Contents

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COUNTY PROFILE

CUSTER COUNTY

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

Table CSR.1: Custer County Local Planning Team

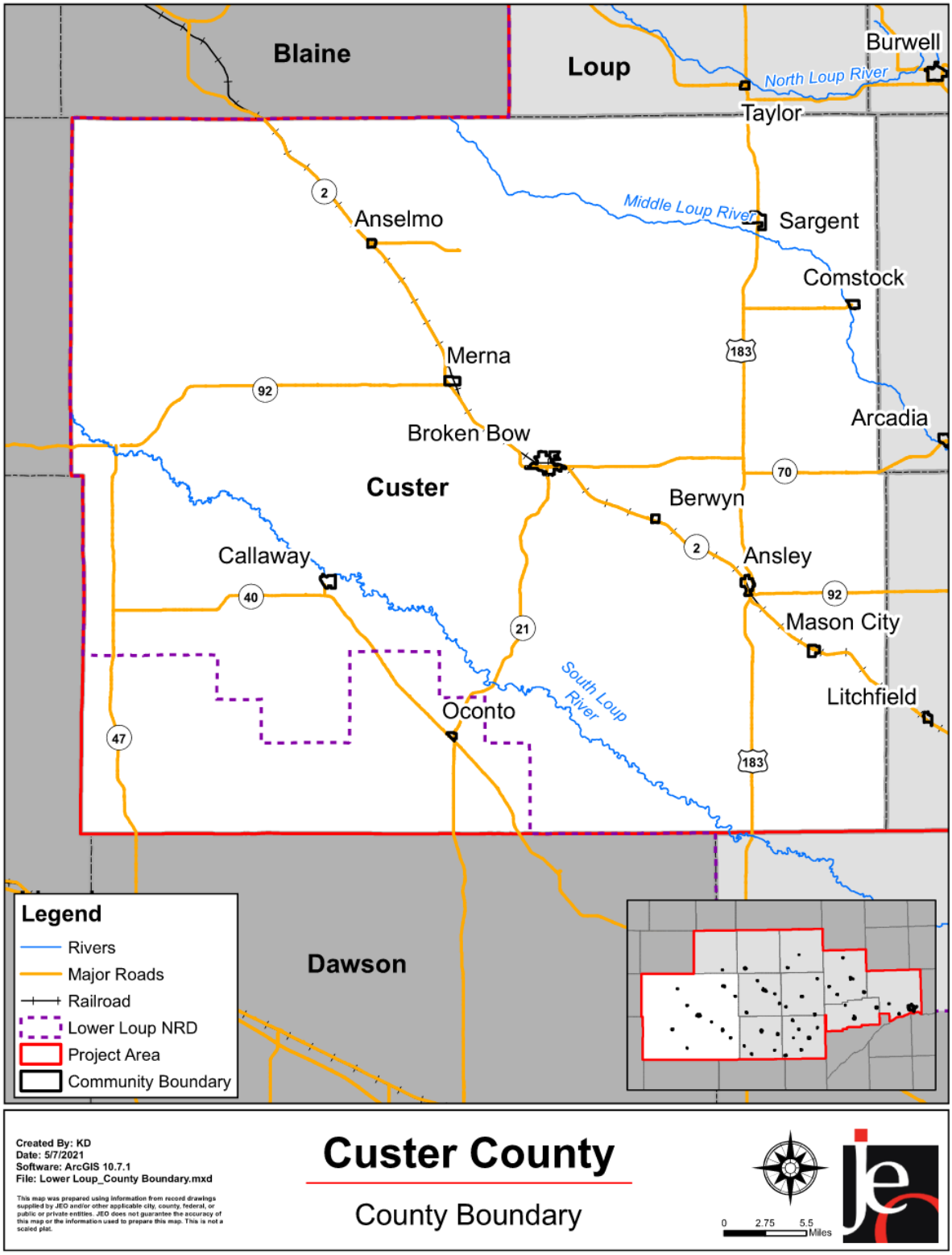
NAME	TITLE	JURISDICTION
MARK D. REMPE	Emergency Manager	Custer County

Location, Geography, & Climate

Custer County is located in central Nebraska and is bordered by Sherman County, Valley County, Logan County, and Lincoln County.

The total area of Custer County is 2,576 square miles. Major waterways within the county include the South Loup River in the west and south, and the Middle Loup River in the northeast. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Custer County lies within the dissected plains and sand hills topographic region, with the vast majority of the county's land characterized by agricultural fields and grasslands.

Figure CSR.1: Custer County Jurisdictional Boundary



Climate

The average high temperature in Custer County for the month of July is 86.1 degrees and the average low temperature for the month of January is 11.5 degrees. On average, Custer County receives over 23 inches of rain and 29 inches of snowfall per year. The following table compares these climate indicators with those of the entire 11-county planning area and the 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 CSR.2: Custer County Climate Normals

	CUSTER COUNTY	PLANNING AREA	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP	86.1°F	62.7°F	87.4°F
JANUARY NORMAL LOW TEMP	11.5°F	12.1°F	13.9°F
ANNUAL NORMAL PRECIPITATION	23.0 inches	26.36 inches	24.0 inches
ANNUAL NORMAL SNOWFALL	29.5 inches	28.6 inches	28.2 inches

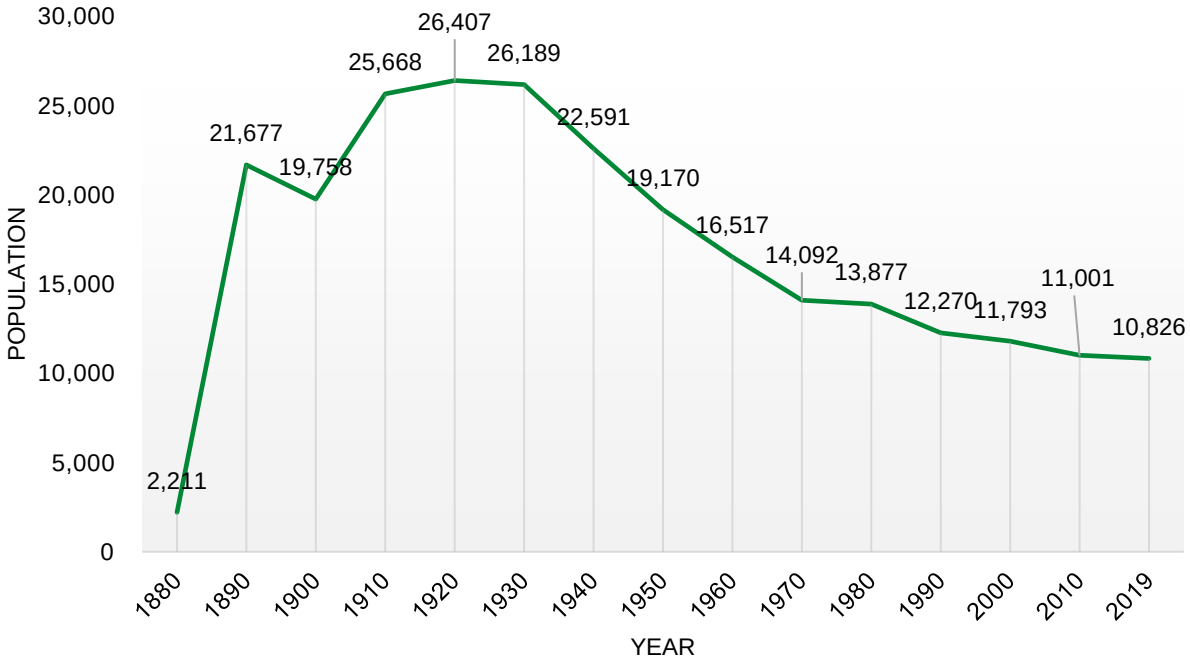
Source: NCEI 1991-2020 Climate Normals[1]
Precipitation includes all rain and melted snow and ice.

Demographics

The following figure displays the historical population trend from 1880 to 2019. This figure indicates that the population of Custer County has been declining since 1930. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population will be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the county which could make implementation of mitigation actions more fiscally challenging.

[1] NOAA National Centers for Environmental Information. May 2021. "Data Tools: 1991-2020 Normals." [datafile]. https://www.ncdc.noaa.gov/cdo-web/datatools/normals.

Figure CSR.2: Custer County Population 1880-2019



Source: U.S. Census Bureau[2]

The following table indicates the county has a slightly lower percentage of people under the age of 5 than the State of Nebraska. The following table indicates the State of Nebraska has a higher percentage between the ages of 5 and 64 than Custer County. Custer County has a higher median age and higher percentage of people over the age of 65. This is relevant to hazard mitigation insofar as 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 CSR.3: Population by Age

AGE	CUSTER COUNTY	STATE OF NEBRASKA
<5	6.3%	6.9%
5-64	71.7%	78.1%
>64	21.9%	15.0%
MEDIAN AGE	43.1	36.4

Source: U.S. Census Bureau[3]

The following table indicates that the county's median household income is lower than the state; however, per capita income is slightly greater. Median home values are notably lower, while rent is slightly lower compared to the state. These economic indicators are relevant to hazard mitigation because they show the relative economic strength compared to the state as a whole. Areas with economic indicators which are relatively low may influence a community's level of resiliency during hazardous events.

2 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
3 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]

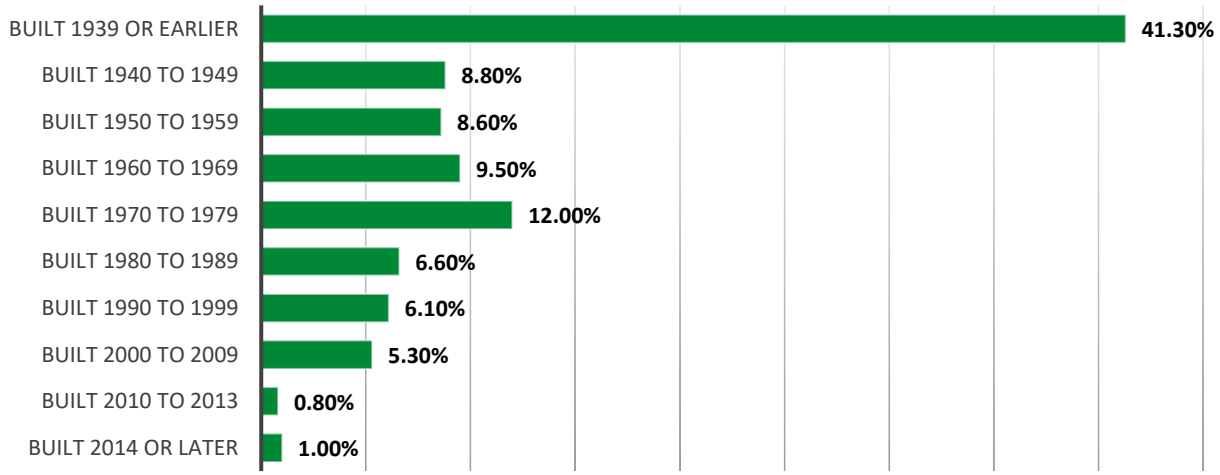
Table CSR.4: Housing and Income

AGE	CUSTER COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	$52,184	$59,116
PER CAPITA INCOME	$33,561	$31,101
MEDIAN HOME VALUE	$108,100	$147,800
MEDIAN RENT	$666	$805

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

The following figure indicates that the majority of the housing in Custer County was built prior to 1940. According to the United States Census Bureau 2019 ACS 5-year estimates, the county has 5,655 housing units; with 86.0 percent of those units occupied. Approximately 3.3 percent of the county's housing is classified as mobile homes. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code adopted in 2010. The current edition of the IBC was updated in 2018. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Figure CSR.3: Housing Units by Age



Source: U.S. Census Bureau[6]

Table CSR.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS					OCCUPIED HOUSING UNITS			
	Occupied		Vacant			Owner		Renter	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
CUSTER COUNTY	4,862	86.0%	793	14.0%		3,382	69.6%	1,480	30.4%
NEBRASKA	754,063	90.8%	76,686	9.2%		498,567	67.1%	255,496	33.9%

Source: U.S. Census Bureau[7]

4 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]
5 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
6 United States Census Bureau. "2019 American Fact Finder: SP04: Selected Housing Characteristics." [database file]
7 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Employment Factors

According to 2018 Business Patterns Census Data, Custer County had 375 business establishments. The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars. Communities which have a diverse economic makeup may be more resilient following a hazardous event, especially if certain industries are more impacted than others.

Table CSR.6: Businesses in Custer County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2014)	380	2,934	$93,748
TOTAL FOR ALL SECTORS (2016)	387	2,954	$100,159
TOTAL FOR ALL SECTORS (2018)	375	3,125	$112,015

Source: U.S. Census Bureau[8,9]

Agriculture is also important to the economic fabric of Custer County, and the state of Nebraska as a whole. Custer County's 1,108 farms cover 1,505,139 acres of land. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table CSR.7: Custer County Agricultural Inventory

	2012 CENSUS	2017 CENSUS	PERCENT CHANGE
NUMBER OF FARMS WITH HARVESTED CROPLAND	1,352	1,108	-18.05%
ACRES OF HARVESTED CROPLAND	1,503,594	1,505,139	0.10%

Source: USDA Census of Agriculture[10,11]

Governance

A community's governance structure impacts its capability to implement mitigation actions. The county is governed by a seven-member board of supervisors. The county also has the following offices or departments: assessor, attorney, clerk, county court, district court, emergency management, planning and zoning, register of deeds, roads, sheriff, treasurer, veterans office, and weed control. Additionally, the local planning team stated that local police and fire departments may be able to assist in implementing hazard mitigation related activities.

8 2016 County Business Patterns and 2016 Nonemployer Statistics. https://www.census.gov/programs-surveys/cbp/technical-documentation/methodology.html and https://www.census.gov/programs-surveys/nonemployer-statistics/technical-documentation/methodology.html.
9 2018 County Business Patterns and 2018 Nonemployer Statistics. https://www.census.gov/programs-surveys/cbp/technical-documentation/methodology.html and https://www.census.gov/programs-surveys/nonemployer-statistics/technical-documentation/methodology.html.
10 United States Department of Agriculture, National Agricultural Statistics Server. 2014. "2012 Census of Agriculture – County Data."
11 United States Department of Agriculture, National Agricultural Statistics Server. 2019. "2017 Census of Agriculture – County Data."

Capabilities

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

Table CSR.8: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	Yes
	Local Emergency Operational Plan	Yes
	Floodplain Ordinance	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Building Codes	No
	Floodplain Management Plan	Yes
	Storm Water Management Plan	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	Yes
	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	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
EDUCATION AND OUTREACH	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.	Yes

SURVEY COMPONENTS		YES/NO
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table CSR.9: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Moderate	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	High	High
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	High	High
TIME TO DEVOTE TO HAZARD MITIGATION	Moderate	Moderate

Plan Integration

The County has several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

The county's budget is primarily limited to maintaining current facilities and systems. The county is currently working to budget to adjust for new ventures as well as using grant funds if there are any available. Road and building maintenance use up a large amount of the available funds. Municipal funds have increased in recent years which have also kept up with local expenses.

Comprehensive Plan

Custer County's Comprehensive Plan is anticipated to be updated once Zoning Regulation updates are completed. Updates to the plan may include hazard mitigation in the following ways: directing development away from the floodplain, directs development away from chemical fixed sites, encourages infill development, encourages elevation of structures located in the floodplain, and encourages the preservation of open space in hazard-prone areas.

Ordinances and Regulations

The Custer County Zoning Regulations were under revision as of January 2022. Custer County's zoning regulations specifically mention reducing the risk to fire and flooding. The regulations restrict development within the floodplain, require more than one foot base flood elevation for any

structures built within the floodplain, and prohibit development in wetlands. The regulations also include a wellhead protection overlay district to protect community water systems.

Custer County Local Emergency Operations Plan

The City of Broken Bow is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the past five years, Custer County has had some improvements made to infrastructure. The flooding in 2019 caused damage to major roads, bridges, and other infrastructure. The county has repaired roads and replaced a destroyed bridge in one of the parks in Broken Bow. According to census data, the population is declining. However, the local planning team believes the population is increasing due to more people moving to the less crowded rural area during Covid 19. No new commercial or residential developments are planned for the next five years.

Community Lifelines

Transportation

Custer County's major transportation corridors include Nebraska Highway 2, and Highway 92. The local planning team identified Highways 21, 40, 47, 70, and 183 as additional transportation routes of concern in the county. A BNSF rail line that runs parallel to Nebraska Highway 2 across the county. The county also has a number of air landing strips dispersed throughout the county, including airports in Broken Bow and Sargent. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the county, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there 37 chemical storage sites throughout Custer County which house hazardous materials. In the event of a chemical spill, local fire departments, law enforcement, and

Emergency Management would be the first to respond. For a description of chemical sites located in incorporated areas, please see the jurisdiction's participant section.

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 a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table CSR.10: Custer County Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Communications	Alltel Tower #1	N	N	N
2	Communications	Alltel Tower #2	N	N	N
3	Communications	Alltel Tower #3	N	N	N
4	Communications	Alltel Tower #4	N	N	N
5	Communications	Alltel Tower #5	N	N	N
6	Transportation	Broken Bow Airport	N	N	N
7	Communications	Communication Tower	N	N	N
8	Communications	Comstock Tower	N	N	N
9	Food, Water, and Shelter	Custer County Fairgrounds	N	N	N
10	Food, Water, and Shelter	Gates School	N	N	N
11	Communications	Mason City Tower	N	N	N
12	Communications	Merna Communications Tower	N	N	N
13	Safety and Security	National Guard Armory	N	N	N
14	Communications	Oconto Communication Tower	N	N	N
15	Food, Water, and Shelter	Rand Valley School	N	N	N
16	Communications	Region 26 Tower	N	N	N
17	Communications	Region 26 Tower	N	N	N
18	Communications	Region 26 Tower	N	N	N
19	Transportation	Sargent Airport	N	N	N
20	Energy	Sweetwater (NPPD) Substation	N	N	N

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
21	Communications	US Cellular Tower	N	N	N
22	Communications	US Cellular Tower	N	N	N
23	Communications	US Cellular Tower	N	N	N
24	Communications	US Cellular Tower	N	N	N
25	Communications	Viaero Tower	N	N	N
26	Communications	Viaero Tower	N	N	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the county. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

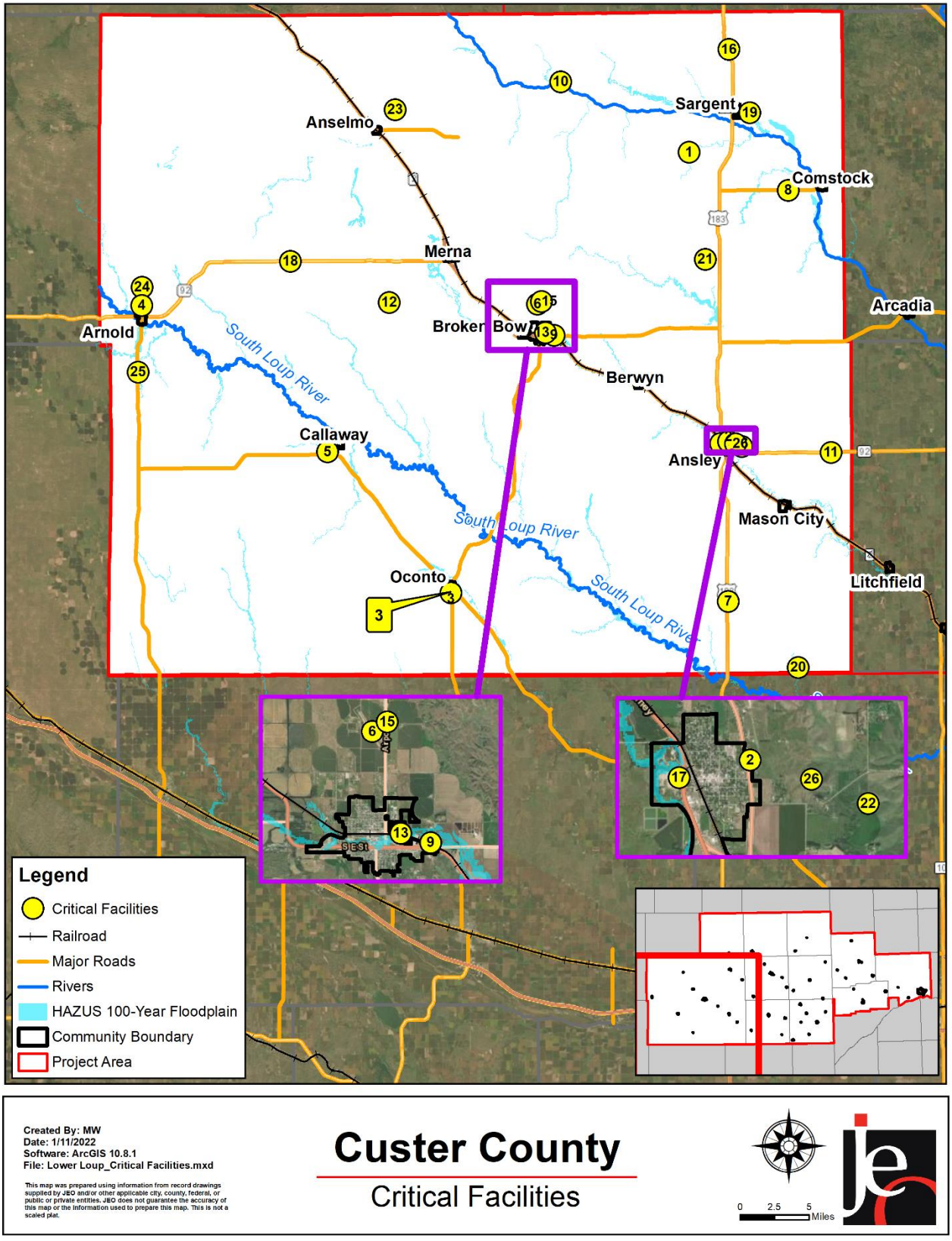
The following medical and health facilities are located within the county.

Table DAY.11: Daykin Critical Facilities

TYPE OF FACILITY	FACILITY NAME	COMMUNITY	NUMBER OF LICENSED BEDS
Assisted Living	Custer Care	Broken Bow	10
Assisted Living	Off Broadway Apartments	Broken Bow	50
Assisted Living	Quality Senior Villages	Broken Bow	14
Hospital	Callaway District Hospital	Callaway	12
Hospital	Jennie M Melham Memorial Medical Center	Broken Bow	23
Long Term Care	Brookestone View	Broken Bow	60
Long Term Care	Callaway Good Life Center	Callaway	35

Source: DHHS Care Rosters, 2021

Figure CSR.4: Custer County Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 CSR.12: Custer County Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
16,250	5597	546,690,894	1972	80,239,415	35.23%

Source: County Assessor, GIS Workshop

Table CSR.13: Custer County Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	02-07-404A-310429	3/13/2002	Structure removed from SFHA
LOMA	03-07-941A-310428	6/11/2003	Portion of property removed from SFHA
LOMA	04-07-104A-310428	2/18/2004	Portion of property removed from SFHA
LOMA	09-07-0038A-310428	12/4/2008	Structure (building 1) removed from SFHA
LOMA	13-07-0933A-310428	3/19/2013	Portion of property removed from SFHA
LOMA	14-07-0734A-310428	2/27/2014	Structure removed from SFHA
LOMA	14-07-1030A-310428	3/18/2014	Structure (residence) removed from SFHA
LOMA	16-07-0432A-310428	1/29/2016	Portion of property removed from SFHA
LOMA	17-07-0270A-310428	11/29/2016	Structure removed from SFHA
LOMA	18-07-0285A-310428	12/08/2017	Structure (garage) removed from SFHA
LOMA	18-07-0430A-310428	1/17/2018	Structure removed from SFHA
LOMA	21-07-0025A-310428	11/12/2020	Portion of property removed from SFHA

Source: FEMA Flood Map Service Center

Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the planning area. The property damages from the NCEI Storm Events Database (January 1996 – December 2020) should be considered only as broad estimates. Sources include but are not limited to: emergency management; local law enforcement; Skywarn spotters; NWS damage surveys;

newspaper clipping services; insurance industry; and the general public. Crop damages reports come from the USDA Risk Management Agency between 2000 and 2020.

For the complete discussion on historical occurrences, please refer to *Section 4: Risk Assessment*.

Table CSR.14: Hazard Risk Assessment – Custer County

Hazard Type		Custer County		
		Count	Property	Crop
Agricultural Disease	Animal Disease[2]	33	2,435 Animals	N/A
	Plant Disease[3]	17	N/A	$135,711
Dam Failure[7]		2	$0	N/A
Drought[8]		444 out of 1,512 Months	$30,000,000	$56,220,811
Earthquakes[11]		27	$0	$0
Extreme Heat[9]		Avg 2 Days per Year	$0	$7,322,8444
Flooding[1]	Flash Flood *1 injury*	38	$534,000	$205,508
	Flood	15	$3,675,000	
Grass/Wildfires[4] *21 injuries, 2 deaths*		390	19,021 acres	$124,536
Hazardous Materials	Chemical Spills (Fixed Site)[5] *1 injury*	2	$0	N/A
	Chemical Spills (Transportation)[6]	11	$807,710	N/A
Levee Failure[12]		1	$165,000	N/A
Public Health Emergency[13]		~850 cases, 19 deaths	N/A	N/A
Severe Thunderstorms[1]	Hail *Average: 1.19"* *Range: 0.75"-4.5"*	652	$1,241,500	$38,583,091
	Heavy Rain	6	$0	$5,290,330
	Lightning	0	$0	N/A
	Thunderstorm Wind *1 injury* *Average: 57.7mph* *Range: 50-91mph*	185	$1,961,000	N/A
Severe Winter Storms[1]	Blizzard	9	$1,835,000	$1,965,615
	Extreme Cold/Wind Chill	9	$0	
	Heavy Snow	8	$0	
	Ice Storm *1 injury*	3	$11,000	
	Winter Storm *1 death*	40	$263,000	
	Winter Weather	1	$0	
Terrorism[10]		0	$0	N/A

Hazard Type		Custer County		
		Count	Property	Crop
Tornadoes & High Winds[1]	High Winds *Average: 50.2mph Range: 35-67mph*	27	$21,000	$3,027,741
	Tornadoes *Average: F0 Range: EF0/F0-F2*	46	$4,255,000	$1,044
TOTALS		*1,519*	*$44,769,210*	*$112,877,231*

1 - NCEI, Jan 1996-Dec 2020
2 - USDA, 2014-2020
3 - USDA RMA, 2000-2020
4 - NFS, 2000- April 2020
5 - NRC, 1990-2020
6 - PHSMA, 1971- Jan 2021
7 - NeDNR Dam Safety Division, 2021
8 - NOAA, 1895-2020
9 - HPRCC & NOAA Regional Climate Center, 1983-2021
10 - Global Terrorism Database, 1970-2017
11 - USGS, 1900-2021
12 - USACE, 2021
13 - NE DHHS, May 12, 2021(COVID only)

The following table provides a summary of hazards that have or have the potential to affect each jurisdiction in the county. Each jurisdiction was evaluated for previous hazard occurrence and the probability of future hazard events on each of the hazards profiled in this plan. The evaluation process was based on data collected and summarized in the previous table; 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. For example, while there may not been instances of dam failure in the planning area, there exists a possibility for a dam to fail in the future due to the presence of dams.

Table CSR.15: Custer County and Communities Hazard Matrix

Jurisdiction	Ag Disease	Dam Failure	Drought & Extreme Heat	Earthquakes	Flooding	Grass/ Wildfire	Hazardous Materials	Levee Failure	Public Health Emergency	Severe Thunderstorms	Severe Winter Storms	Terrorism	Tornadoes & High Winds
Custer County	X	X	X	X	X	X	X	X	X	X	X	X	X
Anselmo	X		X	X	X	X	X		X	X	X	X	X
Ansley	X	X	X	X	X	X	X		X	X	X	X	X
Arnold	X		X	X	X	X	X		X	X	X	X	X
Berwyn	X	X	X	X	X	X	X		X	X	X	X	X
Broken Bow	X		X	X	X	X	X	X	X	X	X	X	X
Callaway	X	X	X	X	X	X	X		X	X	X	X	X
Comstock	X		X	X	X	X	X		X	X	X	X	X
Mason City	X		X	X	X	X	X		X	X	X	X	X
Merna	X		X	X	X	X	X		X	X	X	X	X
Oconto	X		X	X	X	X	X		X	X	X	X	X
Sargent	X	X	X	X	X	X	X	X	X	X	X	X	X

Hazard Prioritization

For additional discussion regarding area wide hazards, please see *Section Four: Risk Assessment*. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the county's capabilities.

Agricultural Animal and Plant Disease

Agriculture is a major portion of the economy in Custer County. An event of animal or plant disease in the county could have a significant impact on the economy. Other than economic impacts, local concerns include the containment of disease and disposal/clean-up of infected populations. Adams Land & Cattle in Broken Bow sees a large concentration of livestock, and containment of disease would be difficult.

Dam Failure

There are 23 dams in Custer County. Of these, none of them have been identified as a high hazard dam. According to the Custer County LEOP, there are no dams that could affect Custer County and zero percent of the population of the county could be affected by the failure of one or another of these dams.

Table CSR.16: Dams in Custer County

	NUMBER OF DAMS	MINIMAL	LOW	SIGNIFICANT	HIGH
CUSTER COUNTY	23	0	22	1	0
PLANNING AREA	135	5	119	6	5

Source: NeDNR, 2017

During the major flooding in 2019, a small dam southwest of Broken Bow breached due to excessive water. There was also major damage to roadways and crop land.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Unincorporated areas of Custer County have 10 NFIP policies in-force for $1,188,400. There are four primary areas in the County which are subject to flooding. These include (1) the areas along the Middle Loup River which traverses the northeastern quarter of the County, (2) the South Loup River in the south-central portion of the County, (3) the lower elevations in the creeks which flow

from the upland areas to the two rivers, and (4) the areas in the sandhills and other minor areas of the County which are subject to ponding from high water tables and during periods of heavy rainfall. Due to the flooding hazard in these areas, development of these areas for building or structure development should be avoided.

There are no repetitive flood loss properties in unincorporated areas of Custer County. The northeast corner of the county, including Sargent and Comstock, is most prone to flooding. Stormwater drainage and the ability to maintain drainage ditches is a major concern in the county. The community of Sargent indicated that sewer lines cannot handle excessive water and creates issues with flooding basements. One previous flooding event has caused streets to flood, sewers to overload, and lagoons to overflow.

The major flooding in 2019 impacted multiple buildings, houses, farms, and residential areas. Multiple areas of the county had to be evacuated during the event. According to the local planning team, there are four primary areas in the county which are subject to flooding. These include the areas along the Middle Loup River which traverses the northeastern quarter of the County, the South Loup River in the south-central portion of the County, the lower elevations in the creeks which flow from the upland areas to the two rivers, and the areas in the sandhills and other minor areas of the County which are subject to ponding from high water tables and during periods of heavy rainfall. Going forward, the county wants to improve stormwater drainage by evaluating flood prone properties and improving drainage ditches. The county would also like to create a database of structures in the floodplain to have on hand in the event of a future disaster.

Grass/Wildfire

Past fires have destroyed grassland and farmland, affecting livelihood. There are ten fire departments located in the county, with a total of approximately 225 members. Property owners within the county are encouraged to have defensible space around structures. Local fire departments are responsible for responding to grass/wildfires in the county. Custer County participated in the Central Sandhills Community Wildfire Protection Plan.

Severe Thunderstorms

Local concerns regarding thunderstorms include the potential for widespread damages to homes, agricultural industries, landmarks, and businesses. Critical county records are protected by surge protectors and backed up on separate hard drives off site daily. Weather radios are located in critical facilities. Some critical facilities have backup generators; however, the courthouse has been identified as needing a backup generator. Very few powerlines are buried in the county. The county has experienced damages from flooding, straight line winds, hail, and grass fires caused by lightning. According to NCEI data, there have been 843 severe thunderstorm events in the county from 1996 to 2020 that have caused $3,202,500 in property damages. The county works with the National Weather Service to alert citizens of the dangers of severe weather through radio, social media, and CodeRed.

Tornadoes and High Winds

According to NCEI data, there have been 43 tornadoes in Custer County from 1996 to 2020 that caused $4,255,000 in property damages. Significant tornadic events include Oconto in 2000 and east of Merna in 1990. During the 2000 event, the Oconto Community Center was destroyed, the Oconto Fire Hall roof was removed, and damages occurred to homes, buildings, electrical

systems, and loss of livestock. Warning sirens are in various communities throughout the county and are activated locally. County Emergency Management offers text alerts. In the event of a disaster, all fire departments within the county have mutual aid agreements. All schools have visits from Fire Departments and conduct tornado drills. Some other businesses conduct safety inspections and drills.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	EMERGENCY EXERCISE: AGRICULTURAL DISEASE OUTBREAK
DESCRIPTION	1. Conduct an outbreak exercise with producers, emergency managers, veterinarians, extension agents, etc. 2. Identify areas for improvements and become familiar with procedures
HAZARD(S) ADDRESSED	Ag Animal and Plant Disease
STATUS	An exercise was completed in 2019 for Thomas Livestock.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
STATUS	Custer County has implemented the CodeRed system to notify all residents of hazard events as they occur.

OBJECTIVE	AGRICULTURAL DISEASE RESPONSE/ACTION PLAN
DESCRIPTION	1. Coordinate with farmers, USDA, UNL and other local actors to develop a plan of action to contain or respond to disease outbreaks
HAZARD(S) ADDRESSED	Ag Animal and Plant Disease
STATUS	The county attends annual meetings with local producers and with state department of Ag discussing these topics.

OBJECTIVE	BIOSECURITY PLAN
DESCRIPTION	1. Prevent the introduction of disease to a farm and reduce the spread of disease within a farm and farm to farm 2. Include vaccination, perimeter fences, extensive cleaning, new animal quarantines, etc.
HAZARD(S) ADDRESSED	Ag Animal and Plant Disease
STATUS	The county attends annual meetings with local producers and with state department of Ag discussing these topics.

OBJECTIVE	DEVELOP HAZARD/EMERGENCY RESPONSE PLAN
DESCRIPTION	1. Identify and evaluate current hazards, response plan and procedures 2. Develop/Update multi-hazard emergency plan and procedures 3. Obtain additional response equipment and material 4. Train additional team members/maintain high training level for all team members
HAZARD(S) ADDRESSED	All Hazards
STATUS	This activity is covered under the county Local Emergency Operations Plan. The LEOP is reviewed every year and continued trainings on various topics with all entities involved.

OBJECTIVE	MORTALITY MANAGEMENT PLAN
DESCRIPTION	1. Develop a routine and plan for emergency disposal of diseased animals which prevents the spread of disease
HAZARD(S) ADDRESSED	Ag Animal and Plant Disease
STATUS	This activity is covered under the county Local Emergency Operations Plan. The LEOP is reviewed every year and continued trainings on various topics with all entities involved.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	$20,000 to $75,000 + per generator
POTENTIAL FUNDING	Custer County General Fund, HGMP, PGM
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management
STATUS	We have identified locations needing backup generators. The county is currently exploring potential funding opportunities.

OBJECTIVE	CRITICAL FACILITY SITING
DESCRIPTION	1. Prohibit the construction of critical facilities within the immediate radius of chemical storage facilities
HAZARD(S) ADDRESSED	Chemical Transportation, Chemical Fixed Sites
ESTIMATED COST	$0; Staff Time
POTENTIAL FUNDING	Custer County General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Planning & Zoning
STATUS	This project has not yet been started.

OBJECTIVE	EMERGENCY EXERCISE: HAZARDOUS SPILL
DESCRIPTION	1. Utilize exercise to prepare for potential explosions or hazardous spills 2. Ensure that nearby business and residents have appropriate plans in place
HAZARD(S) ADDRESSED	Chemical Transportation
ESTIMATED COST	$5,000+
POTENTIAL FUNDING	Custer County General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Custer County Emergency Management
STATUS	This project has not yet been started.

OBJECTIVE	FIRM MAPPING
DESCRIPTION	1. Develop digital FIRM maps for regulatory use 2. Update FIRM maps to reflect accurate flood inundation areas within the jurisdiction
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Custer County General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Planning & Zoning
STATUS	The Nebraska Department of Natural Resources is currently working on remapping Custer County floodplain.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$5,000+
POTENTIAL FUNDING	General Municipal Funds, Custer County General Fund, HGMP, PGM
TIMELINE	2 – 5 years
PRIORITY	High
LEAD AGENCY	Custer County Emergency Management
STATUS	Continued work towards inner operability with all agencies involved. Continued equipment upgrading. Work with weather service on weather radio knowledge.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS AND PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0 - $5,000+
POTENTIAL FUNDING	Custer County General Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management
STATUS	This project has not yet been started. Potential start date 2023.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. Custer County Emergency Management will annually review the profile and notify and involve the public via local website updates and at open board meetings.

