County Board, Region 24 Emergency Management Agency
Status	Not Started

Mitigation Action	Stream Bank Stabilization / Grade Control Structures / Channel Improvements
Description	Stream bank/ bed degradation can occur along many rivers and creeks. Stabilization improvements including rock rip rap, vegetative cover, j-hooks, boulder vanes, etc. can be implemented to reestablish the channel banks. Grade control structures including sheet-pile weirs, rock weirs, ponds, road dams, etc. can be implemented and improved to maintain the channel bed. Channel stabilization can protect structures, increase conveyance and provide flooding benefits.
Hazard(s) Addressed	Flooding
Estimated Cost	$50,000 - $100,000+
Funding	County Fund
Timeline	1 Year
Priority	Medium
Lead Agency	Roads Department
Status	Not Started

Mitigation Action	Warning Systems
Description	Improve city cable TV interrupt warning system and implement telephone interrupt system such as Reverse 911.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Funding	County Fund
Timeline	1 Year
Priority	High
Lead Agency	County Board, Region 24 Emergency Management Agency
Status	Not Started

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed.
Hazard(s) Addressed	All Hazards
Estimated Cost	$50 per radio
Funding	County Fund
Timeline	1 Year
Priority	High
Lead Agency	County Board, Region 24 Emergency Management Agency
Status	Not Started

Community Profile

Village of Cody

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table CDY.1: Cody Local Planning Team

Name	Title	Jurisdiction
Michael Knapp	Village Board Member	Village of Cody
Rocky Richards	Village Chair	Village of Cody
Loretta Fish	Village Board Member	Village of Cody
Tyler Peterson	Village Board Member	Village of Cody

Location and Geography

The Village of Cody is in north-central Cherry County and covers an area of one square mile. The community of Cody is a small ranching community, with few trees and no major water ways in the immediate vicinity. Hay Creek is located approximately one mile north of the village, with Cody Lake located approximately two miles north of the village.

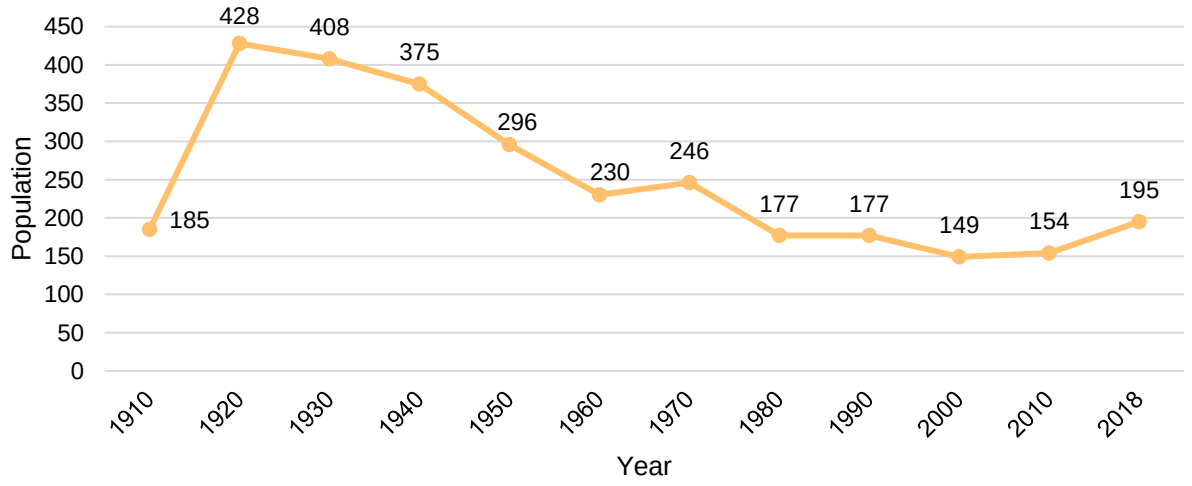
Transportation

Cody's major transportation corridor includes US Highway 20. It has an average of 935 vehicles daily, 150 of which are trucks.[9] There are no rail lines traveling through or near the community. Highway 20 is the transportation route of most concern due the high amount of traffic and various chemicals that carried on it. No large chemical spills or accidents have occurred in the village. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Demographics

The Village of Cody's population has been increasing since 2000 to about 195 people. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. An increasing population can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Cody's population accounted for 3.4% of Cherry County's population in 2018.[10]

Figure CDY.1: Population 1910 - 2018

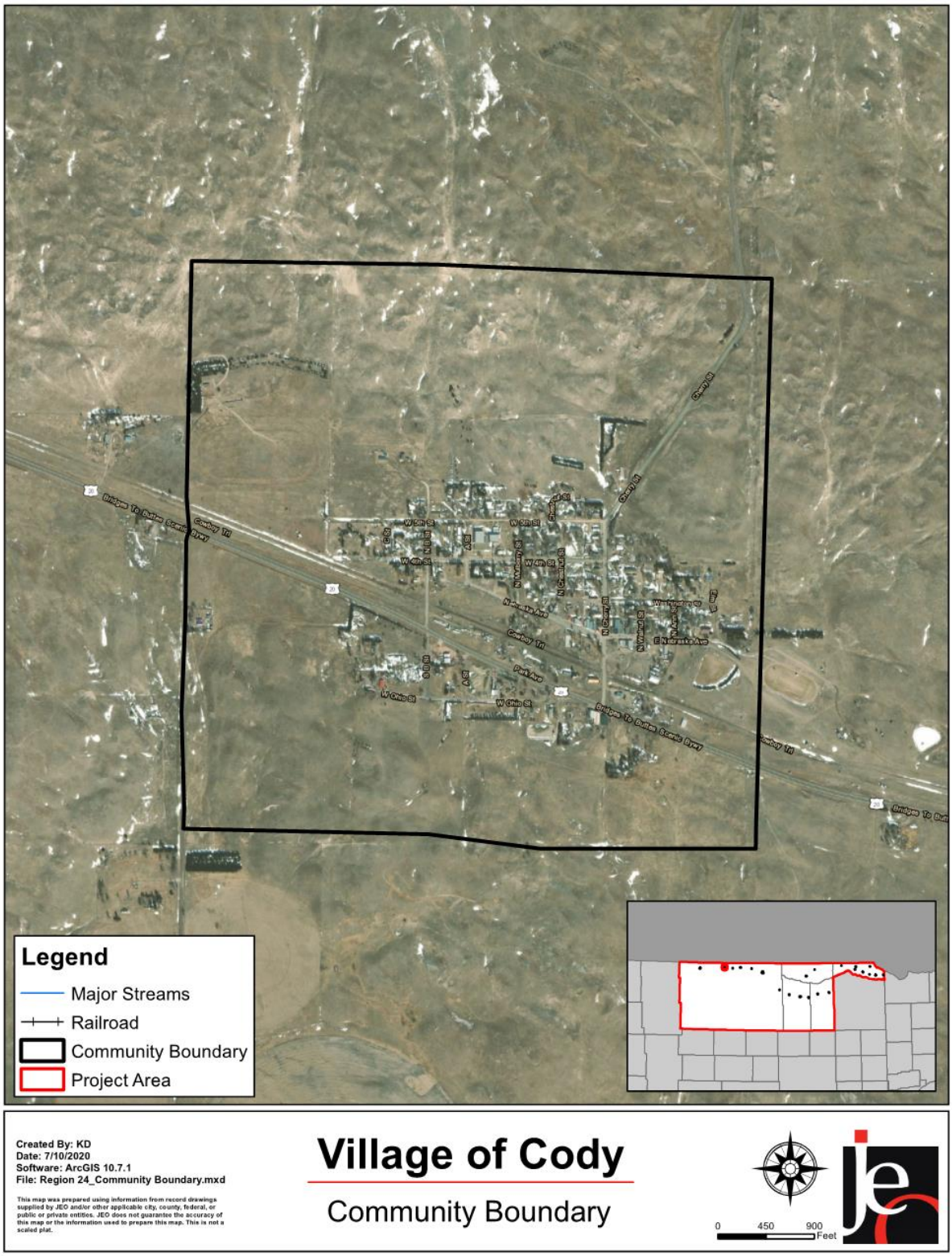


9 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

10 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. https://data.census.gov/cedsci/.

Source: U.S. Census Bureau

Figure CDY.2: Village of Cody



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Cody's population was:

- **Older.** The median age of Cody was 46.8 years old in 2018, compared with Cherry County's median of 43.6 years. Cody's population grew older since 2010, when the median age was 45 years old.[10]
- **Less ethnically diverse**. Since 2010, Cody became less ethnically diverse. In 2010, 7.2% of Cody's population was non-white. By 2018, about 4.1% was non-white. During that time, the non-white population in the county declined from 9.4% in 2010 to 8.6% in 2018.[10]
- **Less likely to be below the federal poverty line.** The poverty rate in the Village of Cody (9.2% of people living below the federal poverty line) was lower than the county's poverty rate (10.5%) in 2018.[11]

Employment and Economics

In comparison to Cherry County, Cody's economy had:

- **Similar mix of industries.** Cody's major employment sectors, accounting for 10% or more of employment each, were: agriculture, retail trade, and education.[11]
- **Lower median household income.** Cody's median household income in 2018 ($41,000) was about $12,700 lower than the county ($53,684).[11]
- **More long-distance commuters.** About 48% of workers in Cody commuted for fewer than 15 minutes, compared with about 72.4% of workers in Cherry County. About 32.6% of workers in Cody commuted 30 minutes or more to work, compared to about 14.9% of county workers.[12]

Major Employers

Major employers in the community include Cody-Kilgore High School, Cody Livestock, Cody Oil, and Husker Hub. The local planning team indicated that several residents commute to Valentine for employment.

Housing

In comparison to Cherry County, Cody's housing stock was:

- **Older.** Cody had a larger share of housing built prior to 1970 than the county (76.2% compared to 60.2%).[13]
- **More mobile and manufactured housing.** The Village of Cody had a larger share of mobile and manufactured housing (13%) compared to the county (9.6%).[13]
- **Less renter-occupied**. About 13.6% of occupied housing units in Cody were renter-occupied compared with 39% of occupied housing in Cherry County.[13]
- **More occupied.** Approximately 4.3% of Cody's housing units were vacant compared to 20.7% of units in Cherry County.[13]

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Unoccupied housing may also suggest that future development may be less likely to

11 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.
12 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://data.census.gov/cedsci/.
13 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.

occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

Future Development Trends

Over the past five years, a few new homes were constructed. No new businesses were added, or road improvements made. According to the 2018 American Community Survey estimates, Cody's population is growing. The local planning attributed this to individuals returning to the community to raise their families. In the next five years, the east side of Cody will be an expanded business area. No new housing is planned at this time.

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table CDY.2: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain*	Value of Improvements in Floodplain*	Percentage of Improvements in the Floodplain*
118	$3,973,091	0	$0	0%

Source: County Assessor, 2018
**Cody does not have a digital floodplain map. However, a paper map from 1976 shows no flood risk area in the community.*

Community Lifelines

Critical Facilities

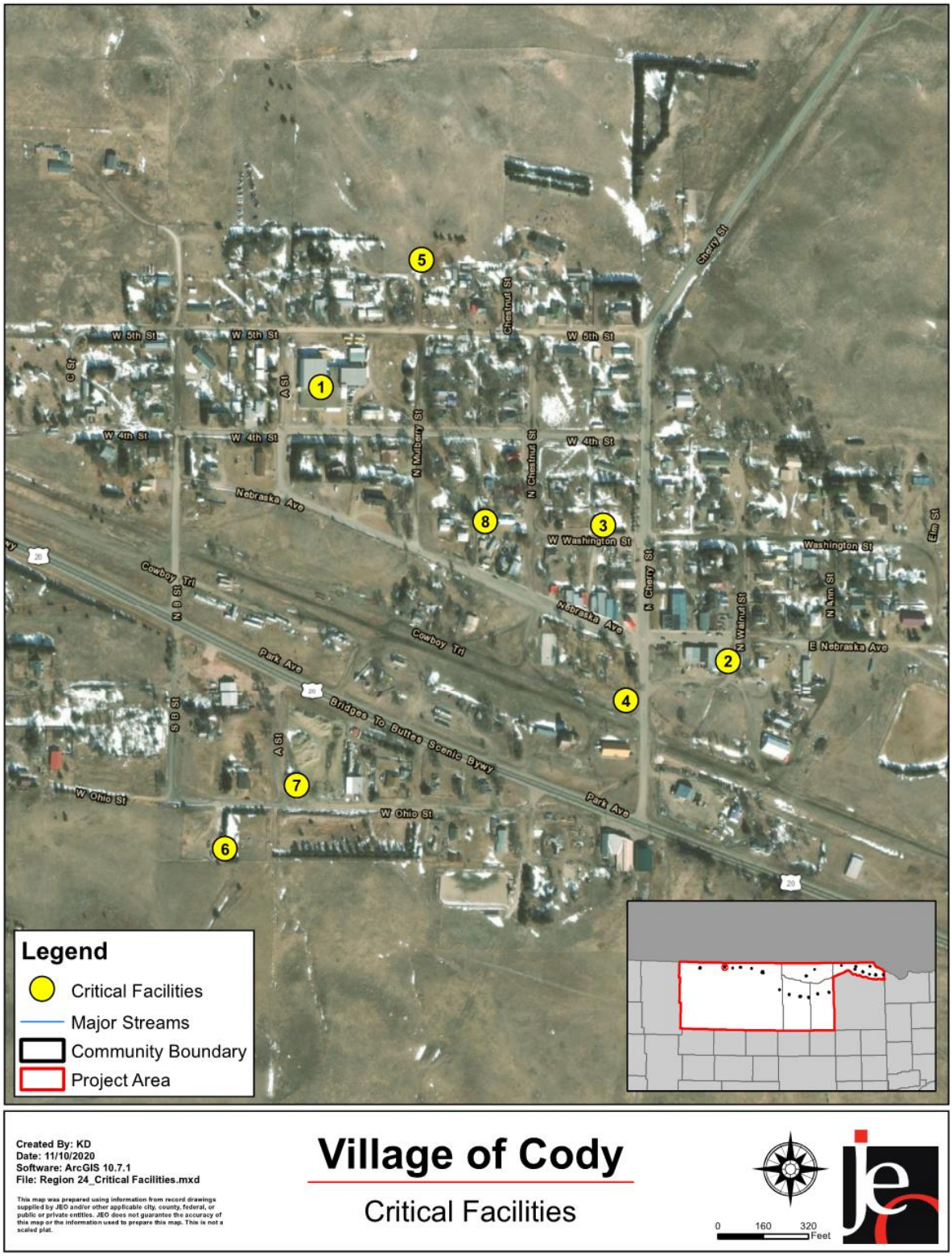
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table CDY.3: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)*
1	Cody-Kilgore Public School	Y	N	N
2	Fire Hall	N	N	N
3	Great Plains Communication	N	Y	N
4	Lift Station	N	Y	N
5	North Well	N	Y	N
6	South Well	N	N	N
7	State Roads Department	N	N	N
8	Water Tower	N	N	N

***Cody does not have a digital floodplain map. However, a paper map from 1976 shows no flood risk area in the community.*

Figure CDY.3: Critical Facilities



Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Severe Winter Storms

Cody's risk to severe winter storms is comparable with the region. While there is a high regional likelihood of occurrence, Cody is primarily concerned with potential power outages as there are very few buried powerlines in the community. The village is responsible for snow removal using a loader and a blade on the village truck. New snow equipment has recently been purchased by the village. Local ranchers have also helped remove snow in the past after a large snow event. Past impacts have been hazardous roads due to blizzard conditions and loss of power. The village does have a generator on the lift station and one of the wells in order to keep them running during a power outage.

