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COUNTY PROFILE

WHEELER COUNTY

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

Table WHE.1: Wheeler County Local Planning Team

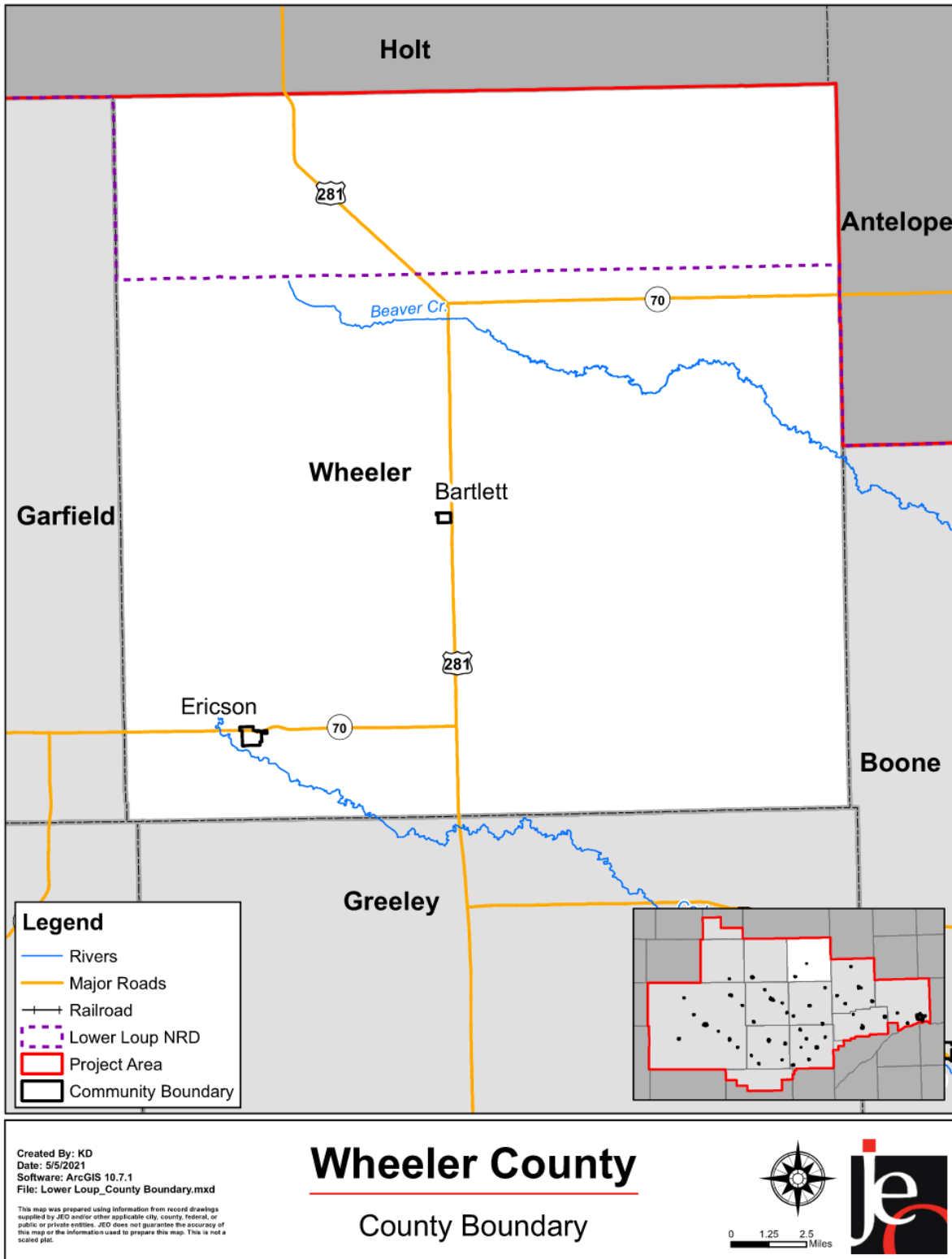
NAME	TITLE	JURISDICTION
TRAVIS HEMZ	County Commissioner	Wheeler County
ROY PLUGGE	County Commissioner	Wheeler County
DOUG REITER	County Emergency Manager	Wheeler County

Location, Geography, & Climate

Wheeler County is located in central Nebraska and is bordered by Garfield County, Holt County, and Greeley County.