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COMMUNITY PROFILE

VILLAGE OF ANSELMO

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

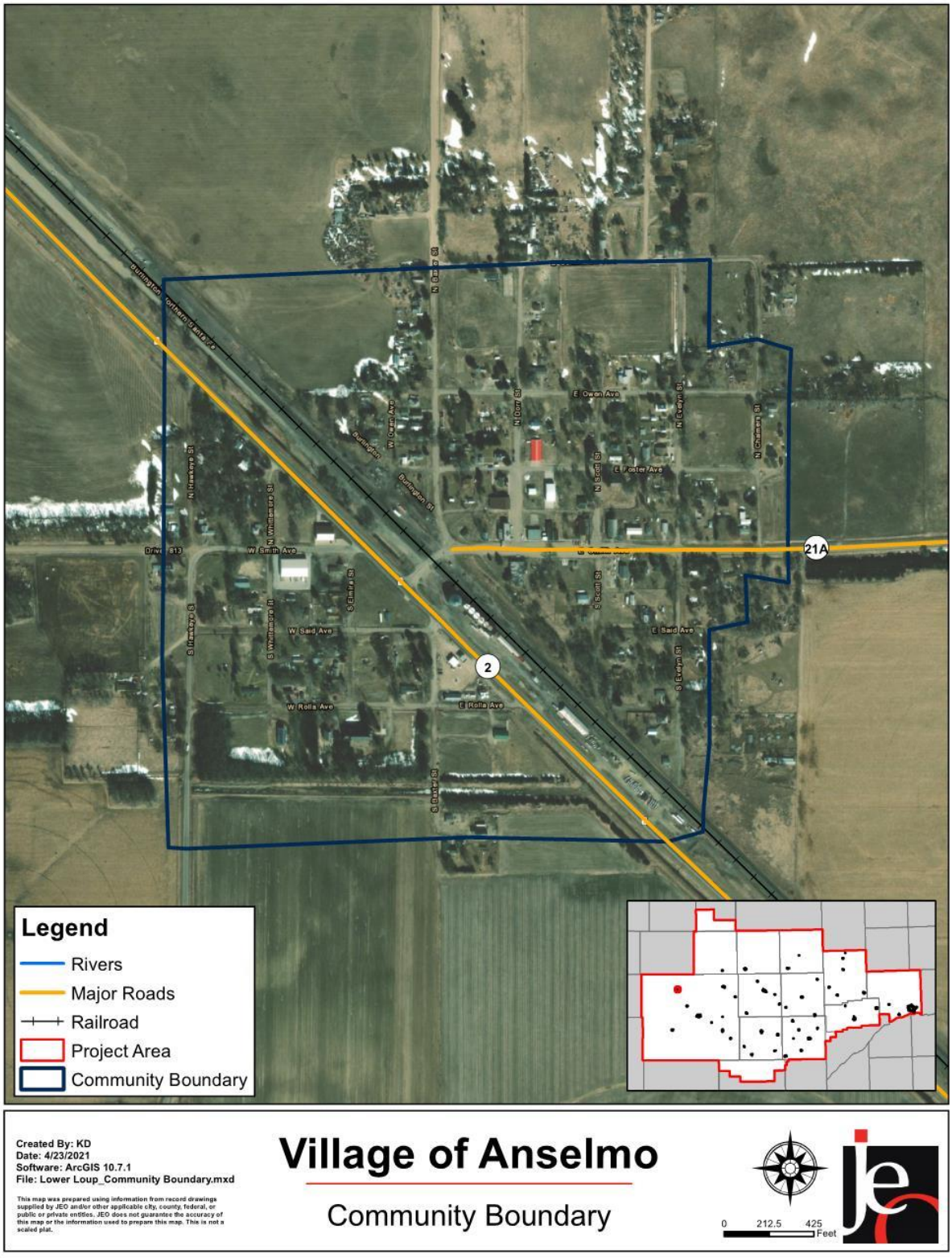
Table ANS.1: Village of Anselmo Local Planning Team

NAME	TITLE	JURISDICTION
TAMMY BURNETT	Village Clerk	Anselmo
MARK CHRISTEN	Fire Chief	Anselmo

Location and Geography

The Village of Anselmo is located in northern Custer County. The Village of Anselmo covers an area of 0.27 square miles.

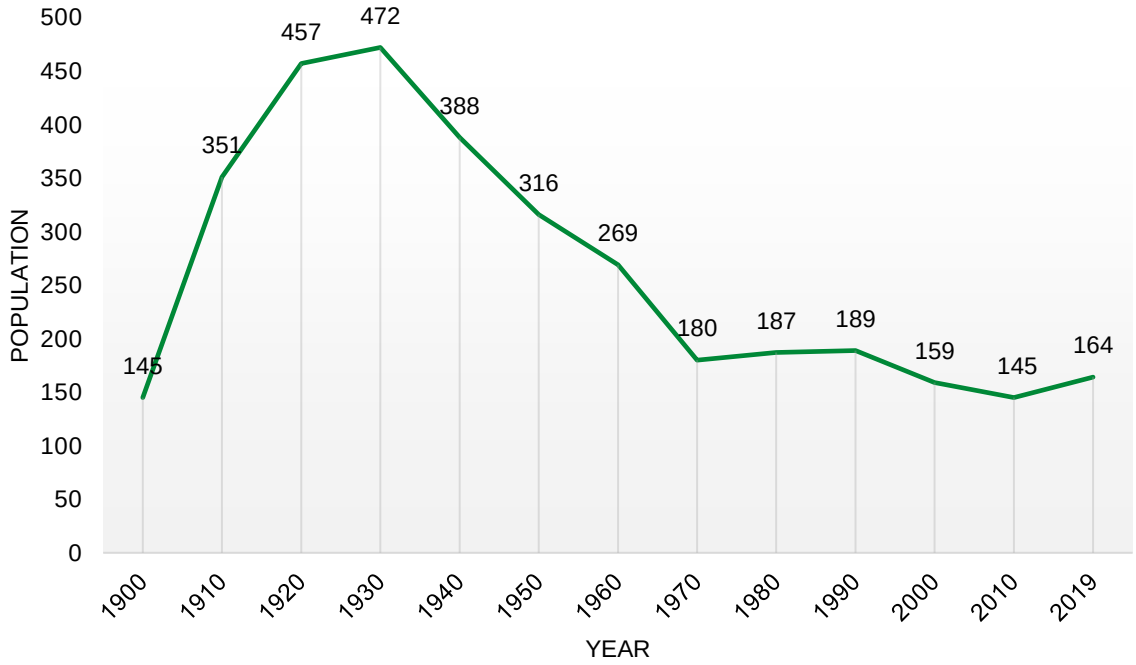
Figure ANS.1: Village of Anselmo Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Anselmo experienced a decline from 1990 to 2019. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging.

Figure ANS.2: Anselmo Population 1900-2019



Source: U.S. Census Bureau[12]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Anselmo's population was:

- **Similarly aged.** The median age of Anselmo was 44.3 years old in 2019, compared with the County average of 44.7 years. However, Anselmo had a significantly smaller proportion of people under 20 years old (12.8%) than the County (25%).[13]
- **Less ethnically diverse.** In 2019, 0% of Anselmo's population was non-white, compared to 3% for the County.
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Anselmo (8.5%) was lower than the County (11.5%) in 2019.[14]

12 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
13 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
14 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Anselmo's economy had:

- **Different industries**. Employment sectors accounting for 10% or more of employment in Anselmo included Agriculture, Manufacturing, and Transportation. In comparison Custer County's included Agriculture, Retail, and Education.[15]
- **Higher household income**. Anselmo's median household income in 2018 ($57,500) was higher than the County ($52,184).[16]
- **More long-distance commuters**. About 40.1% percent of workers in Anselmo commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 20.1% of workers in Anselmo commute 30 minutes or more to work, compared to about 16.8% of the County workers.[17]

Major Employers

Major employers in the Village of Anselmo include Cooperative Producers Inc., Richard's Electric, USPS, Anselmo Market, Fubar & Grill, and Anderson's Inc. The local planning team noted that approximately forty percent of resident commute to Broken Bow.

Housing

In comparison to the Custer County, Anselmo's housing stock was: [18]

- **More owner occupied.** About 88.8% of occupied housing units in Anselmo are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Anselmo has fewer houses built prior to 1970 than the county (89.5% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached. About 94.3% of housing in Anselmo was single-family detached, compared with 89.5% of the County's housing. Anselmo has a similar share of mobile and manufactured housing (3.8%) compared to the County (3.3%)

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Anselmo has a limited number of offices that may be involved in implementing hazard mitigation initiatives. The Village has a five-member village board

15 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
16 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
17 United States Census Bureau. "2019 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
18 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

and the following offices: clerk/treasurer, sewer/water commissioner, street commissioner, utility superintendent, and volunteer fire department.

Capabilities

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

Table ANS.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Building Codes	Yes
	Chief Building Official	No
	Floodplain Management Plan	No
	Storm Water Management Plan	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
	Civil Engineering	Yes
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	Yes
	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	No
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
EDUCATION AND OUTREACH	Local citizen groups or non-profit organizations focused on environmental	No

SURVEY COMPONENTS		YES/NO
	protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes
	Natural Disaster or Safety related school programs	Yes
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table BAR.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	Limited
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Moderate	Moderate
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Village municipal funds have mostly remained the same over the last five years and are limited to maintaining current facilities and systems.

Building Codes

The Village of Anselmo has adopted the 2018 International Building Codes. The code integrates hazard mitigation in the following ways: requires elevation of structures in the floodplain, requires mechanical systems to be elevated for structures in the floodplain, requires onsite storm water detention for commercial structures, encourages the use of permeable surfaces, and requires a safe room in multiple dwelling units.

Custer County Local Emergency Operations Plan

The Village of Anselmo is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

No changes have occurred in the community in the past five years. No new residential developments have occurred in the village. At this time there are no new commercial or residential developments planned in the coming five years. The local planning team noted the population is decreasing due to a lack of housing.

Community Lifelines

Transportation

Anselmo's major transportation corridors include Highway 2 with 1,535 total vehicles per day, with 295 of them being heavy commercial vehicles. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Anselmo which houses hazardous materials. The local fire department would be first to respond to chemical spills or events. The local planning team indicated that current response resources are not sufficient.

Table ANS.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	105 E Highway 2	Yes

Source: Nebraska Department of Environment and Energy[19]

19 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table ANS.5: Anselmo Critical Facilities

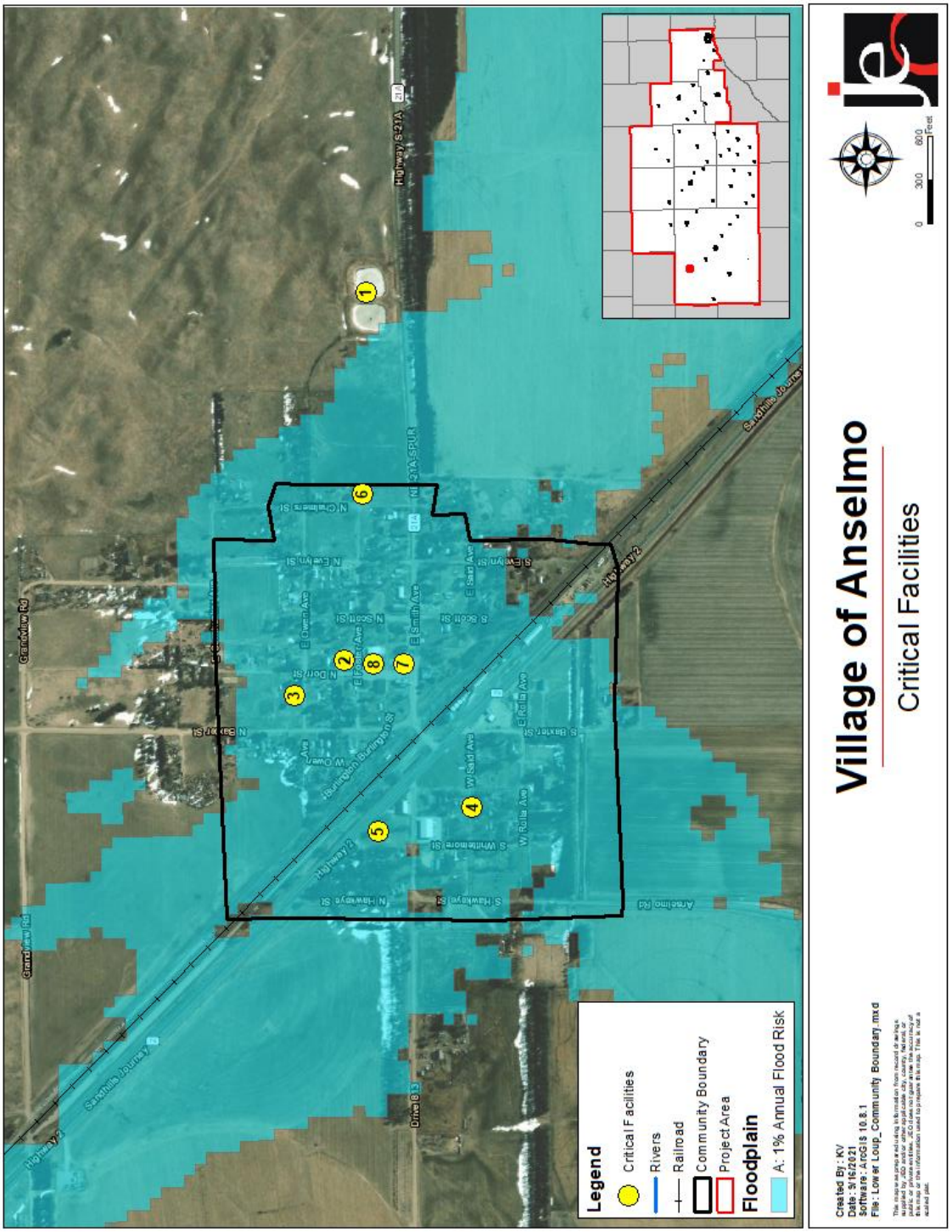
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Sewage Lagoon	N	N	N
2	Safety and Security	Fire Department	N	N	Y
3	Food, Water, and Shelter	Well Site	N	N	Y
4	Food, Water, and Shelter	Well Site 2	N	N	Y
5	Food, Water, and Shelter	Sewer Lift Station	N	Y	Y
6	Food, Water, and Shelter	Main Sewer Lift Station	N	Y	Y
7	Food, Water, and Shelter	Community Center Building	N	N	Y
8	Communications	Siren System	N	N	Y

Although not listed in the table above, critical infrastructure also include power substations, cell towers in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

There are no medical and health facilities are located within the community.

Figure ANS.3: Anselmo Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 ANS.7: Anselmo Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
180	180	3,275,434	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Flooding from Table Hill is led directly into drainage ditches, which were paid with federal grants. Local concerns regarding flooding include the ability to maintain the current drainage ditches. Any large amounts of water that come into town from Table Hill can cause damage to homes and streets if it is too much for the drainage ditches to handle. During the major flooding of 2019, homes and streets had extensive damage, with one home completely destroyed after it caught fire. Areas within Anselmo that have poor stormwater drainage include the tree belt/ditch east of Owen Avenue, and the drainage ditch on the south side of W. Rolla Avenue. Flood ditches have been cleaned out with larger culverts placed in ditches to mitigate future impacts of flooding. Anselmo participates in the NFIP, but does not have any policies in-force. There are no repetitive flood loss properties in the Village of Anselmo.

Hazardous Materials (Transportation)

Anselmo's concerns regarding this hazard include the increased vulnerability due to the proximity of Highway 2 and the BNSF railway. Chemicals are regularly transported along these routes. The local planning team indicated that the city wells, lift stations, and community building are all

located along these transportation routes. Additionally, there are water and sewer lines located underneath BNSF rail lines and Highway 2. In the event of a chemical spill, an outside HAZMAT team would need to be called to respond to the event as local fire department volunteers are not trained in hazardous material response.

Tornadoes and High Winds

Tornadic events have the potential to cause significant property damages and loss of life. There are no storm shelters in the community and some homes do not have basements. Anselmo has data backup systems for their municipal records through a private company. The village does have a warning siren but it is an aging system and does not cover all residents. The County Emergency Management does offer text alerts. In the future, the village would like to establish a tornado shelter in the community.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	4. Identify and evaluate current backup and emergency generators 5. Obtain additional generators based on identification and evaluation 6. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All hazards
ESTIMATED COST	$20,000 to $75,000 + per generator
POTENTIAL FUNDING	Village General Fund, HMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Utility Superintendent
STATUS	Lift stations have backup generators however a generator is needed for village offices and fire hall.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	Village General Fund, HGMP, PGM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Fire Department
STATUS	Warning siren needs to be updated.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	1. Evaluate restrictions and measures to prevent or reduce flood damage 2. Implement appropriate nonstructural or structural methods on an emergency or permanent basis (monitoring or warning systems, ice jam dusting, excavation or blasting, reshaping channel, tree and debris removal, acquire property and/or construct additional channels or other flow improvements)
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$10,000 to $50,000 for studies; $10,000+ to implement
POTENTIAL FUNDING	Village General Fund, HGMP, PGM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE STORM WATER DAMAGE
DESCRIPTION	1. Conduct stormwater drainage study to evaluate restrictions, capacity, level of protection, alternative improvements, prioritize improvements, etc. 2. Evaluate and implement recommendations or comparable measures (open ditch and culvert improvements, underground piping, retention and detention facilities to decrease runoff, etc.) 3. Evaluate storm water ordinance 4. Implement improved storm water ordinance
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$10,000 to $75,000 for studies; $10,000 or more for ditch or pipe cleaning; unknown for other large projects
POTENTIAL FUNDING	Village General Fund, HGMP, PGM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Flooding
STATUS	Flood ditches have been cleaned out with larger culverts placed in ditches to mitigate future impacts of flooding. Additional areas near Owen and W Rolla Avenues need improvements.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	$2,000+
POTENTIAL FUNDING	Village General Fund
TIMELINE	2 – 5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Board and Village Clerk will bi-annually review the city's profile. They will involve and notify the public of the review through sharing information at board meetings.

COMMUNITY PROFILE

VILLAGE OF ANSLEY

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

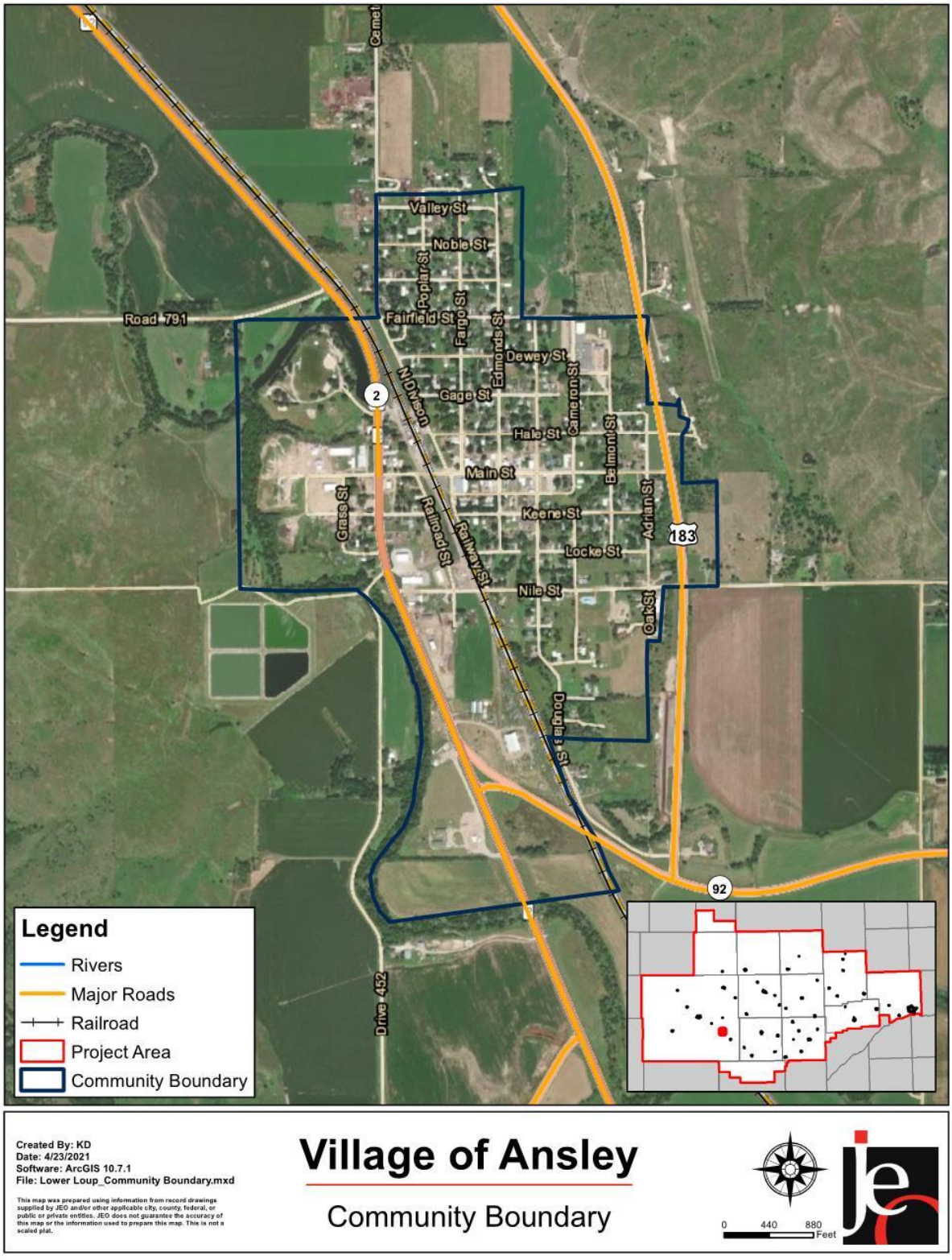
Table ANY.1: Village of Ansley Local Planning Team

NAME	TITLE	JURISDICTION
LANETTE DOANE	Clerk/Treasurer	Village of Ansley
CATHERINE JO W. MILLS	Board Chairperson	Board Chairperson

Location and Geography

The Village of Ansley is located in the southeastern portion of Custer County. The Village of Ansley covers an area of 0.59 square miles. Mud Creek is located on the west side of Ansley.

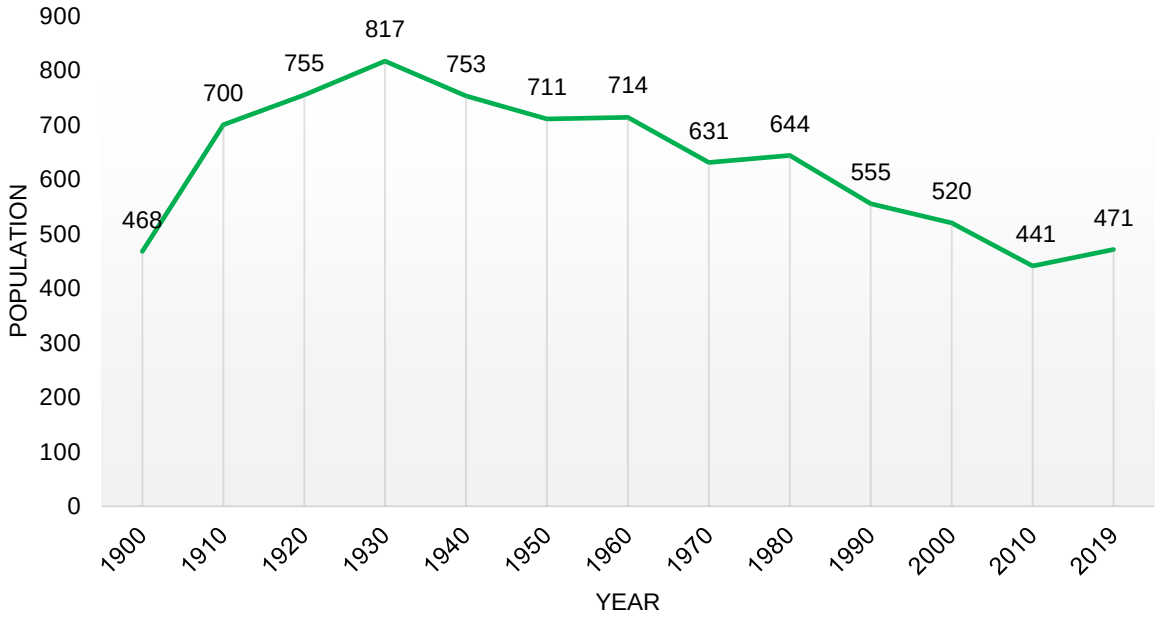
Figure ANY.1: Village of Ansley Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Ansley has generally been declining since 1930. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging.

Figure ANY.2: Ansley Population 1900-2018



Source: U.S. Census Bureau[20]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Ansley' population was:

- **Younger.** The median age of Ansley was 46.4 years old in 2019, compared with the County average of 44.7 years. Ansley's population has grown older since 2010, when the median age was 39.2 years old. Ansley had a slightly smaller proportion of people under 20 years old (24.2%) than the County (25%).[21]
- **More ethnically diverse.** In 2019, 8.3% of Ansley's population was non-white, compared to 3% for the county.[22]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Ansley (11.2%) was higher than the County (11.5%) in 2019.[23]

20 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
21 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
22 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
23 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Ansley's economy had:

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Ansley included Agriculture, Construction, Manufacturing, Retail, and Education. In comparison Custer County's included Agriculture, Retail, and Education.[24]
- **Higher household income**. Ansley's median household income in 2018 ($55,000) was about $3,000 higher than the County ($52,184).[25]
- **More long-distance commuters**. About 37.1% percent of workers in Ansley commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 13.1% of workers in Ansley commute 30 minutes or more to work, compared to about 16.8% of the County workers.[26]

Major Employers

Major employers in the City of Albion include: Ansley Public School, Flatwater Bank, Fill-N-Chill, and Trotter's Grain and Fertilizer. The local planning team noted approximately fifty percent commute to the surrounding communities of Broken Bow and Kearney for work.

Housing

In comparison to the Custer County, Ansley's housing stock was: [27]

- **Less owner occupied.** About 62.5% of occupied housing units in Ansley are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Similar share of aged housing stock**. Ansley has a similar percentage of houses built prior to 1970 compared to the county (69.4% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Ansley contains no multifamily housing with five or more units per structure. About 89.6% of housing in Ansley was single-family detached, compared with 89.5% of the County's housing. Ansley has a larger share of mobile and manufactured housing (7.6%) compared to the County (3.3%)

The local planning team noted that blighted properties are an issue in various spots throughout the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

24 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
25 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
26 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
27 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Ansley has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five-member board and the following offices: clerk/treasurer, village superintendent, street/trash commissioner, planning commission, and volunteer fire department.

Capabilities

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

Table ANY.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*Yes*
	Economic Development Plan	*No*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*Yes*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*Yes*
	Building Codes	*No*
	Chief Building Official	*No*
	Floodplain Management Plan	*Yes*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*Yes*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*Yes*
	Floodplain Administration	*Yes*
	GIS Capabilities	*Yes, for water & sewer*
	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	1 & 6 Year Plan	*Yes*
	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*

SURVEY COMPONENTS		YES/NO
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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	*Yes*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table BAR.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Moderate	Moderate
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Village funds have increased somewhat in recent years thanks to local option sales tax revenues which primarily go toward infrastructure improvements. Limited funds are dedicated for new capital improvement projects, specifically for the village's electric distribution and generation system. In addition to upgrades to the village's electric generation system, the funds are also slated to pay to install a liner in sewer mains and upgrade the water system with all radio read meters, as well as the software to support the system. The village plans to use American Recovery Plan Act funds for some sewer and water infrastructure improvements.

The village has completed comprehensive plan and zoning regulations updates through the Nebraska Community Development Block Grant (CDBG) program. They have been awarded Custer County Tourism and Foundation grants for improvements for a walking path and new playground equipment, as well as a grant to conduct GPS mapping of the village's water system. The village's most recent grant request to update their comprehensive plan and zoning regulations was not funded; they will apply again to the next Nebraska CDBG program cycle. The hazard mitigation plan and hazard mitigation principles will be integrated into the village's next comprehensive plan and zoning regulations updates. The village will seek other grant funding sources to make improvements beyond what their reserves will allow.

Comprehensive Plan

The village plans to update their comprehensive plan in 2022 when they reapply for the CDBG program. The comprehensive plan limits development in areas adjacent to known hazard areas, primarily in the floodplain. The floodplain runs through the middle of Ansley, so the village works diligently to keep development and structures away from the floodplain. The village will coordinate with their engineer to incorporate the hazard mitigation plan objectives into the upcoming comprehensive plan update.

Capital Improvement Plan

Capital improvements are discussed annually during the budgetary season. The village is considering extending their capital improvements plan out beyond the one- or two-year timeline the village board currently works within. The village plans to upgrade their sewer system by installing a liner and all radio read meters and corresponding software. The village acknowledges that stormwater drainage could warrant improvement, but the main ditch that drains most of the stormwater from Ansley is located on BNSF railroad property. BNSF has not properly maintained the ditch, which has been narrowed over recent years and is not deep enough to sustain adequate drainage flow.

Ordinances and Regulations

The village plans to update their zoning regulations during 2022 depending on CDBG funding. Their current zoning regulations limit development in the floodplain. In addition to the floodplain map and zoning restrictions, additional development near the floodplain often does not occur because of the cost of flood insurance. The village does not limit development in the wildland urban interface, nor their ETJ, beyond what their floodplain restrictions currently dictate.

Building Codes

The village has not adopted the International Building Codes because they do not have personnel with the expertise to regulate the code.

Custer County Local Emergency Operations Plan

The Village of Ansley is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

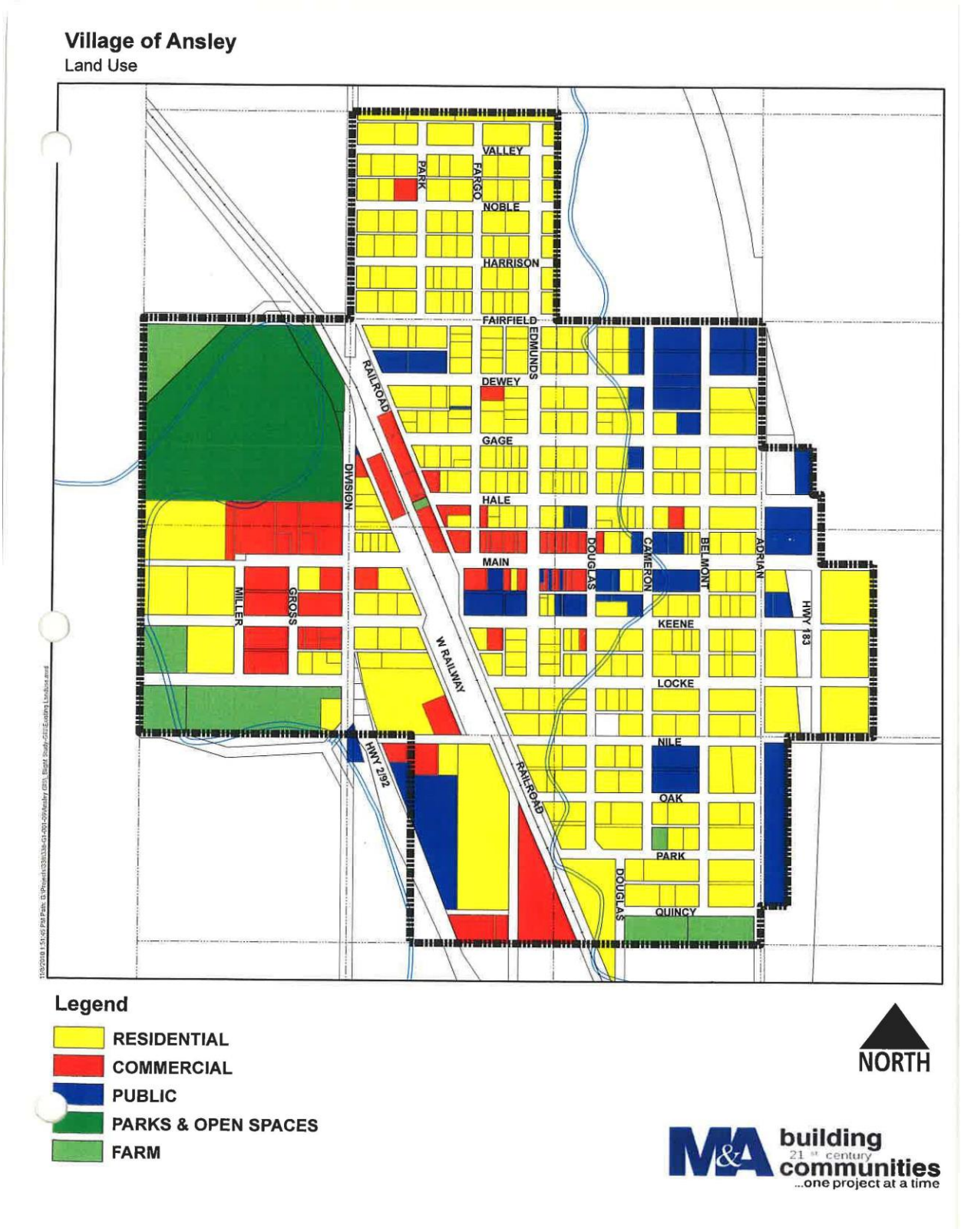
Other Plans

The village has a wellhead protection plan, last updated in February 2014. The village does not have an evacuation plan, stormwater management plan, nor a drought management plan. However, water restrictions on lawn watering can be implemented when necessary.

Development Trends

In the past five years, six new single family housing units have been built in Ansley. Four new businesses have opened on main street and filled existing businesses and two abandoned buildings have been demolished. The local planning team noted that the population is increasing due to new available housing and people wanting to live in a smaller community and commute to work. The community has an Ansley Investment Group that built two of the new housing units and plans to continue building and selling in the community in the next five years. The Investment Group has acquired property outside of the floodplain for building on.

Figure ANY.2: Village of Ansley Land Use Map



Community Lifelines

Transportation

Ansley's major transportation corridors include Highway 2 with 3,205 vehicles per day, and Highway 183 with 825 vehicles per day. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents. The local planning team indicated that chemicals are regularly transported along the rail line.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is two chemical storage sites throughout Ansley which houses hazardous materials. The local fire department would be first to respond to chemical spills or events with mutual aid agreements in place for additional response resources.

Table ANY.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
Trotter Grain & Fertilizer Co	1120 Main St	No
Nebraska Central Telephone Co	608 Main St	Yes

Source: Nebraska Department of Environment and Energy[28]

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table ANY.5: Ansley Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Well #1	N	N	N
2	Food, Water, and Shelter	Fundamental Baptist Church	N	N	N
3	Food, Water, and Shelter	Well #4	N	N	N
4	Food, Water, and Shelter	Ansley Public School	Y	N	N
5	Food, Water, and Shelter	Park Shelter Building	Y	N	N
6	Energy	Generating Plant	N	Y	Y
7	Hazardous Materials	Trotter Fertilizer	N	N	Y
8	Communications	Region 23 Tower	N	N	N

28 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

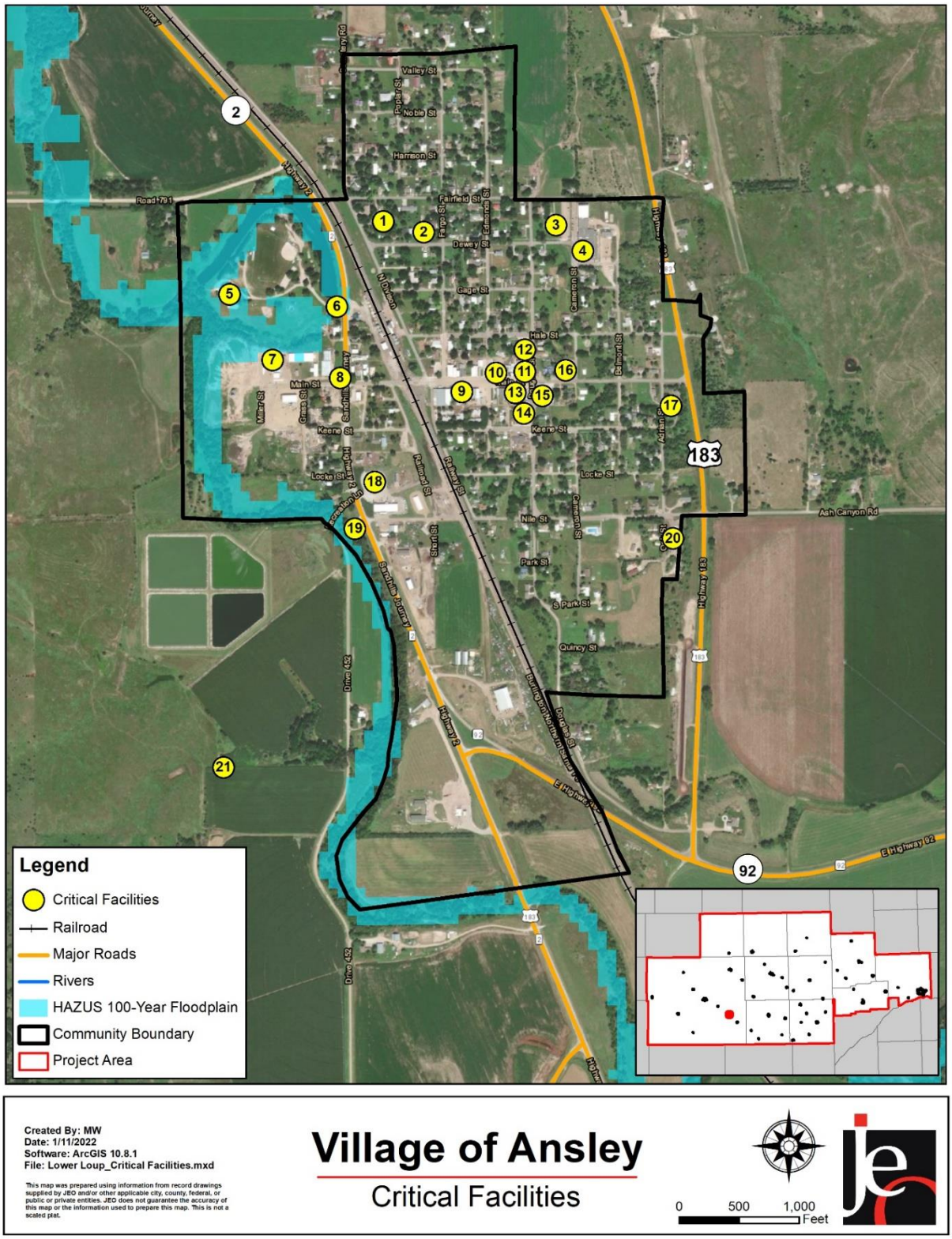
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
9	Food, Water, and Shelter	Low Rent Housing	Y	N	Y
10	Food, Water, and Shelter	Flatwater Bank	Y	Y	Y
11	Communications	Telephone Office	N	Y	Y
12	Food, Water, and Shelter	Christian Church	Y	N	Y
13	Safety and Security	Police Office	N	N	N
14	Food, Water, and Shelter	Methodist Church	Y	N	Y
15	Food, Water, and Shelter	Municipal Auditorium	Y	N	Y
16	Food, Water, and Shelter	Baptist Church	Y	N	Y
17	Food, Water, and Shelter	Well #5	N	Y	N
18	Safety and Security	Fire Station	Y	Y	N
19	Food, Water, and Shelter	Lift Station	N	Y	N
20	Safety and Security	City Office and Maintenance Building	Y	N	N
21	Food, Water, and Shelter	Sewer Lagoon	N	N	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

There are no medical and health facilities are located within the community.