Tornadoes

Tornadoes are rare in the area but the NCEI has recorded three tornadoes touching down near the community. No damages have been recorded in the community, but nearby farms have had shops and barns destroyed. The village has a warning siren that can be activated by Emergency Management in Valentine or locally by the village board. There are no safe rooms in the community, but many homes have basements that individuals can use for shelter.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Cody is governed by a village board; other governmental offices and departments are listed below.

- Clerk/Treasurer
- Attorney
- Utility Superintendent
- Sewage Plant Operator
- Community Development Coordinator
- Engineer

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table CDY.4: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	-
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible	No

Survey Components/Subcomponents		Yes/No
	water use, fire safety, household preparedness, environmental education)	
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Moderate

Plan Integration

The Village of Cody does not have any formal planning documents. However, they are currently working on creating full ordinances with anticipated adoption by the end of 2021. The village is also an annex in the 2017 Cherry County Local Emergency Operations Plan (LEOP). The LEOP establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years. The community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

Mitigation Strategy

Cody's municipal funds are limited to maintaining current facilities and systems and have stayed the same over recent years. Although a large portion of funds have not already been dedicated, the village will likely need assistance from grants to help pay for many of the mitigation actions listed below. The village does have experience with grants but has not applied for one in the past five years. Cody would continue to benefit from partnerships with the county, local NRD, and various state agencies.

Completed Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Status	Completed. System has been upgraded and is connect to the Emergency Management system in Cherry County.

Mitigation Action	Backup and Emergency Generators
Description	This village of Cody currently has no generators but would like one at the EOC in Village Hall.
Hazard(s) Addressed	All Hazards
Status	Completed. The village has added a large generator to run one of the wells and the lift station.

New Mitigation Actions

Mitigation Action	Digital Floodplain Mapping
Description	Work with NeDNR to digitally map the floodplain in the community.
Hazard(s) Addressed	Flooding
Estimated Cost	Staff Time
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Board of Trustees, NeDNR
Status	Not Started

Mitigation Action	Floodplain Ordinance Development
Description	Develop a floodplain ordinance for the village.
Hazard(s) Addressed	Flooding
Estimated Cost	Staff Time
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Board of Trustees
Status	Not Started

Continued Mitigation Actions

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc. This would also include developing backup systems for emergency vehicles, identifying and training additional personnel for emergency response, or continuing educational opportunities for current personnel.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Board of Trustees
Status	In Progress. New snow removal equipment has been recently purchased.

Mitigation Action	Drainage Study / Stormwater Master Plan
Description	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Stormwater master plans can be developed to help identify stormwater problem areas and potential drainage improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Funding	General Budget, CDBG
Timeline	2-5 Years
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Emergency Communications
Description	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inner-operable communications.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Firewise Community
Description	Work to become a Firewise Community/USA participant through the Nebraska Forest Service and US Forest Service in order to educate homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire. The Firewise Communities approach emphasizes community responsibility for planning in the design of a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	$20,000
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Flood-Prone Property Acquisition
Description	Voluntary acquisition and demolition of properties prone to flooding will reduce the general threat of flooding for communities. Additionally, this can provide flood insurance benefits to those communities within the NFIP.
Hazard(s) Addressed	Flooding
Estimated Cost	Varies
Funding	General Budget, CDBG
Timeline	5+ Years
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Improve Snow/Ice Removal Program / Snow Fence
Description	Revise and improve the snow and ice removal program for streets. Revisions should address situations such as plowing snow, ice removal, parking during snow and ice removal, and removal of associated storm debris. This would include updating the emergency routes, acquiring equipment that is needed, paving routes, and ordinances as necessary. Consider purchase of snow fence at critical areas and installation of living snow fence.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	$20,000+
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Board of Trustees, State Road Department
Status	In Progress. New snow removal equipment has been purchased.

Mitigation Action	Participate in the National Flood Insurance Program
Description	Participate in the NFIP.
Hazard(s) Addressed	Flooding
Estimated Cost	Staff Time
Funding	Staff Time
Timeline	5+ Years
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Power, Service, electrical, and Water Distribution Lines
Description	Communities can work with their local KBR Public Power District to identify vulnerable transmission and distribution lines and plan to bury lines underground, upgrade, or retrofit existing structures to be less vulnerable to storm events. Electrical utilities shall be required to use underground construction methods where possible for future installation of power lines. Rural Water Districts can work with their County or NRD to identify vulnerable distribution lines near river crossings or creek beds and plan to place lines underground to reduce vulnerability from storm events and erosion.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
Estimated Cost	$50,000 - $70,000
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Board of Trustees, KBR
Status	In Progress. KBR buries lines if/when needed.

Mitigation Action	Promote First Aid
Description	Promote first aid training for all residents.
Hazard(s) Addressed	All Hazards
Estimated Cost	$500+
Funding	General Budget, Corporate Donations, Volunteer Time
Timeline	2-5 Years
Priority	Low
Lead Agency	Board of Trustees
Status	In Progress. Some first aid classes are provided.

Mitigation Action	Public Awareness/Education
Description	Through activities such as outreach projects, distribution of maps and environmental education increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Also, educate citizens on water conservation methods, evacuation plans, etc. In addition, purchasing education equipment such as overhead projectors and laptops.
Hazard(s) Addressed	All Hazards
Estimated Cost	$0 - $5,000+
Funding	General Budget, Staff Time
Timeline	2-5 Years
Priority	Medium
Lead Agency	Board of Trustees
Status	In Progress. The village includes flyers with the utility billings.

Mitigation Action	Source Water Contingency Plan
Description	Villages and cities can evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur. Also, identify and develop water sources for fire protection.
Hazard(s) Addressed	Drought, Grass/Wildfire
Estimated Cost	$5,000+
Funding	General Budget, State Revolving Fund, CDBG
Timeline	5+ Years
Priority	Low
Lead Agency	Board of Trustees
Status	Not Started

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Smaller communities may utilize stormwater systems comprising of ditches, culverts, or drainage ponds to convey runoff. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossing can increase conveyance, reducing the potential for flooding. Replacement or modification of bridges and other flow restrictions may be necessary to provide greater capacity, maintain or improve structural integrity during flood events, and eliminate flooding threats and damages.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Funding	General Budget, CDBG
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	In Progress. Some parts have been completed but a lot more still needs to be done.

Removed Mitigation Actions

Mitigation Action	Floodplain Regulation Enforcement
Hazard(s) Addressed	Flooding
Reason for Removal	While the village will continue to enforce all local regulations, this project can be removed as it is considered an ongoing effort.

Mitigation Action	Stabilize/Anchor Fertilizer, Fuel, and Propane Tanks
Description	Anchor fuel tanks to prevent movement. If left unanchored, tanks could present a major threat to property and safety in tornado or high wind event.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Status	Removed. Tanks have been removed.

Mitigation Action	Weather Radios
Description	Conduct an inventory of weather radios at schools and other critical facilities and provide new radios as needed. Cody would like weather radios at the school and village maintenance building.
Hazard(s) Addressed	All Hazards
Status	Removed. Most residents have cell phones and weather radios.

Community Profile

Village of Crookston

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table CRK.1: Crookston Local Planning Team

Name	Title	Jurisdiction
Phyllis Daniels	Village Board Trustee	Village of Crookston
Linda Quick	Village Board Trustee	Village of Crookston
Tiffany Hill	Clerk	Village of Crookston

Location and Geography

The Village of Crookston is in northwestern Cherry County and covers an area of 275 acres. The community of Crookston sits above the Minnechaduza Creek. The land use surrounding the community is agricultural crops and ranching. There are very few trees located in the community or around it.

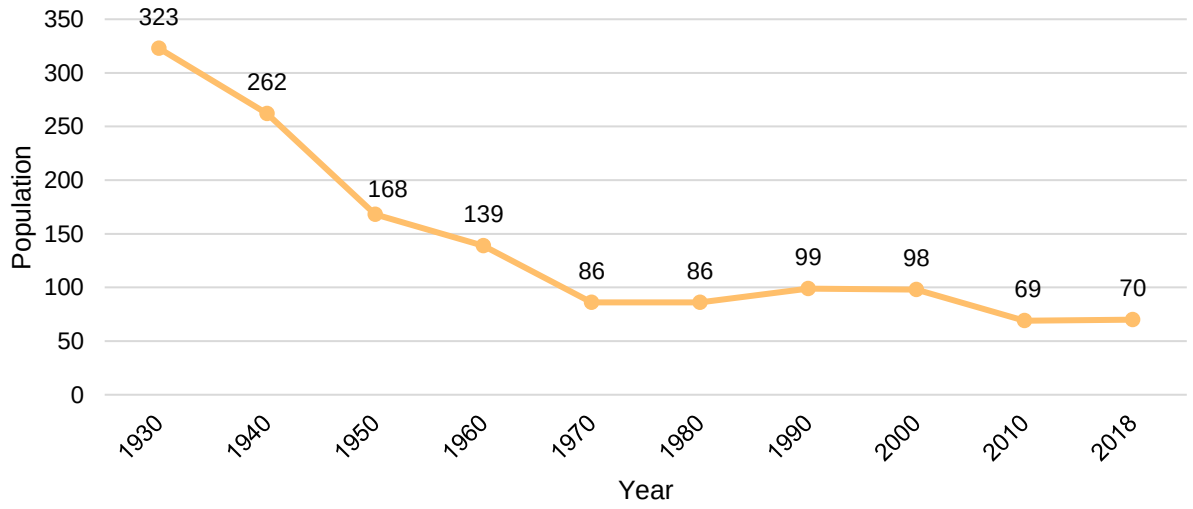
Transportation

Crookston's major transportation corridor includes US Highway 20. It is traveled by an average of 1,460 vehicles daily, 195 of which are trucks.[14] The village does not have a rail line traveling through or near the community. The local planning team is most concerned with Highway 20 as fertilizer, gas, and propane are regularly transported on it. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Demographics

The Village of Crookston's population has been stable at about 70 people since 2010. With a low number of residents, there is a small tax base for the community, which could make implementation of mitigation projects more fiscally challenging. Crookston's population accounted for 1.2% of Cherry County's population in 2018.[15]

Figure CRK.1: Population 1930 - 2018

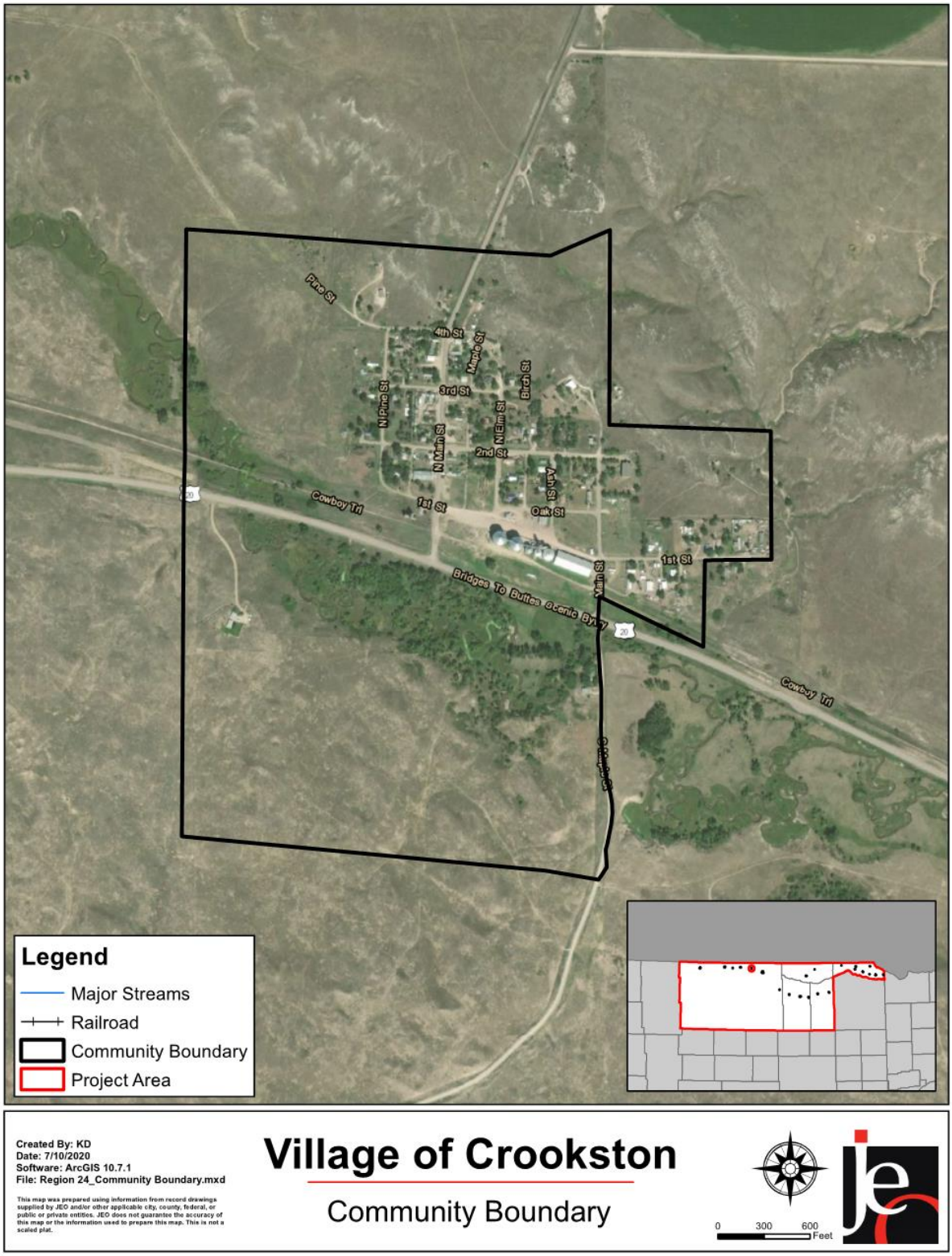


Source: U.S. Census Bureau

14 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

15 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. https://data.census.gov/cedsci/.

Figure CRK.2: Village of Crookston



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Crookston's population was:

- **Younger.** The median age of Crookston was 22 years old in 2018, compared with Cherry County's median of 43.6 years. Crookston's population grew younger since 2010, when the median age was 45.8 years old.[15]
- **Less ethnically diverse**. Since 2010, Crookston became less ethnically diverse. In 2010, 10.2% of Crookston's population was non-white. By 2018, about 0% was non-white. During that time, the non-white population in the county declined from 9.4% in 2010 to 9.4% in 2018.[15]
- **More likely to be below the federal poverty line.** The poverty rate in the Village of Crookston (15% of people living below the federal poverty line) was higher than the county's poverty rate (10.2%) in 2018.[16]

Employment and Economics

In comparison to Cherry County, Crookston's economy had:

- **Similar mix of industries.** Crookston's major employment sectors, accounting for 10% or more of employment each, were: retail trade and education.[16]
- **Lower median household income.** Crookston's median household income in 2018 ($36,042) was about $17,600 lower than the county ($53,684).[16]
- **Fewer long-distance commuters.** About 21.9% of workers in Crookston commuted for fewer than 15 minutes, compared with about 72.4% of workers in Cherry County. About 3.1% of workers in Crookston commuted 30 minutes or more to work, compared to about 14.9% of county workers.[17]

Major Employers

The major employer in the community is Danielski Harvesting and Farming. The local planning team estimates that approximately 75% of residents commute to Valentine, Mission, or Rosebud for employment.