The total area of Wheeler County is 576 square miles. The county includes Ericson Lake and reservoir. The county is not heavily forested, nor is it located in a geographic area of the state prone to landslides. Most of Wheeler County lies in the sand hills topographic region, with the vast majority of the county's land characterized by agricultural fields.

Figure WHE.1: Wheeler County Jurisdictional Boundary



Climate

The average high temperature in Wheeler County for the month of July is 87.8 degrees and the average low temperature for the month of January is 12.4 degrees. On average, Wheeler County receives over 27 inches of rain and 35 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 WHE.2: Wheeler County Climate Normals

	WHEELER COUNTY	PLANNING AREA	STATE OF NEBRASKA
JULY NORMAL HIGH TEMP	87.8°F	62.7°F	87.4°F
JANUARY NORMAL LOW TEMP	12.4°F	12.1°F	13.9°F
ANNUAL NORMAL PRECIPITATION	27.18 inches	26.36 inches	24.0 inches
ANNUAL NORMAL SNOWFALL	35.1 inches	28.6 inches	28.2 inches

Source: NCEI 1991-2020 Climate Normals¹

Precipitation includes all rain and melted snow and ice.

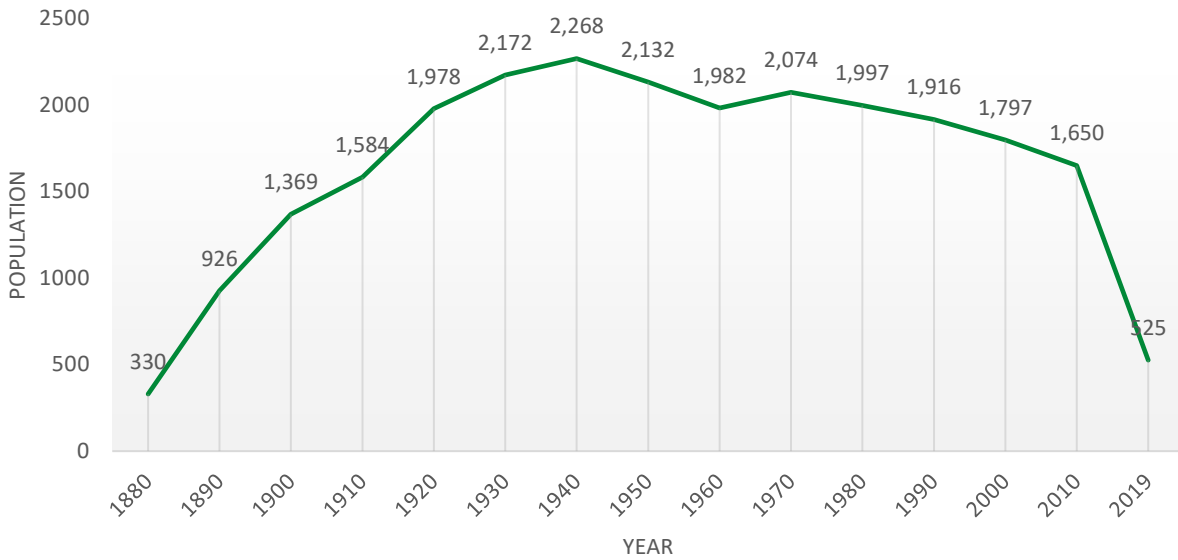
Demographics

The following figure displays the historical population trend from 1880 to 2019. This figure indicates that the population of Wheeler County declined slowly between the 1970s and 2010, with an estimated sharp decline in population between 2010 and 2019. However, the local planning team noted the current population estimates between 2010 to 2019 is inaccurate. The U.S. Census Bureau's 2020 census was not available for this plan update but should be reviewed in the future.