Figure ANY.3: Ansley Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 ANY.7: Ansley Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
459	405	14,799,962	20	1,077,411	4.94%

Source: County Assessor, GIS Workshop

Table ANY.8: Ansley Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	07-07-0315A-310340	1/4/2007	Structure removed from SFHA
LOMA	08-07-0523A-310340	3/11/2008	Structure removed from SFHA
LOMA	14-07-0959A-310340	3/13/2014	Structure removed from SFHA
LOMA	15-07-1234A-310340	5/28/2015	Structure (office) removed from SFHA
LOMA	15-07-1357A-310340	6/1/2015	Structure (residence) removed from SFHA
LOMA	16-07-0565A-310340	3/23/2016	Portion of property removed from SFHA
LOMA	17-07-0359A-310340	12/5/2016	Structure removed from SFHA
LOMA	18-07-0006A-310340	10/11/2017	Property removed from SFHA
LOMA	18-07-0413A-310340	11/15/2017	Property removed from SFHA
LOMA	18-07-0502A-310340	12/11/2017	Structure (residence) removed from SFHA
LOMA	18-07-2211A-310340	10/30/2018	Portion of property removed from SFHA
LOMA	09-07-0644A-310340	2/12/2019	Property removed from SFHA
LOMA	19-07-0737A-310340	3/1/2019	Structure (residence) removed from SFHA
LOMA	21-07-0387A-310340	1/29/2021	Property removed from SFHA
LOMA	21-07-1000A-310340	7/15/2021	Property removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Hazardous Materials (Transportation)

Ansley has several critical facilities located near major transportation routes. The transportation routes of greatest concern are Highway 2, Highway 183, and the rail line. Although there has not been a previous chemical spill identified, a chemical spill along one of these routes could severely affect the community as many people travel out of the community for work. The local planning team also noted concerns with getting supplies to the town in the event of a spill. Ansley would like to utilize an emergency exercise to ensure appropriate plans are in place to respond to such an event.

Flooding

Flooding was identified as a significant concern for the local planning team. Flood risk areas in the community include a large portion of the central sections of Ansley, which are in Zone A of the floodplain map. This area contains a high percentage of residential and commercial properties. The local planning team indicated that Comer Canyon, Mud Creek, and the railroad berm together create a greater potential for flooding and is a top priority for the community.

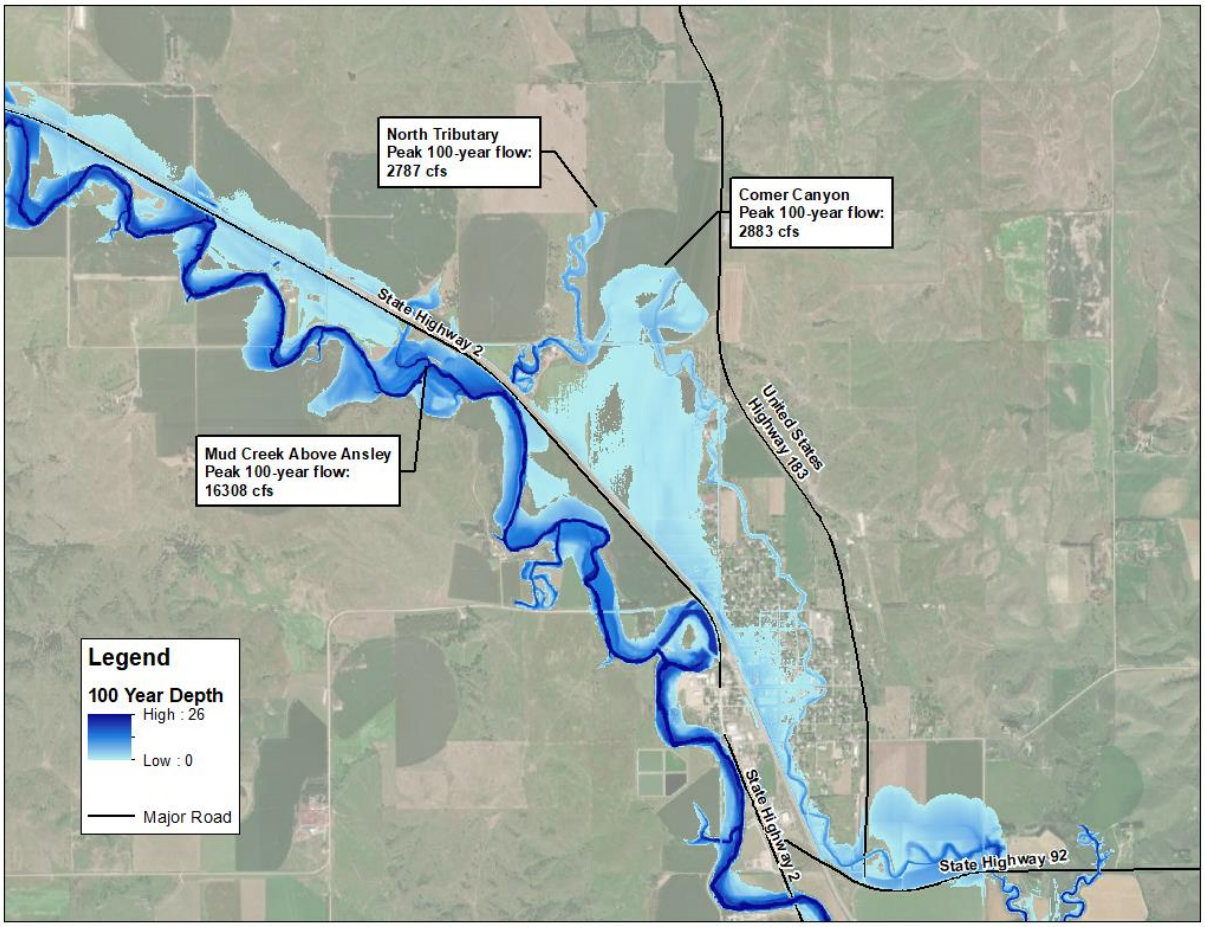
Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

A hydraulic analysis for the Mud Creek Watershed, which includes the Village of Ansley, was under development as of January 2022. Some major findings pertaining to the village from this report included:

- Flooding in Ansley originates from flows coming from Comer Canyon. During significant rainfalls, flows enter the north side of Ansley via a county road bridge approximately 0.25 miles west of the intersection of County Road 792 and Highway 183. Additionally, a significant portion of County Road 792 overtops contributing to additional flows from the North. Flows from the adjacent drainage area to the west do not appear to cause flooding within Ansley, isolating Comer Canyon as the main source.
- The resulting flooding within Ansley due to these flows and overtopping is widespread and relatively shallow throughout the community.
- The Section 22 study indicated that a single large dam upstream of Ansley would not be feasible due to the size of the dam, and the possibility for it to back water over Highway

183. Instead a diversion structure was recommended in conjunction with a road raise along County Road 792.

Figure ANY.4: Ansley Hydraulic Report HEC-RAS Results



During the flooding in March 2019, significant water came through the community. Although there wasn't much damage, the potential was there, and some residents had water in their basements. During the event, if the water flowing from the north could have been slowed or diverted, the community would likely have seen less impacts from the flooding.

Ansley has 31 NFIP policies in-force for $1,434,100. There are no repetitive flood loss properties in the village of Ansley. Ansley is depending on the studies and coordination with the LLNRD, NRCS, and Army Corp of Engineers to develop and implement a response to reduce flooding risk. The village would also like to work on slowing and/or diverting flood water north of Ansley to reduce flood risks and impacts.

Severe Thunderstorms

The concerns regarding severe thunderstorms include the potential for damages to trees, electrical lines, damages to property, and power outages. In the past, storm events have caused power outages and downed trees, costing the village time and money. The local planning team indicated that they have limited staff available to respond to widespread storm damage in the

community. Additional staff available to assist the community through interlocal agreements and local power suppliers is limited, especially if nearby communities are also impacted by a storm event. Ansley has a backup generator for one of the community wells and the lift station. The village also has electrical generating capabilities to provide service to the entire community if necessary. Most of the village's powerlines are above ground. According to the NCEI, previous thunderstorm events have caused $42,000 in property damages. Custer County Emergency Management offers text alerts to assist in providing advanced warning of an impending storm.

Tornadoes and High Winds

There have been no reported damages from previous high wind events. However, straight-line high wind events have the potential to cause damage to trees and knock down power lines. The local fire department has a warning siren system that is activated by Custer County Communications. Siren coverage is sufficient in the community. There are numerous hazardous trees throughout the community and village staff trim trees when able to avoid interference with electrical lines. Trees on private property are the responsibility of the property owner to trim. The village needs additional equipment, staff, and time to enhance the tree trimming schedule in the community.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	7. Identify and evaluate current backup and emergency generators 8. Obtain additional generators based on identification and evaluation 9. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$50,000+
POTENTIAL FUNDING	HMGP, Village General Fund
TIMELINE	5+ Years
PRIORITY	High
LEAD AGENCY	Village Board, Custer County Emergency Manager
STATUS	The village is seeking grant funding to replace the generator at Well #5, as well as to obtain a generator for Well #4. The estimated cost of this project for each generator is between $30,000 - $40,000. Updating the village's electric generating units is also being considered.

OBJECTIVE	DEVELOP EMERGENCY SNOW & EVACUATION ROUTES
DESCRIPTION	10. Develop/Improve snow/evacuation route and program to include parking, snow/ice and debris removal, etc. 11. Obtain and install snow emergency route/evacuation signs 12. Provide information on emergency routes to public
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	$1,000+ Staff time
POTENTIAL FUNDING	HMGP, Village General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board, Custer County Emergency Manager
STATUS	This project has not yet been started.

OBJECTIVE	DEVELOP/UPDATE FLOODPLAIN INFORMATION
DESCRIPTION	1. Conduct mapping/remapping of floodplain 2. Revise floodplain /insurance maps
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	HMGP, FMA, Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Custer County Emergency Manager, Floodplain Administrator
STATUS	This is a joint project among LLNRD, NRCS, Army Corp of Engineers to implement plan/project to divert water coming from the north. A meeting will be held in January or February 2022 with JEO to receive updated information on the plan status.

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails 3. Implement measures to improve electrical service 4. Bury power lines for future construction
HAZARD(S) ADDRESSED	High Winds, Severe Thunderstorms, Severe Winter Storms, Flooding, Tornadoes
ESTIMATED COST	$50,000+
POTENTIAL FUNDING	HMGP, Electric rates & reserves
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Distribution service loops have been completed for some areas and continue for others so service can be provided from different directions when necessary. The village does not have sufficient staff to accomplish burying electric lines. Poles are replaced as needed to increase stability. Upgrade of the electric generators is under consideration by the Board.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0 - $5,000+
POTENTIAL FUNDING	HMGP, FMA, Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Custer County Emergency Manager, Floodplain Administrator
STATUS	This project has not yet been started. The village will rely on direction and coordination through the Custer County Emergency Manager. They have the training to direct this type of public education campaign.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$150/sf for retrofit; $300/sf for new construction
POTENTIAL FUNDING	HMGP, Village General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Custer County Emergency Manager
STATUS	This project has not yet been started. The village is interested in providing this type of shelter near their RV camping grounds.

OBJECTIVE	REDUCE STORM WATER DAMAGE
DESCRIPTION	1. Conduct stormwater drainage study to evaluate restrictions, capacity, level of protection, alternative improvements, prioritize improvements, etc. 2. Evaluate and implement recommendations or comparable measures (open ditch and culvert improvements, underground piping, retention and detention facilities to decrease runoff, etc.) 3. Evaluate storm water ordinance 4. Implement improved storm water ordinance
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$10,000 to $75,000 for studies; $10,000+ for cleaning; unknown for large projects
POTENTIAL FUNDING	HMGP, Village General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Custer County Emergency Manager
STATUS	This project has not yet been started. The lack of sufficient staffing is a roadblock for this project. The main drainage ditch to carry flood water out of Ansley is on railroad property which does not allow the village the control for improvements.

OBJECTIVE	WATER SYSTEM IMPROVEMENTS
DESCRIPTION	1. Make water system improvements to include additional fire hydrants/increase supply and pressure to effectively fight fires and meet increasing demands 2. Update/improve water distribution system (identifying and replacing leaky pipes, assisting residents in identifying inefficiencies, transitioning to smart irrigation systems, etc.) 3. Upgrade water district infrastructure to decrease likelihood of damages and improve water system for emergency use
HAZARD(S) ADDRESSED	Grass/Wildfire, Drought
ESTIMATED COST	$10,000+, varies by scope
POTENTIAL FUNDING	City General Fund, CDBG
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Administrator, Water Department
STATUS	The village is upgrading water meters to improve efficiency. This improves the village's ability to track leaks so residents can make repairs. One new fire hydrant has been installed in the last year.

New Mitigation Actions – 2022 Plan

OBJECTIVE	PROJECT SCOPING AS A RESULT OF THE WFPO PROGRAM
DESCRIPTION	1. Evaluate potential flood risk reduction alternatives as identified through the Watershed and Flood Prevention Operations Program including project scoping and implementation
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	General Fund, WFPO, HMA
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board, LLNRD, JEO Consulting Group
STATUS	Mud Creek WFPO is currently under development. No formal alternatives have yet been determined however several alternatives are under further review.

Removed Mitigation Actions

OBJECTIVE	HAZARD/EMERGENCY OPERATIONS/ACTION/RESPONSE PLAN
DESCRIPTION	1. Identify and evaluate current hazards, response plan and procedures 2. Develop/Update multi-hazard emergency plan and procedures 3. Obtain additional response equipment and material 4. Train additional team members/maintain high training level for all team members
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	This project would be coordinated through and is the responsibility of Custer County Emergency Management Agency.

OBJECTIVE	HAZARDOUS SPILL EMERGENCY EXERCISE
DESCRIPTION	1. Utilize exercise to prepare for potential explosions or hazardous spills 2. Ensure that nearby business and residents have appropriate plans in place
HAZARD(S) ADDRESSED	Chemical Spills (Transportation)
REASON FOR REMOVAL	This project would likely be coordinated through Custer County Emergency Management Agency and the Ansley Fire Department, governed by the Ansley Rural Fire District.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	This improvement would fall to the Fire Department. They installed a new warning siren approximately 5 years ago.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The Utility Superintendent, Street Foreman, Village Clerk, and Board members will annually review Ansley's profile during the village's budgetary process. They will communicate profile updates to the public via Board meetings and the village website. They will also consider using public meetings to gain perspectives from the community on project priorities identified in the hazard mitigation plan. This will increase the likelihood of new, and public supported, ideas for the Board to consider.

COMMUNITY PROFILE

VILLAGE OF ARNOLD

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

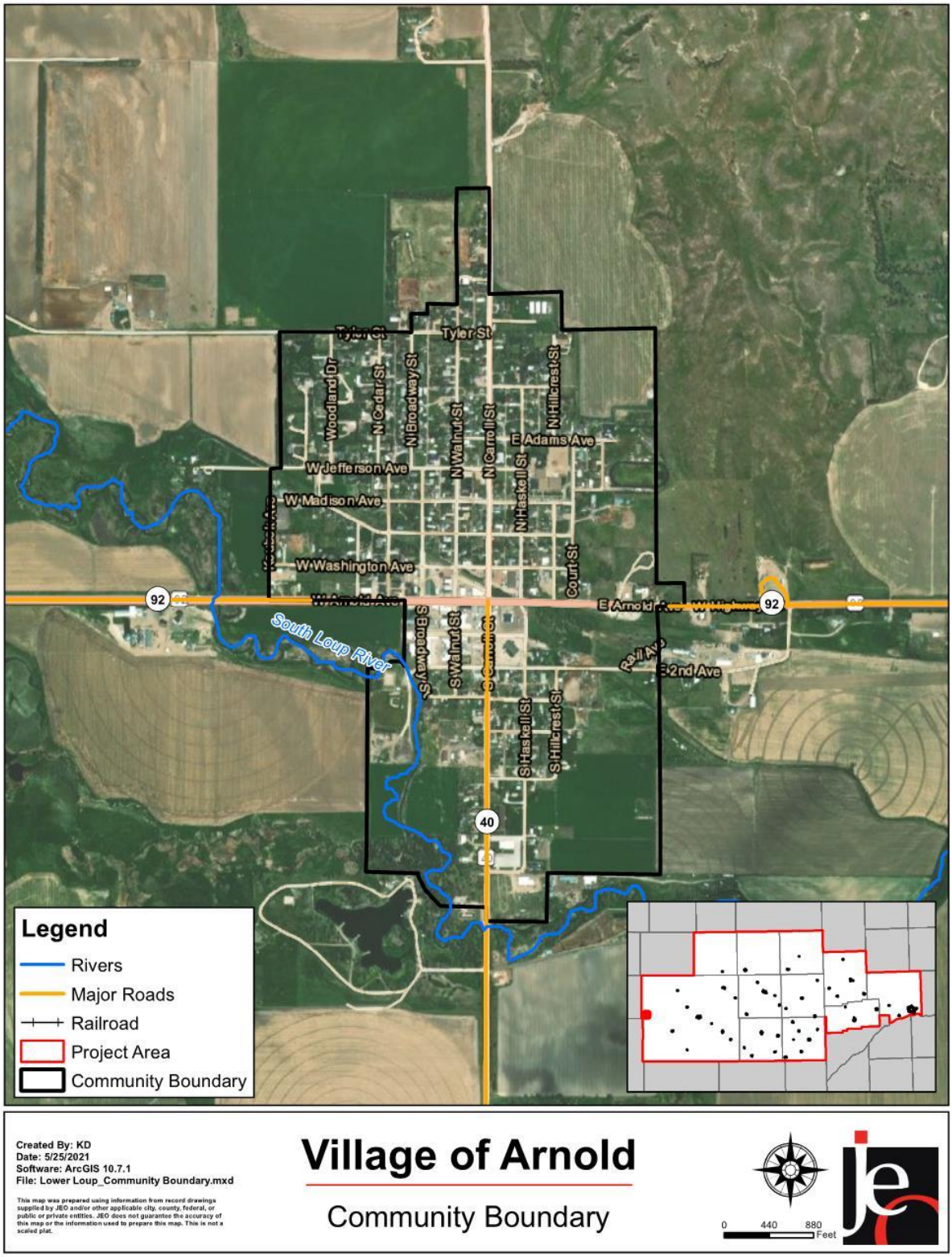
Table ARN.1: Village of Arnold Local Planning Team

NAME	TITLE	JURISDICTION
DOUG DELAUNE	Utility Superintendent	Village of Arnold

Location and Geography

The Village of Arnold is located in the western portion of Custer County and covers an area of 0.67 square miles. The South Loup River runs through the southwestern portion of the village. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Arnold. Most of Arnold lies in the dissected plains topographic region, and is surrounded by agricultural fields.

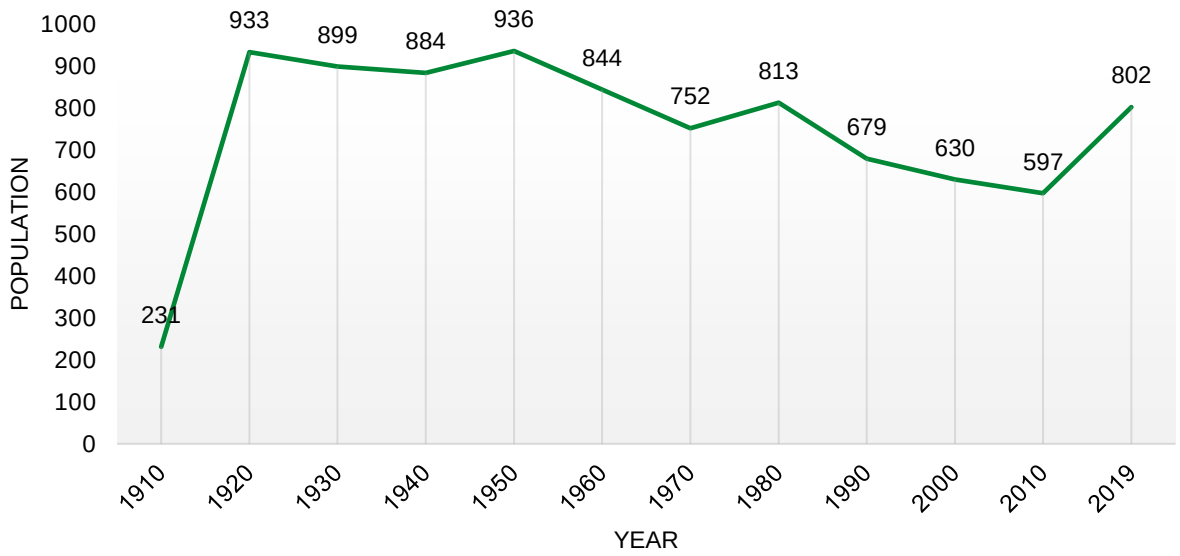
Figure ARN.1: Village of Arnold Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Arnold experienced a decline from 1980 through 2010. Since 2010, the population has been steadily increasing. 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. The village's population accounted for 7% of Custer County's Population in 2019.

Figure ARN.2: Arnold Population 1910-2019



Source: U.S. Census Bureau[29]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Arnold' population was:

- **Younger.** The median age of Arnold was 39.1 years old in 2019, compared with the County average of 43.1 years. Arnold's population has grown younger since 2010, when the median age was 46.4 years old. Arnold had a larger proportion of people under 20 years old (29.8%) than the County (25.0%).[30]
- **Less ethnically diverse.** In 2010, 0% of Arnold's population was Black or African American, 0% was other races, and 3.8% were two or more races. By 2019, only 0% of Arnold's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[31]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Arnold (4.2%) was lower than the County (6.1%) in 2019.[32]

29 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
30 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
31 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
32 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Arnold's economy had:

- **Same mix of industries**. Employment sectors accounting for 10% or more of employment in Arnold included Agriculture and Education. In comparison Custer County's included Agriculture, Retail, and Education.[33]
- **Slightly higher household income**. Arnold's median household income in 2019 ($55,982) was about $3,500 higher than the County ($52,184).[34]
- **More long-distance commuters**. About 54.2% percent of workers in Arnold commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 33.9% of workers in Arnold commute 30 minutes or more to work, compared to about 16.8% of the County workers.[35]

Major Employers

Major employers in the village include the Village of Arnold, Mill's Hardware, Reed's Food Center, Cenex, Sinclair, Grazer's Bar and Grill, and Country Partners. The local planning team noted that approximately fifty percent of residents commute for work to the following communities: Broken Bow, Callaway, and North Platte.

Housing

In comparison to Custer County, Arnold's housing stock was: [36]

- **More owner occupied.** About 82.0% of occupied housing units in Arnold are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Arnold has more houses built prior to 1970 than the county (71.6% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the village is single family detached and Arnold contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 85.4% of housing in Arnold was single-family detached, compared with 89.5% of the County's housing. Arnold has a slightly smaller share of mobile and manufactured housing (3.2%) compared to the County (3.3%).

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms. The local planning team noted that there is only one mobile home in the community.

33 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
34 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
35 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
36 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Arnold has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five-member village board and the following offices: clerk/treasurer, volunteer fire department, sewer/water commissioner, street/parks commissioner, zoning administrator, economic development director, and village superintendent.

Capabilities

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

Table ARN.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*No*
	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*Yes*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*Yes*
	Building Codes	*Yes*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*No*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*Yes*
	Floodplain Administration	*Yes*
	GIS Capabilities	*No*
	Civil Engineering	*Yes*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*No*
	Grant Manager	*Yes*
	Mutual Aid Agreement	*Yes*
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	*Yes*
	Applied for grants in the past	*No*
	Awarded a grant in the past	*No*
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*No*
	Gas/Electric Service Fees	*Yes*

SURVEY COMPONENTS		YES/NO
	Storm Water Service Fees	*No*
	Water/Sewer Service Fees	*Yes*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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.	*Yes*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes*
	Natural Disaster or Safety related school programs	*No*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table BAR.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Moderate	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Limited	Limited
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Municipal funds are currently limited to maintaining facilities and municipal systems. Funds have remained about the same in recent years and there are currently no projects with major funds set aside. The village has not applied for or received grant funding to assist with project implementation in the past.

Comprehensive Plan

The Village is currently working on updating the Arnold Comprehensive Plan with the assistance of Central Nebraska Economic Development District. The plan update is slated to begin early 2022 with anticipated completion by 2024. The plan is anticipated to address flooding as a concern for the village in regards to identifying future development areas.

Economic Development Plan

The Village of Arnold developed an Economic Development Plan which extends from 2017 to 2032. This plan focuses on strategies to strengthen and maintain economic growth factors in the village. The goals of the plan for the economic development program has been: to create and retain jobs and generate employment opportunities within the area labor market; to attract new capital investment to the community; to broaden the tax base; and to provide economic diversification to ensure economic stability and vitality for the Village of Arnold and the surrounding area.

Ordinances and Regulations

Arnold's zoning ordinance addresses concerns for all new development in the village including requiring at least one-foot of elevation above Base Flood Elevation in the floodplain, and prohibits filling wetlands. In the next update, the zoning ordinance will: identify floodplain areas as parks or open space, prohibit development within floodways, discourage development near chemical storage sites, consider the wildland urban interface, and limit development in the ETJ.

Custer County Local Emergency Operations Plan

The Village of Arnold is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the past five years, Arnold has removed multiple mobile homes and built six new homes in the community. In the next five years, the village has plans for residential development in the Block 6 area of the community. The local planning team noted the population has increased due to more employment opportunities in the surrounding area.

Community Lifelines

Transportation

Arnold's major transportation corridors include State Highway 92, which runs east-west, through the center of Arnold and State Highway which runs north-south to the southern portion of the community. Th most traveled route is Highway 92, which accommodates on average 1,405 vehicles per day, 120 of which are heavy commercial vehicles. Arnold does not have rail lines. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical storage sites throughout Arnold which house hazardous materials. The local fire department would be first to respond to chemical spills or events.

Table ARN.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
NDOT Arnold Yard 60600	510 S Carroll St	No
Country Partners Cooperative	509 E 2nd Ave	Yes
Country Partners Cooperative	E 2nd Ave	No

Source: Nebraska Department of Environment and Energy[37]

37 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table ARN.5: Arnold Critical Facilities

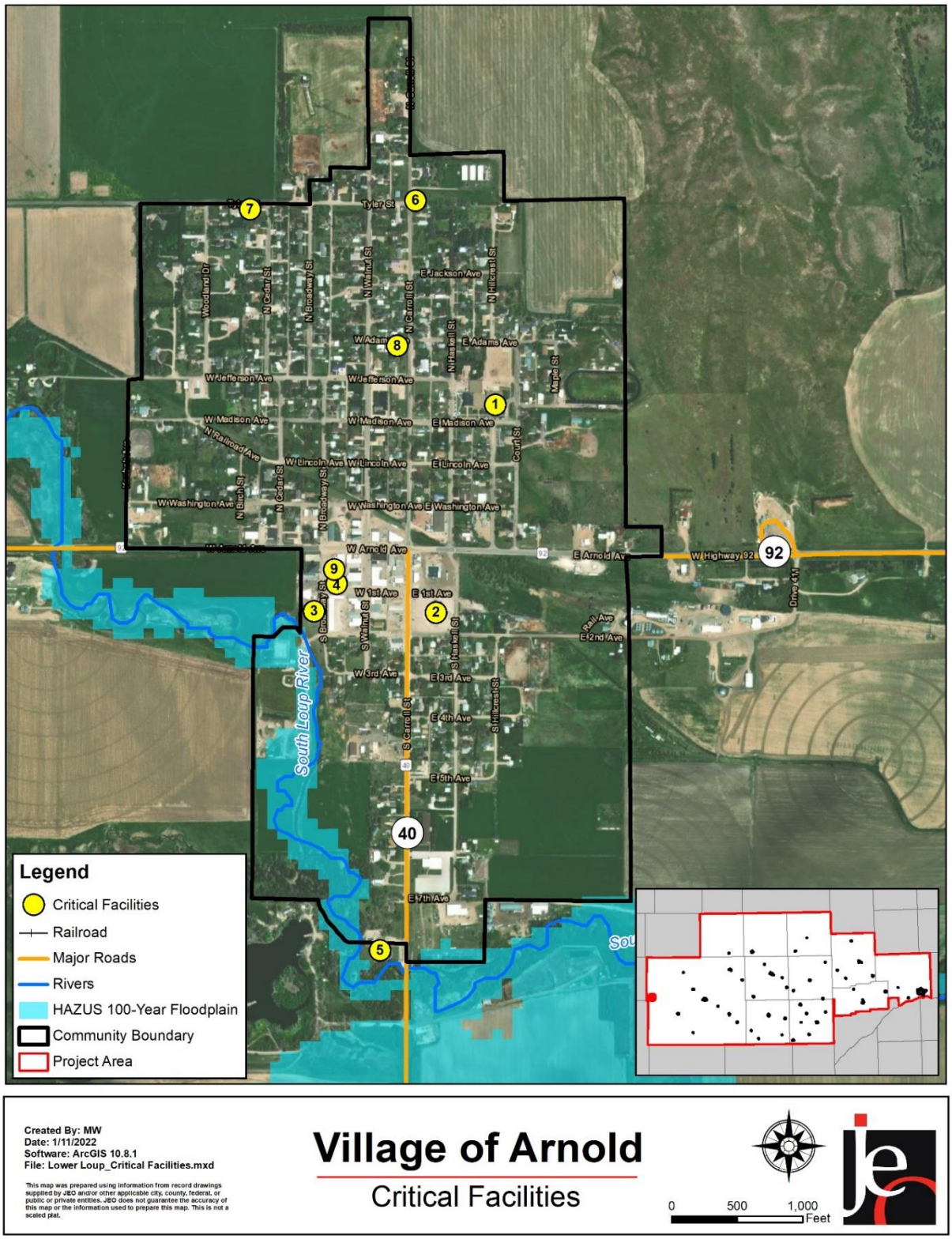
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Arnold Public School	Y	N	N
2	Food, Water, and Shelter	Community Center	N	Y	N
3	Safety and Security	Fire Hall	N	N	N
4	Energy	Power Plant & City Office	N	Y	N
5	Food, Water, and Shelter	Wastewater Treatment Facility	N	Y	N
6	Food, Water, and Shelter	Water Tower	N	N	N
7	Food, Water, and Shelter	Well #1	N	N	N
8	Food, Water, and Shelter	Well #2	N	Y	N
9	Food, Water, and Shelter	Well #3	N	N	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure ARN.3: Arnold Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 ARN.7: Arnold Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
531	524	23,939,328	9	243,015	1.72%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Arnold does not participate in the National Flood Insurance Program. NCEI data indicates that the village has experienced six flooding events from 1996 to 2019. These flooding events caused $350,000 in property damages. The local planning team indicated that flooding continues to occur in flood zone areas of the community during heavy rains. Most recently during the major flooding throughout the state in 2019, the village experienced damage to streets which forced traffic to be rerouted. Additionally, high river flows closed the outlet for the sewer plant which forced the village to reduce inflow to the plant. In the community, residential developments in Gordon's addition in the Block 6 area is most prone to flooding. The village has purchased a large pump to deal with potential flooding in the future. The village is in need of a concrete waterway along the west side of Black 6 in Gordon's addition and concrete drain ways on the south side of Block 1 in Gordon's addition to adequately deal with future flooding.

Severe Thunderstorms (includes hail)

Local concerns related to severe thunderstorms include the potential electrical damage and equipment damage following a storm. The village has an off-site data backup system provided by the internet service provider. However, the local planning team indicated that improvements could be made to the data backup system. In 2015, a lightning strike took out motor controls and ancillary equipment for Arnold's NW water well. The strike caused excess of $5,000 in damages. Ninety percent of the villages electrical system is above ground and is vulnerable to lightning and high winds. In the past, severe thunderstorm events have blown tree limbs and debris into power lines and caused power outages. Some of the critical facilities in the village have backup generators and all facilities are fitted with hail-resistant building materials. The village currently has one well with a portable generator but needs additional generators for the other two wells in the community.

Severe Winter Storms

During severe winter storms, Arnold is primarily concerned about the hazard to public safety. Past severe winter storms have isolated the village for a number of days. These events hindered any emergency services leaving or entering town. There are no designated snow routes in the village. Employees for the village are in charge of snow removal. Snow removal resources are sufficient at this time and include a Case Loader, Bobcat with a bucket, snow blower, broom and ten-foot blade, John Deere tractor with a ten foot blade attachment, and three dump trucks. Past winter storms have also damaged power lines and poles. Arnold will evaluate the need for additional backup generators.

Tornadoes and High Winds

Arnold has four manually activated warning sirens, and one remotely activated siren which reach all areas of the community. Custer County Emergency Management also offers text alerts. The village will evaluate existing warning systems and conduct an inventory of existing weather radios.

According to NCEI data, there have been ten tornado events in and around the village from 1999 to 2020 and caused approximately $160,000 in damages. The most significant event occurred in May 2007, where a tornado touched down eight miles northeast of Arnold and broke windows in an old home, and destroyed a barn, windmills, fences, and trees.

Local concerns regarding high winds include the potential for damage to property, power lines, and subsequently power outages. It is estimated that less than ten percent of power lines are buried within Arnold, adding to the village's vulnerability. Arnold will utilize a tree management program to mitigate damages caused by falling trees and/or branches.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails
HAZARD(S) ADDRESSED	All hazards
STATUS	Completed a voltage conversion from 2400 KVA to 7200 KVA including new power lines and poles in town.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system
HAZARD(S) ADDRESSED	All hazards
STATUS	New rotating siren was installed in central Arnold.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	$20,000 to $75,000+ per generator
POTENTIAL FUNDING	Village General Fund, HMGP
TIMELINE	1 Year
PRIORITY	Medium
LEAD AGENCY	Utilities Department, Custer County Emergency Management
STATUS	Generators have been added to the community center, wastewater facility, and well #1. Well #3 needs to be fitted to accept a portable generator.

OBJECTIVE	FIRST AID TRAINING
DESCRIPTION	1. Promote first aid training for all residents
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$100 per person
POTENTIAL FUNDING	Fire Department Budget
TIMELINE	2-5 Years
PRIORITY	Low
LEAD AGENCY	Custer County Emergency Management, Arnold Fire Department and EMS
STATUS	This project has not yet been started. Ongoing training and awareness is a priority and shared as available through hands on training, demonstrations, and sharing flyers.

OBJECTIVE	IMPROVE DRAINAGE
DESCRIPTION	1. Improve storm sewers and drainage patterns in and around the community
HAZARD(S) ADDRESSED	Deepen drainage ditches and clean out culverts
ESTIMATED COST	Flooding
POTENTIAL FUNDING	$5,000+
TIMELINE	Village General Fund
PRIORITY	5+ Years
LEAD AGENCY	Utilities Department
STATUS	This project has not yet been started. Ditch deepening and culvert cleanout being done as time and funding allows.

Objective	Parcel Level Evaluation of Flood Prone Properties
DESCRIPTION	1. Conduct a study examining parcels located in the flood prone areas
HAZARD(S) ADDRESSED	Identify mitigation measures that can reduce future impacts
ESTIMATED COST	Flooding
POTENTIAL FUNDING	$25,000+
TIMELINE	Property Owners, Village General Fund
PRIORITY	5+ Years
LEAD AGENCY	Property Owners, Utilities Department
STATUS	This project has not yet been started. Further activities will be determined once floodplain maps have been developed for the county and community.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Severe Thunderstorms, High Winds and Tornadoes
ESTIMATED COST	$500+
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Utilities Department
STATUS	Arnold will utilize a tree management program to mitigate damages caused by falling trees and/or branches. The village evaluates all trees in town monthly to address problem areas.