Housing

In comparison to Cherry County, Crookston's housing stock was:

- **Newer.** Crookston had a smaller share of housing built prior to 1970 than the county (48.7% compared to 60.2%).[18]
- **More mobile and manufactured housing.** The Village of Crookston had a larger share of mobile and manufactured housing (23.1%) compared to the county (9.6%).[18]
- **Less renter-occupied**. About 21.7% of occupied housing units in Crookston were renter-occupied compared with 39% of occupied housing in Cherry County.[18]
- **Less occupied.** Approximately 41% of Crookston's housing units were vacant compared to 20.7% of units in Cherry County.[18]

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly

16 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.
17 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://data.census.gov/cedsci/.
18 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.

maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Crookston has nine mobile homes located throughout the community. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

Future Development Trends

Over the last five years, the village has converted gravel and dirt roads into paved streets. This will help reduce the number of washouts from heavy rail and flood events. No new homes or businesses were built over that time. According to the American Community Survey estimates, Crookston's population is generally stable. The local planning team attributed the stability to the low cost of housing and low taxes. In the next five years, there are no planned housing develops or new businesses.

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table CRK.2: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in the Floodplain
55	$3,175,070	N/A	N/A	N/A

Source: County Assessor, 2018
N/A: The community does not have a mapped floodplain, so it is not known how many improvements are in the floodplain.

Community Lifelines

Critical Facilities

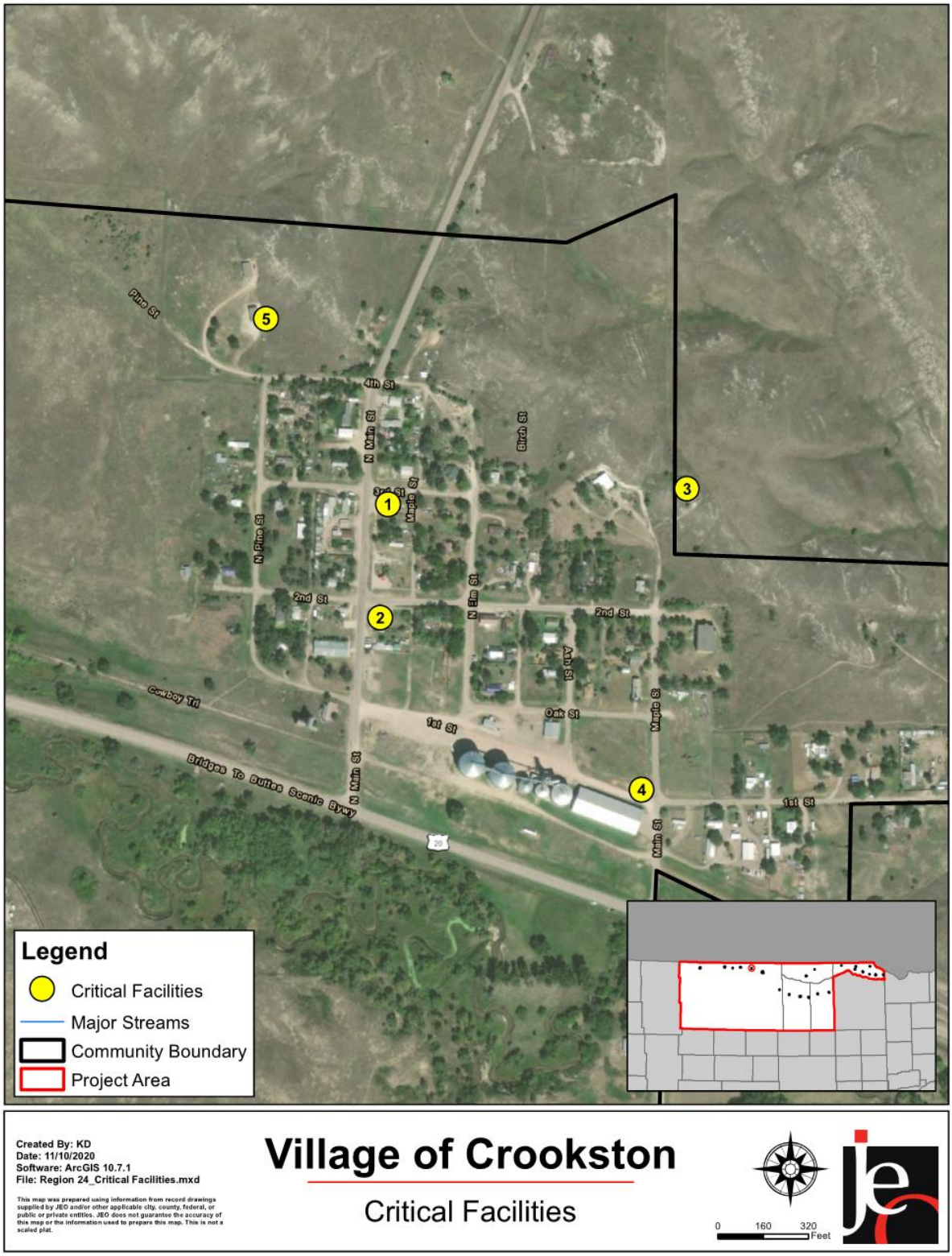
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table CRK.3: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Great Plains Communications	N	No	N/A
2	Town Hall	Y	No	N/A
3	Water Tower	N	No	N/A
4	Well #591	N	No	N/A
5	Well #911	N	Yes	N/A

N/A: The community does not have a mapped floodplain, so it is not known if any facilities are located in the floodplain.

Figure CRK.3: Critical Facilities



Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Chemical and Radiological Spills - Transportation

Crookston and Lakeview Road provides a coordinator between Nebraska and South Dakota and Highway 20 runs east-west at Crookston's southern border. These roadways frequently have trucks carrying hazardous agricultural materials. Both the town hall and Great Plains Communications are located on Crookston and Lakeview Road along with several residences. If a spill were to occur on that road evacuations of the area may need to occur.

Drought

Crookston identified a need to pursue mitigation actions which address drought, especially because the surrounding economy is heavily dependent on the agricultural and ranching sector. The village has two wells and water tank to supply water to the community. Recently the water tank was upgraded to meet state standards. Water levels in the wells are checked at least once a week and have meters on them. If water levels are low, the village is able to implement water restrictions as needed. Water quality is not an issue, with low levels of nitrates and other contaminants.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Crookston is governed by a village board; other governmental offices and departments are listed below.

- Clerk
- Treasurer
- Utility Superintendent
- Engineer
- Chairperson

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table CRK.4: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	Yes
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	-
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes - Water
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible	No

Survey Components/Subcomponents		Yes/No
	water use, fire safety, household preparedness, environmental education)	
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Public support to implement projects	Limited
Time to devote to hazard mitigation	Limited

Plan Integration

The Village of Crookston has a zoning ordinance and buildings codes, but they have not been integrated with the hazard mitigation plan. The village is also an annex in the 2017 Cherry County Local Emergency Operations Plan. The local emergency operations plan establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years.

Mitigation Strategy

Crookston's municipal funds are limited to maintaining current facilities and systems and have stayed the same over recent years. Although a large portion of funds have not been dedicated to a specific project, the village would likely need assistance from grants to help pay for larger mitigation projects. The village has experience in applying for grants as it recently applied for and was awarded a water survey grant.

Completed Mitigation Actions

Mitigation Action	Backup and Emergency Generators
Description	Provide a portable or stationary source of backup power to redundant power supplies, county wells, lift stations, and other critical facilities and shelters. Crookston would like a generator for their water source.
Hazard(s) Addressed	All Hazards
Status	Completed. A generator was purchased and installed at well #911

Mitigation Action	Expand Water Storage Capacity / Emergency Water Supplies / Dry Hydrants
Description	Evaluate the need to expand water storage capacity through a new water tower, standpipe, etc. to provide a safe water supply for the community and additional water for fire protection. Establish emergency water supplies such as dry hydrants and individual or community cisterns for defending structures from wildland fires.
Hazard(s) Addressed	Drought, Grass/Wildfire
Status	Completed. The water tank was upgraded to meet state standards.

Continued Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$15,000+
Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc. This would also include developing backup systems for emergency vehicles, identifying and training additional personnel for emergency response, or continuing educational opportunities for current personnel.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Groundwater/Irrigation/Water Conservation Management Plan
Description	Develop and implement a plan/ best management practices to conserve water use and reduce total use (high water use to low water use) and consumption of groundwater resources by citizens and irrigators of agricultural land during elongated periods of drought. Identify water saving irrigation projects or improvements such as sprinklers or soil moisture monitoring. Potential restrictions on water could include limitations on lawn watering, car washing, farm irrigation restrictions, or water sold to outside sources. Implement BMPs through water conservation practices such as changes in irrigation management, education on no-till agriculture and modified crop selection and use of xeriscaping in communities.
Hazard(s) Addressed	Drought
Estimated Cost	$10,000+
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Source Water Contingency Plan
Description	Villages and cities can evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur. Also, identify and develop water sources for fire protection.
Hazard(s) Addressed	Drought, Grass/Wildfire
Estimated Cost	$5,000+
Funding	CDBG, State Revolving Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started

Community Profile

Village of Kilgore

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table KLR.1: Kilgore Local Planning Team

Name	Title	Jurisdiction
Debra Hand	Board Member	Village of Kilgore
Todd Rothleutner	Clerk / Board Member	Village of Kilgore
Bonnie Rothleutner	Kilgore Resident / Planning Team	Village of Kilgore

Location and Geography

The Village of Kilgore is in north-central Cherry County and covers an area of 288 acres. The community of Kilgore is not heavily forested, although there are rows of trees lining the edges of the village. There are no waterways in the immediate vicinity of the community, however Spring Creek is located approximately one-mile northeast of the Kilgore. Kilgore is heavily influenced by ranching and agriculture, and the land use surrounding the community is primarily used for these purposes.

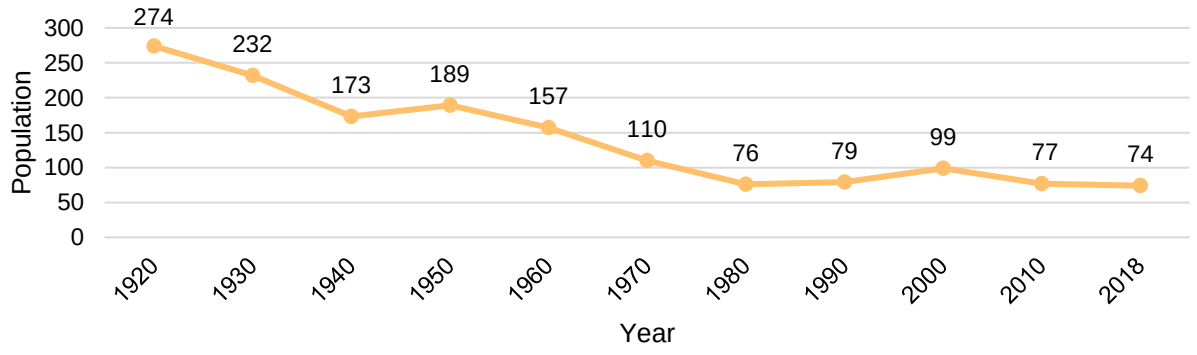
Transportation

Kilgore's major transportation corridor includes US Highway 20. It is traveled by an average of 1,045 vehicles daily, 175 of which are trucks.[19] Another transportation route of concern is Steinbrecker Avenue, which passes north through the village and on to the South Dakota border. Trucks carrying nitrogen, phosphorus, potassium, and sulfur in liquid and dry forms travel south on Steinbrecker Avenue to Highway 20 from Midwest Fertilizer & Seed. No chemical spills have occurred in the past. The village does not have a rail line traveling through or near the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Demographics

The Village of Kilgore's population has been declining since 2000 to about 74 people. A declining population can lead to more unoccupied housing that is not being maintained and is then at risk to high winds and other hazards. Furthermore, with fewer residents, there is decreasing tax revenue for the community, which could make implementation of mitigation projects more fiscally challenging. Kilgore's population accounted for 1.3% of Cherry County's population in 2018.[20]

Figure KLR.1: Population 1920 - 2018

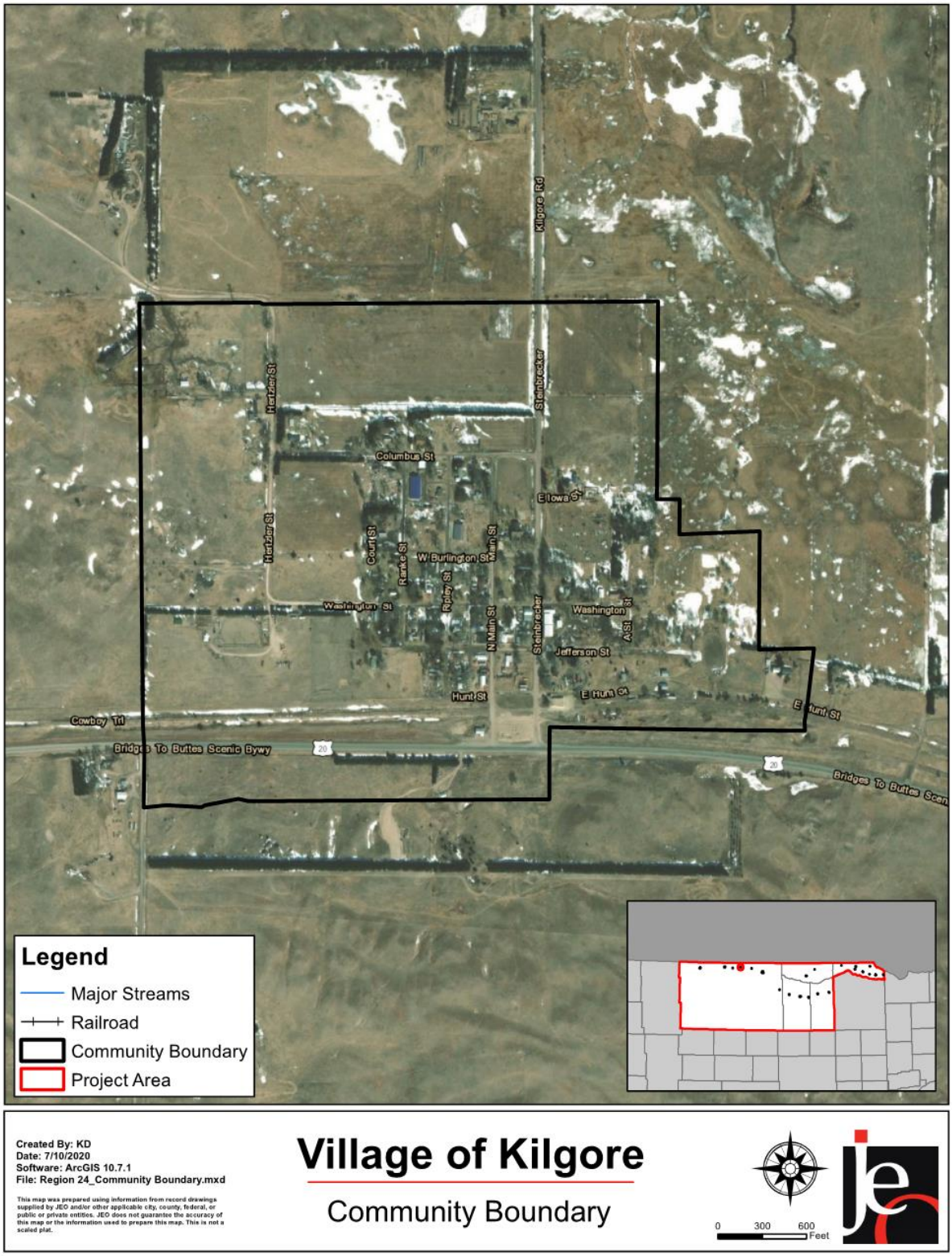


Source: U.S. Census Bureau

19 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

20 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. https://data.census.gov/cedsci/.