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 WHE.2: Wheeler County Population 1880-2019



Source: U.S. Census Bureau²

The following table indicates the State of Nebraska has a lower percentage of people under the age of 5 and over 64 than Wheeler County. Wheeler County has a higher median age, and a lower percentage of people between the ages of 5 and 64. 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 WHE.3: Population by Age

AGE	WHEELER COUNTY	STATE OF NEBRASKA
<5	8.4%	6.9%
5-64	67.6%	78.1%
<64	23.9%	15.0%
MEDIAN AGE	49.4	36.4

Source: U.S. Census Bureau³

The following table indicates that the county’s median household income and per capita income are slightly lower than those of the state. Median home values and rent are notably lower. 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]

SECTION SEVEN: WHEELER COUNTY PROFILE

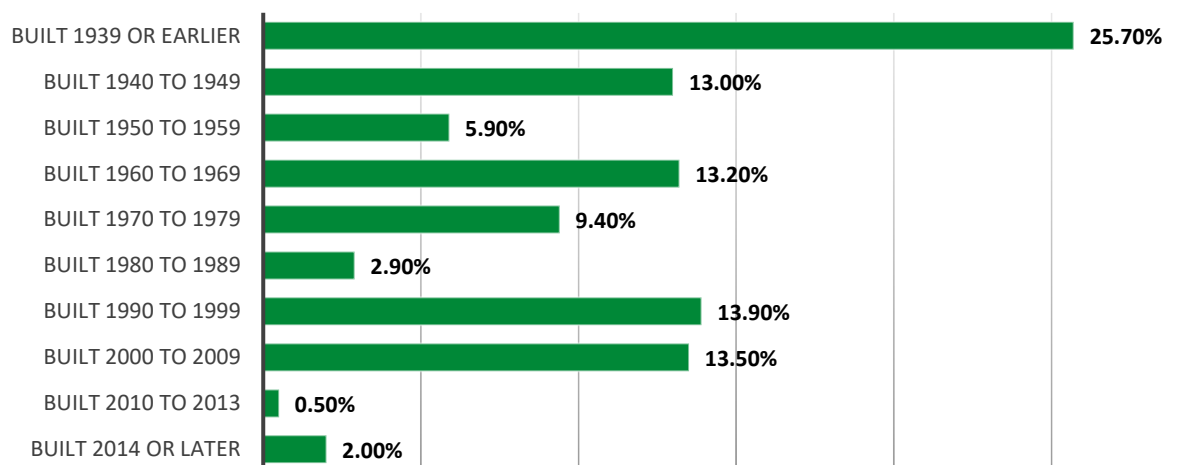
Table WHE.4: Housing and Income

AGE	WHEELER COUNTY	STATE OF NEBRASKA
MEDIAN HOUSEHOLD INCOME	\$51,591	\$59,116
PER CAPITA INCOME	\$29,037	\$31,101
MEDIAN HOME VALUE	\$97,800	\$147,800
MEDIAN RENT	\$508	\$805

Source: U.S. Census Bureau^{4,5}

The following figure indicates that the majority of the housing in Wheeler County was built prior to 1940. According to U.S. Census Bureau 2019 ACS 5-year estimates, the county has 561 housing units; with 61.7 percent of those units occupied. Approximately 21.2 percent of the county’s housing is classified as mobile homes. The local planning team noted mobile homes are scattered throughout the county. 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 WHE.3: Housing Units by Age



Source: U.S. Census Bureau⁶

Table WHE.5: Housing Units

JURISDICTION	TOTAL HOUSING UNITS				OCCUPIED HOUSING UNITS			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
WHEELER COUNTY	346	61.7%	215	38.3%	232	67.1%	114	32.9%
NEBRASKA	754,063	90.8%	76,686	9.2%	498,567	67.1%	255,496	33.9%

Source: U.S. Census Bureau⁷

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, Wheeler County had 20 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 WHE.6: Businesses in Wheeler County