OBJECTIVE	STREAM BED/BANK STABILIZATION
DESCRIPTION	1. Evaluate current stream bed and bank stabilization needs
HAZARD(S) ADDRESSED	Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
ESTIMATED COST	Flooding
POTENTIAL FUNDING	$10,000+, Varies by Scope
TIMELINE	Village General Fund, FMA, HMGP
PRIORITY	5+ Years
LEAD AGENCY	Village Board, Utilities Department
STATUS	Streambank stabilization efforts are taken as needed when erosion causes problem areas.

OBJECTIVE	UPDATE COMPREHENSIVE PLAN
DESCRIPTION	1. Update comprehensive plan
HAZARD(S) ADDRESSED	Integrate plan with Hazard Mitigation Plan components
ESTIMATED COST	All Hazards
POTENTIAL FUNDING	$10,000
TIMELINE	Village General Fund, CDBG
PRIORITY	2-5 Years
LEAD AGENCY	Village Board
STATUS	Plan anticipated to be updated in 2022.

New Mitigation Actions – 2022 Plan

OBJECTIVE	FLOOD CONTROL STRUCTURES
DESCRIPTION	1. Evaluate the need for and construct concrete waterways in town to reduce flood impacts
HAZARD(S) ADDRESSED	Flooding, Severe Thunderstorms
ESTIMATED COST	Unknown
POTENTIAL FUNDING	General Fund, SRF, HMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Utility Superintendent
STATUS	This is a new mitigation action.

Removed Mitigation Actions

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	Custer County EMA and Arnold Rural Fire Department maintains emergency communication equipment. Village utilities no longer use hand held radios.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board, Village Clerk, Utility Superintendent, and County Emergency Manager. The local planning team will review the plan no less than bi-annually and will include the public in the review and revision process by sharing information at board meetings and sharing information on the village website.

COMMUNITY PROFILE

VILLAGE OF BERWYN

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

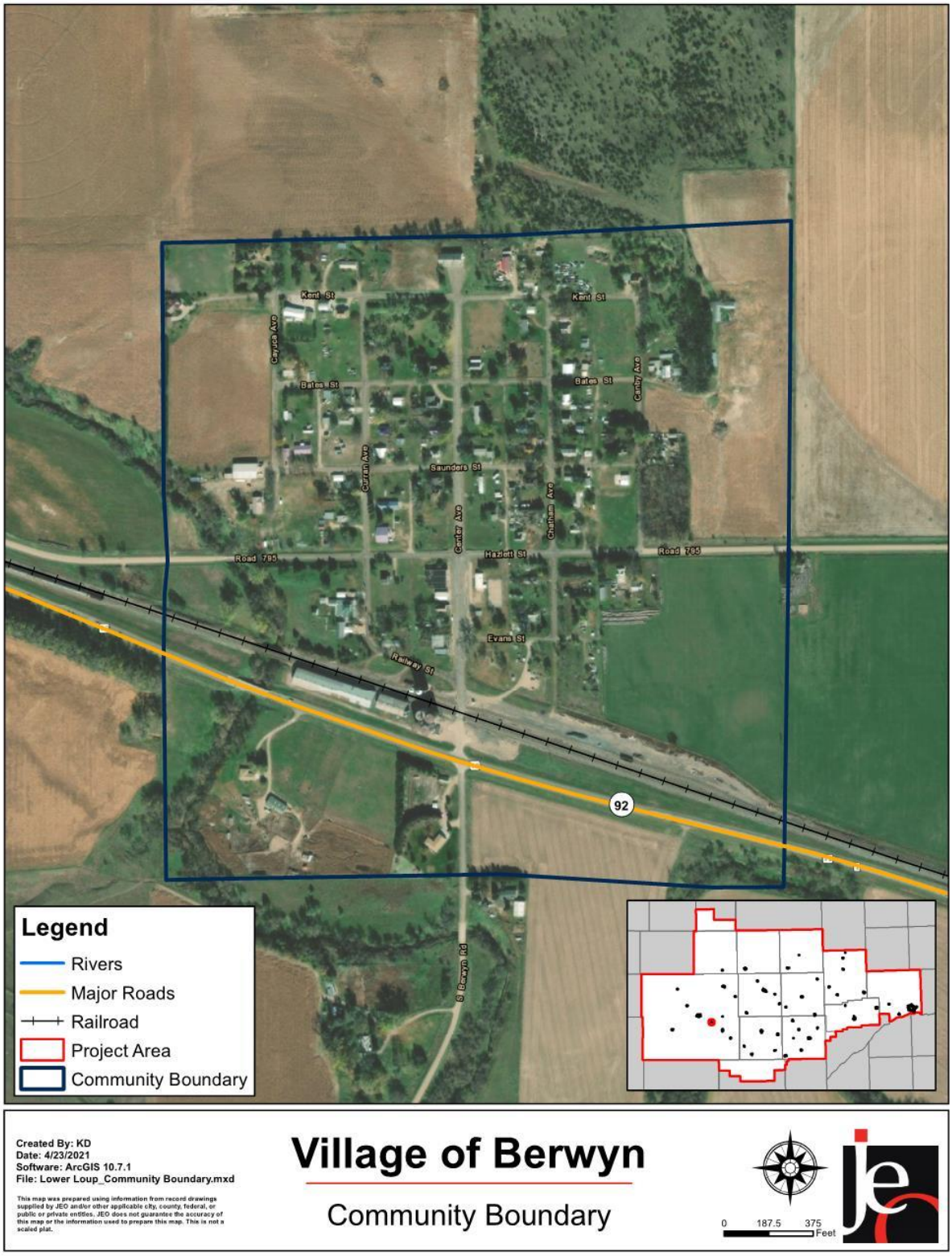
Table BER.1: Village of Berwyn Local Planning Team

NAME	TITLE	JURISDICTION
GREGG JOHNSON	Chairman of the Board	Village of Berwyn
HUNTER GOLDSBY	Co-Chairman of the Board	Village of Berwyn
BILL DRAKE	Trustee	Village of Berwyn
LORISSA ANDERSON	Trustee	Village of Berwyn
CAROLYN BRUNKEN	Trustee	Village of Berwyn

Location and Geography

The Village of Berwyn is located in central Custer County and covers an area of 0.26 square miles. Mud Creek runs along the southwestern side of the village. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Berwyn. Most of Berwyn lies in the dissected plains topographic region and is surrounded by agricultural fields.

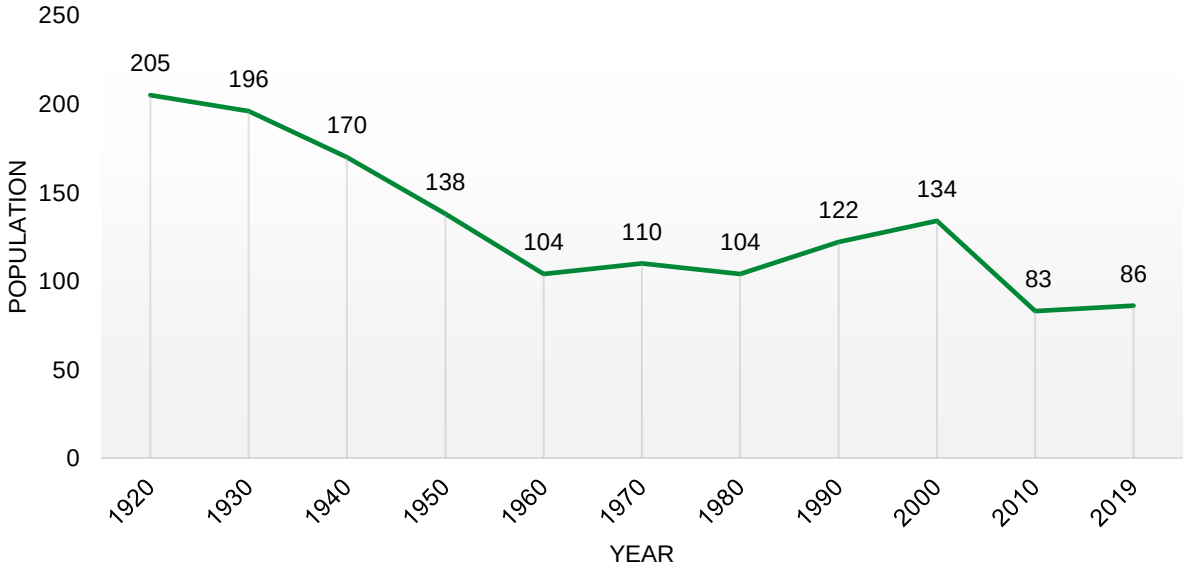
Figure BER.1: Village of Berwyn Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1920 to 2019 (estimated). This figure indicates that the population of Berwyn experienced a decline from 1970 through 1980. Between 1980 and 2000 the population grew, however, in 2000 the population decreased again. Since 2010 the population has increased. 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. The Village's population accounted for <1% of Custer County's Population in 2019.

Figure BER.2: Berwyn Population 1920-2019



Source: U.S. Census Bureau[38]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Berwyn' population was:

- **Older.** The median age of Berwyn was 49.2 years old in 2019, compared with the County average of 43.1 years. Berwyn's population has grown older since 2010, when the median age was 48.4 years old. Berwyn had a larger proportion of people under 20 years old (24.8%) than the County (25.0%).[39]
- **Less ethnically diverse.** In 2010, 0% of Berwyn's population was Black or African American, 0% was other races, and 2.8% were two or more races. By 2019, only 1.9% of Berwyn's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[40]

38 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
39 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
40 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Berwyn (0%) was higher than the County (3.1%) in 2019.[41]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Berwyn's economy had:

- **Different mix of industries**. Employment sectors accounting for 10% or more of employment in Berwyn included Agriculture, Construction, Retail, Education, and Entertainment. In comparison Custer County's included Agriculture, Retail, and Education.[42]
- **Lower household income**. Berwyn's median household income in 2019 ($48,611) was about $4,000 lower than the County ($52,184).[43]
- **Fewer long-distance commuters**. About 43.8% percent of workers in Berwyn commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 15.8% of workers in Berwyn commute 30 minutes or more to work, compared to about 16.8% of the County workers.[44]

Major Employers

The major employers in the village include Pracht Irrigation, Sandhills Seamless Gutters, and Hunter's Towing and Repair. However, the local planning team noted that many residents commute to Broken Bow or other communities for work.

Housing

In comparison to Custer County, Berwyn's housing stock was: [45]

- **More owner occupied.** About 97.7% of occupied housing units in Berwyn are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Smaller share of aged housing stock**. Berwyn has fewer houses built prior to 1970 than the county (57.2% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Berwyn contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 79.6% of housing in Berwyn was single-family detached, compared with 89.5% of the County's housing. Berwyn has a larger share of mobile and manufactured housing (20.4%) compared to the County (3.3%). The local planning team noted there are eight mobile homes located in the village.

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

41 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
42 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
43 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
44 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
45 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Berwyn has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member village board and the following offices: clerk/treasurer and volunteer fire department. Custer County Emergency Management Agency also may assist with project implementation in the village.

Capabilities

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

Table BER.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*No*
	Capital Improvements Plan	*No*
	Economic Development Plan	*No*
	Local Emergency Operational Plan	*No*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*No*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*No*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*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*
	Civil Engineering	*No*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*No*
	Grant Manager	*No*
	Mutual Aid Agreement	*No*
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	*Yes*
	Applied for grants in the past	*Yes*
	Awarded a grant in the past	*No*
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*Yes*
	Gas/Electric Service Fees	*No*
	Storm Water Service Fees	*No*

SURVEY COMPONENTS		YES/NO
	Water/Sewer Service Fees	*No*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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)	

Table BER.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	Limited
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Limited	Limited
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Village municipal funds have mostly remained the same over the last five years and are limited to maintaining current facilities and systems. However, municipal funds are not already dedicated to a specific project. No projects identified in the hazard mitigation plan are already included in the village's budget, but in 2019, the village was awarded a FEMA grant to complete road repairs following the devastating floods of the same year. The village has a stormwater protection plan, but no other plans or planning mechanisms at this time.

Custer County Local Emergency Operations Plan

The Village of Ansley is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the past five years the village has seen several changes. Specifically the March 2019 flood events led to significant damage in Berwyn which required repairs throughout 2020. While no new homes have been constructed, several garages, storage buildings, and carports have been built. Additionally, the local Bed and Breakfast recently closed and no new business have moved into town. Currently there are no plans for future residential or commercial development. The population in Berwyn has declined in recent years which the local planning team attributes to an aging population and lack of available quality housing. Some new families have moved to town but several old homes throughout the village are in disrepair and should be demolished.

Community Lifelines

Transportation

Berwyn's major transportation corridors include Highway 2, which runs east-west, past the southern edge of Berwyn. N-2 accommodates on average 3,390 vehicles per day, 375 of which are heavy commercial vehicles. The local planning team noted residential concerns about the speed limit through Berwyn on N-2 to reduce accidents. Adding a turn lane to the highway into Berwyn has also been suggested as a potential solution. Burlington Northern Santa Fe has a rail line that runs along Highway 2 on the southern side of Berwyn. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no chemical storage sites throughout Berwyn which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table BER.5: Berwyn Critical Facilities

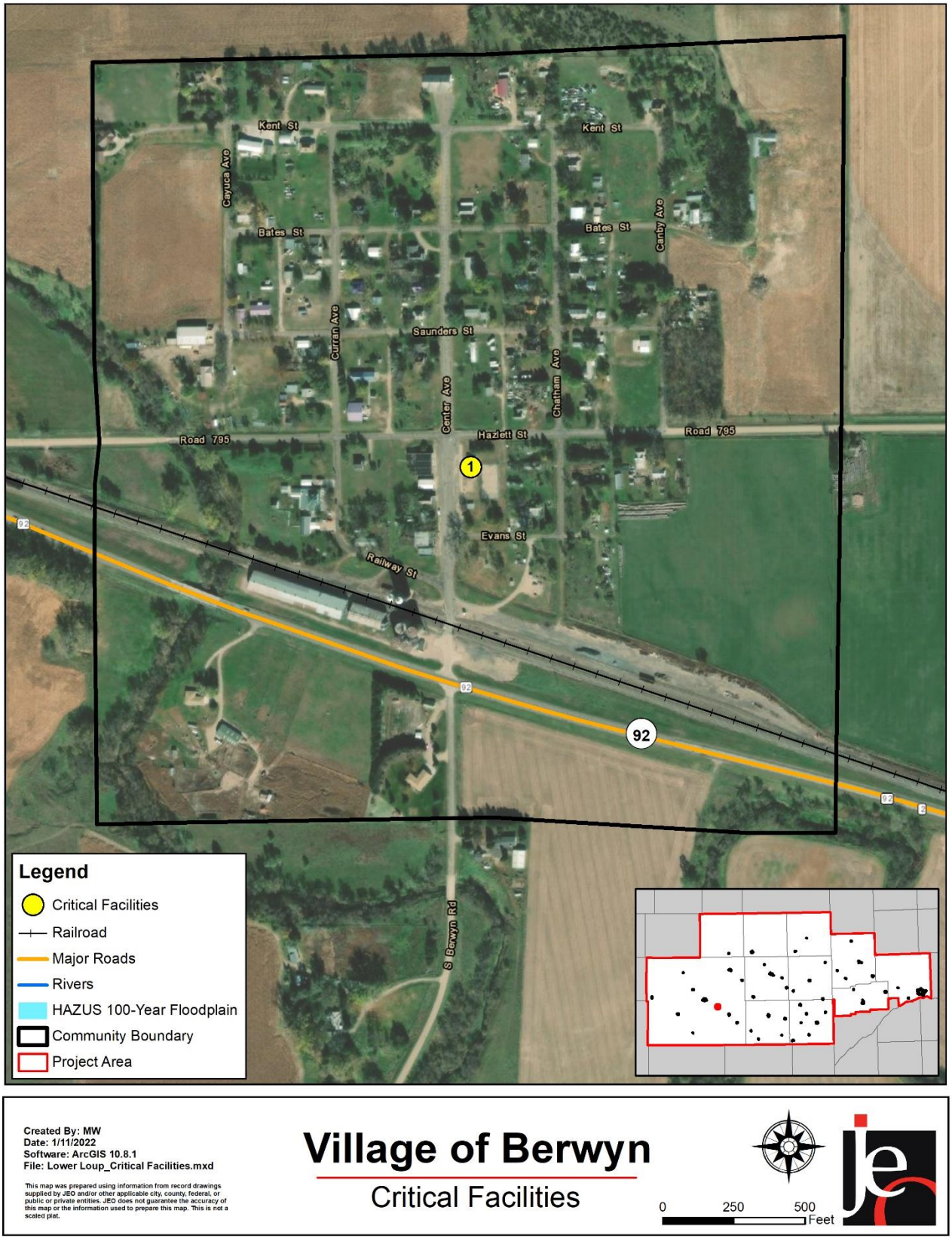
CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Berwyn Fire Hall and Community Center	Y	Y	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure BER.3: Berwyn Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 BER.7: Berwyn Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
107	100	2,004,731	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Drought

Berwyn has experienced drought in the past, particularly feeling its effects during the statewide drought of 2012. While water supply has not historically been an issue for the village as each property owner has their own well, the lack of rain during periods of drought concerns Berwyn's local planning team. Particularly, the planning team prioritized this hazard due to the risk of fire and tree loss during drought. As far as the planning team knows, high nitrates in the village's wells have not been a problem.

Extreme Heat

With many senior citizens in Berwyn, extreme heat is of top concern. The village does have cooling centers, equipped with backup generators, available when needed for residents. While the planning team did not identify any major past extreme heat events, they acknowledged the need to keep vulnerable resident cool during such events in the future.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

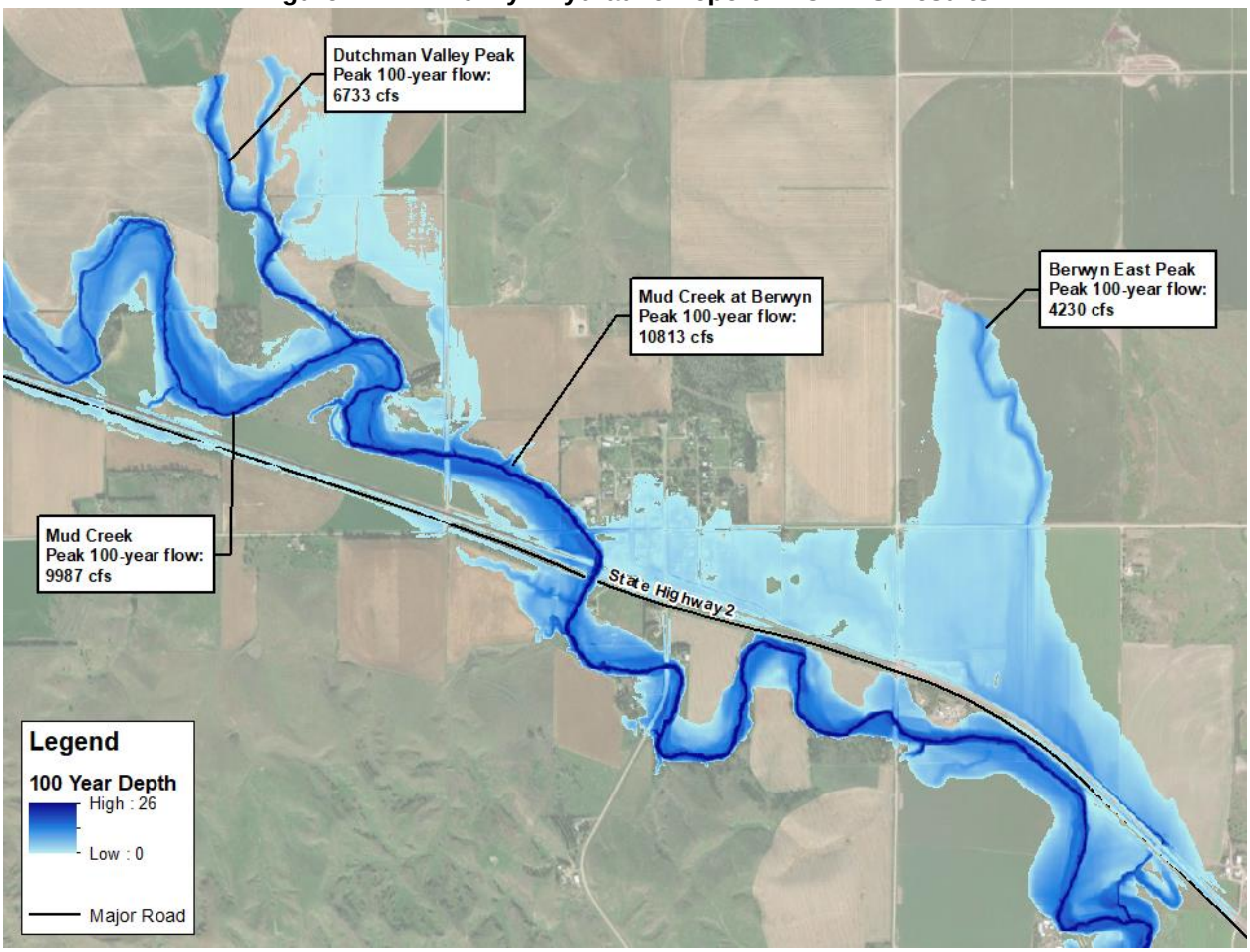
Flooding was identified as a hazard of concern for the Village due to past damages and events which have occurred. Mud Creek flows along the western and southern edges of the community. However, the Village of Berwyn has not been mapped for flood risk. The local planning team noted, though, that down Chatham Avenue, near Mud Creek, and around the center of town experience flooding.

A hydraulic analysis for the Mud Creek Watershed, which includes the Village of Berwyn, was under development as of January 2022. Some major findings pertaining to the village from this report included:

- Flooding within Berwyn appears to occur due to overtopping within Mud Creek along Hazlett Street. Once Mud Creek overtops its banks, it free flows down Hazlett Street right into the community of Berwyn.
- Flows in Mud Creek just west of Berwyn experience a double peak which correspond to the difference in timing between Dutchman Creek and Mud Creek. The magnitudes of these peaks are similar, due to the shorter time of concentration within Dutchman Creek, and the significant attenuation which occurs throughout the Mud Creek floodplain.
    - This suggest that storage alternatives within Dutchman Creek will not appreciably reduce peak flows in Mud Creek west of Berwyn since they peak at separate times with similar magnitudes. Storage provided in Dutchman Creek will not reduce flooding extents within Berwyn.
- The three-existing bridge crossings west of Berwyn do not appear to provide significant backwater effects. This is likely because a major overland relief outlet exists along Hazlett street through Berwyn, and therefore minimal head can back up behind these bridges.
- During Alternatives Analysis, a diversion channel and/or a berm should be evaluated west of Berwyn to provide relief prior to water entering through Hazlett Street.

Flood events in 2010 and 2019 caused significant damages. The July 2010 flood caused damage to numerous residential homes including roofs, foundations, and electrical components. This event also caused well contamination and erosion throughout the village. The March 2019 flood event also inundated and damaged roads, as well as damaged fences and caused widespread debris. The village has received aid from FEMA and repairs are ongoing as of 2021. The village plans to conduct bridge inspections and maintain their streets to mitigate the effects of flooding. Future projects the village is interested in pursuing include repairing and replacing culverts, improving ditches, and clearing debris and brush from the bridge at Mud Creek.

Figure BER.4: Berwyn Hydraulic Report HEC-RAS Results



Severe Thunderstorms

The village indicated that severe thunderstorms are a hazard of top concern because of their potential to down branches and trees, cause power loss, and cause hail damage. A severe thunderstorm event occurred in 2010 that resulted in hail damage and flash flooding. While no powerlines are buried, critical facilities in the village do have backup generators. Additionally, the village fire hall is a steel building capped with a thick foam roof.

Severe Winter Storms

Severe winter storms were identified as a top hazard of concern by the Village of Berwyn due to the community's need to keep roads accessible for emergency vehicles entering and exiting town. Two major events stand out in the village's memory: a severe ice storm in 2001 that took out powerlines and left many residents without heat, and a heavy snowstorm in 2005 that buried the village for days. There are no designated snow routes in town, but the board members take turns clearing the streets and alleyways after snow events. A local resident also plows the streets for the village. Currently, the village is equipped with a pickup with a blade, two tractors with blades and push loaders.

Tornadoes and High Winds

Like severe thunderstorms, the village is concerned about the potential of damage caused by tornadoes and high winds, particularly the risk of downed branches and trees, power loss, and structural damage. No major tornadic or high wind events have impacted the village. The village does have warning sirens, activated through the Ansley Rural Fire District Emergency System, but those sirens are not tested and do not work. The village does not have safe rooms for residents to take shelter. Additionally, the village knows of hazardous trees that should be removed to prevent potential damage. The hazardous trees are along Saunders, Chatham, and Canby streets. The village identified the need for additional equipment and manpower to improve their resilience to this hazard.

Mitigation Strategy

New Mitigation Actions – 2022 Plan

OBJECTIVE	DRAINAGE DITCHES AND CULVERT CLEANING
DESCRIPTION	4. Repair or replace culverts to lessen flood impacts. 5. Clean out or deepen drainage ditches to improve stormwater drainage
HAZARD(S) ADDRESSED	Flooding, Severe Thunderstorms
ESTIMATED COST	$15,000
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action.

OBJECTIVE	MUD CREEK BRIDGE IMPROVEMENTS
DESCRIPTION	1. To mitigate the effects of flooding, the village wants to clear the debris, grass, brush, and shrubs from around Mud Creek Bridge.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$25,000
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This is a new mitigation action.

New Mitigation Actions – 2022 Plan

OBJECTIVE	PROJECT SCOPING AS A RESULT OF THE WFPO PROGRAM
DESCRIPTION	1. Evaluate potential flood risk reduction alternatives as identified through the Watershed and Flood Prevention Operations Program including project scoping and implementation
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	General Fund, WFPO, HMA
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board, LLNRD, JEO Consulting Group
STATUS	Mud Creek WFPO is currently under development. No formal alternatives have yet been determined however several alternatives are under further review.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The Village Board of Trustees will bi-annually review the Berwyn profile. The Board will notify and involve the public by sharing notice of the review at Board meetings, in newsletters mailed to residents, and on the village website.
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COMMUNITY PROFILE

CITY OF BROKEN BOW

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

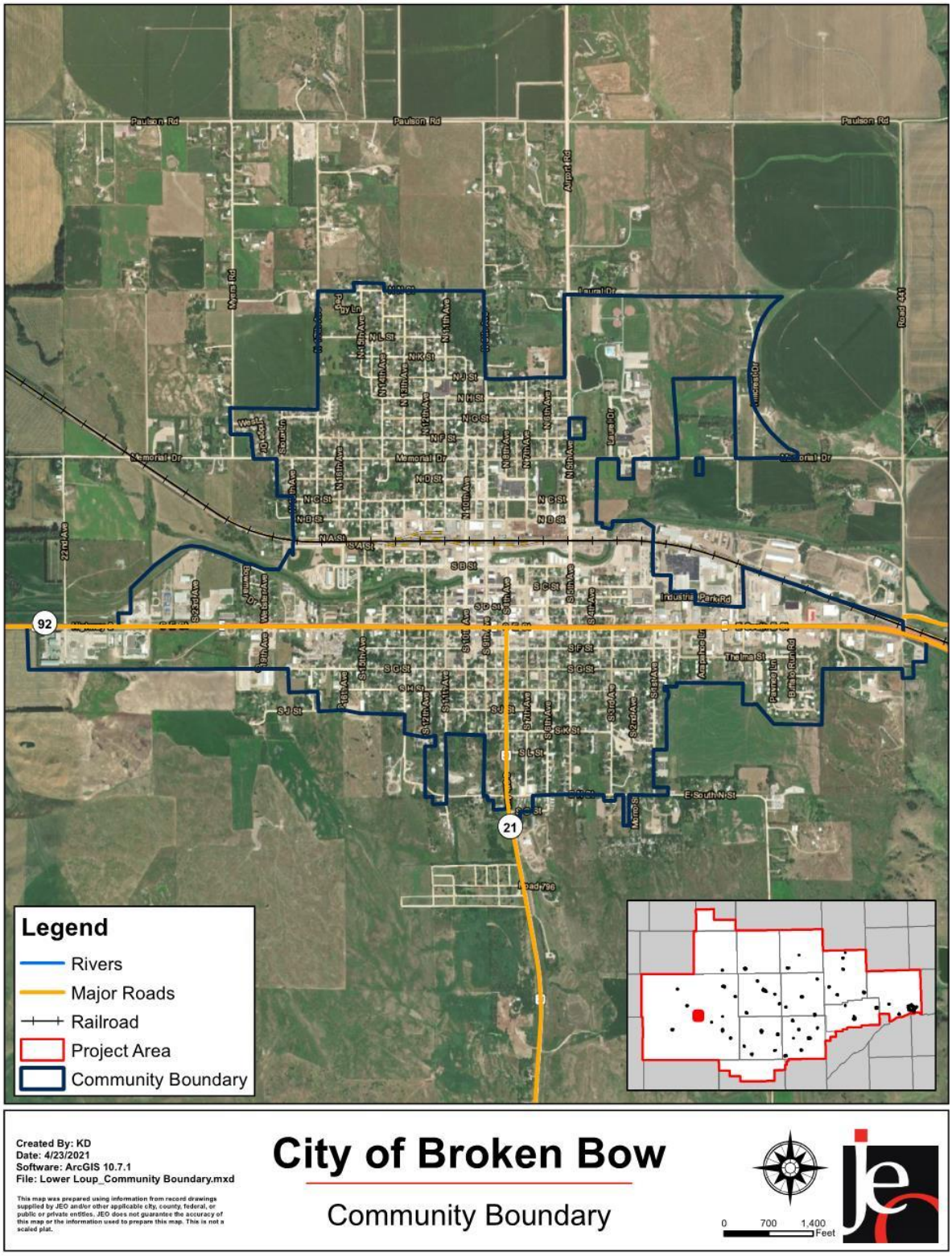
Table BRO.1: City of Broken Bow Local Planning Team

NAME	TITLE	JURISDICTION
DAN KNOELL	City Administrator	City of Broken Bow
DARREN MARTEN	Street Overseer	City of Broken Bow
ROD SONNICHSEN	Mayor	City of Broken Bow

Location and Geography

The City of Broken Bow is located in central Custer County. The City of Broken Bow covers an area of 1.9 square miles. Mud Creek runs through the center of the city. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Broken Bow. Most of Broken Bow lies in the plains topographic region, and is surrounded by agricultural fields.

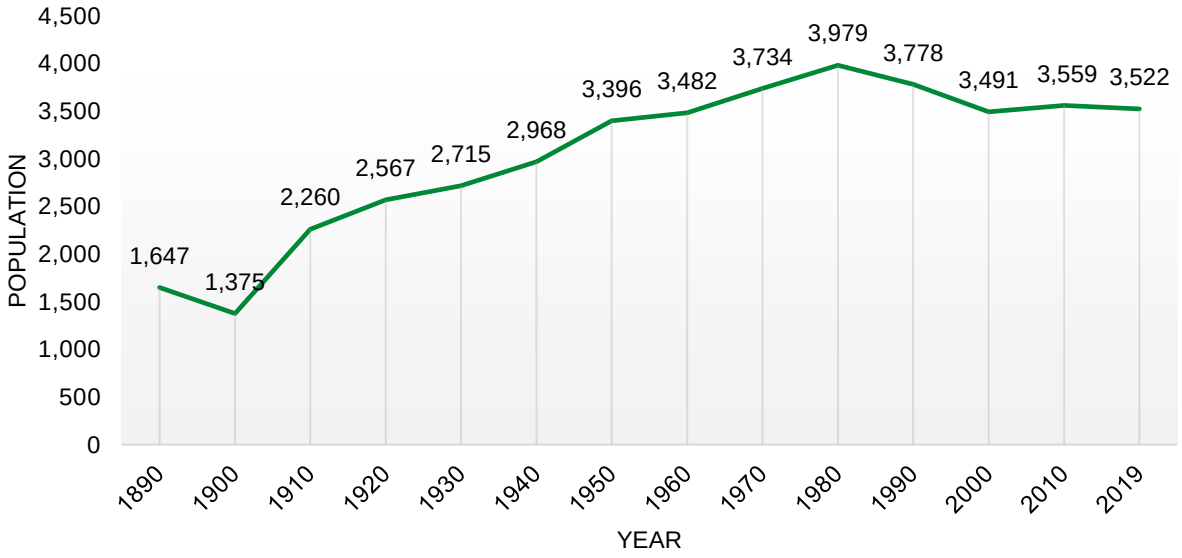
Figure BRO.1: City of Broken Bow Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2019 (estimated). This figure indicates that the population of Broken Bow experienced a decline from 1980 through 2000. Between 2000 and 2010 the population grew, however, since 2010 the population has been in a steady decline. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The City's population accounted for 33% of Custer County's Population in 2019.

Figure BRO.2: Broken Bow Population 1890-2019



Source: U.S. Census Bureau[46]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Broken Bow' population was:

- **Younger.** The median age of Broken Bow was 39.8 years old in 2019, compared with the County average of 43.1 years. Broken Bow's population has grown younger since 2010, when the median age was 44.4 years old. Broken Bow had a larger proportion of people under 20 years old (27.4%) than the County (25.0%).[47]
- **More ethnically diverse.** In 2010, 0% of Broken Bow's population was Black or African American, 0% was other races, and 1% were two or more races. By 2019, about 1.9% of Broken Bow's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[48]

46 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
47 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
48 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Broken Bow (9.8%) was higher than the County (6.1%) in 2019.[49]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Broken Bow's economy had:

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Broken Bow included Retail, Education, and Entertainment. In comparison Custer County's included Agriculture, Retail, and Education.[50]
- **Lower household income**. Broken Bow's median household income in 2019 ($42,890) was about $10,000 lower than the County ($52,184).[51]
- **Fewer long-distance commuters**. About 84.2% percent of workers in Broken Bow commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 3.5% of workers in Broken Bow commute 30 minutes or more to work, compared to about 16.8% of the County workers.[52]

Major Employers

The city's major employers include Becton Dickinson & Co (BD), Adams Land and Cattle, Broken Bow Public Schools, Jennie M. Melham Memorial Medical Center, Myers Construction, Custer County, and the City of Broken Bow.

Housing

In comparison to the Custer County, Broken Bow's housing stock was: [53]

- **More owner occupied.** About 58.3% of occupied housing units in Broken Bow are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Slightly larger share of aged housing stock**. Broken Bow has slightly more houses built prior to 1970 than the county (68.5% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the City is single family detached and Broken Bow contains more multifamily housing with five or more units per structure than the County (3.4% compared to 1.1%). About 82.6% of housing in Broken Bow was single-family detached, compared with 89.5% of the County's housing. Broken Bow has a smaller share of mobile and manufactured housing (0.3%) compared to the County (3.3%).

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

49 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
50 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
51 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
52 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
53 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Broken Bow has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The City has a mayor and four member city council and the following offices: clerk/treasurer, city administrator, finance director, water/sewar superintendent, street commissioner, economic development director, board of public works, volunteer fire department.

Capabilities

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

Table BRO.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*Yes*
	Economic Development Plan	*No*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*Yes*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*Yes*
	Building Codes	*No*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*Yes*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*Yes*
	Floodplain Administration	*Yes*
	GIS Capabilities	*Yes*
	Civil Engineering	*Yes, contracted*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*Yes*
	Grant Manager	*Yes*
	Mutual Aid Agreement	*Yes*
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	*Yes*
	Applied for grants in the past	*No*
	Awarded a grant in the past	*No*
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*Yes*
	Gas/Electric Service Fees	*Yes*
	Storm Water Service Fees	*No*

SURVEY COMPONENTS		YES/NO
	Water/Sewer Service Fees	*Yes*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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.	*Yes*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes*
	Natural Disaster or Safety related school programs	*Yes*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*Yes*
	Other (if any)	

Table BRO.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Moderate	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	High	High
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Moderate	High
TIME TO DEVOTE TO HAZARD MITIGATION	Moderate	Moderate

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Broken Bow's municipal funds have decreased over recent years and are limited to maintaining current facilities and systems. A large portion of the city's funds are dedicated to improving roads. The city has, however, already included in their budget levee reconstruction at Mud Creek, a project also identified in the hazard mitigation plan. The city has not applied for grants in the past.

Comprehensive Plan

Broken Bow's comprehensive plan was last updated in 2018. The plan directs development away from the levee, encourages infill development, encourages clustering of development in sensitive areas, encourages preservation of open space in hazard prone areas, and encourages strengthening retrofits to historic structures. The city will incorporate hazard mitigation principles into the next comprehensive plan update, including recommending a berm be created at Indian Hills park to reduce flood risk.

Capital Improvement Plan

The city has a capital improvement plan updated annually. This plan includes a number of mitigation projects including: storm water projects, upgrading storm sewer systems, installing new municipal wells, upsizing distribution pipes, installing water meters for residential structures, updating electrical distribution system, burying power lines, improving fire hall, and improving the existing police headquarters. Future updates to the capital improvement plan include: widening roadways that would improve evacuations if they were required, and bridge improvements.
An area the city plans to focus on is 5th street, two and a half blocks south of Highway 2.

Ordinances and Regulations

The zoning ordinance was updated in 2018. While the zoning ordinance does not limit development in the floodplain nor the ETJ, it does restrict development near the levee. This zoning ordinance identifies floodplain areas as parks or open space, requires more than one-foot above Base Flood Elevation in the floodplain based on the state standard, and contains natural hazard layers.