Figure KLR.2: Village of Kilgore



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Kilgore's population was:

- **Younger.** The median age of Kilgore was 31.8 years old in 2018, compared with Cherry County's median of 43.6 years. Kilgore's population grew younger since 2010, when the median age was 43.2 years old.[20]
- **More ethnically diverse**. Since 2010, Kilgore grew more ethnically diverse. In 2010, 26% of Kilgore's population was non-white. By 2018, about 43.9% was non-white. During that time, the non-white population in the county declined from 9.4% in 2010 to 8.6% in 2018.[20]
- **Less likely to be below the federal poverty line.** The poverty rate in the Village of Kilgore (2.7% of people living below the federal poverty line) was lower than the county's poverty rate (10.5%) in 2018.[21]

Employment and Economics

In comparison to Cherry County, Kilgore's economy had:

- **Different mix of industries.** Kilgore's major employment sectors, accounting for 10% or more of employment each, were: manufacturing, transportation, education, public administration.[21]
- **Higher median household income.** Kilgore's median household income in 2018 ($58,750) was about $5,100 higher than the county ($53,684).[21]
- **More long-distance commuters.** About 23.8% of workers in Kilgore commuted for fewer than 15 minutes, compared with about 72.4% of workers in Cherry County. About 38.1% of workers in Kilgore commuted 30 minutes or more to work, compared to about 14.9% of county workers.[22]

Major Employers

Major employers in the Kilgore include Bordertown Steakhouse & Saloon, Welder Manufacturing, Cody-Kilgore Elementary, Stoner Trucking, and Josh Whipple Trucking. The local planning team indicated a large portion of residents commute to Valentine, Cody, St. Francis, and Rosebud for employment.

Housing

In comparison to Cherry County, Kilgore's housing stock was:

- **Newer.** Kilgore had a smaller share of housing built prior to 1970 than the county (43.9% compared to 60.2%).[23]
- **More mobile and manufactured housing.** The Village of Kilgore had a larger share of mobile and manufactured housing (51.2%) compared to the county (9.6%).[23]
- **Less renter-occupied**. About 21.4% of occupied housing units in Kilgore were renter-occupied compared with 39% of occupied housing in Cherry County.[23]
- **Less occupied.** Approximately 31.7% of Kilgore's housing units were vacant compared to 20.7% of units in Cherry County.[23]

21 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.
22 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://data.census.gov/cedsci/.
23 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. There are four mobile homes spread out across the community. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

Future Development Trends

Over the past five years, a gas station has been installed, a hazardous commercial building was demolished, several houses have been demolished, and streets within the village limits have been updated. No developments were located in the known hazardous areas. According to the 2018 American Community Survey estimates, Kilgore's population is declining. The local planning team attribute this to a lack of available housing. Affordable housing options do not exist as building new homes with private septic systems is expensive. In the next five years, there are currently no planned housing or business developments.

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table KLR.2: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in the Floodplain
63	$1,465,334	N/A	N/A	N/A

Source: County Assessor, 2018
N/A: The community does not have a mapped floodplain, so it is not known how many improvements are in the floodplain.

Community Lifelines

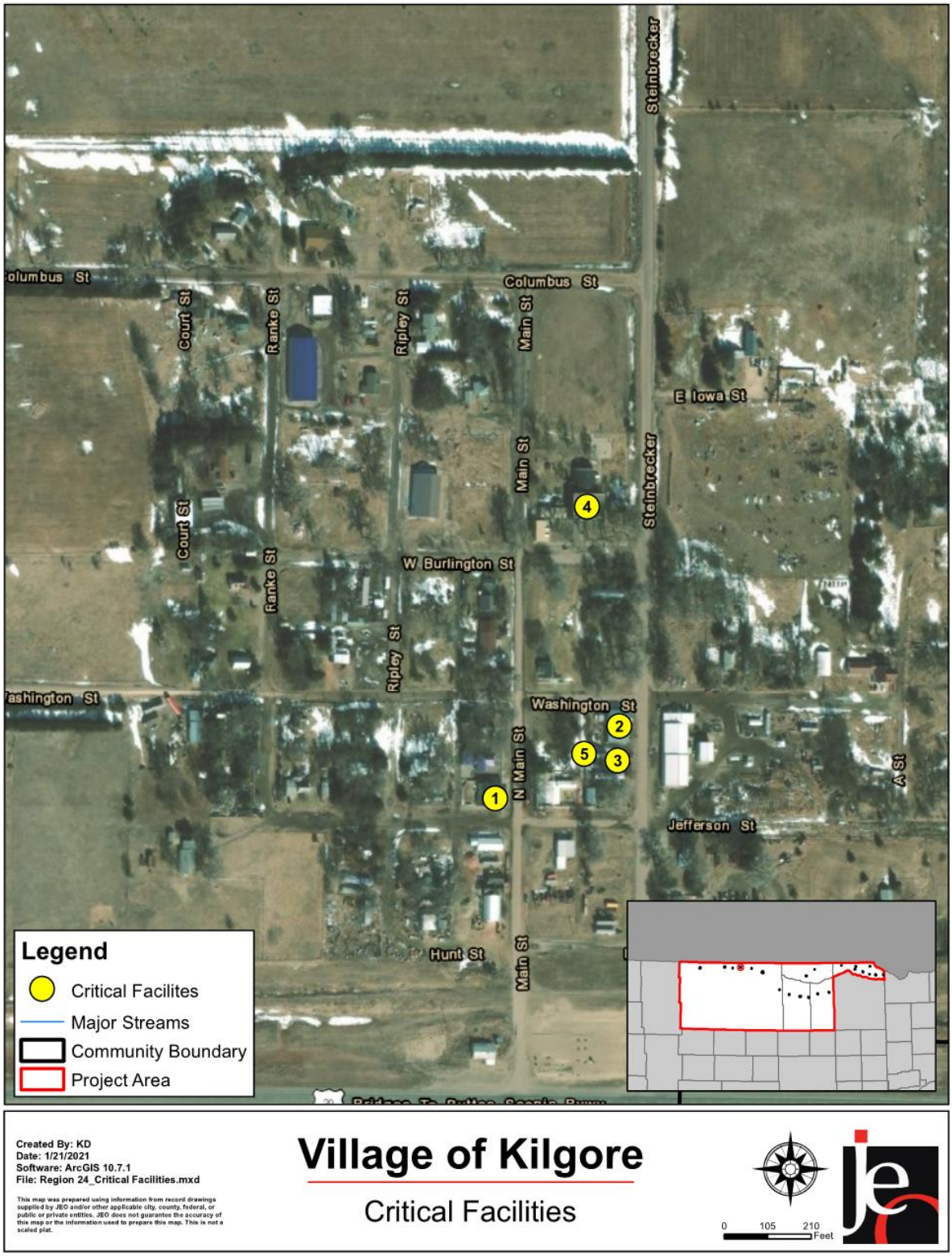
Critical Facilities

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table KLR.3 Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Community Center	Y	N	N/A
2	Fire Hall	N	Y	N/A
3	Great Plains Communication	N	Y	N/A
4	School Buildings	Y	N	N/A
5	Well	N	Y	N/A

Figure KLR.3: Critical Facilities



Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Flooding

Kilgore identified flash flooding drainage problems associated with heavy rains as the primary concern. In 2019, heavy rainfall resulted in all streets being unusable. Emergency vehicles could not reach residents in distress and community members were unable to travel to their jobs by conventional means. These impacts lasted for several months until the water drained. In 2020 the streets in Kilgore were rebuilt by elevating and crowning with material and creating ditches for proper drainage with some replacement of culverts. The village is continuing to perform street maintenance and evaluation for improved drainage options.

Grass/Wildfire

Although Kilgore has few trees within its municipal boundaries or surrounding the community, the community is at risk from agricultural debris fires. The Kilgore Volunteer Fire Department is located in the community and is staffed entirely by volunteers. The fire department reported responded to 36 fires which have burned 1,212 acres since 2000.

Tornadoes

Kilgore recognized that although there has not been a tornado that has impacted Kilgore to date, the community needs to be proactive about mitigating risk. The community also expressed concern over prolonged power outages, which could be a secondary impact from this hazard. Kilgore presently has three backup generators at the well house, Great Plains Communications, and fire hall. In 2020, the village was able to install an emergency alert siren which can be used for tornadoes, severe weather, or fire notification if the fire department paging system is inoperable. The siren is activated remotely by the Cherry County Dispatch. There are no FEMA certified safe rooms in the community. However, residents can use the community center that was originally a bank. Restrooms in the community center can be used for sheltering as that was previously a bank vault. The community would like to create an alert system for residents to seek shelter in the possibility of a tornado.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Kilgore is governed by a village board; other governmental offices and departments are listed below.

- Water Commissioner
- Engineer
- Certified Water Operator
- Fire Department

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table KLR.4: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	-
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-

Survey Components/Subcomponents		Yes/No
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Public support to implement projects	Limited
Time to devote to hazard mitigation	Limited

Plan Integration

The Village of Kilgore does not have any formal planning documents. However, the village is an annex in the 2017 Cherry County Local Emergency Operations Plan (LEOP). The LEOP establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years. The community will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

Mitigation Strategy

Kilgore's municipal funds are limited to maintaining current facilities and systems and have remained the same over recent years. With a large portion of funds used for street maintenance and payroll, the village will likely need assistance from grants to help pay for many of the actions listed below. The village has experience applying for and has been awarded grants in the past.

Completed Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	All Hazards
Status	Completed. A new emergency siren was installed in 2020.

Continued Mitigation Actions

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc. This would also include developing backup systems for emergency vehicles, identifying and training additional personnel for emergency response, or continuing educational opportunities for current personnel.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board, Fire Department
Status	Not Started

Mitigation Action	Drainage Study / Stormwater Master Plan
Description	Preliminary drainage studies and assessments can be conducted to identify and prioritize design improvements to address site specific localized flooding/drainage issues to reduce and/or alleviate flooding. Stormwater master plans can be developed to help identify stormwater problem areas and potential drainage improvements.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Funding	General Budget, CDBG
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Expand Water Storage Capacity / Emergency Water Supplies / Dry Hydrants
Description	Evaluate the need to expand water storage capacity through a new water tower, stand pipe, etc. to provide a safe water supply for the community and additional water for fire protection. Establish emergency water supplies such as dry hydrants and individual or community cisterns for defending structures from wildland fires.
Hazard(s) Addressed	Drought, Grass/Wildfires
Estimated Cost	$30,000+
Funding	General Budget, CDBG
Timeline	5+ Years
Priority	High
Lead Agency	Village Board
Status	In Progress. The village has purchased new hydrants but needs to install them.

Mitigation Action	Source Water Contingency Plan
Description	Villages and cities can evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur. Also, identify and develop water sources for fire protection.
Hazard(s) Addressed	Drought, Grass/Wildfire
Estimated Cost	$5,000+
Funding	General Budget, CDBG, State Revolving Fund
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Smaller communities may utilize stormwater systems comprising of ditches, culverts, or drainage ponds to convey runoff. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossing can increase conveyance, reducing the potential for flooding. Replacement or modification of bridges and other flow restrictions may be necessary to provide greater capacity, maintain or improve structural integrity during flood events, and eliminate flooding threats and damages.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Funding	General Budget, CDBG
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	In Progress. The village has made street drainage improvements, install culvers, and made ditches to assist drainage. Additional work is still needed.

Community Profile

Village of Nenzel

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table NZL.1: Nenzel Local Planning Team

Name	Title	Jurisdiction
Richard Schmit	Board Member	Village of Nenzel
Kim Schmit	Board Member	Village of Nenzel
Tim Nollette	Board Chairman	Village of Nenzel
Kurt Busenitz	Board Member	Village of Nenzel

Location and Geography

The Village of Nenzel is in north-central Cherry County and covers an area of 200 acres. The community of Nenzel is not located near any waterbodies. The western and southern portions of the community do have concentrations of trees. The areas surrounding the community are predominately used for agriculture and ranching, which are the dominant economic drivers for Nenzel.

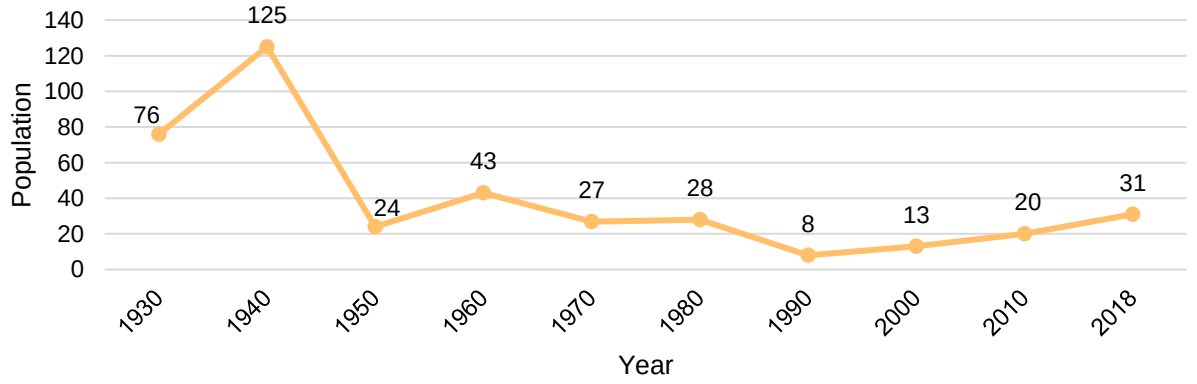
Transportation

Nenzel's major transportation corridors include State Highway S16F and US Highway 20. The most traveled route is Highway 20 with an average of 910 vehicles daily, 135 of which are trucks.[24] Crop fertilizers are transported south of Nenzel on Highway S16F. No large spills or accidents have occurred in the community. The village does not have any rail lines traveling through or near the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Demographics

The Village of Nenzel's population has been increasing since 1990 to about 31. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing population can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Nenzel's population accounted for 0.5% of Cherry County's population in 2018.[25]