	TOTAL BUSINESSES	NUMBER OF PAID EMPLOYEES	ANNUAL PAYROLL (IN THOUSANDS)
TOTAL FOR ALL SECTORS (2014)	20	97	\$1,832
TOTAL FOR ALL SECTORS (2016)	24	134	\$2,209
TOTAL FOR ALL SECTORS (2018)	20	109	\$2,198

Source: U.S. Census Bureau^{8,9}

Agriculture is also important to the economic fabric of Wheeler County, and the state of Nebraska as a whole. Wheeler County's 215 farms cover 357,279 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 WHE.7: Wheeler County Agricultural Inventory

	2012 CENSUS	2017 CENSUS	PERCENT CHANGE
NUMBER OF FARMS WITH HARVESTED CROPLAND	198	215	8.59%
ACRES OF HARVESTED CROPLAND	357,134	357,279	0.04%

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 three-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.

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

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."

planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

Table WHE.13: Capability Assessment

		SURVEY COMPONENTS	YES/NO
PLANNING & REGULATORY CAPABILITY		Comprehensive Plan	Yes
		Capital Improvements Plan	No
		Economic Development Plan	No
		Local Emergency Operational Plan	Yes
		Floodplain Ordinance	Yes
		Zoning Ordinance	Yes
		Subdivision Regulation/Ordinance	Yes
		Building Codes	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
		Chief Building Official	No
		Civil Engineering	No
		Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
		Grant Manager	No
		Mutual Aid Agreement	Yes
		Other (if any)	
FISCAL CAPABILITY		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	No
		Storm Water Service Fees	No
		Water/Sewer Service Fees	No
		Development Impact Fees	No
		General Obligation Revenue or Special Tax Bonds	No
		Other (if any)	
EDUCATION 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

SURVEY COMPONENTS		YES/NO
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	

Table WHE.14: Overall Capability

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

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.

Annual Budget

County funds are generally limited to maintaining current facilities and systems but have held relatively stable over the past decade. There are currently no large-scale projects with earmarked funds. The county has applied for grants in the past to assist with project implementation.

Zoning Ordinance and Floodplain Ordinance

The county's floodplain ordinance and zoning ordinance outline where and how development should occur in the future. These documents discourage development in the floodplain and require one foot base flood elevation per state standards.

Wheeler County Local Emergency Operations Plan

The Wheeler County Local Emergency Operations Plan (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 Loup 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 past five years no major changes have occurred in unincorporated Wheeler County. At this time there are no new residential or commercial developments anticipated in the coming five years.

Community Lifelines

Transportation

Wheeler County's major transportation corridors include Highway 281 and Highway 70. This information is important to hazard mitigation plans insofar as it 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 are five chemical storage sites throughout Wheeler County which house hazardous materials. The local volunteer fire departments would be first on scene to respond to chemical spill events. HAZMAT teams are located in Ord or O'Neil. No major spill events have occurred which required additional support or resources in the county. 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 WHE.9: Wheeler County Critical Facilities