Custer County Local Emergency Operations Plan

The City of Broken Bow is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

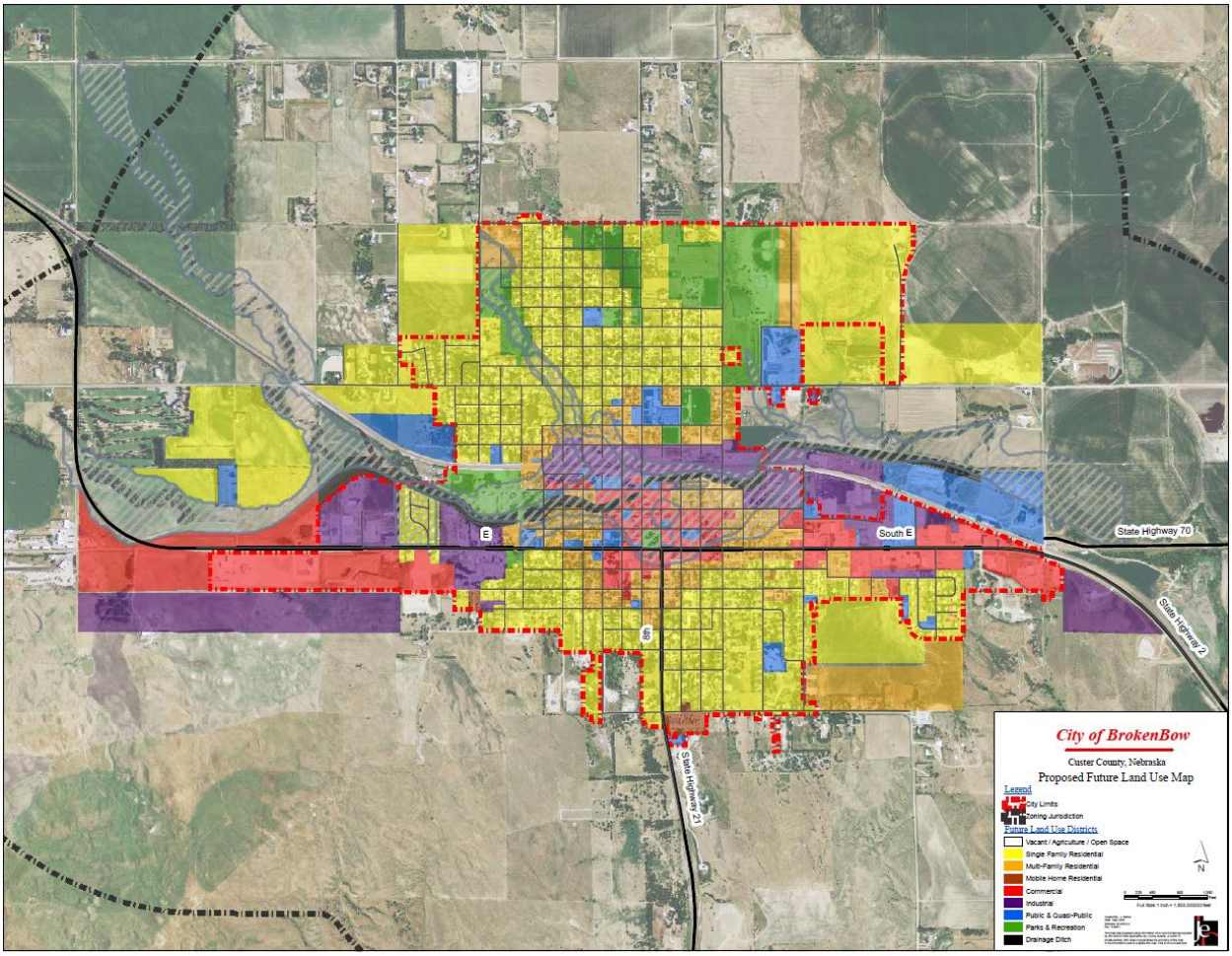
Other Plans

The city is developing a wellhead protection plan, but does not have any other plans or planning mechanisms.

Future Development Trends

In the past decade, population has rebounded and stabilized from the rapid decline seen from 1980 to 2000. The taxable sales and pull factor seen in the Broken Bow Comprehensive Plan indicate that Broken Bow will continue to draw residents from outside the city with its retail and entertainment opportunities. In the past five years, new housing was developed in Broken Bow, including Eagle Crest/Woodcrest and Country Club Estates. A Dollar General opened. O'Reilly's constructed a new building. Memorial Drive road was improved by the city. No structures were developed in the floodplain, but the city notes that O'Reilly's new building is close to the levee, however, it is outside the no-build zone. Broken Bow has experienced high demand for housing, so it questions the Census's reports of a declining population. New residential developments are expected throughout Broken Bow in the next five years, including expanding neighborhoods and multi-family housing. The figure below shows the proposed future land use map for the city.

Figure BRO.3: Broken Bow Future Land Use Map



Community Lifelines

Transportation

Broken Bow's major transportation corridors include Highway 2, which runs east-west, through the center of Broken Bow, and Highway 21 which runs south-north to the southern edge of Broken Bow. N-2 accommodates on average 10,335 vehicles per day, 655 of which are heavy commercial vehicles, and N-21 accomodates on average 3,535 vehicles per day, 340 of which are heavy commerical vehicles. Burlington Northern Santa Fe has a rail line that runs through the south-central portion of the city. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 13 chemical storage sites throughout Broken Bow which house hazardous materials. County Emergency Management and the LEPC would be the first to respond to a spill.

Table BRO.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
BECTON DICKINSON CORP	150 S 1st Ave	No
ARROW AVIATION INC	79971 Airport Rd	No
PAULSEN INC REDI-MIX PLANT	1981 N 17th Ave	No
NDOT BROKEN BOW YARD	515 E South E St	No
TROTTER INC	Airport Rd	No
TROTTER FERTILIZER INC	1220 N B St	Yes
CENTURYLINK	610 S 10th Ave	No
ADAMS LAND & CATTLE CO SOUTH	79574 Road 438	No
ADAMS LAND & CATTLE CO EAST	79879 Road 442	Yes
NDOT BROKEN BOW WEST YARD	Ryno Rd	No
BROKEN BOW WIND I	80347 Road 444	Yes
BROKEN BOW WIND II	80538 Round Valley Rd	No
TROTTER'S WHOA & GO WEST	2990 S E St	No

Source: Nebraska Department of Environment and Energy[54]

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 previous planning process and updated by the local planning team as a part of this plan update. The American Red Cross has agreements with Broken Bow High School, Custer Elementary, and North Park Elementary in Broken Bow to serve as mass care facilities during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

54 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Table BRO.5: Broken Bow Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Wastewater Treatment Plant	N	N	N
2	Energy	Electrical	N	N	N
3	Energy	Power Plant	N	N	N
4	Safety and Security	Broken Bow Courthouse	N	N	N
5	Safety and Security	Police, Fire, Jail, Sheriff, Dispatch Office	N	N	N
6	Food, Water, and Shelter; Safety and Security	Municipal Building	Y	Y	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

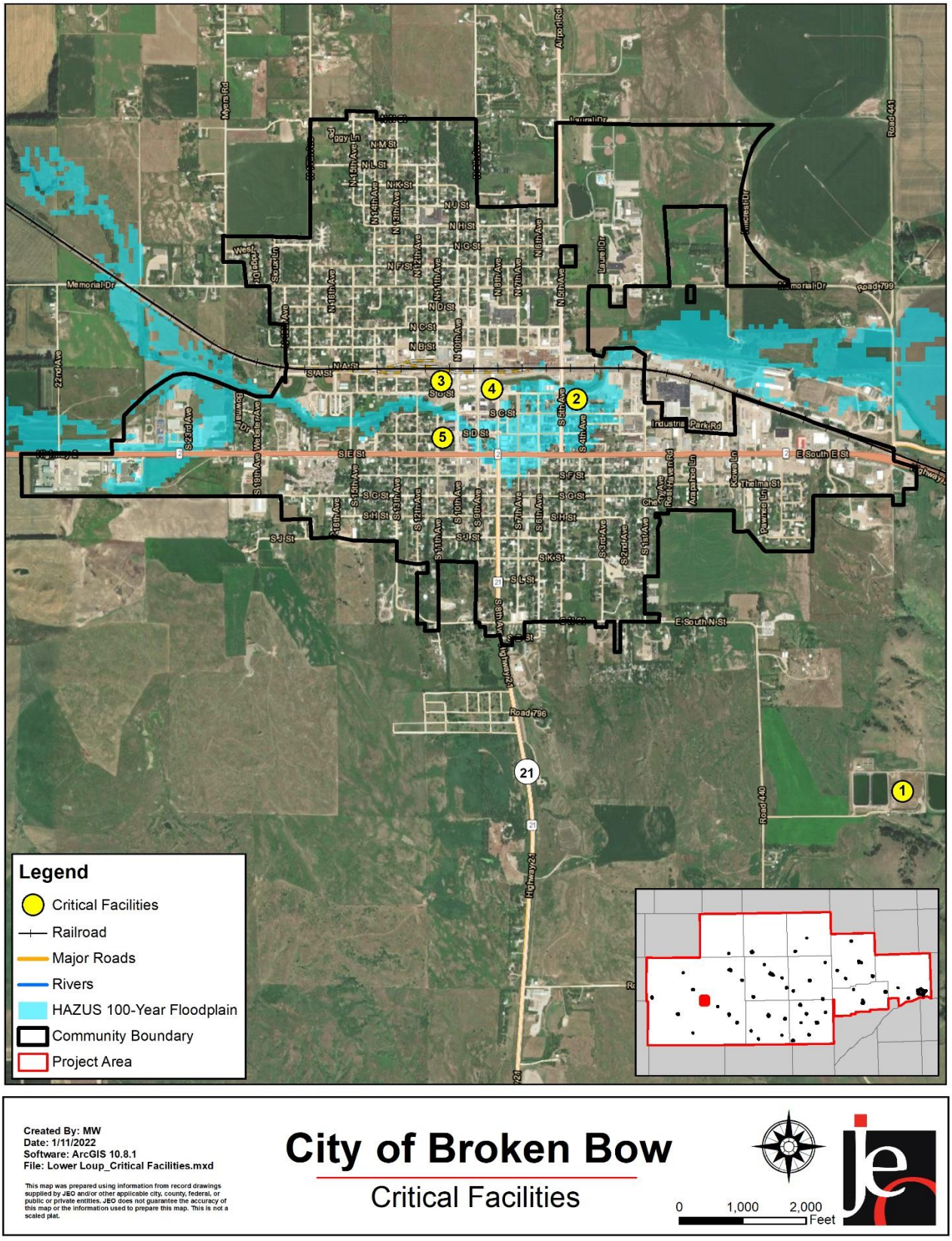
Health and Medical Facilities

The following medical and health facilities are located within the community.

Table BRO.6: Broken Bow Critical Facilities

NAME OF FACILITY	TYPE OF FACILITY	NUMBER OF LICENSED BEDS
BROOKESTONE VIEW	Long Term Care Facility	60
CUSTER CARE	Assisted Living Facility	10
JENNIE M MELHAM MEMORIAL MEDICAL CENTER	Hospital	23
OFF BROADWAY APARTMENTS	Assisted Living Facility	50
QUALITY SENIOR VILLAGES	Assisted Living Facility	14

Figure BRO.3: Broken Bow Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 BRO.7: Broken Bow Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
1,985	1954	189,897,028	246	30,143,578	12.59%

Source: County Assessor, GIS Workshop

Table BRO.8: Broken Bow Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	06-07-BC26A-310051	9/6/2006	Structure removed from SFHA
LOMA	07-07-1286A-310051	7/10/2007	Property removed from SFHA
LOMA	09-07-1208A-310051	8/18/2009	Structure removed from SFHA
LOMA	09-07-1766A-310051	11/3/2009	Structure removed from SFHA
LOMA	09-07-1853A-310051	1/21/2010	Property removed from SFHA
LOMA	11-07-2484A-310051	8/25/2011	Structure removed from SFHA
LOMA	11-07-2488A-310051	8/25/2011	Structure removed from SFHA
LOMA	11-07-2556A-310051	9/1/2011	Structure removed from SFHA
LOMA	11-07-2854A-310051	9/29/2011	Structure removed from SFHA
LOMA	12-07-1418A-310051	2/16/2012	Structure (residence) removed from SFHA
LOMA	13-07-0018A-310051	10/25/2012	Property removed from SFHA
LOMA	13-07-0019A-310051	10/23/2012	Property removed from SFHA
LOMA	13-07-2112A-310051	8/13/2013	Structure removed from SFHA
LOMA	14-07-0164A-310051	10/31/2013	Structure removed from SFHA
LOMA	14-07-0642A-310051	12/20/2013	Property removed from SFHA
LOMA	14-07-0644A-310051	12/23/2013	Structure removed from SFHA

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	14-07-0828A-310051	2/20/2014	Structure removed from SFHA
LOMA	14-07-1246A-310051	5/8/2014	Structure removed from SFHA
LOMA	14-07-1388A-310051	4/24/2014	Structure removed from SFHA
LOMA	14-07-1862A-310051	6/26/2014	Structure removed from SFHA
LOMA	14-07-1863A-310051	6/26/2014	Structure removed from SFHA
LOMA	15-07-0464A-310051	1/15/2015	Structure (residence) removed from SFHA
LOMA	15-07-1142A-310051	5/7/2015	Property removed from SFHA
LOMA	15-07-1355A-310051	10/15/2015	Property removed from SFHA
LOMA	15-07-1964A-310051	8/20/2015	Property removed from SFHA
LOMA	15-07-2336A-310051	11/6/2015	Structure removed from SFHA
LOMA	16-07-0410A-310051	12/23/2015	Structure (residence) removed from SFHA
LOMA	16-07-0474A-310051	12/23/2015	Property removed from SFHA
LOMA	16-07-0475A-310051	1/21/2016	Structure (residence) removed from SFHA
LOMA	16-07-0781A-310051	4/11/2016	Structure (residence) removed from SFHA
LOMA	16-07-0788A-310051	5/6/2016	Structure (residence) removed from SFHA
LOMA	16-07-1092A-310051	6/16/2016	Structure (residence) removed from SFHA
LOMA	16-07-1123A-310051	5/13/2016	Property removed from SFHA
LOMA	16-07-1472A-310051	6/30/2016	Structure removed from SFHA
LOMA	16-07-2159A-310051	10/7/2016	Structure removed from SFHA
LOMA	16-07-2203A-310051	10/5/2016	Property removed from SFHA
LOMA	17-07-0122A-310051	10/17/2016	Structure (Stan Barker) removed from SFHA
LOMA	17-07-0331A-310051	11/29/2016	Property (S 36 feet lot) removed from SFHA
LOMA	17-07-0492A-310051	1/6/2017	Structure removed from SFHA

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	17-07-1496A-310051	5/12/2017	Property removed from SFHA
LOMA	17-07-1592A-310051	7/5/2017	Structure removed from SFHA
LOMA	17-07-2335A-310051	9/26/2017	Structure (residence) removed from SFHA
LOMA	18-07-0190A-310051	12/20/2017	Structure removed from SFHA
LOMA	18-07-0800A-310051	7/23/2018	Property removed from SFHA
LOMA	18-07-1040A-310051	2/27/2018	Property removed from SFHA
LOMA	18-07-1231A-310051	4/3/2018	Property removed from SFHA
LOMA	18-07-1617A-310051	7/6/2018	Property removed from SFHA
LOMA	18-07-2097A-310051	8/29/2018	Property removed from SFHA
LOMA	19-07-0231A-310051	12/21/2018	Structure removed from SFHA
LOMA	19-07-0247A-310051	1/18/2019	Structure removed from SFHA
LOMA	19-07-0951A-310051	4/8/2019	Property removed from SFHA
LOMA	19-07-0954A-310051	4/8/2019	Property removed from SFHA
LOMA	19-07-1009A-310051	4/18/2019	Property removed from SFHA
LOMA	19-07-1149A-310051	5/8/2019	Property removed from SFHA
LOMA	20-07-0227A-310051	1/3/2020	Structure removed from SFHA
LOMA	20-07-1498A-310051	10/16/2020	Portion of property removed from SFHA
LOMA	20-07-1541A-310051	11/30/2020	Portion of property removed from SFHA
LOMA	21-07-0137A-310051	12/10/2020	Portion of property removed from SFHA
LOMA	21-07-0243A-310051	1/5/2021	Portion of property removed from SFHA
LOMA	98-07-283A-310051	2/17/1998	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning

team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Flooding and flood mitigation is a critical issue in the City of Broken Bow. Currently there is no established DFIRM available for the city and Custer County and the City are currently in a floodplain mapping project with NeDNR. Current regulatory floodplains maps are from 1978. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

A Hydraulic Report for the City was under development as of January 2022 and included some of the following key findings:

- The hangars at the Broken Bow Airport have experienced flooding on several occasions, sometimes experiencing ponded water to depths more than four or five feet.
- The County Fairgrounds on the eastern side of Broken Bow have been flooded on numerous occasions from Mud Creek.
- Callaway Road to the west of Broken Bow has been overtopped on numerous occasions during significant rainfall events. Once water leaves the channel it goes everywhere.

The existing levee west of Broken Bow appears to be effective at reducing flood risk for the 100-year flood event. However, due to the revised flow rates the freeboard of this levee does not appear sufficient when compared to the modeled 100-year water surface elevation. This suggests that the levee will potentially be de-accredited because of the revised floodplain mapping, and similar results have been documented in previous studies conducted by local consultants. This de-accreditation could have major impacts to required flood insurance in the Levee Protected Area.

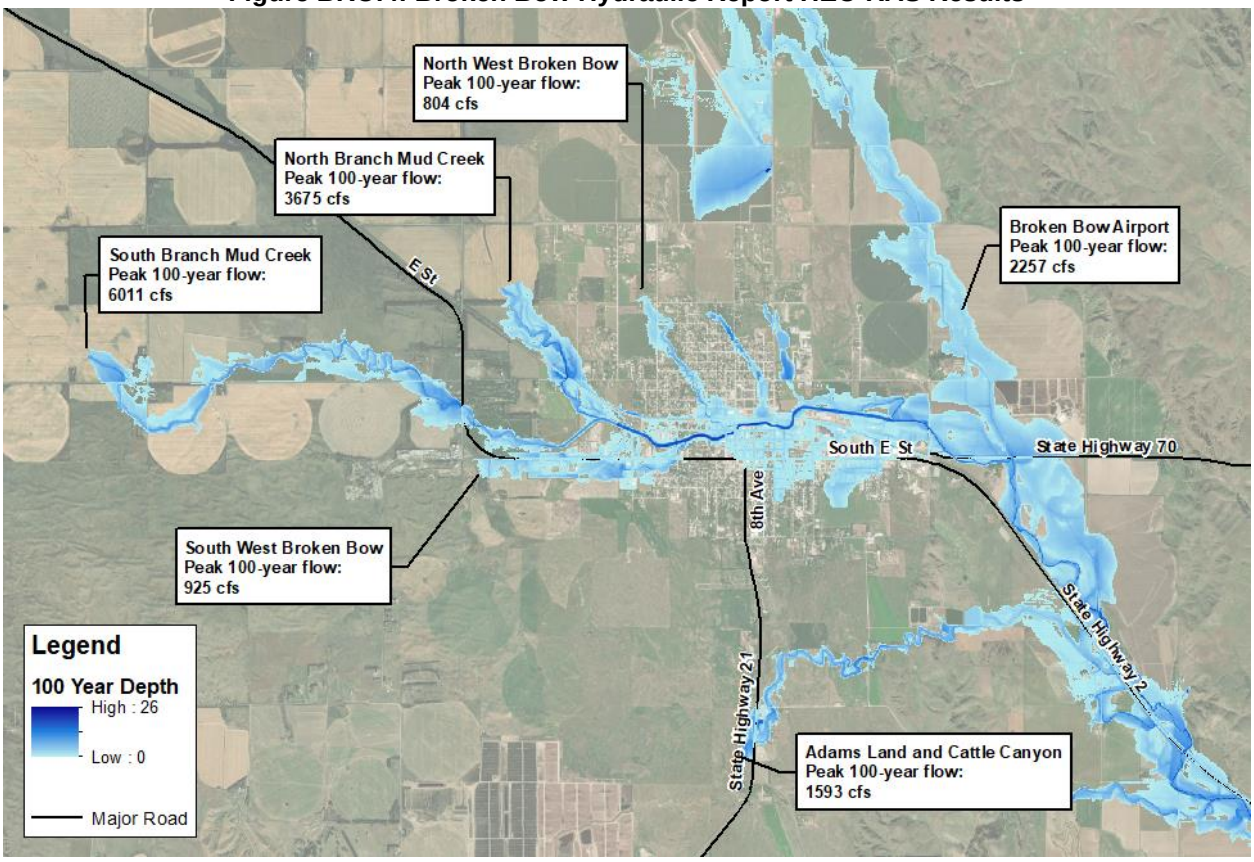
Major Flooding within the City of Broken Bow appears to be linked to backwater effects from the two culverts just south of the intersection of South 10th Avenue and South 9th Avenue and South B Street. These crossings are currently a quad 16.5 ft x 10.5ft box culvert, and quad 15 ft x 10.5 ft box culvert respectively. These culverts are currently adjacent to major business and fully span the improved channel. Widening or increasing the capacity of these crossings would likely involve property acquisitions to expand the stream easement to allow for adequate channel capacity as this area is fully built out.

The Southwest branch of Mud Creek which enters the levee system just Southwest of Highway 2 and Ryno Road is held in the existing channel by a small berm on the east side the of the channel. Existing conditions show that this berm is overtopped and potentially causes flooding to a business district to the east of this location.

The County Fairgrounds appear to receive flooding from both Mud Creek and an in-town tributary to the Southwest. Approximately 1-foot of backwater is present behind the bridge crossing on Memorial Drive. The Broken Bow Airport does appear to experience some flooding within the 100-year event. Flooding depths of approximately 2 feet within their hangers were predicted from the

existing conditions model. This flooding appears to be coming from a relatively large drainage area west of Airport Road. The existing drainage at this site appears to be a series of ditches and culverts which intend to convey water through the road approximately 1,400 ft south of the main entrance to the airport. No other significant crossings exist in this vicinity. A portion of flow appears to be entering the main portion of the airport via overtopping south of Drive 108.

Figure BRO.4: Broken Bow Hydraulic Report HEC-RAS Results



The City of Broken Bow has also had a Technical Memorandum for Levee and Floodplain Programmatic Recommendations completed by JEO Consulting Group which provided recommendations the city can take once floodplain mapping efforts have been completed by NeDNR and Custer County. Programmatic recommendations included structural projects, non-structural practices, and program management-type alternatives. These alternatives are described below:

- Mud Creek Watershed Evaluation
    - Include an evaluation of flood risk reduction strategies such as Upstream Dams, Infiltration Basins, Bridge and Culvert Replacements, and Channel Improvements.
- Phase I Preliminary Levee Accreditation Documentation and Assessment
- Mud Creek Levee System Operation and maintenance Manual Update including Emergency Preparedness Plan
- Address U-Rated items in Continuing Eligibility Inspections
- Install Stream Gages
- Urban Drainage Study
- Parcel Level/Non-Structural Mitigation Assessment

- Join Community Rating System Program

Broken Bow has 32 NFIP policies in-force for $2,348,200. There are no repetitive flood loss properties in Broken Bow. A flood control project in the 1970's reduced the risk of flooding within the community. The local planning team indicated that the most recent major flood event occurred in 2019 and caused significant property damage. East of Broken Bow along the Mud Creek channel, as well as downtown, were identified as areas most prone to flooding. The local planning team is most concerned about the risk of property damage, loss of livestock, and loss of life that flooding can cause. To reduce risk to flooding, the city is planning to raise community awareness about flooding, construct a berm and changed their snow removal placement location to another location to avoid blockage.

Levee Failure

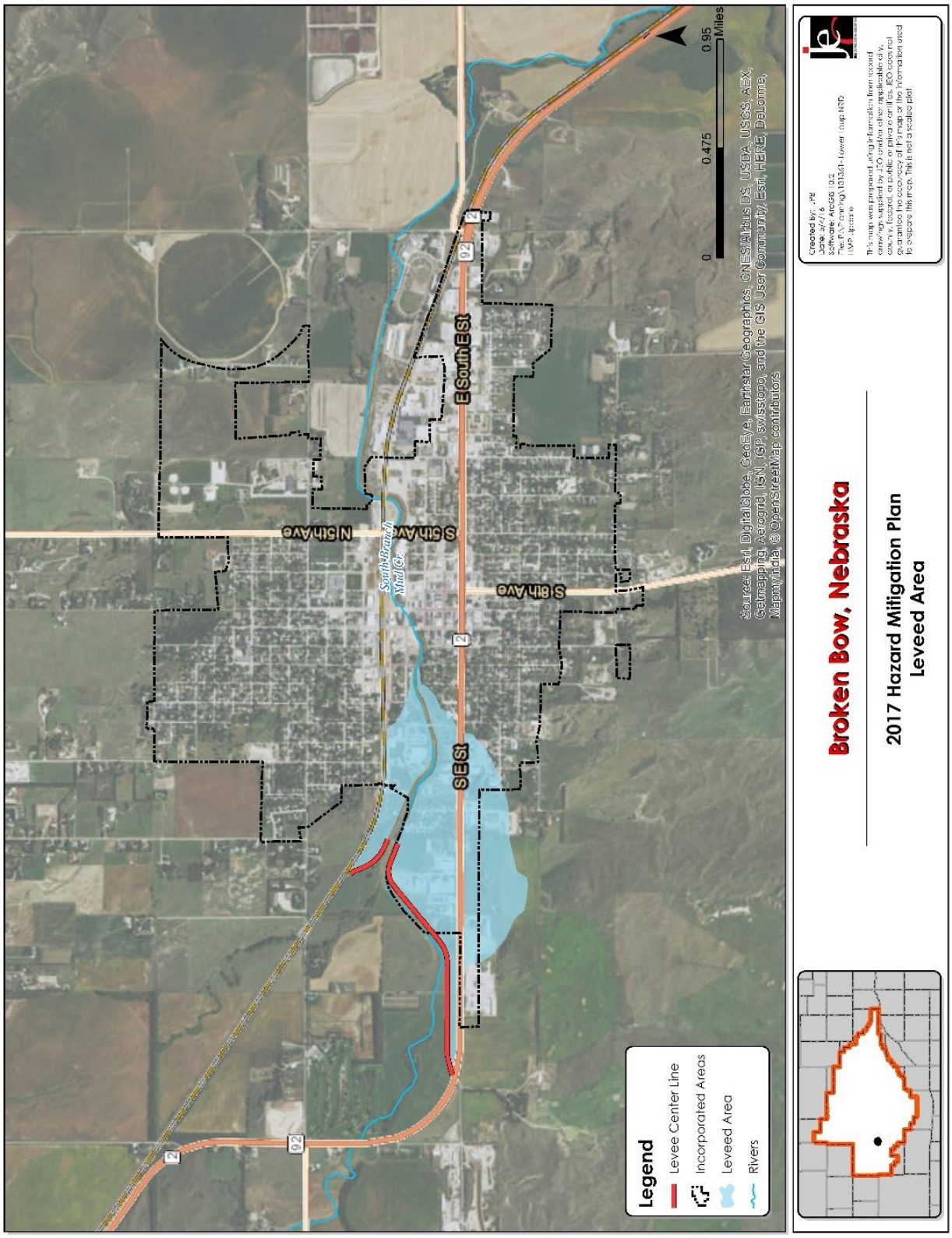
Levee failure was identified as a top concern by the local planning team. There are two levees located within Broken Bow. The City of Broken Bow, Nebraska (City) is the local sponsor of the Broken Bow – Mud Creek Left Bank (LB) and Mud Creek Right Bank (RB) flood risk reduction projects (FRRPs). The FRRPs were originally constructed by the U.S. Army Corps of Engineers (USACE) and are annually inspected for condition and performance. Table BRO.9 and Figure BRO.4, describe the local levees. The value of improvements within the leveed areas exceed $20 million. If the Mud Creek levee fails, significant portions of the city are likely to flood and property damage, infrastructure damage, and loss of life are possible. In past events, snow and ice build-up has caused water to go around the levee, causing flooding and property damage in the city's safe zone. To address this hazard, the city is carefully maintaining Mud Creek and changed their snow placement location.

The city is also in the process of repairing the Mud Creek levee and have contracted with JEO Consulting to design and construct levee improvements. As part of the 2018 continuing eligibility inspection report rated the FRRPs as 'unacceptable'. The unacceptable rating was given as there is a lowered segment of the LB levee adjacent to a Burlington Northern Santa Fe (BNSF) railroad embankment. An Emergency Action Plan (EAP) was developed for temporary closure of the lowered levee segment. This EAP satisfied the USACE's requirements for meeting 'acceptable' rating criteria and the FRRP was subsequently re-rated. Though an acceptable rating was achieved, the City seeks to implement permanent measures to provide flood risk reduction.

Table BRO.9: Broken Bow Levees

Name	Sponsor	River	Length (miles)	Type of Protection	Protected Area (acres)	Latest Inspection Rating
Broken Bow – Mud Creek LB	City of Broken Bow	Mud Creek	0.17	100 Year	35.02	Unacceptable
Broken Bow – Mud Creek RB	City of Broken Bow	Mud Creek	0.83	100 Year	156.78	Minimally Acceptable

Figure BRO.4: Broken Bow Leveed Area



Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	1. Improve emergency rescue and response equipment and facilities by providing additional, or updating existing, emergency response equipment. 2. Includes developing backup system for emergency vehicles and identifying and training additional personnel for emergency response
HAZARD(S) ADDRESSED	All Hazards
STATUS	Completed – purchased and updated local response fleet.

OBJECTIVE	TREE PLANTING
DESCRIPTION	1. Develop city tree planting and maintenance guidelines
HAZARD(S) ADDRESSED	High Winds
STATUS	Updated guidelines and adopted into ordinances.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	$20,000 to $75,000 + per generator
POTENTIAL FUNDING	Property Tax Levy, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Electrical Department and City Administration
STATUS	Still a priority for the city, Broken Bow has not yet started this project. Currently determining the best location for generators and preparing machinery for installation.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	County and Local Levy, HMGP, PGM
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Fire Department & Custer County Emergency Management
STATUS	This project is in the works. The city is determining current warning system needs and best applications of mitigation strategies.

OBJECTIVE	FACILITY FLOOD PROOFING
DESCRIPTION	1. Explore possibility of flood proofing facilities which fall within HAZUS 1% flood inundation areas 2. Conduct flood proofing feasibility study for structures and implement identified measures
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by structure
POTENTIAL FUNDING	Property Tax Levy and Sales Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Utility Department
STATUS	This project is in the works. The city is Identifying critical facilities to undergo flood proof feasibility studies.

OBJECTIVE	IMPROVE STREAM BED/BANK STABILIZATION
DESCRIPTION	1. Evaluate current stream bed and bank stabilization needs 1. Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$25,000 to $50,000
POTENTIAL FUNDING	Infrastructure Funds and Property Tax
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Street and Maintenance Department
STATUS	This project is in the works. The city is evaluating stream bed needs for mitigation actions.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0 - $5,000+
POTENTIAL FUNDING	Property Tax
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	City Hall & Utility Administration
STATUS	This project is in the works. Broken Bow is conducting ongoing outreach to the public for education and conducting monthly siren testing.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	2. Identify and evaluate existing safe rooms and/or storm shelters 3. Improve and/or construct safe rooms and/or storm shelters 4. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Thunderstorms
ESTIMATED COST	$150/sf for retrofit; $300/sf for new construction
POTENTIAL FUNDING	Property Tax Levy, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	City Administrator
STATUS	This project has not yet been started. Currently financially impractical for the city.

OBJECTIVE	RELOCATE MUNICIPAL INFRASTRUCTURE
DESCRIPTION	1. Identify and evaluate current placement and vulnerability of municipal infrastructure 2. Acquire Geographic Information System (GIS) to relocate municipal infrastructure (water lines, sewer lines, etc.)
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$1,500 single user and staff time
POTENTIAL FUNDING	Utility Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Utility Department
STATUS	This project has not yet been started.

OBJECTIVE	FIRM MAPPING
DESCRIPTION	1. Develop digital FIRM maps for regulatory use 2. Update FIRM maps to reflect accurate flood inundation areas within the jurisdiction
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Grants, Property Tax Levy
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Administration
STATUS	This project has not yet been started.

New Mitigation Actions – 2022 Plan

OBJECTIVE	CONSTRUCT FLOOD CONTROL STRUCTURES
DESCRIPTION	1. Evaluate the need for flood control structures such as a berm to reduce flood risk impacts. 2. Construct a flood risk reduction structure
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	City Engineer, Lower Loup NRD
STATUS	This is a new mitigation action.

OBJECTIVE	CREEK MAINTENANCE
DESCRIPTION	1. Maintain Mud Creek to reduce flood risk including clearing debris, streambank stabilization, or other repair work
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$20,000-$100,000, varies by need
POTENTIAL FUNDING	General Fund
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	City Engineer
STATUS	This is a new mitigation action.

OBJECTIVE	PROJECT SCOPING AS A RESULT OF THE WFPO PROGRAM
DESCRIPTION	1. Evaluate potential flood risk reduction alternatives as identified through the Watershed and Flood Prevention Operations Program including project scoping and implementation
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	General Fund, WFPO, HMA
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board, LLNRD, JEO Consulting Group
STATUS	Mud Creek WFPO is currently under development. No formal alternatives have yet been determined however several alternatives are under further review.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. Broken Bow's City Administrator, Street Overseer, Electric/Water Superintendent, and Mayor or Council Members will bi-annually review the city's profile. They will involve and notify the public of the review through social media, City Council meetings, and other media outlets.

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COMMUNITY PROFILE

VILLAGE OF CALLAWAY

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

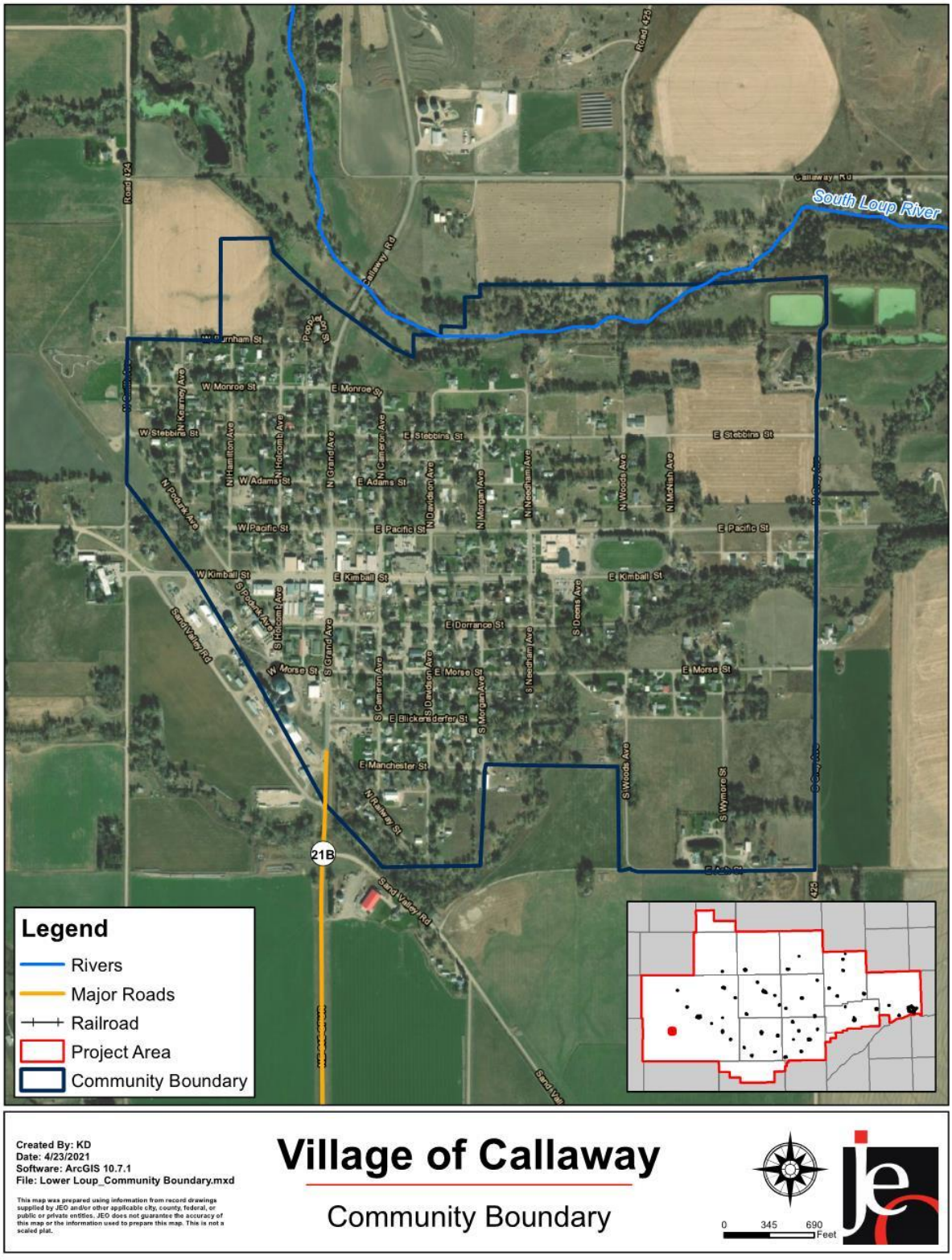
Table CAL.1: Village of Callaway Local Planning Team

NAME	TITLE	JURISDICTION
LANETT CONROY	Village Clerk	Village of Callaway

Location and Geography

The Village of Callaway is located in the western portion of Custer County. The Village of Callaway covers an area of 0.70 square miles. The South Loup River runs along the north portion of the village, and Sand Creek runs along the south and southeast portion of the village. The area is not heavily forested. Custer County has experienced at least eight landslides historically; however, it is unknown if these landslides occurred in or near Callaway. Callaway lies in the dissected plains topographic region and is surrounded by agricultural fields.