Figure NZL.1: Population 1930 - 2018

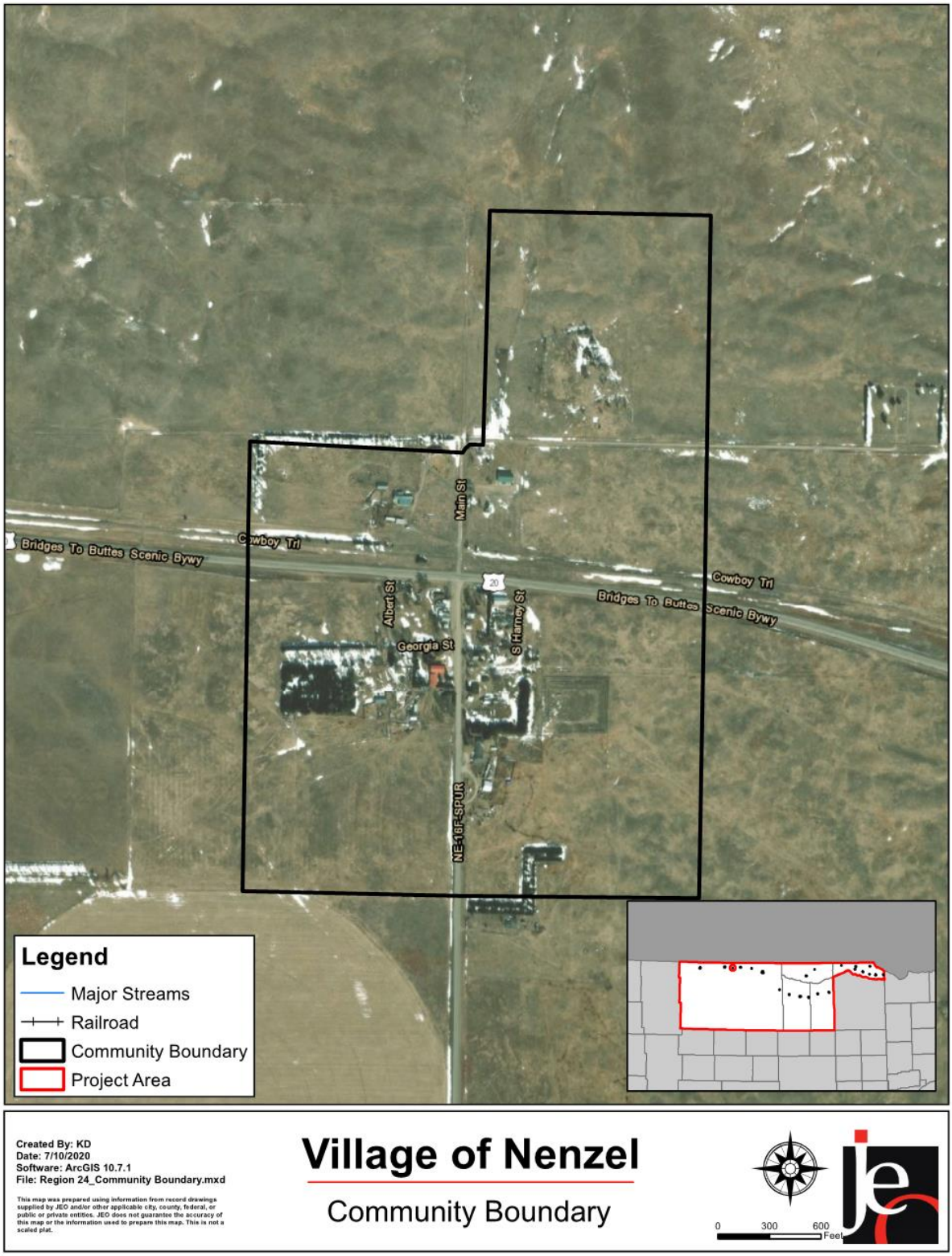


Source: U.S. Census Bureau

24 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

25 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. https://data.census.gov/cedsci/.

Figure NZL.2: Village of Nenzel



The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Nenzel's population was:

- **Older.** The median age of Nenzel was 58.9 years old in 2018, compared with Cherry County's median of 43.6 years. Nenzel's population grew older since 2010, when the median age was 31.5 years old.[25]
- **Less ethnically diverse**. Since 2010, Nenzel became less ethnically diverse. In 2010, 25% of Nenzel's population was non-white. By 2018, about 0% was non-white. During that time, the non-white population in the county declined from 10.5% in 2010 to 9.4% in 2018.[25]
- **More likely to be below the federal poverty line.** The poverty rate in the Village of Nenzel (12.9% of people living below the federal poverty line) was higher than the county's poverty rate (10.5%) in 2018.[26]

Employment and Economics

In comparison to Cherry County, Nenzel's economy had:

- **Similar mix of industries.** Nenzel's major employment sectors, accounting for 10% or more of employment each, were: agriculture, wholesale trade, and edcuation.[26]
- **Higher median household income.** Nenzel's median household income in 2018 ($73,889) was about $20,200 higher than the county ($53,684).[26]
- **Fewer long-distance commuters.** About 100% of workers in Nenzel commuted for fewer than 15 minutes, compared with about 72.4% of workers in Cherry County. About 0% of workers in Nenzel commuted 30 minutes or more to work, compared to about 14.9% of county workers.[27]

Major Employers

The local planning team indicated that there are no major employers in the community. Approximately 25% commute to other communities for employment. Others are self-employed or retired.

Housing

In comparison to Cherry County, Nenzel's housing stock was:

- **Older.** Nenzel had a larger share of housing built prior to 1970 than the county (92.9% compared to 60.2%).[28]
- **Less mobile and manufactured housing.** The Village of Nenzel had a smaller share of mobile and manufactured housing (0%) compared to the county (9.6%).[28]
- **Less renter-occupied**. About 28.6% of occupied housing units in Nenzel were renter-occupied compared with 39% of occupied housing in Cherry County.[28]
- **More occupied.** Approximately 0% of Nenzel's housing units were vacant compared to 20.7% of units in Cherry County.[28]

The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly

26 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.
27 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://data.census.gov/cedsci/.
28 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.

maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

Future Development Trends

Over the past five years, there have been no changes within the village. According to the 2018 American Community Survey estimates, Nenzel's population is growing. The local planning team indicated that in 2020 census the population will decline due to younger individuals leaving the community.

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table NZL.2: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in the Floodplain
14	$450,365	N/A	N/A	N/A

Source: County Assessor, 2018
N/A: The community does not have a mapped floodplain, so it is not known how many improvements are in the floodplain.

Community Lifelines

Critical Facilities

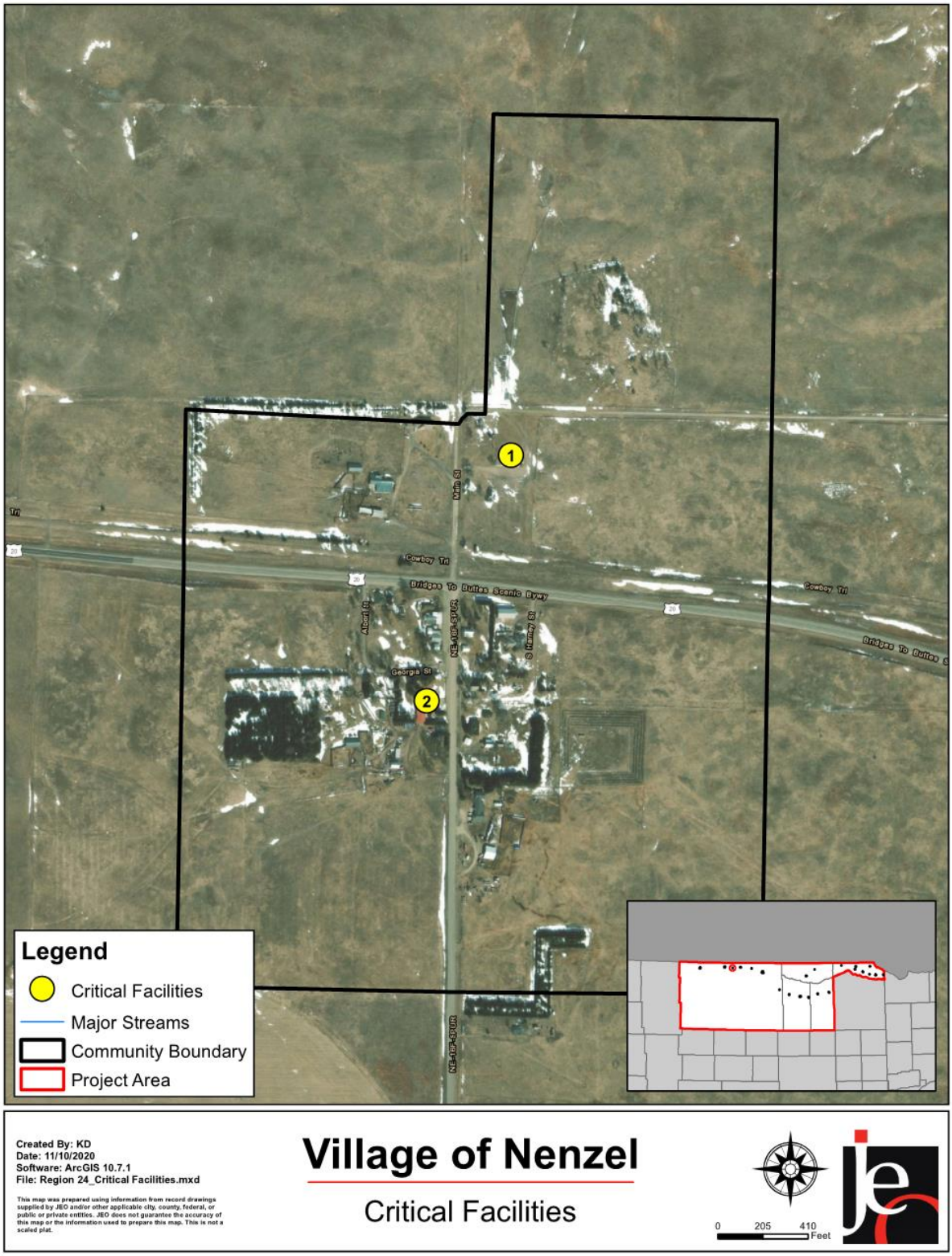
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table NZL.3: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Community Building	N	Y	N/A
2	St. Mary's Church	Y	N	N/A

N/A: The community does not have a mapped floodplain, so it is not known if the facilities are located in the floodplain.

Figure NZL.3: Critical Facilities



Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Flooding

Nenzel identified a concern during this planning process which had to do with poor drainage stemming from flash flooding events. All of Main Street to the east and west has poor stormwater drainage. Due to past flooding and poor drainage, many of the homes in Nenzel have experienced water damage and four individuals have had their water wells replaced. During the March 2019 flood event, several areas in the community had standing water, homes had water in the basements, and several water wells were damaged. Drainage ditches have been dug out by community members to help mitigate the impacts of flooding.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The Village of Nenzel is governed by a village board; other governmental offices and departments are listed below.

- Clerk/Treasurer
- Fire Board

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table NZL.4: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	No
	National Flood Insurance Program	No

Survey Components/Subcomponents		Yes/No
	Community Rating System	No
	Other (if any)	-
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Limited
Staff/expertise to implement projects	Limited
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Limited

Plan Integration

The Village of Nenzel does have any formal planning documents. They are an annex in the 2017 Cherry County Local Emergency Operations Plan (LEOP). The LEOP establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years. The village will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Mitigation Strategy

Nenzel's municipal funds are currently at a minimum and have stayed the same over recent years. Capital projects cannot be considered without assistance from grants or partners. The village has experience applying for grants but have not done so in the past five years. Nenzel will likely need assistance from the county, local NRD, or various state agencies.

Continued Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine which sirens should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	Tornadoes, Severe Thunderstorms, High Winds
Estimated Cost	$15,000+
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Nenzel Village Board, Fire Board, Region 24 Emergency Management Agency
Status	Not Started

Mitigation Action	Continuity Plan
Description	Develop continuity plans for critical community services.
Hazard(s) Addressed	All Hazards
Estimated Cost	$500 - $1,000
Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Emergency Communications
Description	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inner-operable communications.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, Region 24 Emergency Management Agency
Status	Not Started

Mitigation Action	Hazardous Tree Removal Program
Description	Identify and remove hazardous limbs and/or trees.
Hazard(s) Addressed	Severe Thunderstorms, Tornadoes, High Winds, Severe Winter Storms
Estimated Cost	$20,000
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Power, Service, Electrical, and Water Distribution Lines
Description	Communities can work with their local Public Power District or Electricity Department to identify vulnerable transmission and distribution lines and plan to bury lines underground, upgrade, or retrofit existing structures to be less vulnerable to storm events. Electrical utilities shall be required to use underground construction methods where possible for future installation of power lines. Rural Water Districts can work with their County or NRD to identify vulnerable distribution lines near river crossings or creek beds and plan to place lines underground to reduce vulnerability from storm events and erosion.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
Estimated Cost	$50,000 - $70,000
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Stabilize/Anchor Fertilizer, Fuel, and Propane Tanks
Description	Anchor fuel tanks to prevent movement. If left unanchored, tanks could present a major threat to property and safety in tornado or high wind event.
Hazard(s) Addressed	Tornadoes, High Winds
Estimated Cost	$1,000+
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Smaller communities may utilize stormwater systems comprising of ditches, culverts, or drainage ponds to convey runoff. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossing can increase conveyance, reducing the potential for flooding. Replacement or modification of bridges and other flow restrictions may be necessary to provide greater capacity, maintain or improve structural integrity during flood events, and eliminate flooding threats and damages.
Hazard(s) Addressed	Flooding
Estimated Cost	$10,000 - $100,000+
Funding	General Budget, CDBG
Timeline	5+ Years
Priority	Low
Lead Agency	Village Chairman
Status	In Progress. Some ditches have been cleaned out, but additional work is needed.

Community Profile

City of Valentine

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table VLT.1: Valentine Local Planning Team

Name	Title	Jurisdiction
Shane Siewert	City Manager / Floodplain Administrator	City of Valentine

Location and Geography

The City of Valentine is in northeastern Cherry County and covers an area of 2.31 square miles. Valentine is the largest community in the county and is the county seat. The community of Valentine lies on the northern edge of the Sandhills and along the Niobrara River Valley. The land use surrounding the community is mainly ranching with some agricultural crops. Hilly land with moderate to steep slopes and rounded ridge crests along with steep, pine covered canyons are the dominant land features. The community lies immediately north and east of the Niobrara River. The watershed flows generally from the west to the east. The city gets thousands of visitors each year due to the nearby Niobrara National Scenic River.

Transportation

Valentine's major transportation corridors include State Highway 97, 12 and US Highway 20, 83. The most traveled route is Highway 20 with an average of 8,500 vehicles daily, 490 of which are trucks.[29] Fuel and agricultural chemicals are transported along local routes. City and county administrative buildings and law enforcement are located directly next to Highway 83. The city does not have any rail lines traveling through or near the community, however, the Miller Field Airport is located on the south end of the city. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

Demographics

The City of Valentine's population has increased since 2010 to about 2,777 people. Increasing populations are associated with increased hazard mitigation and emergency planning requirements for development. Increasing populations can also contribute to increasing tax revenues, allowing communities to pursue additional mitigation projects. Valentine's population accounted for 48% of Cherry County's population in 2018.[30]

29 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

30 United States Census Bureau. 2018. "DP05: Demographic and Housing Estimates [database file]. https://data.census.gov/cedsci/.