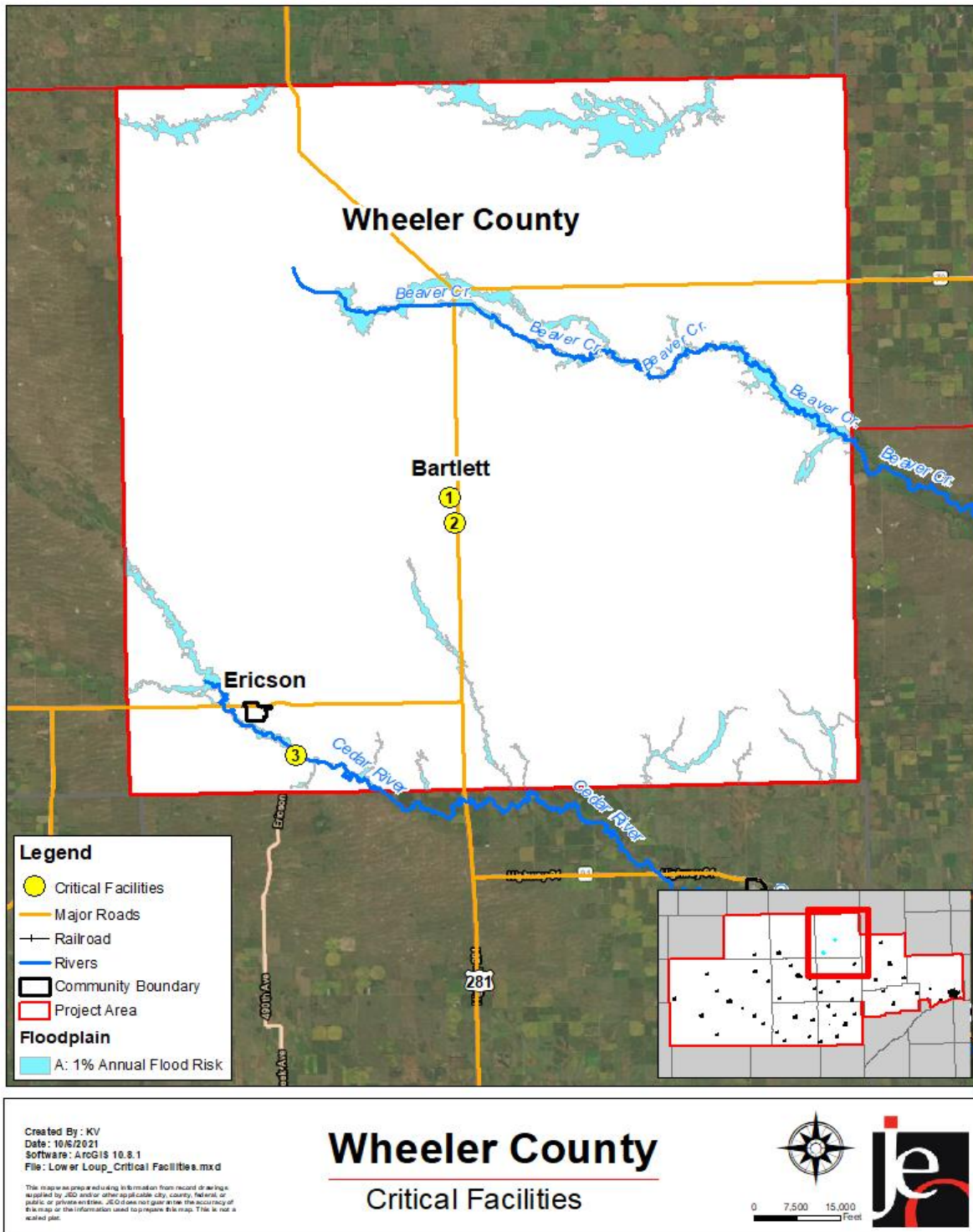
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Lake Ericson Dam	N	N	N
2	Safety and Security	County Courthouse	N	N	N
3	Transportation	County Shed	N	N	Y

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

No medical and health facilities are located within the county.

Figure WHE.4: Wheeler 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 WHE.12: Wheeler County 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
2,067	518	25,362,220	92	4,281,370	17.76%

Source: County Assessor, GIS Workshop

Table WHE.13: Wheeler County Flood Map Products

TYPE OF PRODUCT	PRODUCT ID	EFFECTIVE DATE	DETAILS
LOMA	11-07-0831A-310485	3/10/2011	Structure (residence) removed from SFHA
LOMA	13-07-2053A-310485	8/15/2013	Portion of property removed from SFHA
LOMA	18-07-0432A-310485	12/22/2017	Structure (residence) removed from SFHA
LOMA	21-07-0255A-310485	1/27/2021	Structure (cabin structure) 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 WHE.14: Hazard Risk Assessment – Wheeler County