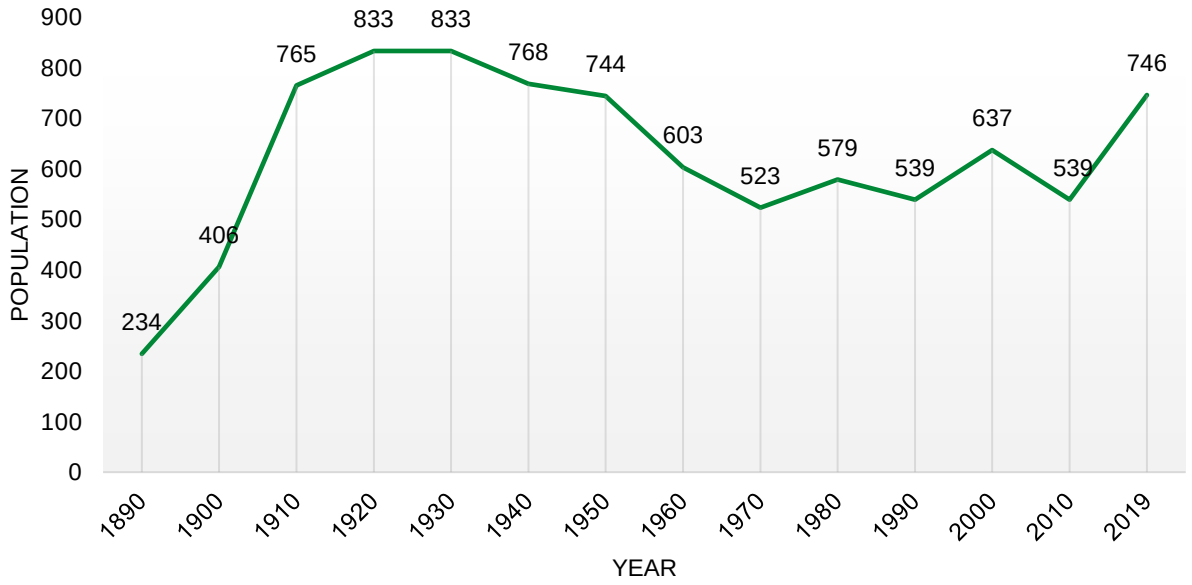
Figure CAL.1: Village of Callaway Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2019 (estimated). This figure indicates that the population of Callaway has experienced several declines and increases from 1960 through 2010. Since 2010 however, the population has been increasing. 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. The Village's population accounted for 7% of Custer County's Population in 2019.

Figure CAL.2: Callaway Population 1890-2019



Source: U.S. Census Bureau[55]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Callaway' population was:

- **Younger.** The median age of Callaway was 42.7 years old in 2019, compared with the County average of 43.1 years. Callaway's population has grown younger since 2010, when the median age was 49.3 years old. Callaway had a larger proportion of people under 20 years old (29.6%) than the County (25.0%).[56]
- **More ethnically diverse.** In 2010, 0% of Callaway's population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, about 1.7% of Callaway's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[57]
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Callaway (9.8%) was higher than the County (6.1%) in 2019.[58]

55 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
56 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
57 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
58 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Callaway's economy had:

- **Different mix of industries**. Employment sectors accounting for 10% or more of employment in Callaway included Construction and Education. In comparison Custer County's included Agriculture, Retail, and Education.[59]
- **Lower household income**. Callaway's median household income in 2019 ($47,500) was about $5,000 lower than the County ($52,184).[60]
- **Fewer long-distance commuters**. About 69.4% percent of workers in Callaway commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 22.7% of workers in Callaway commute 30 minutes or more to work, compared to about 16.8% of the County workers.[61]

Major Employers

Major employers in the Village of Callaway includes Progressive Fertilizer, County Partners, Callaway District Hospital and Clinic, Good Life Center, and Callaway Schools. Residents may also commute to Broken Bow for work as well.

Housing

In comparison to the Custer County, Callaway's housing stock was: [62]

- **More owner occupied.** About 76.8% of occupied housing units in Callaway are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Smaller share of aged housing stock**. Callaway has fewer houses built prior to 1970 than the county (64.0% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Callaway contains more multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 89.9% of housing in Callaway was single-family detached, compared with 89.5% of the County's housing. Callaway has a smaller share of mobile and manufactured housing (4.2%) compared to the County (3.3%). According to the local planning team, there are approximately 11 mobile homes in the community.

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

59 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
60 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
61 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
62 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Callaway has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five-member village board led by a chairperson and the following offices: clerk/treasurer, utility superintendent, and volunteer fire department. Additionally Custer County Emergency Management may assist the village in emergency response activities and mitigation activities.

Capabilities

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

Table CAL.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*Yes*
	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*Yes*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*No*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*Yes*
	Floodplain Administration	*No*
	GIS Capabilities	*No*
	Civil Engineering	*No*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*No*
	Grant Manager	*Yes*
	Mutual Aid Agreement	*Yes*
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	*Yes*
	Applied for grants in the past	*No*
	Awarded a grant in the past	*No*
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*Yes*
	Gas/Electric Service Fees	*Yes*
	Storm Water Service Fees	*No*

SURVEY COMPONENTS		YES/NO
	Water/Sewer Service Fees	*Yes*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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)	

Table CAL.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Moderate	Moderate
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Moderate	Moderate
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Moderate	Moderate
TIME TO DEVOTE TO HAZARD MITIGATION	Moderate	Moderate

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Municipal funds are currently limited to maintaining facilities and municipal systems. Funds have remained about the same in recent years and no grants were applied for during that time.

Comprehensive Plan

Callaway has a comprehensive plan that: directs development away from the floodplain, encourages infill development, and encourages preservation of open space in hazard-prone areas. The plan was completed in 2017 and is written with a ten-year vision in mind.

Ordinances and Regulations

Village Zoning Regulations were adopted in 2017 and revised in 2021. Regulations include discouraging development in the floodplain and limits to other incompatible uses.

Building Codes

The building code sets standards for constructed buildings and structures. The city has adopted the 2009 International Building Code, the 2015 Uniform Plumbing Code, and the 2014 National Electrical Code.

Custer County Local Emergency Operations Plan

The Village of Ansley is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the past five years several new homes have been constructed on the east side of town while several other homes have been demolished. According to the census data, Callaway's population is increasing. The local planning team indicated that most of the growth is due to an annexation that increased the population by about fifty people as families are moving to town. There is an assisted living facilities planned for development in the next five years.

Community Lifelines

Transportation

Callaway's major transportation corridors include Spur 21B, which runs north-south, through the center of Callaway. Spur 21B accommodates on average 845 vehicles per day, 80 of which are heavy commercial vehicles. The village also identified Pacific Street as a primary transportation route in Callaway. Pacific Street has a lot of heavy trucks which becomes hard on the street. Callaway does not have rail lines. No major transportation incidents have occurred in the village. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are five chemical storage sites throughout Callaway which house hazardous materials. In the event of a chemical spill, Custer County Emergency Management would be the first to respond to the incident. No major spill events have occurred in the village.

Table CAL.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
COUNTRY PARTNERS COOPERATIVE	42410 Sand Valley Rd	N
PROGRESSIVE FERTILIZER CO INC	79154 Arnold River Rd	N
PROGRESSIVE FERTILIZER CO INC	404 E Manchester St	N
PROGRESSIVE FERTILIZER CO INC	79065 S 21B Spur	N
COUNTRY PARTNERS COOPERATIVE	302 S Grand Ave	N

Source: Nebraska Department of Environment and Energy[63]

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 previous planning process and updated by the local planning team as a part of this plan update.

The American Red Cross has agreements with Callaway Public School and Callaway Community Center to serve as mass care facilities during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

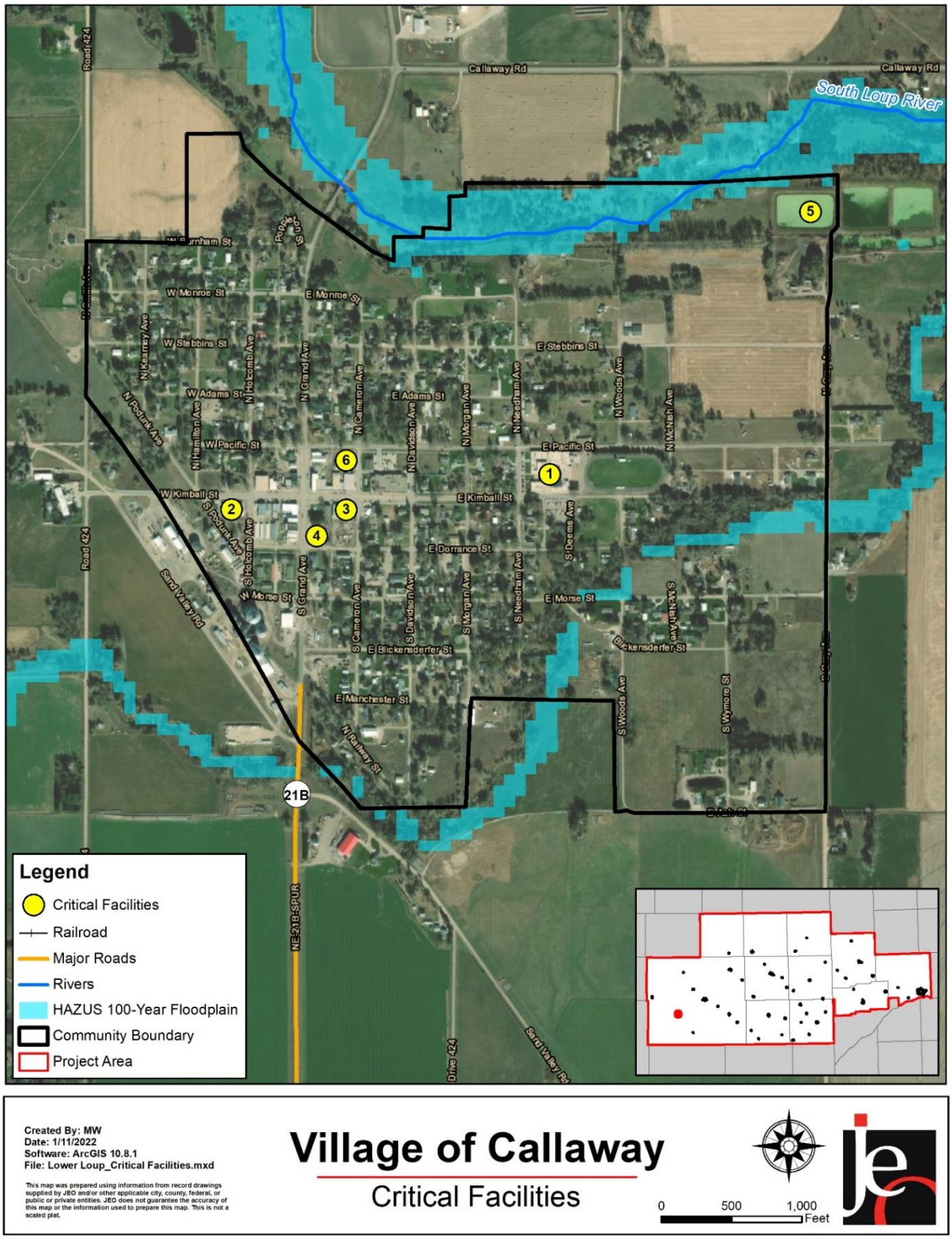
Table CAL.5: Callaway Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Callaway Public School	Y	Y	N
2	Food, Water, and Shelter	Community Center	Y	N	N
3	Safety and Security	Fire Hall	Y	N	N
4	Safety and Security	Light Plant and Police Station	Y	Y	N
5	Food, Water, and Shelter	Sewer Lagoon	N	N	Y
6	Food, Water, and Shelter	Water Tower and Well House	N	N	N

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

63 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Figure CAL.3: Callaway Critical Facilities



Health and Medical Facilities

The following medical and health facilities are located within the community. These facilities house vulnerable populations which may require additional assistance to evacuate or restore utilities during and after a disaster event.

Table CAL.6: Callaway Critical Facilities

NAME OF FACILITY	TYPE OF FACILITY	ADDRESS	NUMBER OF LICENSED BEDS
CALLAWAY DISTRICT HOSPITAL	Hospital	211 E Kimball St, Callaway, NE 68825	12
CALLAWAY GOOD LIFE CENTER	Long Term Care Facility	600 E Kimball St, Callaway, NE 68825	35
CALLAWAY MEDICAL CLINIC	Rural Health Clinic	211 E Kimball St, Callaway, NE 68825	N/A

Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 CAL.7: Callaway Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
505	496	$29,423,044	25	5%	$622,495

Source: County Assessor, GIS Workshop

There are currently no FEMA Flood Map products for the Village of Callaway.

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Agricultural Animal Disease

Agricultural animal disease was identified as a top hazard of concern for the community as the local economy is reliant on agriculture. Specifically the community is concerned about pesticides from crops and potential drift. Callaway will utilize educational efforts to reduce the impacts of agricultural disease.

Drought

Drought for the local planning team is defined as a lack of rain. The local economy is heavily dependent on agriculture. Local concerns regarding drought include the potential extra costs from Western Area Power Administration (WAPA). Residential water supply is not metered. The community does not have a water conservation program, nor does it have response plan in the event of a drought. The water supply was determined to be sufficient for local needs. Callaway will utilize education efforts to reduce the impacts of future drought events.

Severe Thunderstorms

Severe thunderstorms are common in the planning area and include impacts from heavy rain, lightning, hail, and strong winds. The community has data backup systems for municipal records. Records are backed up regularly via flash drives and the cloud. The main concern regarding severe thunderstorms is the potential for damage to power lines. The local power plant needs a backup generator. Hazardous trees are identified and removed every year. Callaway will utilize surge protectors to protect sensitive equipment in critical facilities.

Severe Winter Storms

Severe winter storms have the potential to cause property damages, power outages, and shut down transportation routes. Callaway will utilize building codes and improvements to snow removal equipment to mitigate the impacts of severe winter storms.

Tornadoes and High Winds

Callaway has warning sirens located within the community and are activated through the telephone company. Custer County Emergency Management offers text alerts. There are limited options for community members seeking shelter. The village does not have any FEMA certified safe rooms in the village, but the school has been identified as a potential location for a storm shelter. The local planning team noted that educational outreach activities are done through the school, the fire department, and EMT training. In the event of a disaster, the community has mutual aid agreements with neighboring communities.

Flooding

Flooding was not identified as a hazard of top concern for the village. The village does not participate in the NFIP. Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	SURGE PROTECTORS
DESCRIPTION	1. Purchase and install surge protectors on sensitive equipment in critical facilities
HAZARD(S) ADDRESSED	Severe Thunderstorms
STATUS	Surge protectors have been purchased and installed in critical facilities.

Continued Mitigation Actions

OBJECTIVE	REDUCE STORM WATER DAMAGE
DESCRIPTION	1. Conduct stormwater drainage study to evaluate restrictions, capacity, level of protection, alternative improvements, prioritize improvements, etc. 2. Evaluate and implement recommendations or comparable measures (open ditch and culvert improvements, underground piping, retention and detention facilities to decrease runoff, etc.) 3. Evaluate storm water ordinance 4. Implement improved storm water ordinance
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$10,000 to $75,000 for studies; $10,000 for ditch/pipe cleaning; unknown for large projects
POTENTIAL FUNDING	Street Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Utility
STATUS	Identified Pacific St, and Grand Ave as potential locations for drainage projects. No projects have yet been determined.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0 - $5,000+
POTENTIAL FUNDING	General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Utility
STATUS	Village is currently evaluating educational materials.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	$2,000+
POTENTIAL FUNDING	General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Utility
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE AND REVISE SNOW/ICE REMOVAL AND RESCUE PROGRAM
DESCRIPTION	1. Revise and improve snow and ice removal program for streets 2. Address situations such as plowing snow, ice removal, parking during snow, ice removal and removal of associated storm debris 3. Improve capabilities to rescue those stranded in blizzards and increase the capacity to which snow can be removed from roadways after an event
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	Snow Blower: $800+; Truck Mounted Plow $2,000+; ATV Plow: $1,500+
POTENTIAL FUNDING	Road Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE CONSTRUCTION STANDARDS & BUILDING SURVIVABILITY
DESCRIPTION	1. Prohibit the installation of flat roofs in new construction
HAZARD(S) ADDRESSED	Severe Winter Storms
ESTIMATED COST	$0; Staff Time
POTENTIAL FUNDING	Sales Tax Fund
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to

other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The Village of Callaway's local planning team including the Village Clerk and board members will review and update the Village Community Profile annually at a minimum. The public will be notified and involved in the update review process through various methods including social media updates, website, and at local board meetings.

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COMMUNITY PROFILE

VILLAGE OF COMSTOCK

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

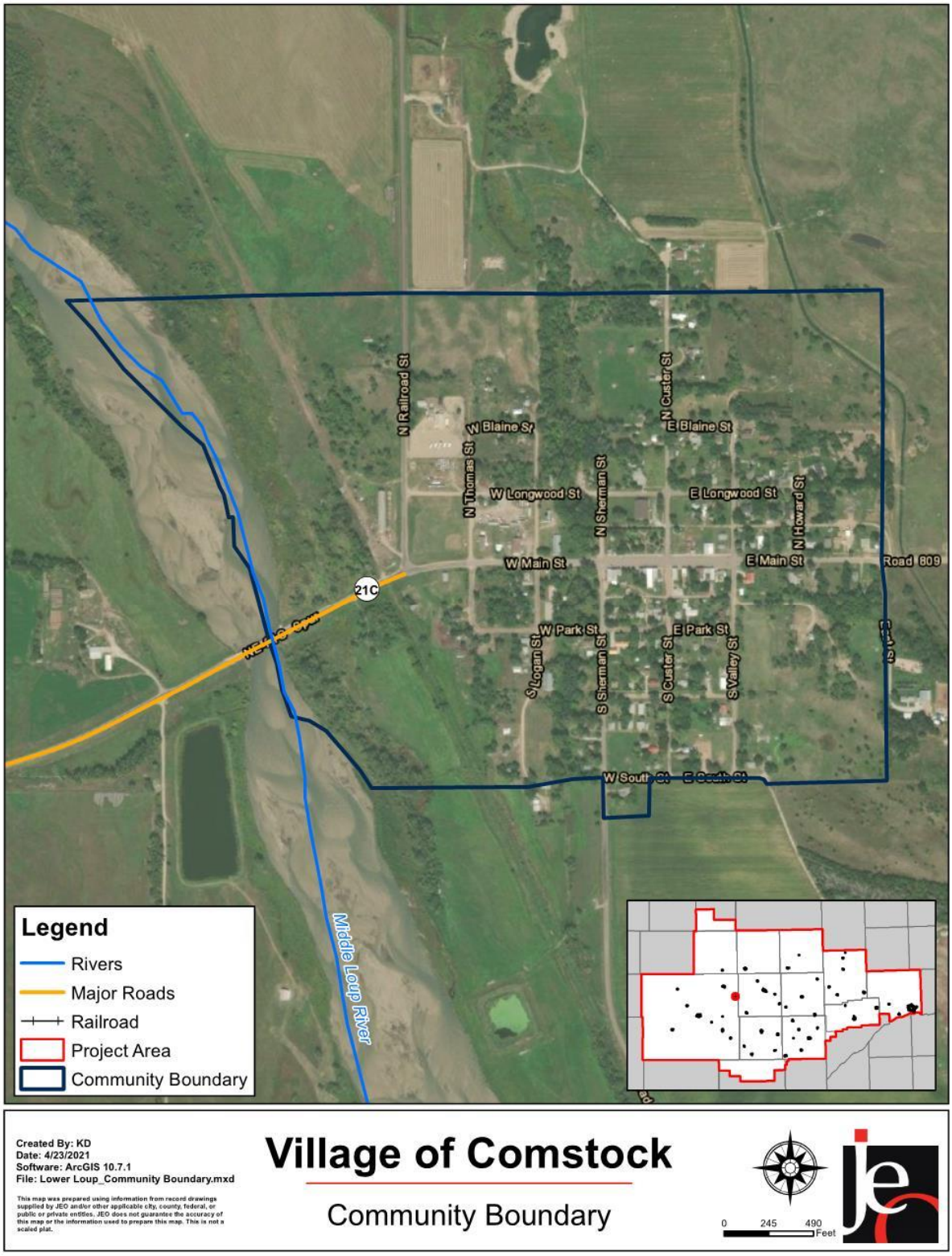
Table COM.1: Village of Comstock Local Planning Team

NAME	TITLE	JURISDICTION
DEBORAH RITZ	Clerk	Village of Comstock
DENNIS JOHNSON	Chairman	Village of Comstock
SHAWNA ABRAHAM	Street/Water	Village of Comstock

Location and Geography

The Village of Comstock is located in the northeastern portion of Custer County. The Village of Comstock covers an area of 0.35 square miles. The Middle Loup River runs along the western side of the village. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Comstock. Most of Comstock lies in the valleys topographic region, and is surrounded by agricultural fields.

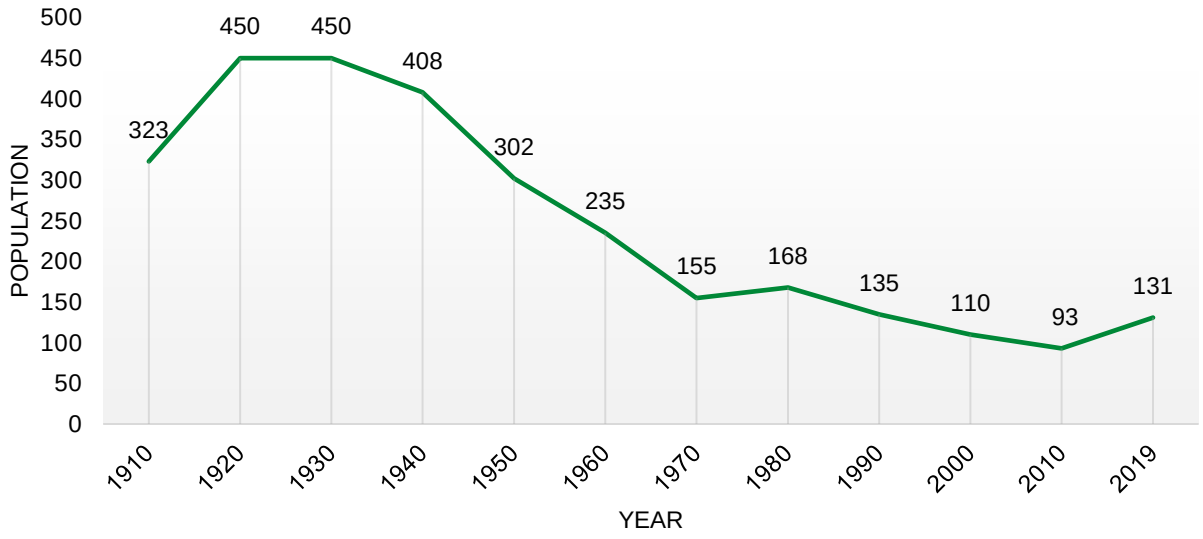
Figure COM.1: Village of Comstock Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Comstock experienced a decline from 1930 through 1970. During the 1980's the population grew, however, since 1980 the population was in a steady decline. Since 2010 the population has been increasing. 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. The village's population accounted for 1% of Custer County's Population in 2019.

Figure COM.2: Comstock Population 1910-2019



Source: U.S. Census Bureau[64]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Comstock' population was:

- **Younger.** The median age of Comstock was 48.9 years old in 2019, compared with the County average of 43.1 years. Comstock's population has grown younger since 2010, when the median age was 50.6 years old. Comstock had a smaller proportion of people under 20 years old (8.6%) than the County (25.0%).[65]
- **Less ethnically diverse.** In 2010, 0% of Comstock's population was Black or African American, 0% was other races, and 9.6% were two or more races. By 2019, only 0% of Comstock's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[66]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Comstock (5.3%) was higher than the County (6.1%) in 2019.[67]

64 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
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Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Comstock's economy had:

- **Same mix of industries**. Employment sectors accounting for 10% or more of employment in Comstock included Agriculture, Retail, and Education. In comparison Custer County's included Agriculture, Retail, and Education.[68]
- **Slightly higher household income**. Comstock's median household income in 2019 ($52,778) was about $500 higher than the County ($52,184).[69]
- **More long-distance commuters**. About 16.7% percent of workers in Comstock commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 47.6% of workers in Comstock commute 30 minutes or more to work, compared to about 16.8% of the County workers.[70]

Major Employers

The major employers in the village include the senior center, local bar, post office, and the village office. A large percentage of residents commute to the surrounding areas for work such as Broken Bow.

Housing

In comparison to Custer County, Comstock's housing stock was: [71]

- **More owner occupied.** About 73.3% of occupied housing units in Comstock are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Comstock has more houses built prior to 1970 than the county (89.8% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the village is single family detached and Comstock contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 100.0% of housing in Comstock was single-family detached, compared with 89.5% of the County's housing. Comstock has a smaller share of mobile and manufactured housing (0%) compared to the County (3.3%).

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

68 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
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A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Comstock has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five member village board and the following offices: clerk/treasurer, volunteer fire department, and sewer/water/street commissioner.

Capabilities

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

Table COM.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*No*
	Capital Improvements Plan	*No*
	Economic Development Plan	*No*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*No*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*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*
	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	1 & 6 Year Plan	*Yes*
	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*

SURVEY COMPONENTS		YES/NO
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*No*
	Other (if any)	
EDUCATION AND OUTREACH	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.	*Yes*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes*
	Natural Disaster or Safety related school programs	*No*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table COM.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	Limited
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Limited	Limited
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Municipal funds are currently limited to maintaining facilities and municipal systems. Funds have remained about the same in recent years and there are currently no large scale projects with earmarked funds.

Comprehensive Plan

Comstock has a comprehensive plan that: directs development away from the floodplain, encourages infill development, and encourages preservation of open space in hazard-prone areas. There are currently no plans to update the Comprehensive Plan.

Building Codes

Comstock has adopted the 2018 International Building Codes. The code integrates hazard mitigation in the following ways: requires elevation of structures in the floodplain, requires mechanical systems to be elevated for structures in the floodplain, requires onsite storm water detention for commercial structures, encourages the use of permeable surfaces, and requires a safe room in multiple dwelling units.

Custer County Local Emergency Operations Plan

The Village of Comstock is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

According to the Census data, Comstock's population is increasing. The local planning team indicated that this is due to young families moving into the community. The nice, safe, quiet lifestyle coupled with a low cost of living is attracting new residents. In the past five years the village received a grant and installed a new sewer lift station to help meet local needs. Despite this increase in population, there are no new residential or commercial developments planned for the next five years.

Community Lifelines

Transportation

Comstock's major transportation corridors include Spur 21C, which runs west-east, to the western edge of Comstock. S21C accommodates on average 195 vehicles per day, 15 of which are heavy commercial vehicles. Of particular concern for the community is Comstock Road. This unpaved road leads to and connects with Highway 70 and serves as an evacuation corridor when needed. During the 2019 flood events Comstock Road was significantly degraded from flood waters and increased traffic. Comstock does not have rail lines. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no chemical storage sites throughout Comstock which house hazardous materials. In the case of a chemical spill in town or in the surrounding areas Comstock Volunteer Fire Department would be first to respond.

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 previous planning process and updated by the local planning team as a part of this plan update.

The American Red Cross has agreements with Wescott Baptist Church to serve as a mass care facility during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table COM.5: Comstock Critical Facilities

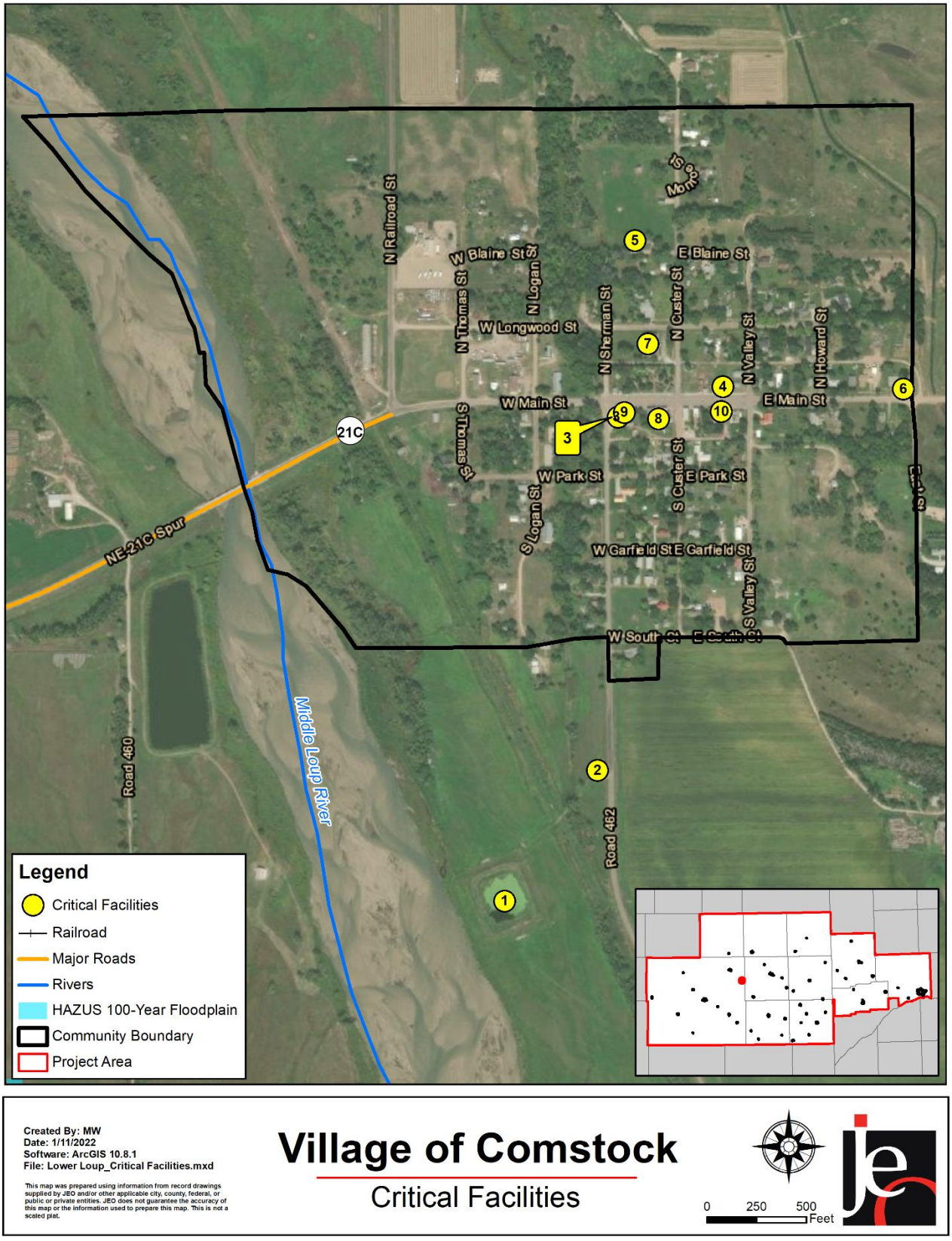
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Lagoon	N	N	
2	Food, Water, and Shelter	Lift Station	N	N	
3	Health and Medical	Senior Center	N	N	
4	Safety and Security	Fire Hall	N	N	
5	Food, Water, and Shelter	Well House	N	N	
6	Food, Water, and Shelter	Water Tower	N	N	
7	Food, Water, and Shelter	Wescott Baptist	Y	N	
8	Food, Water, and Shelter	Community Hall	N	N	
9	Other	Library	N	N	
10	Food, Water, and Shelter	City Hall	Y		

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure COM.3: Comstock Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 COM.7: Comstock Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
206	198	2,259,707	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Flooding is a concern for the village due to the proximity of the Middle Loup River. Residences and buildings in town have experienced water in their basements due to the river and a high water table. Custer County and the Village of Comstock currently do not have a DFIRM with an effective floodplain map. However, the Middle Loup River to the west of town includes Zone A floodplain. The railroad tracks between the village and river provide a small measure of flood protection; however, this would likely be insufficient during major flood events.

The March 2019 flood events did overtop the rail road tracks and impacted the village and caused significant damages to village streets and buildings, particularly along the west side of town and the village park. Comstock does not currently participate in the NFIP. There are no repetitive flood loss properties in the Village of Comstock. The Village will evaluate areas vulnerable to flooding to reduce the impact of future flooding events.

Grass/Wildfires

The local concern regarding this hazard include the potential loss of homes, animals, crops, and feed. Grass fires following drought periods have led to the loss of grassland, and close calls to homes. The Village will utilize educational efforts to reduce future impacts.

Tornadoes and High Winds

Warning sirens in Comstock are manually activated or remotely activated by cellphone by Fireman. The community does not have any publicly available safe rooms. Custer County Emergency Management offers text alerts. The volunteer fire department have meetings to update and educate the public regarding emergency planning.

Comstock has many trees that could cause damage to homes and vehicles. Past high wind events have caused significant tree damages; knocking down branches and limbs into roads, yards, and driveways. Callaway will utilize a tree management program to reduce the damage from high wind events.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$150/sf for retrofit; $300/sf for new construction
POTENTIAL FUNDING	HMGP, PDM, Village taxes, fundraising
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board, Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE DAMAGES IN FLOODPLAIN
DESCRIPTION	1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	HMGP, FMA, PDM, Village taxes, private property owners
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started. The village needs to evaluate which structures are most at risk to flooding and feasibility of flood protection measures.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Tornadoes, Severe Winter Storms, Severe Thunderstorms, Grass/Wildfire
ESTIMATED COST	$0 to $5,000 to develop program; implementation unknown
POTENTIAL FUNDING	HMGP, PDM, Village taxes, fundraising
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Board, Fire Department
STATUS	The village is currently in the process of trimming and removing hazardous trees in the local park and mailing out nuisance letters to residents to encourage them to trim their trees.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS & PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0 to $5,000+
POTENTIAL FUNDING	HMGP, PDM, Village taxes, fundraising
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Fire Department
STATUS	Fire Department currently leads educational efforts through regular meetings at the Fire Hall. Currently the village is working to send letters out to residents regarding hazardous tree mitigation.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
ESTIMATED COST	$2,000+
POTENTIAL FUNDING	Village taxes, fundraising
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Village Clerk
STATUS	This project has not yet been started.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board, Village Clerk, and Utilities/Maintenance personnel. The local planning team will review the plan no less than bi-annually and will include the public in the review and revision process by sharing information at board meetings.

COMMUNITY PROFILE

VILLAGE OF MASON CITY

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

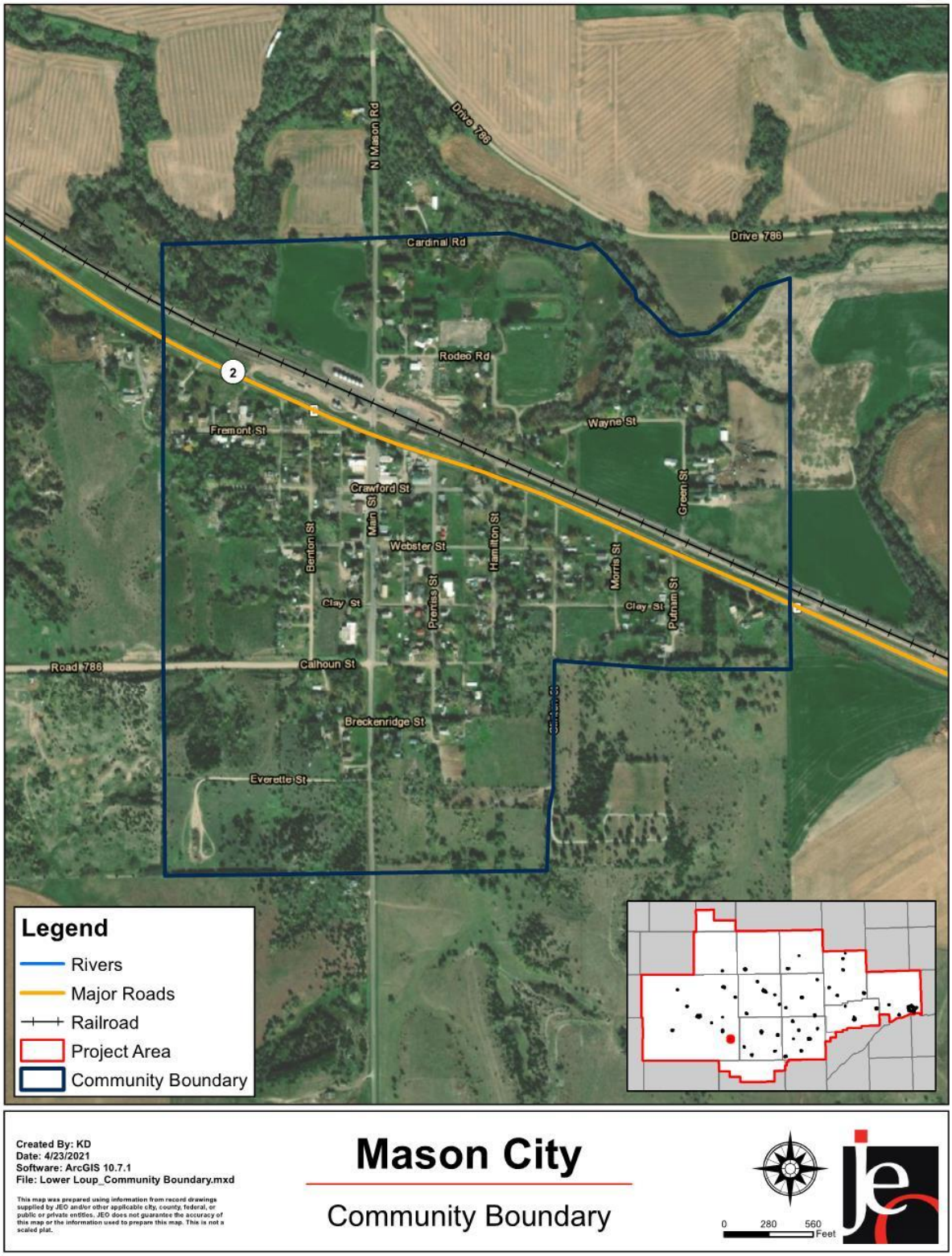
Table MAS.1: Village of Mason City Local Planning Team

NAME	TITLE	JURISDICTION
DONNA HOBLYN-BITTNER	Village Clerk	Mason City
JON HAWKINS	Fire Chief	Rural Volunteer Fire Department/Mason City
KALLA SAWYER	Chairman, Village Emergency Manager	Mason City

Location and Geography

The Village of Mason City is located in the southeastern portion of Custer County. The Village of Mason City covers an area of 0.47 square miles. Mud Creek runs along the north and east sides of the village. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Mason City. Most of Mason City lies in the dissected plains topographic region, and is surrounded by agricultural fields.