Figure VLT.1: City of Valentine

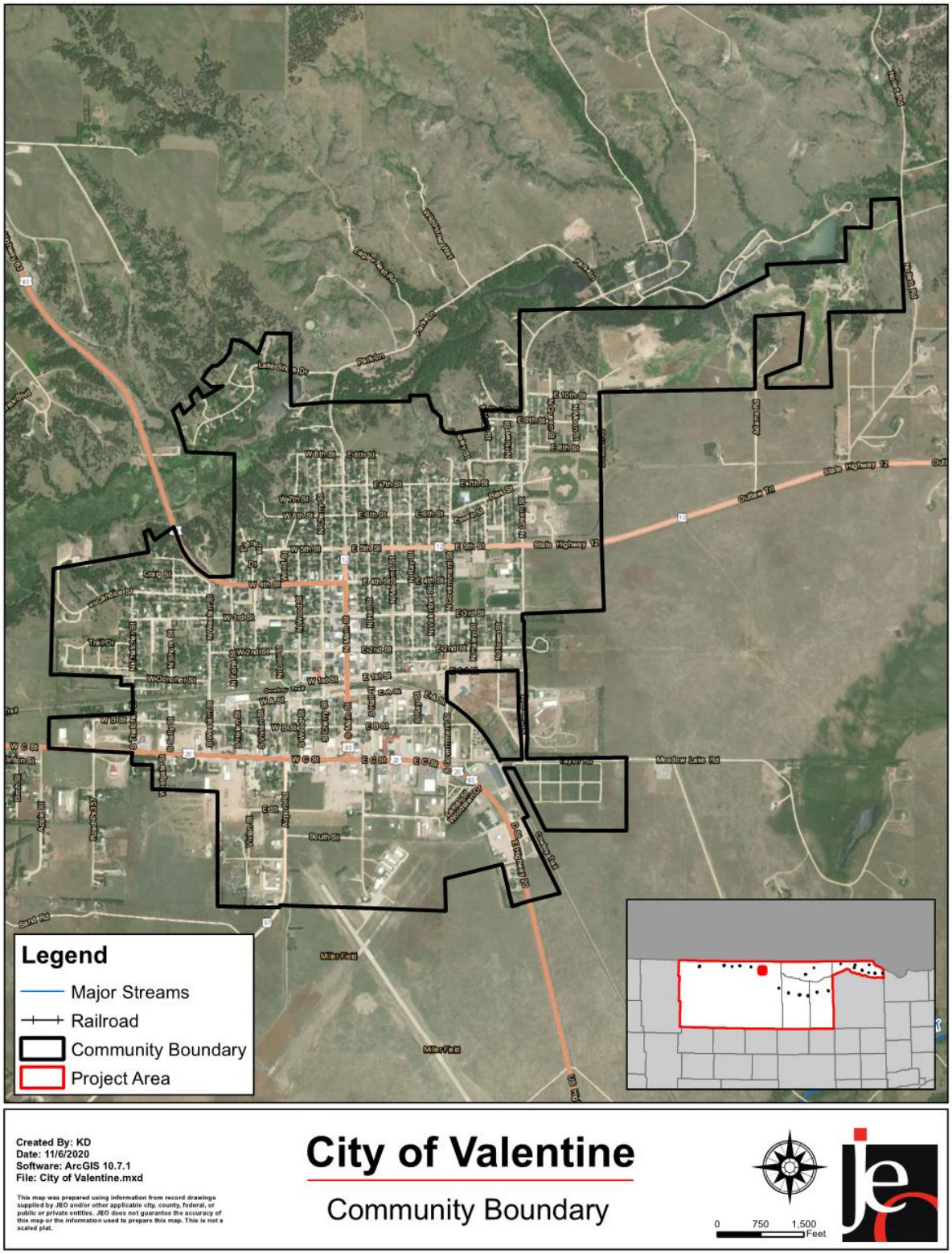
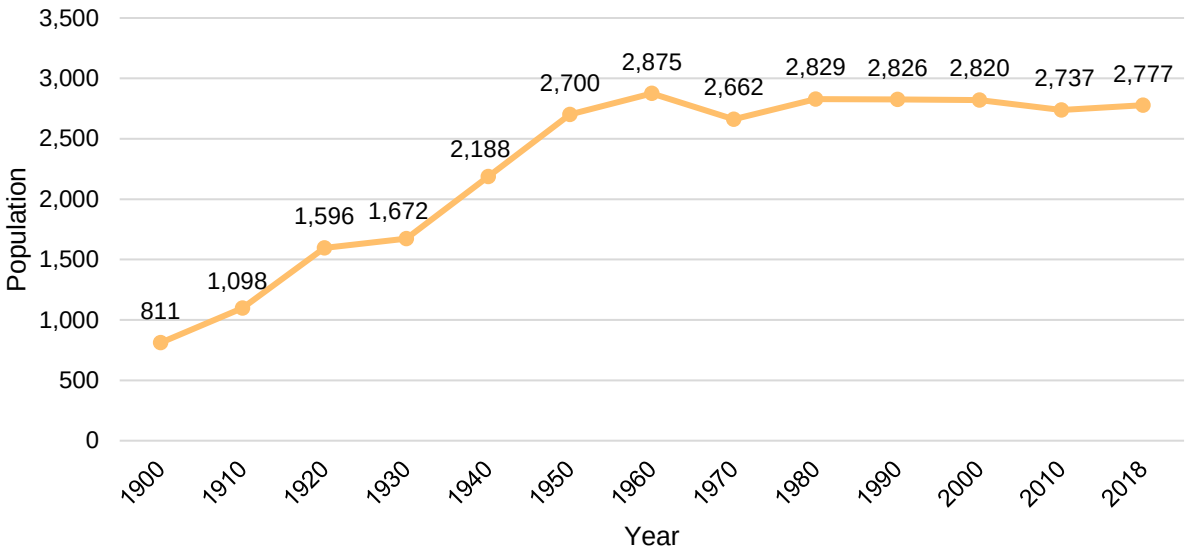


Figure VLT.2: Population 1900 - 2018



Source: U.S. Census Bureau

The young, elderly, minority, and low-income populations may be more vulnerable to certain hazards than other groups. In comparison to the county, Valentine's population was:

- **Younger.** The median age of Valentine was 38.3 years old in 2018, compared with Cherry County's median of 43.6 years. Valentine's population grew younger since 2010, when the median age was 46 years old.[30]
- **More ethnically diverse**. Since 2010, Valentine grew slightly more ethnically diverse. In 2010, 13.7% of Valentine's population was non-white. By 2018, about 13.8% was non-white. During that time, the non-white population in the county declined from 9.4% in 2010 to 8.6% in 2018.[30]
- **As likely to be below the federal poverty line.** The poverty rate in the City of Valentine (10.7% of people living below the federal poverty line) was slightly higher than the county's poverty rate (10.5%) in 2018.[31]

Employment and Economics

In comparison to Cherry County, Valentine's economy had:

- **Similar mix of industries.** Valentine's major employment sectors, accounting for 10% or more of employment each, were: manufacturing, retail trade, education, and entertainment.[31]
- **Lower median household income.** Valentine's median household income in 2018 ($44,219) was about $9,500 lower than the county ($53,684).[31]
- **Fewer long-distance commuters.** About 82.2% of workers in Valentine commuted for fewer than 15 minutes, compared with about 72.4% of workers in Cherry County. About 13.5% of workers in Valentine commuted 30 minutes or more to work, compared to about 14.9% of county workers.[32]

31 United States Census Bureau. 2018. "DP03: Selected Economic Characteristics." [database file]. https://data.census.gov/cedsci/.
32 United States Census Bureau. 2018. "S0802: Means of Transportation to Work by Selected Characteristics." [database file]. https://data.census.gov/cedsci/.

Major Employers

Major Employers in Valentine include Cherry County Hospital, Valentine Community Schools, and various retail trade businesses. Most residents work in the community but some work in agricultural jobs in rural areas of Cherry County. In addition, there are seasonal workers who work at the golf courses south of the city.

Housing

In comparison to Cherry County, Valentine's housing stock was:

- **Newer.** Valentine had a slightly smaller share of housing built prior to 1970 than the county (59.2% compared to 60.2%).[33]
- **Less mobile and manufactured housing.** The City of Valentine had a smaller share of mobile and manufactured housing (4.5%) compared to the county (9.6%).[33]
- **More renter-occupied**. About 40.9% of occupied housing units in Valentine were renter-occupied compared with 39% of occupied housing in Cherry County.[33]
- **More occupied.** Approximately 11.1% of Valentine's housing units were vacant compared to 20.7% of units in Cherry County.[33]

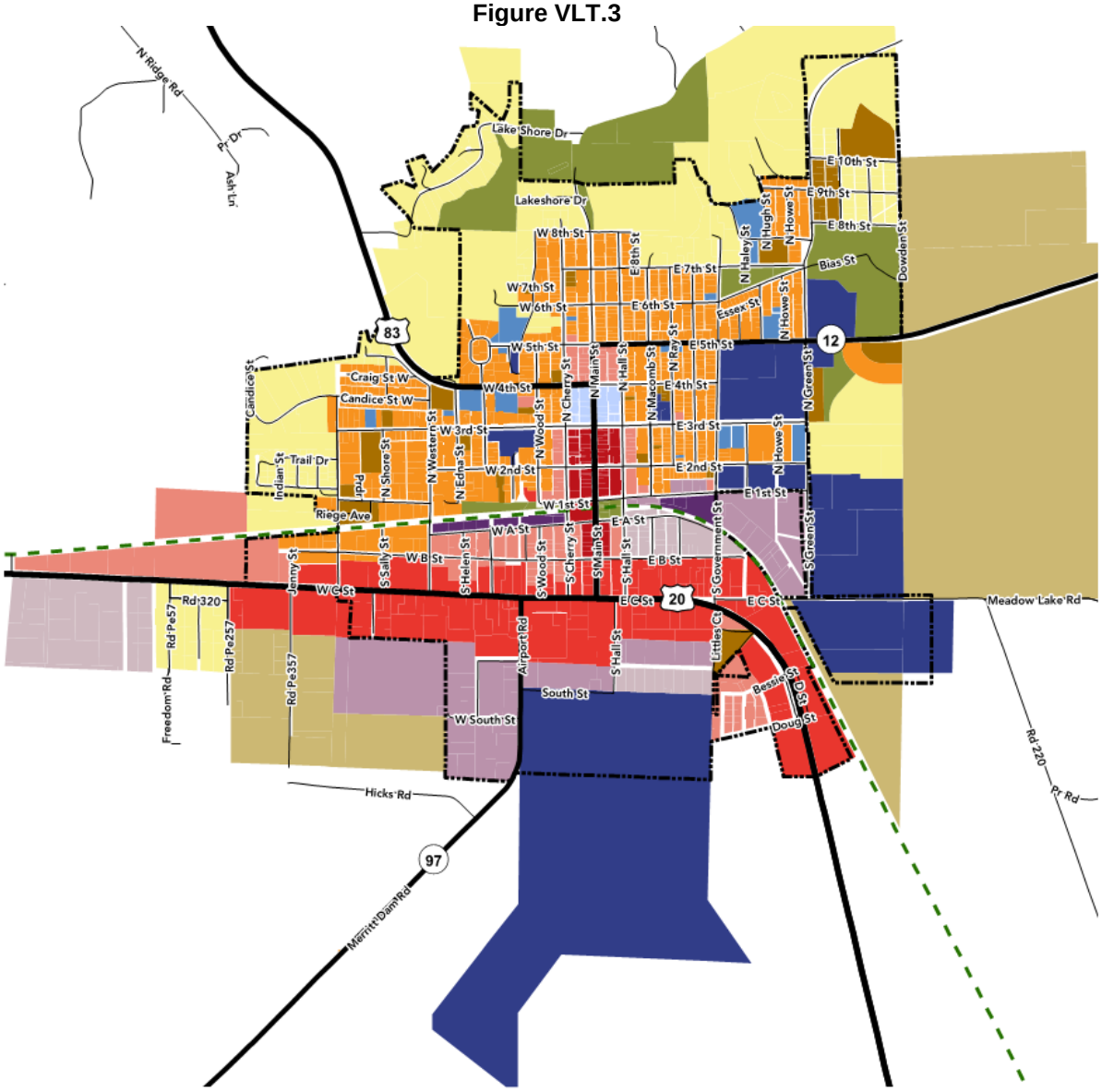
The age of housing may indicate which housing units were built prior to the development of state building codes. Vacant housing stock may also be more vulnerable to hazard events if it is poorly maintained. Unoccupied housing may also suggest that future development may be less likely to occur. Communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms if those homes are not anchored correctly. Mobile homes are concentrated in three locations: East B Street, Little's Trailer Court, and around Helen and B Streets. Renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. They are less likely than homeowners to have flood insurance, or to know their risks to flooding and other hazards.

Future Development Trends

According to the 2018 American Community Survey estimates, Valentine's population is slightly growing. The local planning team attributed this to retirees moving to the city, medical and educational personnel moving in, and the addition of seasonal workers. In the next five years, a second golf course will be built, Family Dollar is considering coming to the city, and a developer is considering building 15 units (six duplexes and one triplex) in the northeast part of the community. The Nebraska Department of Transportation is going to replace the city's main street which is also part of Nebraska Highway 83. This will likely disrupt traffic in the area during the project but will also allow the city to make improvements to the downtown area. The future land map for the community shows that most of the housing will be concentrated on the northern half of the city.

33 United States Census Bureau. 2018. "DP04: Selected Housing Characteristics." [database file]. https://data.census.gov/cedsci/.

Figure VLT.3



- High Density Residential
- Medium Density Residential
- Low Density Residental
- Urban Reserve
- Residential Mixed Use
- Commercial
- Downtown Commercial
- Park and Recreation
- Downtown Civic Core
- Churches
- Civic
- Enterprise Area
- Light Industrial
- General Industrial

Parcel Improvements and Valuation

The planning team acquired GIS parcel data from the County Assessor to analyze the location, number, and value of property improvements (e.g. buildings, garages, sheds etc.) at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table.

Table VLT.2: Parcel Improvements and Value in the Floodplain

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in the Floodplain
1,414	$155,555,089	N/A	N/A	N/A

Source: County Assessor, 2018
N/A: The community does not have a mapped floodplain, so it is not known how many improvements are in the floodplain.