Hazard Type		Wheeler County		
		Count	Property	Crop
Agricultural Disease	Animal Disease ²	14	398 Animals	N/A
	Plant Disease ³	3	N/A	\$106,683
Dam Failure ⁷		3	\$0	N/A
Drought ⁸		444 out of 1,512 Months	\$1,000,000	\$712,421
Earthquakes ¹¹		0	\$0	\$0

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Hazard Type		Wheeler County		
		Count	Property	Crop
Extreme Heat ⁹		Avg 3 Days per Year	\$0	\$1,147,137
Flooding ¹	Flash Flood	3	\$1,053,000	\$5,394
	Flood	2	\$325,000	
Grass/Wildfires ⁴ 2 injuries		53	2,593 Acres	\$500,003,121
Hazardous Materials	Chemical Spills (Fixed Site) ⁵	0	\$0	N/A
	Chemical Spills (Transportation) ⁶	0	\$0	N/A
Levee Failure ¹²		N/A	N/A	N/A
Public Health Emergency ¹³		~39 cases, 0 deaths	N/A	N/A
Severe Thunderstorms ¹	Hail Average: 1.15" Range: 0.75"-4.5"	129	\$225,000	\$2,871,637
	Heavy Rain	2	\$0	\$9,084,101
	Lightning	0	\$0	N/A
	Thunderstorm Wind Average: 56.2mph Range: 52-70mph	31	\$472,200	N/A
Severe Winter Storms ¹	Blizzard	10	\$13,000	\$1,678,962
	Extreme Cold/Wind Chill	8	\$0	
	Heavy Snow	4	\$0	
	Ice Storm	1	\$0	
	Winter Storm	32	\$48,000	
	Winter Weather	0	\$0	
Terrorism ¹⁰		0	\$0	N/A
Tornadoes & High Winds ¹	High Winds Average: 43.8mph Range: 35-55mph	14	\$0	\$773,119
	Tornadoes 2 injuries Average: EF0 Range: EF0/F0-F2	10	\$469,000	\$0
Totals		319	\$3,605,200	\$516,382,575

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

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- 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 WHE.11: Wheeler 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
WHEELER COUNTY	X	X	X		X	X	X		X	X	X		X
BARTLETT	X		X		X	X	X		X	X	X		X
ERICSON	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 Disease

Agricultural animal disease was identified as a top concern because of the local economy’s heavy reliance on the agricultural sector. A large feedlot, Kenneth Kasselder, is located five miles east of Ericson and has a capacity of 950 head. Additionally, concentrated animal feeding operations throughout the county produce hogs, cattle, and poultry. The local planning team also noted hunting is a very active economic boost for the county. The LEOP has an emergency response plan for agricultural disease. The NDA has reported at least one animal disease outbreak per year in the county since 2014. The largest outbreaks included an outbreak of Tuberculosis in 250 animals in 2017 and an outbreak of paratuberculosis in 107 animals in 2018.

Dam Failure

There are nine dams in Wheeler County. None of these dams have been identified as a high hazard dam. The Wheeler County LEOP indicates that if the dam at Lake Ericson were to fail, it

would affect a small portion of the county. In 2010, the Ericson Dam breached from heavy rain and caused flooding damages throughout the county. The Ericson Dam also overtopped during the March 2019 flood event. The inundation area includes primarily agricultural land and up to two or three homes. The Ericson Dam is privately owned and maintained and has been undergoing repairs since March 2019.

Table WHE.16: Dams in Wheeler County

	NUMBER OF DAMS	MINIMAL	LOW	SIGNIFICANT	HIGH
WHEELER COUNTY	9	1	8	0	0
PLANNING AREA	135	5	119	6	5

Source: NeDNR, 2017

Flooding

Beaver Creek and the Cedar River bisect the county. Unincorporated areas of Wheeler County have two NFIP policies in-force for \$222,500. There are no repetitive flood loss properties in unincorporated areas of Wheeler County. Local concerns focus on the potential for property damages due to flooding. The NCEI reported five flooding events since 1996 which caused a total of \$1,378,000 in property damages. One million dollars of these reported property damages resulted from the failure of Ericson Dam in 2010. The March 2019 flood events caused significant impacts to Wheeler County. Ericson Dam overtopped during this flood event and numerous county roads were impassable and/or washed out due to flood waters. The county has been working with FEMA since the event to repair roads. From the event the county also identified several bridges throughout the county which need to be repaired or updated.