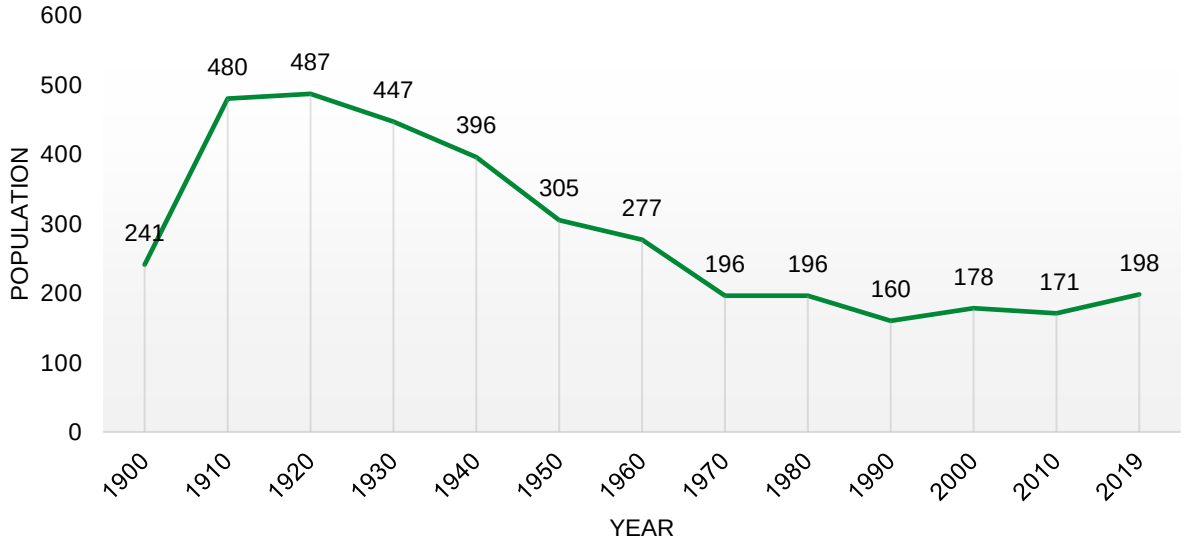
Figure MAS.1: Village of Mason City Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2019 (estimated). This figure indicates that the population of Mason City experienced a decline from 1920 through 2010. Since 2010 however, the population has increased slightly. 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. The Village's population accounted for 2% of Custer County's Population in 2019.

Figure MAS.2: Mason City Population 1900-2019



Source: U.S. Census Bureau[72]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Mason City' population was:

- **Older.** The median age of Mason City was 43.5 years old in 2019, compared with the County average of 43.1 years. Mason City's population has grown older since 2010, when the median age was 35.6 years old. Mason City had a larger proportion of people under 20 years old (27.3%) than the County (25.0%).[73]
- **Less ethnically diverse.** In 2010, 0% of Mason City's population was Black or African American, 0% was other races, and 0% were two or more races. By 2019, only 0% of Mason City's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[74]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Mason City (0%) was lower than the County (6.1%) in 2019.[75]

72 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
73 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
74 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
75 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Mason City's economy had:

- **Different mix of industries**. Employment sectors accounting for 10% or more of employment in Mason City included Agriculture, Manufacturing, Retail, Transportation, and Education. In comparison Custer County's included Agriculture, Retail, and Education.[76]
- **Lower household income**. Mason City's median household income in 2019 ($35,341) was about $17,000 lower than the County ($52,184).[77]
- **More long-distance commuters**. About 28.5% percent of workers in Mason City commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 59.1% of workers in Mason City commute 30 minutes or more to work, compared to about 16.8% of the County workers.[78]

Major Employers

The major employer in the Village of Mason City is Cole Electric. According to the local planning team residents commute to the surrounding communities of Broken Bow, Ansley, Litchfield, and Kearney.

Housing

In comparison to Custer County, Mason City's housing stock was: [79]

- **More owner occupied.** About 80.6% of occupied housing units in Mason City are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Mason City has more houses built prior to 1970 than the county (91.0% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Mason City contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 98.0% of housing in Mason City was single-family detached, compared with 89.5% of the County's housing. Mason City has a smaller share of mobile and manufactured housing (2.0%) compared to the County (3.3%).

According to the local planning team, there is one mobile home and one modular home located in the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

76 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
77 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
78 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
79 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Mason City has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a four member village board and the following offices: clerk/treasurer, utility superintendent, street and maintenance department, and volunteer fire department.

Capabilities

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

Table MAS.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Building Codes	Yes
	Chief Building Official	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	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	1 & 6 Year Plan	Yes
	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

SURVEY COMPONENTS		YES/NO
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	
EDUCATION AND OUTREACH	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

Table BAR.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	Limited
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	Limited
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Limited	Limited
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	Limited

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Municipal funds are currently limited to maintaining facilities and municipal systems. Currently available funds are earmarked for street repair and a major sewer project slated to begin in 2022. Municipal funds have declined over the past few years as taxes, street allocation, and equalization funding has declined slightly. The village has applied for and received grant funding for project implementation in the past including a sewer study, sewer improvements, and FEMA disaster assistance.

Comprehensive Plan

Mason City has a comprehensive plan that: directs development away from the floodplain, encourages infill development, and encourages preservation of open space in hazard-prone areas. There are currently no plans to update the Comprehensive Plan.

Building Codes

Mason City has adopted the 2018 International Building Codes. The code integrates hazard mitigation in the following ways: requires elevation of structures in the floodplain, requires mechanical systems to be elevated for structures in the floodplain, requires onsite storm water detention for commercial structures, encourages the use of permeable surfaces, and requires a safe room in multiple dwelling units.

Custer County Local Emergency Operations Plan

The Village of Mason City is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the past five years, new businesses in Mason City include Enterprises, LLC and Corbin Enterprises. The old mortuary and living quarters north of the Catholic Church were removed in 2021. Major damages impacted the communities' streets during the 2019 flooding and temporary repairs were put in place. Census data indicates that Mason City's population is increasing which the planning team attributes to younger families moving in and additional housing stock becoming available. There are no new residential or commercial developments planned for the next five years.

Community Lifelines

Transportation

Mason City's major transportation corridors include Highway 2, which runs southeast-northwest, through the northern portion of Mason City. Highway 2 accommodates on average 2,405 vehicles per day, 390 of which are heavy commercial vehicles. Burlington Northern Santa Fe has a rail line that runs through the northern side of the village. The local planning team identified North Mason Road as another transportation corridor of concern. North Mason Road is a county

blacktop road that experienced major damages during flooding in 2019. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage sites throughout Mason City which houses hazardous materials. In the event of a chemical spill, the Mason City and Ansley Fire Departments would be first to respond. The planning team indicated that local response resources are sufficient.

Table MAS.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
NEBRASKA CENTRAL TELEPHONE CO	338 Webster St	No

Source: Nebraska Department of Environment and Energy[80]

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table MAS.5: Mason City Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Sewage Lagoon	N	N	N
2	Food, Water, and Shelter	Well #1	N	Y	N
3	Safety and Security	Fire Hall	N	N	N
4	Food, Water, and Shelter	Well #2	N	Y	N
5	Food, Water, and Shelter	Water Tower	N	N	N

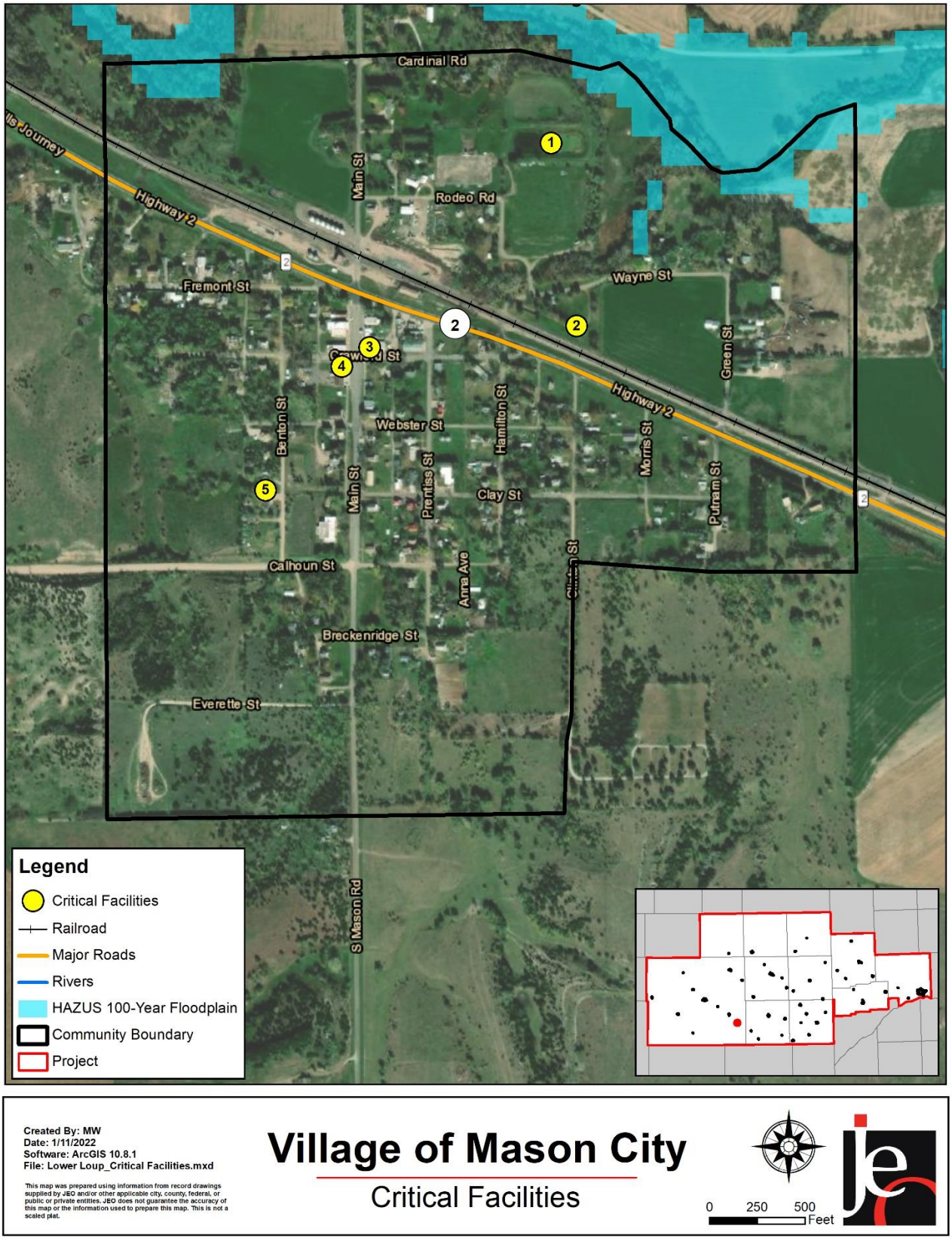
Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the village.

80 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Figure MAS.3: Mason City Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 MAS.7: Mason City Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
232	206	2,844,882	6	69,297	2.91%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

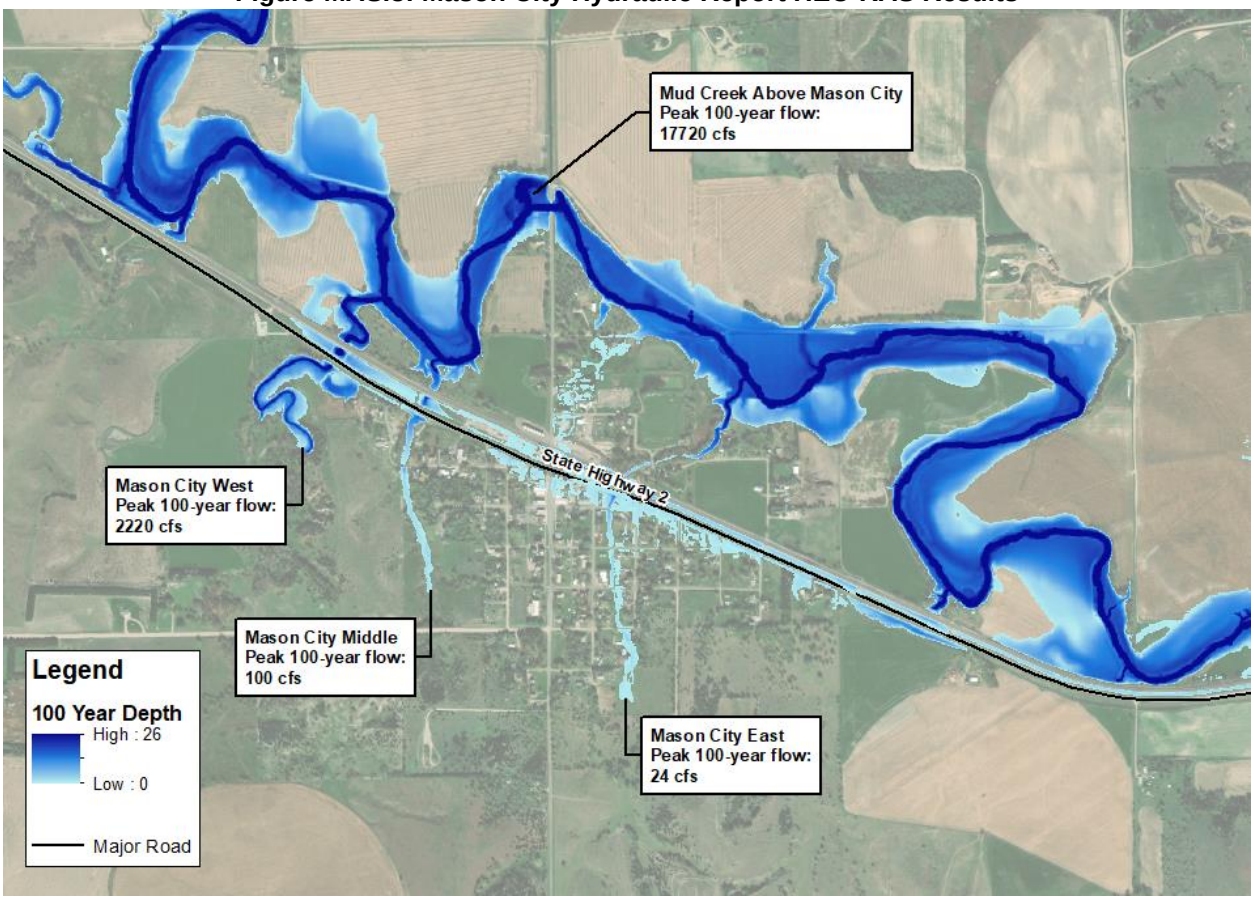
Mason City does not participate in the NFIP. There are no repetitive flood loss properties located in the Village of Mason City. The local planning team indicated that the area north of Highway 2, along Mud Creek is most prone to flooding.

A hydraulic analysis for the Mud Creek Watershed, which includes the Village of Mason City, was under development as of January 2022. Some major findings pertaining to the village from this report included:

- Existing conditions modeling as part of this project confirms that no major flooding risk appears likely because of Mud Creek. Two small tributaries flow through Mason City; however, their contributing drainage areas are small, and their 100-year estimated peak flows are minor. Modeling indicates that the existing infrastructure (ditches and culverts) are adequate to convey this water through Highway 2 and the Railroad into Mud Creek.
- No major flooding was apparent due to the primary conveyance channels in downtown Mason City which suggests that any flooding at this location is likely due to interior

drainage concerns, and not a result of Mud Creek or its major tributaries and should therefore be evaluated separately.

Figure MAS.3: Mason City Hydraulic Report HEC-RAS Results



During the major flooding in 2019, the village was overwhelmed with flood waters. Emergency measures were taken when water crossed over streets and washed sections away. A culvert on Calhoun Street that carries water from the hills west, east, and south of the community, was unable to carry the water effectively causing water to run over Calhoun Street, Clay Street, and Webster Street. The flood waters washed out portions of Prentiss, Benton, and Fremont Streets as well. Several streets were barricaded due to the flooding. Fourteen streets total were damaged in the event with damages reaching $350,000. The community hall and village office basements were flooded, and flood water had to be pumped out. Damages to village building totaled $90,235. The Muddy Creek on the north edge of town overflowed and caused water to cross the bridge briefly, flooding low-lying areas, washing fences away, and damaging property. To mitigate flooding in the future, new culverts will be installed in the community.

Grass/Wildfires

Local concerns regarding grass/wildfires revolve around having an adequate number of volunteer staff to extinguish the fire. The fire district does have mutual aid agreements with surrounding communities. The local planning team indicated that a large fire occurred outside of Mason City in the 1960's. Mason City residents are encouraged to have defensible space around their structures.

Severe Winter Storms

Local concerns regarding severe winter storms focus on the potential for prolonged periods without power. Only approximately five percent of power lines are buried within Mason City. The village's maintenance staff is responsible for removing snow following a storm. Mason City's snow removal resources, a tractor and loader, are sufficient for local needs.

Terrorism

Although the likelihood of an occurrence of terrorism is unlikely in Mason City, the potential impact causes the hazard to be of concern to the local planning team. If power or communications were taken out due to terrorism, vital community functions would be impaired.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails 3. Implement measures to improve electrical service 4. Bury power lines for future construction
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
STATUS	Power lines have been buried to wells and sewer lift stations.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	$20,000 to $75,000 + per generator
POTENTIAL FUNDING	Mason City General Fund, HGMP
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management, Village Board
STATUS	The Village begun a project for a new generator system for lift stations. Local wells still need backup generators.

OBJECTIVE	DEVELOP/UPDATE FLOODPLAIN INFORMATION
DESCRIPTION	1. Conduct mapping/remapping of floodplain 2. Revise floodplain /insurance maps
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Mason City General Fund, FMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	The Nebraska Department of Natural Resources is currently in a remapping effort for Custer County and the Village of Mason City.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	1. Develop/Improve Emergency Communication Action plan 2. Implement Emergency Communication Action Plan 3. Establish inner-operable communications 4. Obtain/Upgrade Emergency Communication Facilities/Equipment 5. Obtain/Upgrade/Distribute Weather Warning Radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$5,000+
POTENTIAL FUNDING	Mason City General Fund, HGMP, PGM
TIMELINE	2 – 5 years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	1. Evaluate current warning systems 2. Improve warning systems/develop new warning system 3. Obtain/Upgrade warning system equipment and methods 4. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 5. Identify location of weather warning radios 6. Improve weather radio system 7. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	Mason City General Fund, HGMP, PGM
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC EDUCATION ON HAZARD EVENTS AND PREPAREDNESS
DESCRIPTION	1. Obtain or develop materials about hazards 2. Conduct multifaceted public education 3. Distribute fact sheet at community events, schools, other venues 4. Conduct scheduled siren/warning system tests 5. Prepare/distribute educational materials listing safe room and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$2,000+
POTENTIAL FUNDING	Mason City General Fund
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	Village Board, Custer County Emergency Management
STATUS	The village currently has a program to test warning sirens. Additional information is needed for residents about hazard events.

OBJECTIVE	PUBLIC SAFE ROOMS AND POST-DISASTER STORM SHELTERS
DESCRIPTION	1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms
ESTIMATED COST	$150/sf for retrofit; $300/sf for new construction
POTENTIAL FUNDING	Mason City General Fund, HGMP, PGM
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Custer County Emergency Management, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE DAMAGES IN FLOODPLAIN
DESCRIPTION	1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	Mason City General Fund, FMA
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	The village is currently evaluating local needs to reduce potential flood impacts aster March 2019 flood event. The village noted several culverts need to be improved/upsized to reduce flood risk.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	1. Conduct tree inventory 2. Develop tree maintenance/trimming program 3. Implement tree maintenance/trimming program 4. Remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Tornadoes, Severe Thunderstorms, Severe Winter Storms, Grass/Wildfire
ESTIMATED COST	$2,000+
POTENTIAL FUNDING	Mason City General Fund
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	The village is currently in the process of trimming hazardous trees around roads and power lines.

New Mitigation Actions – 2022 Plan

OBJECTIVE	PROJECT SCOPING AS A RESULT OF THE WFPO PROGRAM
DESCRIPTION	1. Evaluate potential flood risk reduction alternatives as identified through the Watershed and Flood Prevention Operations Program including project scoping and implementation
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	General Fund, WFPO, HMA
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Board, LLNRD, JEO Consulting Group
STATUS	Mud Creek WFPO is currently under development. No formal alternatives have yet been determined however several alternatives are under further review.

OBJECTIVE	INSTALL NEW CULVERTS
DESCRIPTION	1. Install and/or upgrade culverts in the community to mitigate flood impacts 2. Clean out and widen culverts in town
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$25,000
POTENTIAL FUNDING	General Fund, HMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Stormwater system improvements are needed along Calhoun Street, Clay Street, and Webster Street.

Removed Mitigation Actions

OBJECTIVE	DEVELOP EMERGENCY SNOW & EVACUATION ROUTES
DESCRIPTION	1. Develop/Improve snow/evacuation route and program to include parking, snow/ice and debris removal, etc. 2. Obtain and install snow emergency route/evacuation signs 3. Provide information on emergency routes to public
HAZARD(S) ADDRESSED	All Hazards
REASON FOR REMOVAL	This project was identified as no longer a priority for the village.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board, Village Clerk, and County Emergency Manager. The local planning team will review the plan no less than annually and will include the public in the review and revision process by sharing information at board meetings and posting information at prime locations (community hall, post office, and village office).

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COMMUNITY PROFILE

VILLAGE OF OCONTO

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

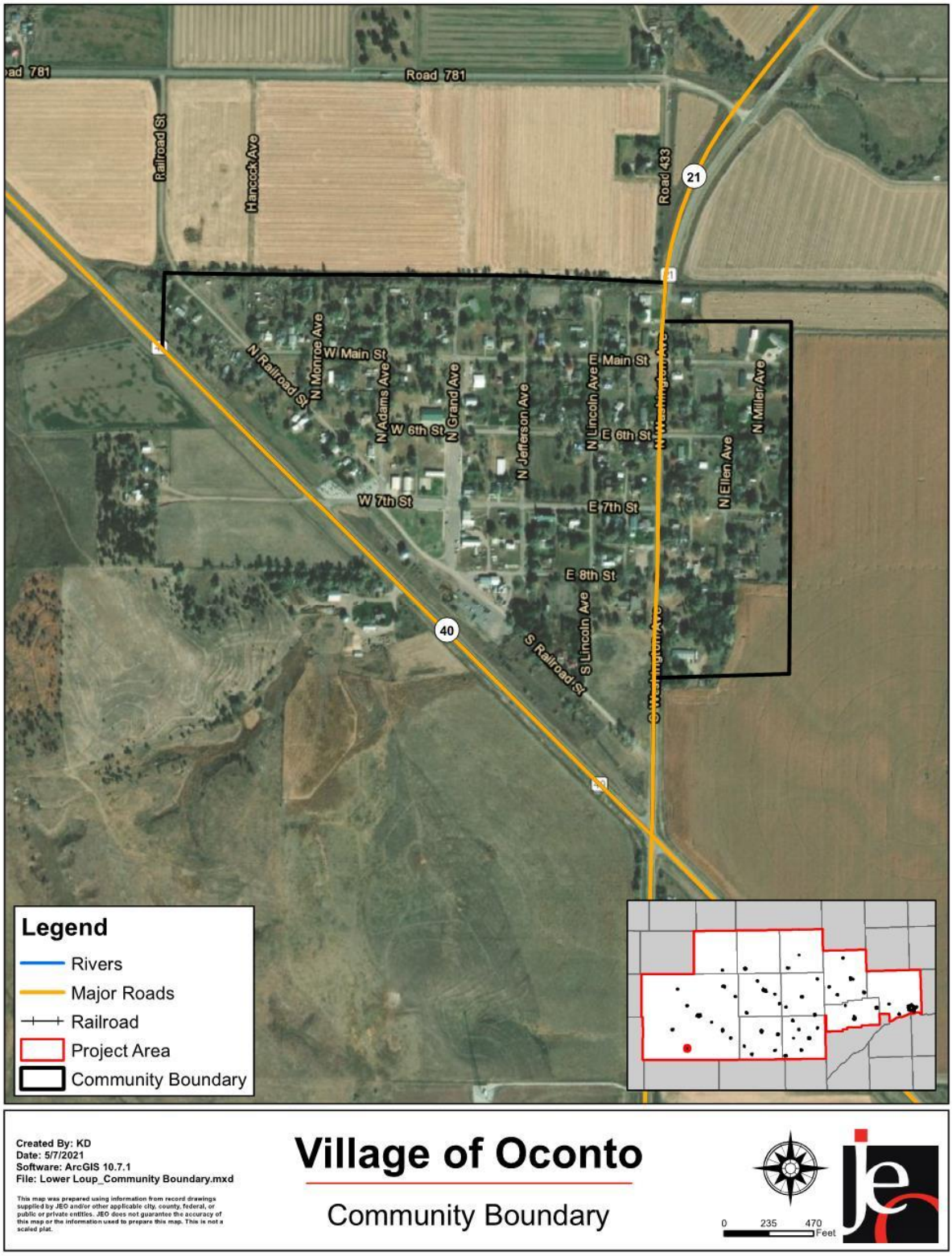
Table OCO.1: Village of Oconto Local Planning Team

NAME	TITLE	JURISDICTION
MARK REMPE	Emergency Manager	Custer County

Location and Geography

The Village of Oconto is located in the southeastern portion of Custer County. The Village of Oconto covers an area of 0.47 square miles. There are no major waterways near the village and the area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Oconto. Most of Oconto lies in the dissected plains topographic region, and is surrounded by agricultural fields.

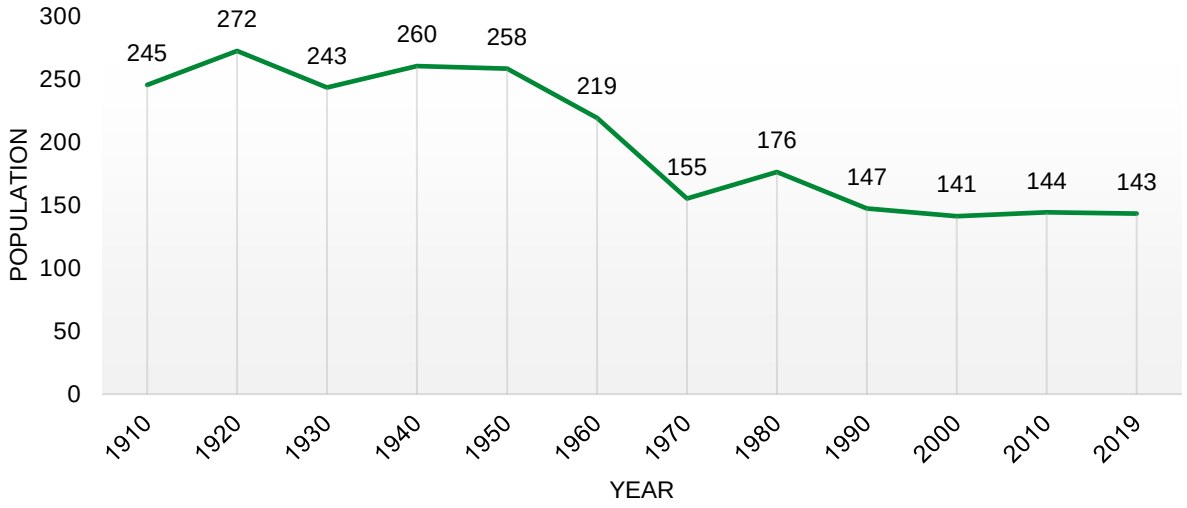
Figure OCO.1: Village of Oconto Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Oconto experienced a decline from 1940 through 1970. Between 1970 and 1980 the population grew, however, since 1980 the population has been in a steady decline This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 1% of Custer County's Population in 2019.

Figure OCO.2: Oconto Population 1910-2019



Source: U.S. Census Bureau[81]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Oconto' population was:

- **Older.** The median age of Oconto was 53.3 years old in 2019, compared with the County average of 43.1 years. Oconto's population has grown older since 2010, when the median age was 45.3 years old. Oconto had a smaller proportion of people under 20 years old (9.1%) than the County (25.0%).[82]
- **The same ethnical diversity.** In 2010, 0% of Oconto's population was Black or African American, 19.4% was other races, and 2.8% were two or more races. By 2019, 2.8% of Oconto's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[83]
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Oconto (6.7%) was higher than the County (6.1%) in 2019.[84]

81 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
82 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
83 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
84 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Oconto's economy had:

- **Different mix of industries**. Employment sectors accounting for 10% or more of employment in Oconto included Agriculture, Manufacturing, Retail, Transportation, and Education. In comparison Custer County's included Agriculture, Retail, and Education.[85]
- **Lower household income**. Oconto's median household income in 2019 ($50,313) was about $2,000 lower than the County ($52,184).[86]
- **More long-distance commuters**. About 11.3% percent of workers in Oconto commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 63.3% of workers in Oconto commute 30 minutes or more to work, compared to about 16.8% of the County workers.[87]

Major Employers

There are no major employers located in Oconto. The majority of working residents commute to the surrounding communities including Gothenburg, Lexington, and Kearney.

Housing

In comparison to Custer County, Oconto's housing stock was: [88]

- **More owner occupied.** About 84.3% of occupied housing units in Oconto are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Oconto has more houses built prior to 1970 than the county (74.1% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the Village is single family detached and Oconto contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 94.4% of housing in Oconto was single-family detached, compared with 89.5% of the County's housing. Oconto has a larger share of mobile and manufactured housing (5.6%) compared to the County (3.3%).

This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Oconto has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a four member village board and the following offices: clerk/treasurer, utility superintendent, street superintendent, and volunteer fire department.

85 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
86 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
87 United States Census Bureau. "2019 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]
88 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Capabilities

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

Table OCO.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*No*
	Capital Improvements Plan	*Yes*
	Economic Development Plan	*No*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*Yes*
	Chief Building Official	*No*
	Floodplain Management Plan	*No*
	Storm Water Management Plan	*No*
	National Flood Insurance Program	*No*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*No*
	Floodplain Administration	*No*
	GIS Capabilities	*Yes*
	Civil Engineering	*Yes*
	Local Staff Who Can Assess Community's Vulnerability to Hazards	*Yes*
	Grant Manager	*Yes*
	Mutual Aid Agreement	*Yes*
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	*Yes*
	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*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*No*
	Other (if any)	
EDUCATION AND OUTREACH	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.	*Yes*

SURVEY COMPONENTS		YES/NO
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes*
	Natural Disaster or Safety related school programs	*No*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table OCO.3: Overall Capability

Overall Capability	2017 Plan	2022 Plan
Financial Resources Needed to Implement Mitigation Projects	High	Moderate
Staff/Expertise to Implement Projects	High	Moderate
Community Support to Implement Projects	High	Moderate
Time to Devote to Hazard Mitigation	High	Moderate

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Municipal funds are fairly limited to maintaining facilities and municipal systems. Municipal funds have remained relatively steady over the past five years. There are currently no large scale projects with earmarked funds.

Custer County Local Emergency Operations Plan

The Village of Oconto is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

Over the last ten years, three new homes have been built along the east side of Highway 21. Otherwise, there has not been any further development or new businesses in the Village of Oconto, and the community does not anticipate new development over the next five years.

Community Lifelines

Transportation

Oconto's major transportation corridors include Highway 21, which runs north-south, through the western portion of Oconto, and Highway 40, which runs northwest-southeast along the southwestern portion of the community. Highway 21 accommodates on average 905 vehicles per day, 225 of which are heavy commercial vehicles. Highway 40 accommodates on average 430 vehicles per day, 45 of which are heavy commercial vehicles. There are no rail lines near the village. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage sites throughout Oconto which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident.

Table OCO.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
EGGLESTON OIL CO.	101 Railroad Street	No

Source: Nebraska Department of Environment and Energy[89]

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 previous planning process and updated by the local planning team as a part of this plan update.

The American Red Cross has agreements with Oconto Community Hall to serve as a mass care facility during disaster events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

89 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Table OCO.5: Oconto Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Oconto Community Center and Library	Y	Y	N
2	Transportation	Township Building/Road Equipment	N	N	N
3	Food, Water, and Shelter	Water Tower	N	N	N
4	Food, Water, and Shelter	Well & Well House	N	Y	N
5	Safety and Security	Fire Station/Warning Siren	N	N	N
6	Hazardous Materials	Liquid Fuel Bulk Storage Plant	N	N	N
7	Food, Water, and Shelter	Well & Well House #2	N	N	N
8	Food, Water, and Shelter	Wastewater Pump & Pump House*	N	Y	N

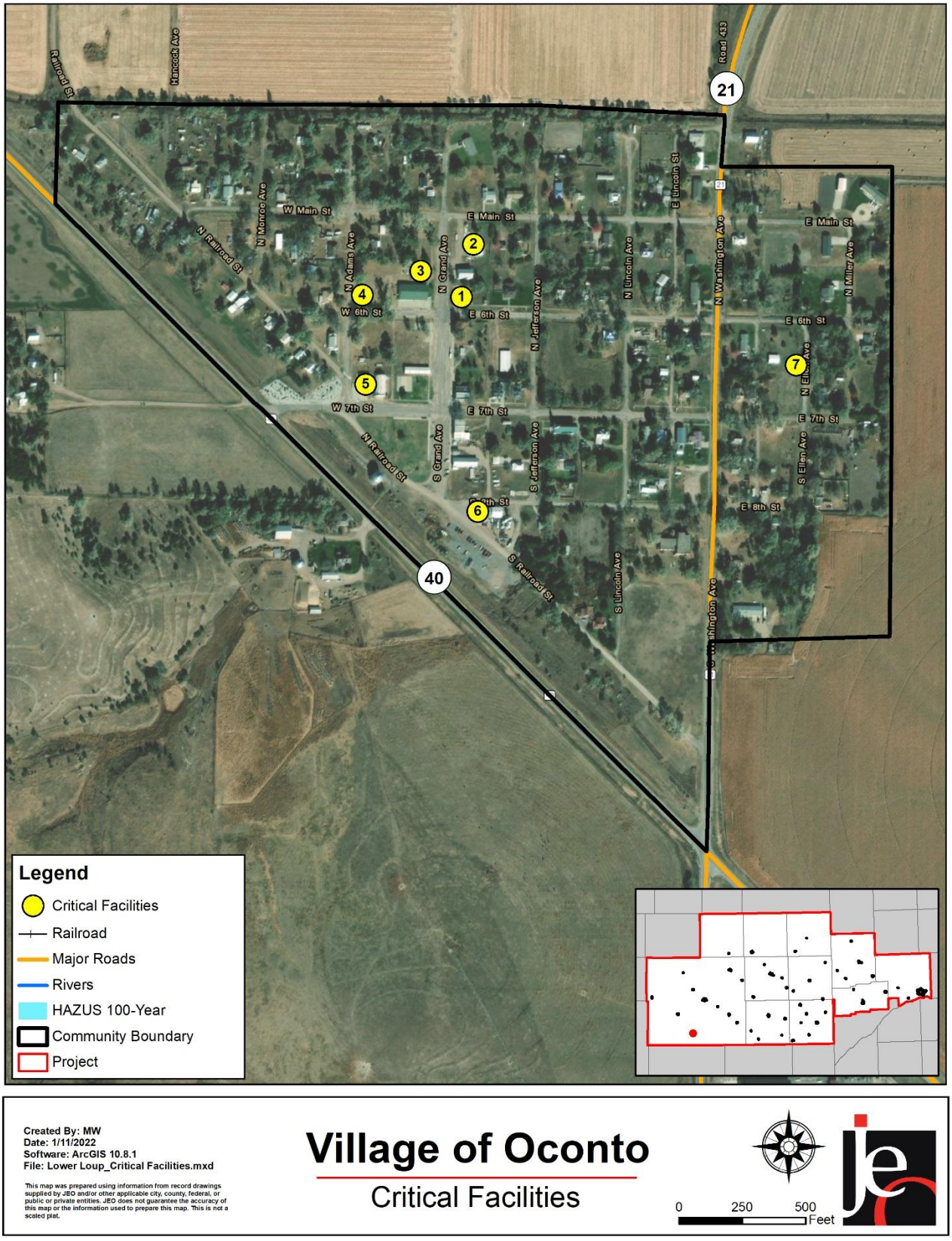
**indicates facility is unmapped*

Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the village.