Community Lifelines

Critical Facilities

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

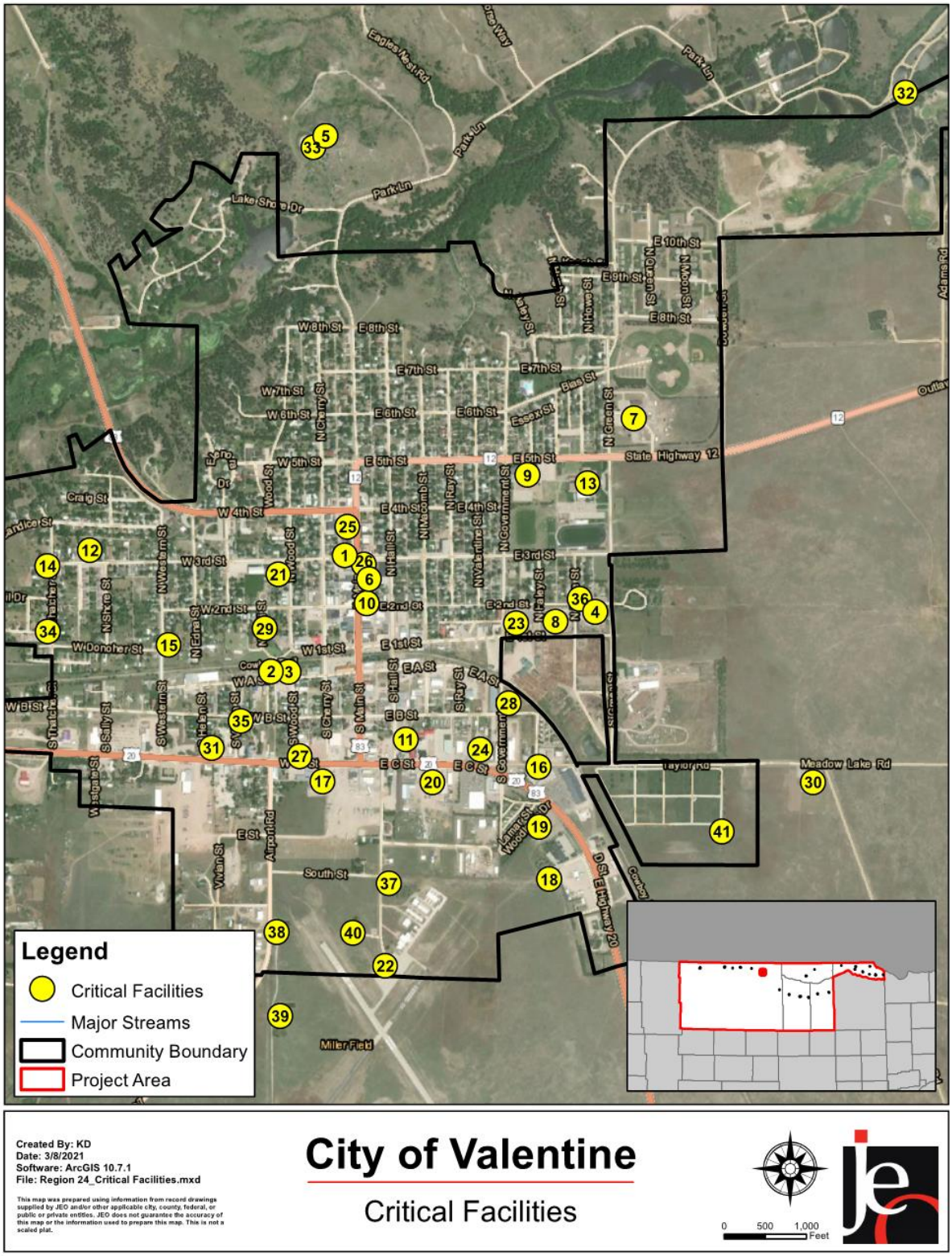
Table VLT.3: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	City Hall and Police Station	N	N	N/A
2	City Shop #1	N	N	N/A
3	City Shop #2	N	N	N/A
4	City Utilities	N	N	N/A
5	Communications Tower #1	N	N	N/A
6	Communications Tower #2	N	N	N/A
7	County Hospital	N	Y	N/A
8	County Road Department	N	N	N/A
9	Elementary School	Y	N	N/A
10	Event Center	Y	N	N/A
11	Fire Department	N	Y	N/A
12	Grace Lutheran School	N	N	N/A
13	High School	Y	N	N/A
14	Lift Station #1	N	N	N/A
15	Lift Station #2	N	N	N/A
16	Lift Station #3	N	N	N/A
17	Lift Station #4	N	N	N/A
18	Lift Station #5	N	N	N/A
19	Mid Plains Community College	N	N	N/A
20	Middle Niobrara NRD	N	N	N/A
21	Middle School	Y	N	N/A
22	Miller Field Airport	N	N	N/A
23	NDOR	N	N	N/A
24	NE DHHS	N	N	N/A
25	County Courthouse / Sheriff's Office	N	Y	N/A
26	Niobrara Council	N	N	N/A
27	NPS Office	N	N	N/A
28	Sub Station #1	N	N	N/A
29	Sub Station #2	N	N	N/A

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
30	Sub Station (NPPD)	N	N	N/A
31	USDA Service Center	N	N	N/A
32	Wastewater Treatment Plant	N	Y	N/A
33	Water Reservoir	N	N	N/A
34	Well #3	N	N	N/A
35	Well #4	N	N	N/A
36	Well #5	N	N	N/A
37	Well #6	N	N	N/A
38	Well #7	N	N	N/A
39	Well #8	N	N	N/A
40	Well #9	N	N	N/A
41	Well #10	N	Y	N/A

N/A: The community does not have a mapped floodplain, so it is not known how if any of the facilities are in the floodplain.

Figure VLT.4: Critical Facilities



Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the community. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Drought

Much of the city's economy is dependent on agriculture and ranching. As such, drought events can have a severe impact on the local economy and increase the fire risk. The city has seven water wells and a 1.8-million-gallon reservoir that is monitored electronically with a SCADA system. The water supply has been sufficient during past drought events. High nitrates are not an issue for Valentine as only one well periodically tests high for nitrates. Within the Water System's Emergency Response Plan, during a drought the city will monitor well levels and enforce restrictions if necessary.

Flooding

The southern portion of Valentine is most vulnerable to flooding. Main, Cherry, and Hall Streets can flood, forcing the city to reroute traffic. Buildings around those areas have also been damaged from flooding. During the March 2019 floods the city experienced flooding on the south side of the community and bank erosion along Minnechaduza Creek east of the Mill Pond Dam and under a walking bridge in City Park. The city is working with the Middle Niobrara NRD to reinforce the bank near the dam and has already replaced the walking bridge and reinforced the bank beneath it. Valentine is currently undertaking a large-scale stormwater and drainage project to alleviate the flash flooding that routinely floods its streets. Currently the first phase of the project is complete and consisted of laying storm sewer pipes from the city's detention pond to the Niobrara River. The city also partially completed a project to stop flooding at 1st and Government Streets. Valentine received a grant from the U.S. Department of Commerce and Economic Development Administration to complete a project that will increase the capacity of the pipes to move water away from areas on Main, Cherry, and Hall Streets. The city also completed a floodplain regulation and zoning project focused on development near Minnechaduza Creek. There are still four to five additional projects that the city is currently looking at for funding opportunities. Valentine participates in the NFIP and maintains strict development regulations to minimize the impacts of flooding.

Grass/Wildfires

Valentine was significantly impacted by wildfire events in 2006 and 2012, which destroyed much of the forest cover on the periphery of the city. The fire in 2006 also destroyed 10 homes, at least one of which was located within city limits. Valentine maintains a thick forest cover and urban wildland interface and remains quite vulnerable to wildfire events. Since 2006, the City of Valentine has worked with the Nebraska Forest Service to become the first Firewise Community in Nebraska. Together, Valentine and the Nebraska Forest Service hold annual wood chipping events to dispose of wildfire fuel debris. Additional thinning of the surrounding forests is still needed.

High Winds

Valentine expressed concern over strong high wind hazards and its threat to property. During the summer of 2014, high winds severely damaged two airport hangers within the city. The city has both mobile home parks and camping grounds within city limits, which may be more vulnerable to high wind events than other structures. The local planning team estimates that less than 10% of power lines are buried. There are several areas in the community that the city would like to bury power lines to protect against high winds and fires.

Severe Thunderstorms

Valentine identified severe thunderstorms as the hazard of most risk, especially in terms of its frequency and vulnerability to property. Valentine is also frequently impacted by heavy rain events, causing street flooding. Valentine indicated that is has backup generators at the wastewater treatment plant and at one of the city's seven wells. There is also one small portable generator in the electric department substations. Heartland Consumers Public Power provides wholesale electricity, while the City of Valentine provides it at retail value. Critical facilities do not have hail resistant building materials, but all city owned buildings are insured against hail damage. There are older trees throughout the city, but the city continues to trim trees around power lines.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. The City of Valentine is governed by a city council; other governmental offices and departments are listed below.

- Clerk/Treasurer
- City Manager
- Attorney
- Planning and Zoning
- Sewer/Water Department
- City Economic Development Director
- Electric Department
- Street Department
- Landfill
- Fire Department

Capability Assessment

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table VLT.4: Capability Assessment

Survey Components/Subcomponents		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No

Survey Components/Subcomponents		Yes/No
	Storm Water Management Plan	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	-
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
Fiscal Capability	Capital Improvement Plan/ 1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	Yes
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	Yes
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
Education & Outreach Capability	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	Yes

Survey Components/Subcomponents		Yes/No
	Tree City USA	No
	Other (if any)	-

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Moderate
Staff/expertise to implement projects	Moderate
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Moderate

Plan Integration

The City of Valentine has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan. Valentine has occasionally considered adopting building codes but have not done it due to the cost of enforcement. The building code adopted by the state applies by statue, but the city does not enforce it. No other planning documents were noted during this process. The city will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Cherry County Local Emergency Operations Plan (2017)

Valentine is an annex in the Cherry County Local Emergency Operations Plan (LEOP). The LEOP establishes standardized policies, plans, guidelines and procedures for emergency resources and governmental entities to respond and recover when a disaster event occurs. It contains information regarding, direction and control, communications and warning, damage assessment, emergency public information, evacuation, fire services, health and human services, law enforcement, mass care, protective shelters, and resource management. This plan is updated every five years.

Comprehensive Plan (2014/2020)

The comprehensive plan is designed to guide the future actions of the city. It directs housing and vulnerable populations away from major transportation routes and encourages infill development. There is currently no timeline to update the plan.

Zoning Ordinance (2016), Subdivision Regulations (2016) Floodplain Regulations (2009)

The city's zoning ordinance and subdivision regulations outline where and how development should occur in the future. The floodplain regulations out the requirements for structures being built in the floodplain. These documents include well setback requirements and include the ability for the city to implement water restrictions if necessary.

Mitigation Strategy

Valentine's municipal funds are sufficient to pursue new capital projects but do required borrowed or grant funds. Annual funds have stayed consistent over recent years a large portion of funds are already dedicated to water and sewer line upgrades, street upgrades, landfill upgrades, storm sewer improvements, and airport additions. The city will likely need assistance from grants to help pay for most of the mitigation actions listed below. The city has experience applying for grants and has been awarded several in the past five years.

Completed Mitigation Actions

Mitigation Action	Drainage Study/Stormwater Master Plan
Hazard(s) Addressed	Flooding
Status	The storm sewer evaluation was completed in 2010.

New Mitigation Actions

Mitigation Action	Variable Frequency Drives on Wells
Description	The city's wells are the backup water supply if something happens to the reservoir or it is empty. Variable frequency drives will allow the wells to operate without damaging the water infrastructure since the well could be controlled based on PSI.
Hazard(s) Addressed	All Hazards
Estimated Cost	$12,000 per well
Funding	Water Department Budget, General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Water Department
Status	In Progress. Variable frequency drives have been installed on three out of the seven wells.

Continued Mitigation Actions

Mitigation Action	Alert/Warning Sirens
Description	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or upgraded. Install new sirens where lacking and remote activation.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$15,000+
Funding	General Budget
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Council
Status	Not Started

Mitigation Action	Backup and Emergency Generators
Description	Provide a portable or stationary source of backup power to redundant power supplies, city wells, lift stations, and other critical facilities and shelters. Valentine would like generators at city hall, lift stations, and wells.
Hazard(s) Addressed	All Hazards
Estimated Cost	$15,000 - $30,000+ per generator
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	City Council, Region 24 Emergency Management Agency
Status	Not started

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing emergency response equipment. This could include fire equipment, ATVs, water tanks/truck, snow removal equipment, pumps, etc. This would also include developing backup systems for emergency vehicles, identifying and training additional personnel for emergency response, or continuing educational opportunities for current personnel.
Hazard(s) Addressed	All Hazards
Estimated Cost	Varies
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	City Manager, Fire Department
Status	In Progress. The city is in the process of purchasing a new pumper truck for the fire department.

Mitigation Action	Continuity Plan
Description	Develop continuity plans for critical community services.
Hazard(s) Addressed	All Hazards
Estimated Cost	$500 - $1,000
Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	City Council, Region 24 Emergency Management Director
Status	Not Started. The city is automating as much as possible and cross training employees.

Mitigation Action	Emergency Communications
Description	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies. Establish inner-operable communications.
Hazard(s) Addressed	All Hazards
Estimated Cost	$10,000+
Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	City Council, Region 24 Emergency Management Agency
Status	Not Started.

Mitigation Action	Expand Water Storage Capacity / Emergency Water Supplies / Dry Hydrants
Description	Evaluate the need to expand water storage capacity through a new water tower, standpipe, etc., to provide a safe water supply for the community and additional water for fire protection. Establish emergency water supplies such as dry hydrants and individual or community cisterns for defending structures from wildland fires.
Hazard(s) Addressed	Drought, Extreme Heat, Grass/Wildfires
Estimated Cost	Varies
Funding	General Budget
Timeline	2-5 Years
Priority	Low
Lead Agency	Water Department
Status	Not Started

Mitigation Action	Hazardous Fuels Reduction
Description	The Nebraska Forest Service Forest Fuels Reduction Program creates strategically located corridors of thinned forests across the landscape, reduces fire intensity, improves fire suppression effectiveness, increases firefighter safety, and better protects lives and property.
Hazard(s) Addressed	Grass/Wildfire
Estimated Cost	Varies
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Nebraska Forest Service, City Manager
Status	Not Started. The last thinning project occurred in 2013.

Mitigation Action	Hazardous Tree Removal
Description	Identify and remove hazardous limbs and/or trees.
Hazard(s) Addressed	Severe Thunderstorms, Tornadoes, High Winds, Severe Winter Storms
Estimated Cost	$20,000
Funding	General Budget
Timeline	5+ Years
Priority	Medium
Lead Agency	Parks Department, Electrical Department
Status	In Progress. Tree removal occurs annually but additional trees/limbs still need to be removed.

Mitigation Action	Improve Snow/Ice Removal Program / Snow Fence
Description	Revise and improve the snow and ice removal program for streets. Revisions should address situations such as plowing snow, ice removal, parking during snow and ice removal, and removal of associated storm debris. This would include updating the emergency routes, acquiring equipment that is needed, paving routes, and ordinances as necessary. Consider purchase of snow fence at critical areas and installation of living snow fence.
Hazard(s) Addressed	Severe Winter Storms
Estimated Cost	$20,000+
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	Street Department
Status	Not Started

Mitigation Action	Power, Service, Electrical, and Water Distribution Lines
Description	Valentine can identify vulnerable transmission and distribution lines and plan to bury lines underground, upgrade, or retrofit existing structures to be less vulnerable to storm events. Electrical utilities shall be required to use underground construction methods where possible for future installation of power lines. Rural Water Districts can work with their County or NRD to identify vulnerable distribution lines near river crossings or creek beds and plan to place lines underground to reduce vulnerability from storm events and erosion.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
Estimated Cost	$1,00,000+
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	City Council
Status	Not Started

Mitigation Action	Promote Higher Codes
Description	Promote the use of higher codes and standards, such as the Fortified for Safer Living Standard, in order to provide greater protection for any new construction or building retrofits.
Hazard(s) Addressed	All Hazards
Estimated Cost	Staff Time
Funding	Staff Time
Timeline	5+ Years
Priority	Low
Lead Agency	Planning and Zoning Departments
Status	Not Started

Mitigation Action	Safe Rooms and Storm Shelters
Description	Assess, design and construct fully supplied safe rooms in highly vulnerable urban and rural areas such as mobile home parks, campgrounds, schools, and other such areas throughout the planning area. Assess the adequacy of current public buildings to be used as safe rooms. Construct safe rooms in areas of greatest need, either as new construction or retrofitting.
Hazard(s) Addressed	Tornadoes, High Winds, Severe Thunderstorms
Estimated Cost	$200 - $300 per square foot
Funding	General Budget
Timeline	5+ Years
Priority	Low
Lead Agency	City Council, Region 24 Emergency Management Agency
Status	Not Started

Mitigation Action	Source Water Contingency Plan
Description	Villages and cities can evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur. Also, identify and develop water sources for fire protection.
Hazard(s) Addressed	Drought, Grass/Wildfire
Estimated Cost	$5,000+
Funding	General Budget, State Revolving Fund, CDBG
Timeline	5+ Years
Priority	Medium
Lead Agency	City Council, Water Department
Status	Not Started

Mitigation Action	Stormwater System and Drainage Improvements
Description	Undersized systems can contribute to localized flooding. Stormwater system improvements may include pipe upsizing and additional inlets. Smaller communities may utilize stormwater systems comprising of ditches, culverts, or drainage ponds to convey runoff. Drainage improvements may include ditch upsizing, ditch cleanout and culvert improvements. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements. Bridges typically serve as flow restrictions along streams and rivers. Cleanout and reshaping of channel segments at bridge crossing can increase conveyance, reducing the potential for flooding. Replacement or modification of bridges and other flow restrictions may be necessary to provide greater capacity, maintain or improve structural integrity during flood events, and eliminate flooding threats and damages.
Hazard(s) Addressed	Flooding
Estimated Cost	$4,000,000+
Funding	General Budget, CDBG
Timeline	2-5 Years
Priority	Medium
Lead Agency	City Council
Status	In Progress. The first phase of the project has been completed along with other smaller projects. Four or five additional projects are still needing to be done.