Severe Winter Storms

Severe winter storms include impacts from heavy snow, extreme cold, ice accumulation, blizzards, and winter storm events. Local concerns focus on the potential for power outages and property damages due to severe winter weather. The NCEI reported that severe winter storms resulted in \$61,000 in property damages in Wheeler County from 1996 to 2020. One significant storm in 2006 resulted in snow accumulations of 6 to 13 inches, 15 to 30 mph winds, and ice accumulations up to a quarter of an inch. These conditions downed power lines and tree branches. Power throughout the county was out for up to 13 days in some parts. Electricity in the county is provided by Loup Valley, Cornhusker, and Elkhorn Public Power Districts. In the case of emergency events an ambulance is stationed in both Bartlett and Ericson which is maintained by the local fire department. Each fire department in Bartlett and Ericson has roughly 30 active volunteers.

Tornadoes and High Winds

Tornadoes and high winds are common across the state and in Wheeler County. Local concerns focus on the availability of shelter and adequate warning for residents. According to the NCEI, there have been ten tornadic events in Wheeler County from 1996 to 2020. These events have caused \$469,000 in property damages and two injuries. Sirens are located throughout the county and in the communities in Wheeler County. Sirens are activated by Region 26 Emergency Management Agency and have battery backups. Some private residents throughout the county are installing personal safe rooms/shelters. Due to the high water table throughout the county many homes do not have basements.

Mitigation Strategy

Completed Mitigation Actions

OBJECTIVE	DEVELOP HAZARD/EMERGENCY RESPONSE PLAN
DESCRIPTION	<ol style="list-style-type: none"> 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	Relevant emergency response information is included in the County LEOP which is updated on a five year cycle.

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 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	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Wheeler County General Fund, HMGP, PDM
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, County Board
STATUS	The county has submitted a grant application for a new backup generator. Obligation has not yet occurred.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 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	HMGP, PDM, Wheeler County General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, County Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 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	HMGP, PDM, Wheeler County General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, County Board
STATUS	This project has not yet been started.

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OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 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, Wheeler County General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, County Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE STREAM & DRAINAGE BOTTLENECKS/FLOW RESTRICTIONS
DESCRIPTION	<ol style="list-style-type: none"> 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+ or more to enlarge ditches, culverts, pipes; unknown for stream channel, crossing structures or bridge improvements
POTENTIAL FUNDING	Wheeler County General Fund, FMA
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Emergency Manager, County Board
STATUS	The county is currently working to identify areas of concern post 2019 flooding.

OBJECTIVE	STREAM BED/BANK STABILIZATION
DESCRIPTION	<ol style="list-style-type: none"> 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
ESTIMATED COST	\$25,000 to \$500,000+
POTENTIAL FUNDING	Wheeler County General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Emergency Manager, County 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 local planning team is responsible for reviewing and updating this profile as changes occur or after a major event. The local planning team will include the County Board of Commissioners, County Emergency Management, and County Clerk. The plan will be reviewed no less than annually and will include the public in the review and revision process by sharing information at local council meetings and through the local paper.