Figure OCO.3: Oconto Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 OCO.7: Oconto Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
162	161	3,396,096	0	0	0.00%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Drought

The local planning team identified drought as a hazard of top concern for the community. The main concerns were related to the increased risk of grass and wildfires during drought periods and water shortages. The summer of 2012 was exceptionally difficult for farmers, ranchers, and the local water supply. A surge of wildfires associated with the dry conditions were common. The Village is in the process of completing a large water project for the community, which includes constructing a new water main distribution, water meters, and new well, upgrading the water tower, and replacing all 14 fire hydrants. The $1.2 million project is being funded through a combination of USDA and CDBG grants and a long term loan from the USDA. The addition of the new well has helped with water loads and supply.

Grass/Wildfire

Grass and wildfire was identified by the local planning team as a hazard of top concern for the Village. Water supply was noted as the primary concern related to wildfire. An increase in eastern red cedar trees to the region has increased the wildfire risk as well. In 2012, there were 31 fire calls between May 1st and October 31st due to the extreme drought conditions that year. Seven of these together burned 2,520 acres. One fire occurred on Highway 40 and threatened two residences. The availability of the Mutual Aid Agreements helped tremendously to control the wildfires that year.

The local all-volunteer fire department (Oconto Fire District) is comprised of 34 members. The District secured a post-9/11 grant that helped purchase a new pumper truck. The Fire Department also has a tanker truck and two grass units available for firefighting. Many local residents do their

own fuel management by cutting down cedar trees, and there is an annual burn throughout the town to reduce the fuel load. The water supply projects will help the water availability during fire-fighting events.

Severe Thunderstorms

Severe thunderstorms were identified as a hazard of top concern for the community. The primary concerns with severe thunderstorms relate to tree damage and roof damage from high winds and hail. The library sustained hail damaged in 2004 (and received a new roof) when hail the size of baseballs fell across the community. Per the NCEI storm report, hail from this severe thunderstorm completely shredded wheat fields and newly planted corn northwest of Oconto. Roofs and siding on nearly every home and business were severely damaged. Furthermore, vehicles sustained severe body damage along with broken windows. Property damages from this storm were estimated at $150,000. Oconto plans to improve their citizen warning system and provide a tree maintenance program to mitigate the hazards associated with severe thunderstorms.

Severe Winter Storms

The local planning team identified severe winter storms as a hazard of top concern. Power outages and property damage are the primary concerns. Oconto has backup power generators at the well, community center, and wastewater plant. In 2007, a severe winter storm caused a power outage in the community that lasted for 14 days when nine inches of snow fell in a night. It was noted that nearly every winter there is at least one power outage, however most of them are short in duration. The library sustained some damages in 2016 when snow accumulations of 15 inches caused the roof to leak.

Custer Public Power District is consistent in trimming trees around power lines every year, but there is a specific large cottonwood in town that concerns the local planning team. Snow removal is completed by a set of volunteers, who have access to skid loaders, bull dozers, and a truck with a blade for snow equipment.

Tornadoes and High Winds

Tornadoes and high winds were identified as hazards of concern for the Village by the local planning team. According to the NCEI, eight tornadoes have impacted the village since 1996 which ranted from EF0 to F2. The most damaging event was a F-2 tornado on Halloween night in 2000 which hit Oconto directly down Main Street, producing extensive damage. Every building along Main Street was either damaged or destroyed, including the water tower, library, and Fire Hall. The community center was destroyed while 19 children and four adults were in the basement. Over half of the homes in the Village suffered minor to major damage. The community was declared a disaster by the governor with an estimated $2 million in damages. A combination of CDBG and USGA funds helped rebuild the community. Residents receive alerts and warnings via cell phones and outdoor sirens. A calling tree was created after this event to help notify those without access to cell phone alerts. Oconto plans to install another siren on the east side of town for better coverage. The local Methodist Church basement can be used as a community storm shelter, and many residents open up their homes to neighbors without basements for shelter.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	IMPROVE DRAINAGE
DESCRIPTION	Improve storm sewers and drainage patterns in and around the community; deepen drainage ditches and clean out culverts
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$30,000
FUNDING	Local funds
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Street Superintendent
STATUS	Custer County and Oconto are currently in a remapping effort with NeDNR. Specific drainage improvements will be identified alongside floodplain updates.

OBJECTIVE	REDUCE IMPACT OF DROUGHT
DESCRIPTION	Install new water meters, water main distribution, curb stop valves, and well; renovate water tower; replace 14 fire hydrants
HAZARD(S) ADDRESSED	Drought, Wildfire
ESTIMATED COST	$1,200,000
FUNDING	USDA long term loan, CDBG
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE TREE DAMAGE AND DAMAGE FROM TREES
DESCRIPTION	Conduct tree inventory; develop tree maintenance/trimming program; implement tree maintenance/trimming program; remove hazardous limbs and/or trees
HAZARD(S) ADDRESSED	Tornadoes, Severe Winter Storms, Severe Thunderstorms, High Winds, Wildfire
ESTIMATED COST	$5,000+
FUNDING	Local funds, Custer Public Power District funds
TIMELINE	Ongoing
PRIORITY	Medium
LEAD AGENCY	Custer Public Power District, Village Board
STATUS	The village is currently working to trim hazardous trees in town.

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	Identify and evaluate current backup and emergency generators; obtain additional generators based on identification and evaluation; provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$20,000-$75,000+ per generator
FUNDING	Local funds, HMGP, CDBG, local grants
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Clerk, Village Board, Contractor
STATUS	Wells and Community Center have generators. Fire Station and Police Station are in need of generators.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	Evaluate current warning systems (defined as alert sirens, weather radios, and television, telephone, and radio warning systems, etc.); improve warning systems/develop new warning system; obtain/upgrade warning system equipment and methods; conduct evaluation of existing alert sirens for replacement or placement of new sirens; identify location of weather warning radios; improve weather radio system; obtain/upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies
FUNDING	Local funds, HMGP
TIMELINE	5 years
PRIORITY	Low
LEAD AGENCY	Maintenance
STATUS	A second siren is needed for the east side of town. The community also uses radios, pagers for fire department, a calling tree for community members, and Code Red Alerts.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board, Village Clerk, and County Emergency Manager. The local planning team will review the plan no less than annually and will include the public in the review and revision process by sharing information at board meetings.

COMMUNITY PROFILE

CITY OF SARGENT

Lower Loup Natural Resources District
Hazard Mitigation Plan 2022

Local Planning Team

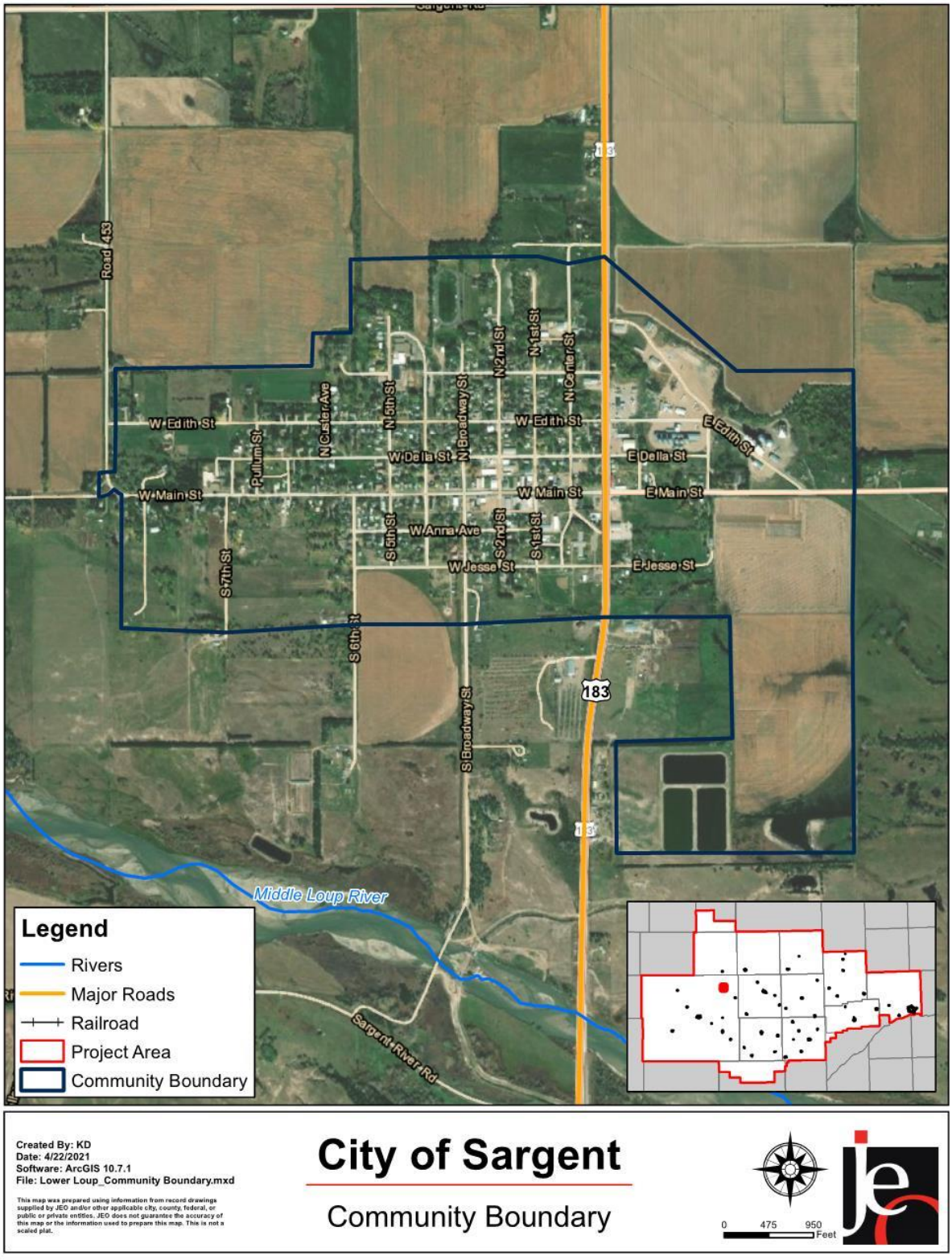
Table SAR.1: City of Sargent Local Planning Team

NAME	TITLE	JURISDICTION
GERRY SHEETS	Council President	City of Sargent
GWENDA HORKY	City Clerk	City of Sargent
MICHEAL L KOZEAL	Mayor	City of Sargent
REECE JENSEN	City Administrator	City of Sargent

Location and Geography

The City of Sargent is located in the northeastern portion of Custer County. The City of Sargent covers an area of 1.07 square miles. The Middle Loup River is located south of the city. The area is not heavily forested. Custer County has experienced at least eight landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Sargent. Most of Sargent lies in the plains and sandhills topographic region, and is surrounded by agricultural fields.

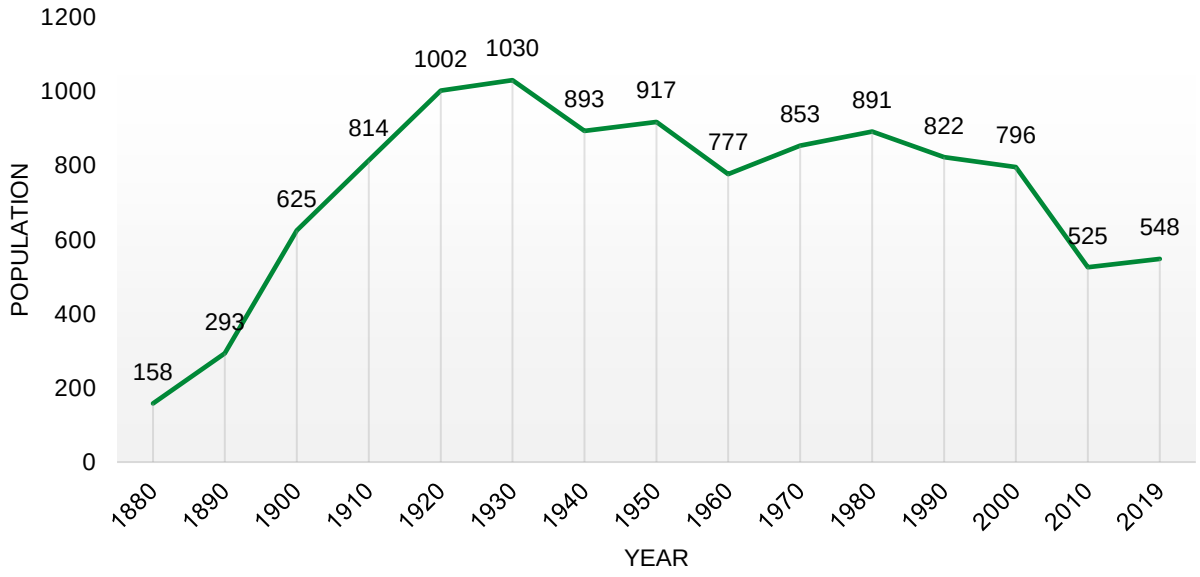
Figure SAR.1: City of Sargent Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2019 (estimated). This figure indicates that the population of Sargent experienced a decline from 1930 through 1960. During the 1960s and 1970s the population grew, however, since 1990 the population was in a steady decline. In recent years the population has been increasing again. 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. The city's population accounted for 5% of Custer County's Population in 2019.

Figure SAR.2: Sargent Population 1880-2019



Source: U.S. Census Bureau[90]

The young, elderly, minorities, and poor may be more vulnerable to certain hazards than other groups. In comparison to the County, Sargent' population was:

- **Older.** The median age of Sargent was 55.7 years old in 2019, compared with the County average of 43.1 years. Sargent's population has grown older since 2010, when the median age was 45.1 years old. Sargent had a smaller proportion of people under 20 years old (21.4%) than the County (25.0%).[91]
- **Less ethnically diverse.** In 2010, 0% of Sargent's population was Black or African American, 0% was other races, and 5.1% were two or more races. By 2019, 0% of Sargent's population was two or more races. During that time, Custer County went from 0.2% to 0.2% American Indian, 0.5% to 0.8% other races and 1.4% to 1.3% two or more races from 2010 to 2019 respectively.[92]
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Sargent (5.5%) was higher than the County (6.1%) in 2019.[93]

90 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
91 United States Census Bureau. "2019 American Fact Finder: S0101: Age and Sex." [database file]
92 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]
93 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

The community's economic base is a mixture of industries. In comparison to Custer County, Sargent's economy had:

- **Similar mix of industries**. Employment sectors accounting for 10% or more of employment in Sargent included Construction, Manufacturing, Retail, and Education. In comparison Custer County's included Agriculture, Retail, and Education.[94]
- **Lower household income**. Sargent's median household income in 2019 ($37,000) was about $15,000 lower than the County ($52,184).[95]
- **Fewer long-distance commuters**. About 53.6% percent of workers in Sargent commuted for fewer than 15 minutes, compared with about 62.2% of workers in Custer County. About 37.0% of workers in Sargent commute 30 minutes or more to work, compared to about 16.8% of the County workers.[96]

Major Employers

Major employers in the City of Sargent include: Trotter Grain and Fertilizer, Trotter Whoa & Go, Sargent Public School, and Sargent Corner Market. The local planning team noted approximately sixty percent of residents commute to the surrounding communities of Broken Bow and Ord.

Housing

In comparison to the Custer County, Sargent's housing stock was: [97]

- **Less owner occupied.** About 66.4% of occupied housing units in Sargent are owner occupied compared with 69.6% of occupied housing in Custer County in 2019.
- **Larger share of aged housing stock**. Sargent has more houses built prior to 1970 than the county (80.5% compared to 68.2%).
- **Fewer multi-family homes**. The predominant housing type in the city is single family detached and Sargent contains less multifamily housing with five or more units per structure than the County (0.0% compared to 1.1%). About 91.9% of housing in Sargent was single-family detached, compared with 89.5% of the County's housing. Sargent has a larger share of mobile and manufactured housing (6.1%) compared to the County (3.3%)

The local planning team noted that there are five mobile homes in the community. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

94 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
95 United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]
96 United States Census Bureau. "2019 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]
97 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Sargent has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The city has a four-member city council and the following offices: clerk/treasurer, city administrator/utility superintendent, and volunteer fire department. On April 1, 2019, a 0.5% sales tax was put into effect in the City of Sargent. The collected sales tax money of approximately $21,000 will be used for hazard mitigation projects.

Capabilities

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

Table SAR.2: Capability Assessment

SURVEY COMPONENTS		YES/NO
PLANNING & REGULATORY CAPABILITY	Comprehensive Plan	*Yes*
	Capital Improvements Plan	*Yes*
	Economic Development Plan	*Yes*
	Local Emergency Operational Plan	*County*
	Floodplain Ordinance	*No*
	Zoning Ordinance	*Yes*
	Subdivision Regulation/Ordinance	*No*
	Building Codes	*Yes*
	Chief Building Official	*Yes*
	Floodplain Management Plan	*Yes*
	Storm Water Management Plan	*Yes*
	National Flood Insurance Program	*No*
	Community Rating System	*No*
	Other (if any)	
ADMINISTRATIVE & TECHNICAL CAPABILITY	Planning Commission	*Yes*
	Floodplain Administration	*No*
	GIS Capabilities	*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	1 & 6 Year Plan	*Yes*
	Applied for grants in the past	
	Awarded a grant in the past	
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	*Yes*
	Gas/Electric Service Fees	*Yes*

SURVEY COMPONENTS		YES/NO
	Storm Water Service Fees	*No*
	Water/Sewer Service Fees	*Yes*
	Development Impact Fees	*No*
	General Obligation Revenue or Special Tax Bonds	*Yes*
	Other (if any)	
EDUCATION AND OUTREACH	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.	*Yes*
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	*Yes*
	Natural Disaster or Safety related school programs	*Yes*
	StormReady Certification	*No*
	Firewise Communities Certification	*No*
	Tree City USA	*No*
	Other (if any)	

Table BAR.3: Overall Capability

OVERALL CAPABILITY	2017 PLAN	2022 PLAN LIMITED/MODERATE/HIGH
FINANCIAL RESOURCES NEEDED TO IMPLEMENT MITIGATION PROJECTS	Limited	LImited
STAFF/EXPERTISE TO IMPLEMENT PROJECTS	Limited	High
COMMUNITY SUPPORT TO IMPLEMENT PROJECTS	Moderate	High
TIME TO DEVOTE TO HAZARD MITIGATION	Limited	High

Plan Integration

Communities have several planning documents that discuss or relate to hazard mitigation. Each applicable planning mechanism is listed below along with a short description of how it is integrated with the hazard mitigation plan. Participating jurisdictions will seek out and evaluate any opportunities to integrate the results of the current hazard mitigation plan into other planning mechanisms and updates.

Grants and Funding

Sargent's annual budget is limited to maintaining current facilities and systems. The city has a 0.5% sales tax which is marked for a drainage project on the north end of town. Hazard mitigation projects identified in the budget include culvert upgrades on Jessie Street. The city has also utilized several grant programs including HMA, CDBG, and from the NRD to implement mitigation projects.

Comprehensive Plan

The city's Comprehensive Plan was last updated in 2011; however, the plan does not address natural hazards in or around the city. The Comprehensive Plan outlines potential ways to continue growth and development throughout the city. The plan encourages infill development and expanding economic opportunities to encourage future growth. Future updates to the Comprehensive Plan will incorporate a discussion of flooding and its potential impacts to future expansion.

Custer County Local Emergency Operations Plan

The City of Broken Bow is an annex in the Custer 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.

Central Sandhills Community Wildfire Protection Plan

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Custer County in June 2019. 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.

Future Development Trends

In the last five years, there have been two new tornado shelters and a bar & grill built. Several new businesses have opened and some dilapidated buildings. Some buildings have been demolished to clean up the community. The population in Sargent has increased recently as young adults have moved to the area to begin families. There are no new housing or business developments planned for the next five years.

Community Lifelines

Transportation

Sargent's major transportation corridors include Highway 183, which runs north-south, through the west portion of Sargent. US-183 accommodates on average 1,255 vehicles per day, 190 of which are heavy commercial vehicles. Sargent does not have rail lines. This information is important to hazard mitigation plans insofar as is suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are four chemical storage sites throughout Sargent which house hazardous materials. In the event of a chemical spill the local fire department would be first to respond.

Table SAR.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
TROTTER GRAIN & FERTILIZER	300 E Edith St	No
GREAT WESTERN GAS CO	102 W Jesse St	No
SARGENT IRRIGATION DISTRICT	402 N 1st St	No
NEBRASKA CENTRAL TELEPHONE CO	101 1/2 S 2nd St	No

Source: Nebraska Department of Environment and Energy[98]

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 previous planning process and updated by the local planning team as a part of this plan update.

The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table SAR.5: Sargent Critical Facilities

CF #	LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Food, Water, and Shelter	Community Center	Y	N	Y
2	Food, Water, and Shelter	Sargent Public School	N	N	Y
3	Food, Water, and Shelter	Pumping Station	N	N	N
4	Food, Water, and Shelter	Water Tower	N	N	Y
5	Food, Water, and Shelter	Well House #1	N	N	Y
6	Food, Water, and Shelter	Well House #2	N	N	N
7	Food, Water, and Shelter	Well House #3	N	N	N
8	Food, Water, and Shelter	Well House #4	N	N	N
9	Safety and Security	Fire Department	N	N	Y
10	Safety and Security	City Office	N	N	Y
11	Energy	Light Tower	N	Y	Y

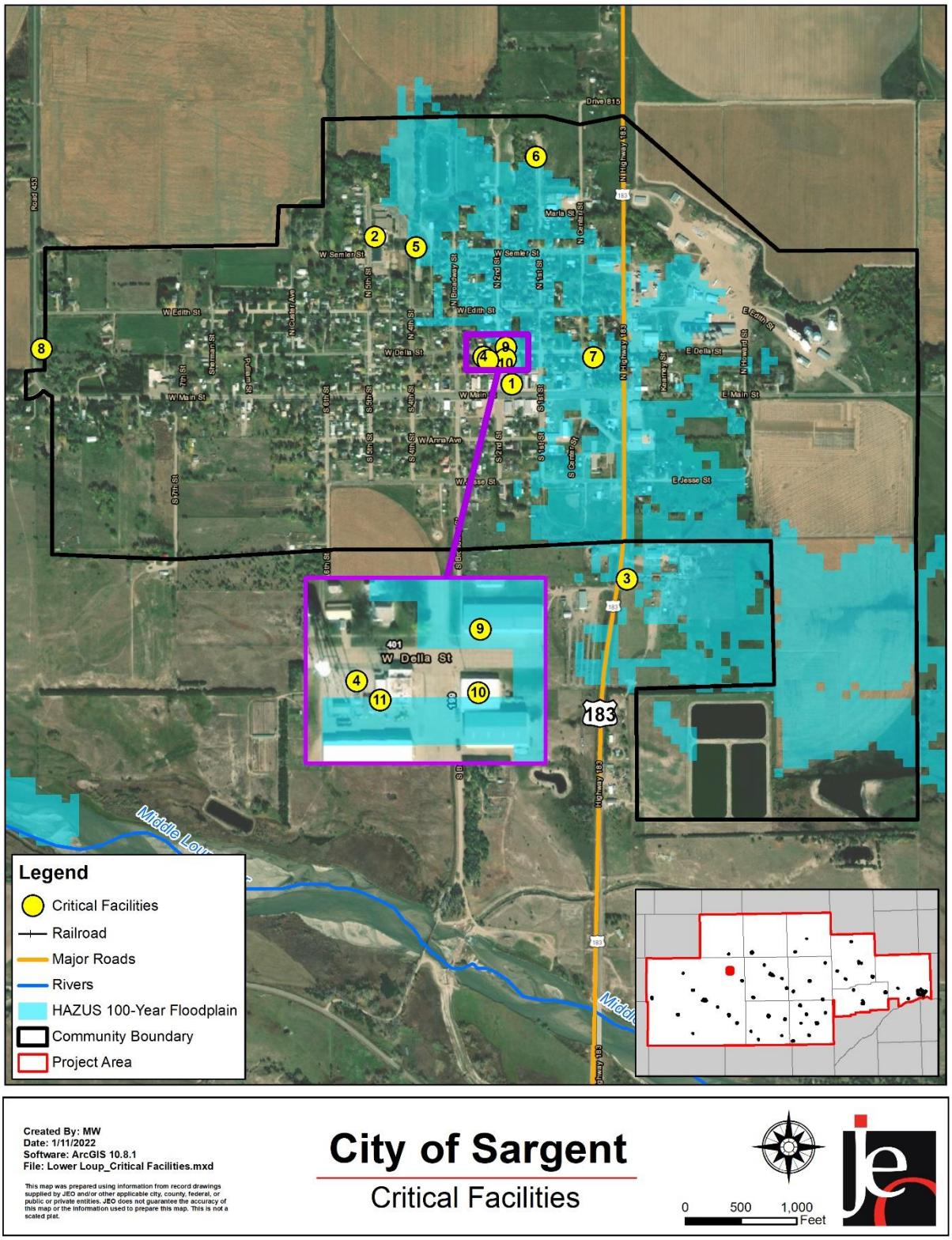
Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

No medical and health facilities are located within the city.

98 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Figure SAR.3: Sargent Critical Facilities



Parcel Improvements and Valuation

GIS parcel data as of December 2020 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements 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 SAR.7: Sargent Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percent of Improvements in Floodplain
537	523	15,931,478	225	7,252,192	43.02%

Source: County Assessor, GIS Workshop

Hazard Prioritization

For additional discussion regarding area-wide hazards, please see *Section Four: Risk Assessment.* A full list of historical hazard occurrences can be found in the Custer County jurisdictional profile. The hazards discussed in detail below were selected by the local planning team from the regional hazard list as the relevant hazards for the jurisdiction. The selected hazards were prioritized by the local planning team based on historical hazard occurrences, potential impacts, and the community's capabilities.

Flooding

Digital Flood Insurance Maps are not available for Custer County. Current regulatory floodplains maps are from 1978. Custer County, communities in the county, and NeDNR are currently in the process of updating floodplain maps in the county. If and when floodplain mapping updates are completed these revisions should include: updated floodplain/floodway boundaries and profiles; increased awareness of flood risks; and electronic models for the hydrology and hydraulics to support floodplain and flood risk management activities. There is no provided timeline for floodplain map updates to be completed.

Sargent has two NFIP policies in-force for $335,000. There are no repetitive flood loss properties in Sargent. The local planning team indicated that sewer lines cannot handle all the water which causes the majority of basements are flooded. Past flooding events have caused significant damage to many of the finished basements around town. One previous significant flooding event in 2010 caused streets to flood, sewers to overload, and lagoons to overflow. Additionally the flooding in 2019 caused significant damage to residential homes totaling more than $1,500,000 in property damages. During the flooding some residents evacuated and nearly all homes had water intrusion to their basements. Additionally a historical bridge one mile south of Sargent was destroyed by Ice flows along the Middle Loup River.

The local planning team indicated that Sargent is too flat and has a drop off of three inches from Forest Street north of the river which is 3 miles away. Areas prone to flooding include between Edith to Main Street and Semler Street. Currently the city is working on a drainage project on the north side of town which should help divert water around the city. A Flooding and Drainage Study was completed by Olsson Associates in July 2020 which evaluated flooding and drainage issues

in the city from the high water table and insufficient stormwater drainage. Several recommendations were identified which the city may choose to pursue to alleviate these issues. Recommendations provided in the report are described below.

- Water Table Lowering Recommendations – convert from surface to groundwater irrigation
- Flood Reduction Recommendations – a two-project phased approach to address surface water flooding. Phase 1 consists of drainage improvements to replace and enlarge four structures.
    - Edith Street
        - Replace current structure with two 6-foot (span) by 2.5-foot (height) box culverts. Reuse, in-place, current box culvert if possible
    - Della/Main Street System
        - Replace current system with two 7-foot (span) by 4.5-foot (height) box culverts. Reuse, in-place, current segment below Main Street, if possible. Replace a total of 700-feet of storm sewer system
    - Anna Street
        - Replace current structures with two 7-foot (span) by 4.5-foot (height) box culverts. Maintain current structure length to provide access to driveways along Broadway Street. Replace a total of 320-feet of culverts
    - Jesse Street.
        - Replace current structures with two 7-foot (span) by 4.5-foot (height) box culverts. Replace a total of 42-ft of culverts to maintain current length

Grass/Wildfires

The city is surrounded by agricultural grasslands which place it at greater risk to dry conditions, heavy winds, and lightning strikes starting wildfires. During periods of drought, the local planning team becomes increasingly concerned about the potential for a grass/wildfire. Grass/wildfires can result in damages to property and loss of life. Sargent has updated local building codes to encourage the use of fire resistant building materials and would like to participate in the Wildland Fire Protection Program and become a Firewise community to mitigate losses from future fires.

Severe Winter Storms

Severe Winter Storms have the potential to cause property damages, power outages, and shut down transportation routes. Local concerns for severe winter storms specifically are for power outages and residential safety. The majority of powerlines in town are above ground. Major storms in the past have caused outages up to a day. The city is in charge of removing snow and has designated snow routes along Main Street, 1st, 2nd, 5th, and Edith Streets. The Village is evaluating the need for generators and power line hardening to reduce the impact of future winter storms.

Tornadoes and High Winds

High winds are a regular occurrence in Sargent. Although there have not been damages identified in the village from past high wind events, high winds have the potential to cause damages to trees and knock down power poles. According to the NCEI, there have been six tornadic events in or near Sargent since 1996. The most damaging occurred in October 2000, when an F1 tornado touched down two miles west of Sargent moving north. The tornado damaged farm buildings, power poles, and communication towers.

Sargent has three outdoor alert sirens which cover the entire community and which are activated from the from the fire hall. Many residents have basements for shelter; however, there are no FEMA certified safe rooms in the city. The city noted hazardous trees should be trimmed and old power poles should be replaced to reduce future damages from high winds.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	DEVELOP EMERGENCY SNOW/EVACUATION ROUTES
DESCRIPTION	1. Develop/Improve snow/evacuation route and program to include parking, snow/ice and debris removal, etc. 2. Obtain and install snow emergency route/evacuation signs 3. Provide information on emergency routes to public
HAZARD(S) ADDRESSED	All Hazards
STATUS	Emergency snow routes have been identified throughout town.

OBJECTIVE	REDUCE WATER DEMAND/IMPROVE DROUGHT EDUCATION
DESCRIPTION	1. Conduct water use study to evaluate/implement methods to conserve water/reduce consumption 2. Evaluate/implement water use restriction ordinance 3. Identify/evaluate current/additional potable water sources 4. Develop or obtain drought education materials to conduct multi-faceted public education and awareness program
HAZARD(S) ADDRESSED	Drought
STATUS	Water use ordinances have been updated for drought management practices.

OBJECTIVE	STREAM BED/BANK STABILIZATION
DESCRIPTION	1. Evaluate current stream bed and bank stabilization needs 2. Implement stream bed and bank stabilization improvements including grade control structures, rock rip rap, vegetative cover, etc.
HAZARD(S) ADDRESSED	Flooding
STATUS	Areas were repaired and improved following the March 2019 flood events through FEMA assistance.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	1. Identify and evaluate current backup and emergency generators 2. Obtain additional generators based on identification and evaluation 3. Provide portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	$20,000 to $75,000 + per generator
POTENTIAL FUNDING	Private Funding, CDBG
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been started.

OBJECTIVE	EMERGENCY EXERCISE: FLOODING
DESCRIPTION	1. Develop and facilitate exercises to identify gaps in planning and to ensure sufficient community response plans to meet jurisdiction needs in case of flooding events
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$5,000+
POTENTIAL FUNDING	Village General Fund, HMGP
TIMELINE	2 – 5 Years
PRIORITY	Medium
LEAD AGENCY	Village Utilities, Custer County Emergency Management
STATUS	The city and Custer County Emergency Management are currently working to schedule an exercise.

OBJECTIVE	FACILITIES FOR VULNERABLE POPULATIONS
DESCRIPTION	1. Evaluate vulnerable population or placement of vulnerable populations throughout community 2. Ensure facilities which house vulnerable populations are placed in the least vulnerable areas of the community 3. Reinforce existing facilities housing vulnerable populations if unable to relocate
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$0, Adopt Regulations, Varies by need
POTENTIAL FUNDING	General Municipal Funds
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been started.

OBJECTIVE	FIRE PREVENTION PROGRAM/PLANNING AND TRAINING
DESCRIPTION	1. Participate in the Nebraska Forest Service Wildland Fire Protection Program (training in wildfire suppression training, equipment, pre-suppression planning, wildfire prevention, aerial fire suppression, etc.)
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	$100 per person
POTENTIAL FUNDING	Village General Fund, Fire Department Budget
TIMELINE	1 Year
PRIORITY	Medium
LEAD AGENCY	Sargent Fire Department
STATUS	The city is currently working to join the Wildland Fire Protection Program.

qOBJECTIVE	FIREWISE COMMUNITY
DESCRIPTION	1. Work with the Nebraska Forest Service and US Forest Service to become a Firewise Communities/USA participant 2. Develop a Community Wildfire Protection Plan 3. Train land owners about creating defensible spaces 4. Enact ordinances and building codes to increase defensible space, improve building materials to reduce structure ignitability, and increase access to structures by responders 5. Develop and implement brush and fuel thinning projects
HAZARD(S) ADDRESSED	Grass/Wildfire
ESTIMATED COST	$10,000+, staff time
POTENTIAL FUNDING	Village General Fund, Fire Department Budget
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Sargent Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	FIRST AID TRAINING
DESCRIPTION	1. Promote first aid training for all residents
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$100 per person
POTENTIAL FUNDING	Fire Department
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Sargent Fire Department
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE DRAINAGE
DESCRIPTION	1. Improve storm sewers and drainage patterns in and around the community 2. Deepen drainage ditches and clean out culverts
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	$4,500,000
POTENTIAL FUNDING	City funds, HMA, CDBG, USDA Rural Development
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Utilities Superintendent, LLNRD, private contractors
STATUS	The city is in the process of improving drainage on the north side of town to divert stormwater around the city. A Flooding and Drainage Study was completed in July 2020. Phase 1 drainage improvements may include replacing and enlarging structures on Edith Street, Della/Main Street, Anna Street, and Jesse Street. Phase 2 improvements include constructing a diversion channel north of the city.

OBJECTIVE	IMPROVE ELECTRICAL SERVICE
DESCRIPTION	1. Evaluate hardening, retrofitting, looping and/or burying of power lines and related infrastructure and/or comparable protection measures 2. Provide looped distribution service and other redundancies in the electrical system as a backup power supply in the event the primary system is destroyed or fails 3. Implement measures to improve electrical service 4. Bury power lines for future construction
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Winter Storms, Severe Thunderstorms, Flooding
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Village General Fund
TIMELINE	2 – 5 Years
PRIORITY	High
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	1. Identify and evaluate existing safe rooms and/or storm shelters 2. Improve and/or construct safe rooms and/or storm shelters 3. Design and construct storm shelters and safe rooms in highly vulnerable areas such as mobile home parks, campgrounds, schools, etc.
HAZARD(S) ADDRESSED	Tornadoes, High Winds, Severe Thunderstorms
ESTIMATED COST	$150/sf for retrofit; $300/sf for new construction
POTENTIAL FUNDING	Private Funding, Village General Fund, HMGP, PDM
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE DAMAGES IN FLOODPLAIN
DESCRIPTION	1. Evaluate repetitive loss or potential loss structures located in floodplain 2. Acquire and relocate or demolish flood prone property or elevate flood prone property 3. Elevate equipment vulnerable to flooding
HAZARD(S) ADDRESSED	Flooding
ESTIMATED COST	Varies by Structure
POTENTIAL FUNDING	Village General Fund, CDBG
TIMELINE	2 – 5 Years
PRIORITY	Medium
LEAD AGENCY	Village Utilities
STATUS	This project has not yet been started.

OBJECTIVE	RELOCATE MUNICIPAL INFRASTRUCTURE
DESCRIPTION	1. Identify and evaluate current placement and vulnerability of municipal infrastructure 2. Acquire Geographic Information System (GIS) to relocate municipal infrastructure (water lines, sewer lines, etc.)
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	$1,500 single user and staff time
POTENTIAL FUNDING	Village General Fund, CDBG
TIMELINE	2-5 Years
PRIORITY	High
LEAD AGENCY	Village Utilities, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	TREE PLANTING
DESCRIPTION	1. Develop city tree planting and maintenance guidelines
HAZARD(S) ADDRESSED	High Winds
ESTIMATED COST	$500, staff time
POTENTIAL FUNDING	Property tax levy or Community Donations
TIMELINE	1 Year
PRIORITY	High
LEAD AGENCY	Parks and Recreation
STATUS	This project has not yet been started.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms. The City Council, City Administrator, and Planning and Zoning Committee will bi-annually review the city's profile. They will involve and notify the public of the review through social media, City Council meetings, and other media outlets.