Removed Mitigation Actions

Mitigation Action	Business Continuity Plans
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and would like to focus on other actions.

Mitigation Action	Facilities for Vulnerable Populations
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and it would be better done by a different entity or organization.

Mitigation Action	Maintain Good Standing with National Flood Insurance Program
Hazard(s) Addressed	Flooding
Reason for Removal	While the city will continue to participate and maintain compliance in the NFIP, this project can be removed as it is considered an ongoing effort.

Mitigation Action	Mitigation Education
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and it would be better done by the Region 24 Emergency Management Agency.

Mitigation Action	Promote First Aid
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and would like to focus on other actions.

Mitigation Action	Vulnerable Population Support Database
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and it would be better done by a different entity or organization.

Mitigation Action	Weather Radios
Hazard(s) Addressed	All Hazards
Reason for Removal	The city is not working on this and would like to focus on other actions.

Fire District Profile

Valentine Rural Fire District

Region 24 Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan Update

2021

Local Planning Team

Table VFD.1: Valentine Rural Fire District Local Planning Team

Name	Title	Jurisdiction
Terry Engles	Fire Chief	Valentine Rural Fire District
Tom Davis	-	Valentine Rural Fire District

Location and Geography

The Valentine Rural Fire District covers 576,000 acres in the northeastern portion of Cherry County, including the City of Valentine and the Village of Crookston. The fire district mainly addresses grass and wildfire in the region's rural areas. Specific areas of concern include the Wildland Urban Interface around Valentine, Niobrara Canyon, Snake River Canyon, Minnechaduza Creek Canyon, and Government Canyon.

Transportation

US Highways 20 and 83 and Nebraska State Highways 12 and 97 all travel through the Valentine Rural Fire District. The most traveled route is US Highway 20 with an average of 5,395 vehicles daily, 375 of which are trucks.[34] There are no rail lines in the district but there is one airport located near Valentine. The local planning team does not have concerns regarding transportation routes as no large accidents or chemical spills have occurred in the past and flooding has not affected major routes. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors and areas more at risk of transportation incidents. The local planning team indicated that some canyon areas may be difficult to evacuate as there is only one way in and one way out.

Demographics

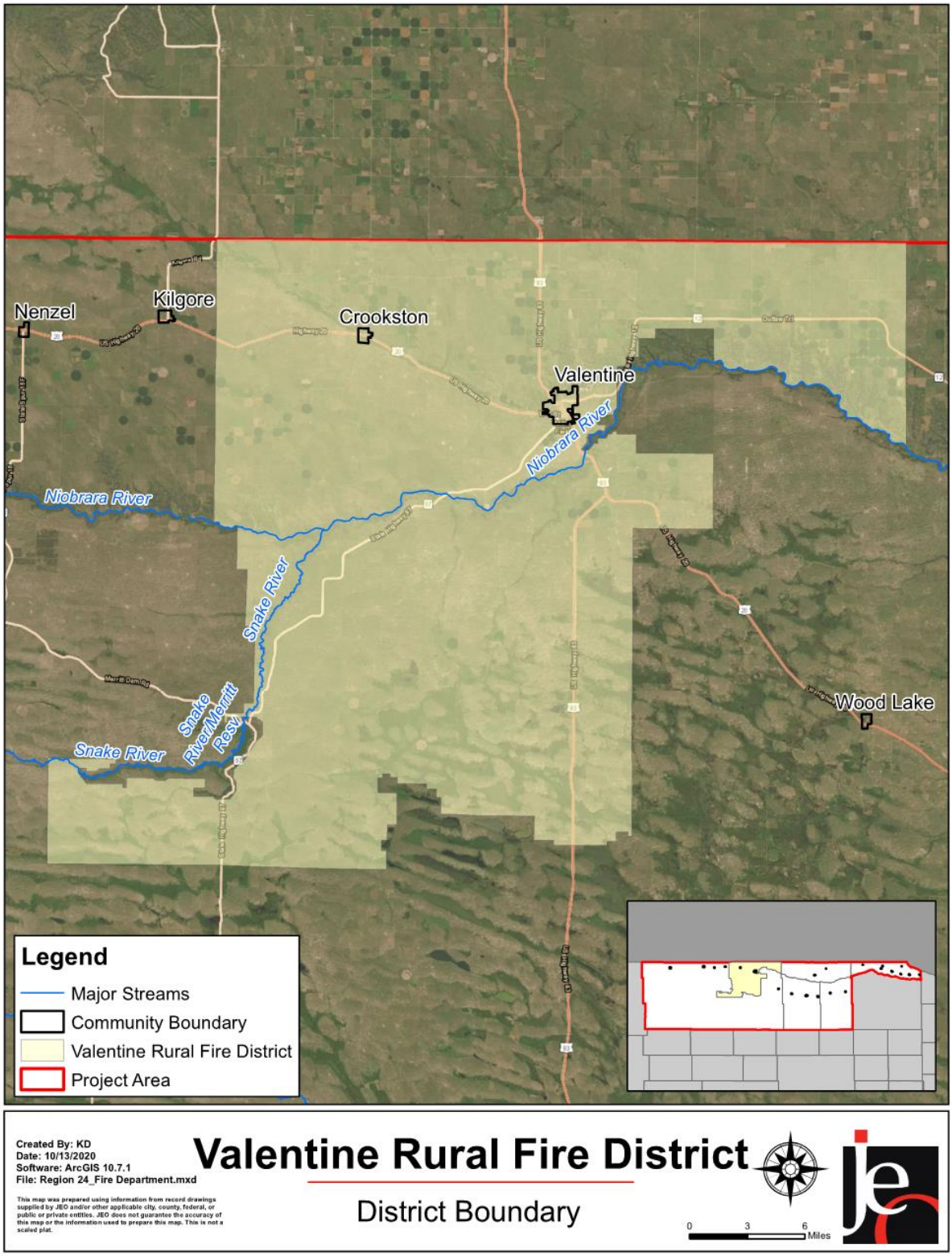
See the City of Valentine, Village of Crookston, and the Cherry County profiles for regional demographic information. The district serves approximately 4,000 people.

Future Development Trends

Over the past five years, the district has purchased new fire trucks and a pumper truck. There are no new planned developments or stations in the next five years. However, the district is making a larger effort to educate residents about the benefits of clearing areas around houses.

34 Nebraska Department of Roads. 2018. "Interactive Statewide Traffic Counts Map." [map]. https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34.

Figure VFD.1: Valentine Rural Fire District



Community Lifelines

Chemical Storage Fixed Sites

Information on chemical storage sites can be found in the Cherry County profile. In the event of a hazardous spill, all response personnel in the district are trained at least to the Hazmat Awareness Level.

Critical Facilities

Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during the original planning process and updated by the local planning team as part of this plan update. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table VFD.2: Critical Facilities

CF Number	Name	Community Shelter (Y/N)	Generator (Y/N)	Floodplain (Y/N)
1	Valentine Fire Station	N	Y	N/A
2	Outpost	N	N	N/A

N/A: The county does not have a mapped floodplain, so it is not known if the facilities are located in a flood hazard area.

Historical Occurrences

See the Cherry County profile for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

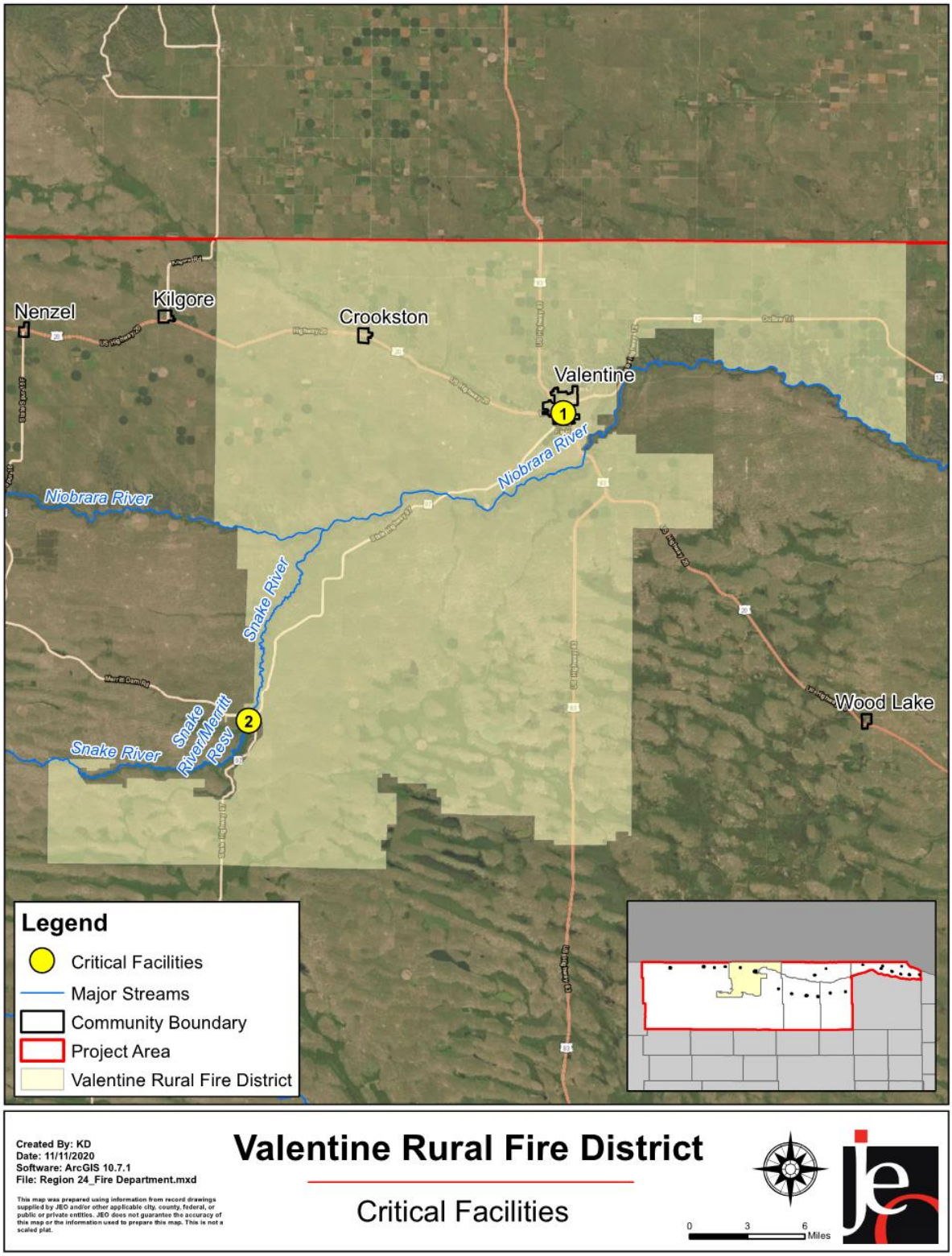
Hazard Prioritization

The hazards discussed in detail below were either identified in the previous HMP and determined to still be of top concern or were selected by the local planning team from the regional list as relevant hazards for the district. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the district's capabilities. For more information regarding regional hazards, please see *Section Four: Risk Assessment*.

Drought

The primary concern related to drought is that it will dry out vegetation causing additional grass/wildfires. Water used to fight fires comes primarily from tankers. Windmill tanks can be used if needed and are located throughout the district. However, they are not a preferred source due to debris in the tanks. The district is currently working with area ranchers to make sure windmill tanks are filled, even when no livestock is present and to get additional fire hookup on irrigation systems.

Figure VFD.2: Critical Facilities



Grass/Wildfire

Past large grass/wildfire events include the Crookston Fire in October 2012 and the Region 24 Complex Fire in July 2012. The Crookston Fire covered approximately 15,000 acres and the Region 24 Complex Fire covered approximately 75,000 acres. It caused damage to structures, livestock, fences, and power lines. Areas most at risk from fire include the canyon areas adjacent to the Niobrara River, Snake River, and Minnechaduza Creek. These locations are also difficult to evacuate as many only have one way in and one way out. Equipment to respond to grass/wildfires includes: one ladle truck, three pumpers, one heavy rescue truck, four tankers, eight brush trucks, one rope rescue trailer, one light trailer, two suburban support vehicles, and one mini 6x6 with a pumping unit in a trailer. In addition, the region's Single Engine Tanker can be used for aerial support. For public outreach and education, the district does Fire Prevention Week at the elementary schools. The district would like to upgrade and add fire equipment. Younger personnel would also be helpful in canyon fires.

High Winds

Valentine Rural Fire District is concerned with high winds because it can cause fires to spread quickly, limits the ability to backfire, and at certain windspeeds, the Single Engine Tanker cannot be used. During high winds additional personnel and equipment is needed, which can be difficult as many are volunteers. The district is currently recruiting additional front-line volunteers.

Staffing

The Valentine Rural Fire District is supervised by a fire chief and a five-member rural board of directors who will oversee the implementation of hazard mitigation projects. The district typically has around 45 personnel. Officers and specific positions are listed below.

- Assistant Fire Chief
- Treasurer
- Secretary
- Captains (3)
- Safety Officers (2)
- Training Officer

Capability Assessment

Due to the unique structure of fire districts, the typical capability assessment table was not used. The following table summarizes the district's overall capabilities. The Valentine Rural Fire District will continue to utilize existing relationships with local, county, state, and federal agencies in the implementation of mitigation projects.

Table VFD.3: Overall Capability

Overall Capability	Limited/Moderate/High
Financial resources to implement mitigation projects	Moderate
Staff/expertise to implement projects	Moderate
Public support to implement projects	Moderate
Time to devote to hazard mitigation	Limited

Plan Integration

The Valentine Rural Fire District has bylaws and standard operating procedures (SOPs) that state how the district will respond to a variety of different calls. Actions in the SOPs are stated generally because each call can be different and will need to be adjusted on the scene. Both the SOPs and bylaws were last updated in August 2013. Valentine Rural Fire District is also a part of the 2020 North Central Nebraska Community Wildfire Protection Plan (CWPP). The purpose of the CWPP is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. This document is updated every five years and has been integrated with the current hazard mitigation plan. No other planning documents were identified during this process. The district will seek out and evaluate any opportunities to integrate the results of the current HMP into other planning mechanisms and updates.

Mitigation Strategy

District funds are somewhat limited, and a large portion of funds are already dedicated to purchasing a new pumper truck and a new tanker. Funds have stayed the same over recent years. For larger mitigation projects the Valentine Rural Fire District will likely rely on grants to help pay for part of the cost. The district has not applied for grants in the past.

New Mitigation Actions

Mitigation Action	Civil Service Improvements
Description	Improve emergency rescue and response equipment and facilities by providing additional or updating existing equipment. For example: backup systems for emergency vehicles, training additional personnel, upgrading radio systems, etc. A new 3,000-gallon tanker and picture taking drone with infrared camera is needed for the fire district.
Hazard(s) Addressed	Grass/Wildfires
Estimated Cost	$226,000
Local Funding	General Budget
Timeline	2-5 Years
Priority	High
Lead Agency	Fire Chief, Fire Board
Status	Not Started