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COMMUNITY PROFILE

VILLAGE OF BARTLETT

**Lower Loup Natural Resources District
Hazard Mitigation Plan 2022**

Local Planning Team

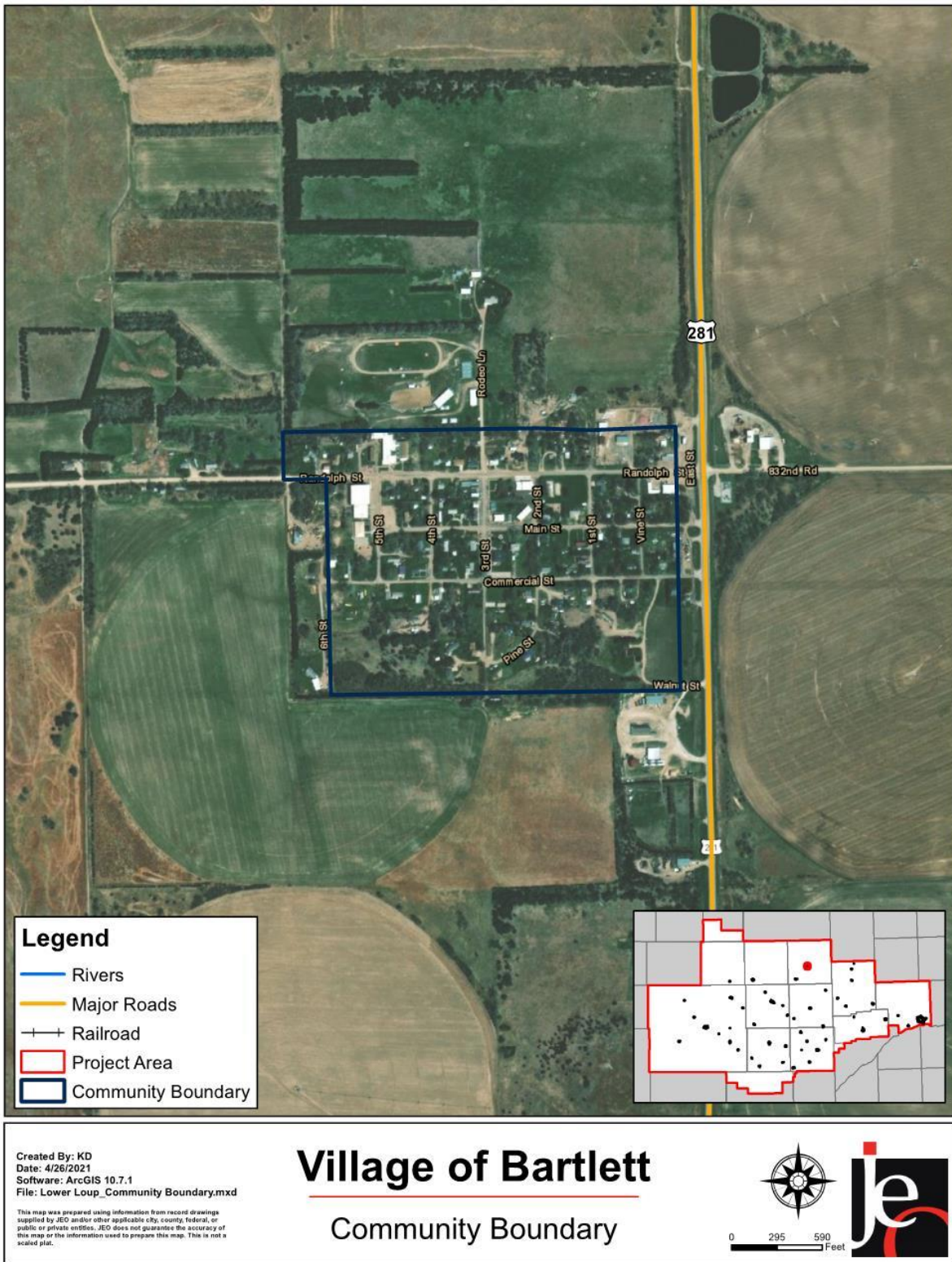
Table BAR.1: Village of Bartlett Local Planning Team

NAME	TITLE	JURISDICTION
DOUG REITER	Board Member	Village of Bartlett

Location and Geography

The Village of Bartlett is located in the central portion of Wheeler County and covers an area of 0.14 square miles. There are no major water ways near Bartlett. The area is not heavily forested. Most of Bartlett lies in the plains topographic region and is surrounded by agricultural fields.

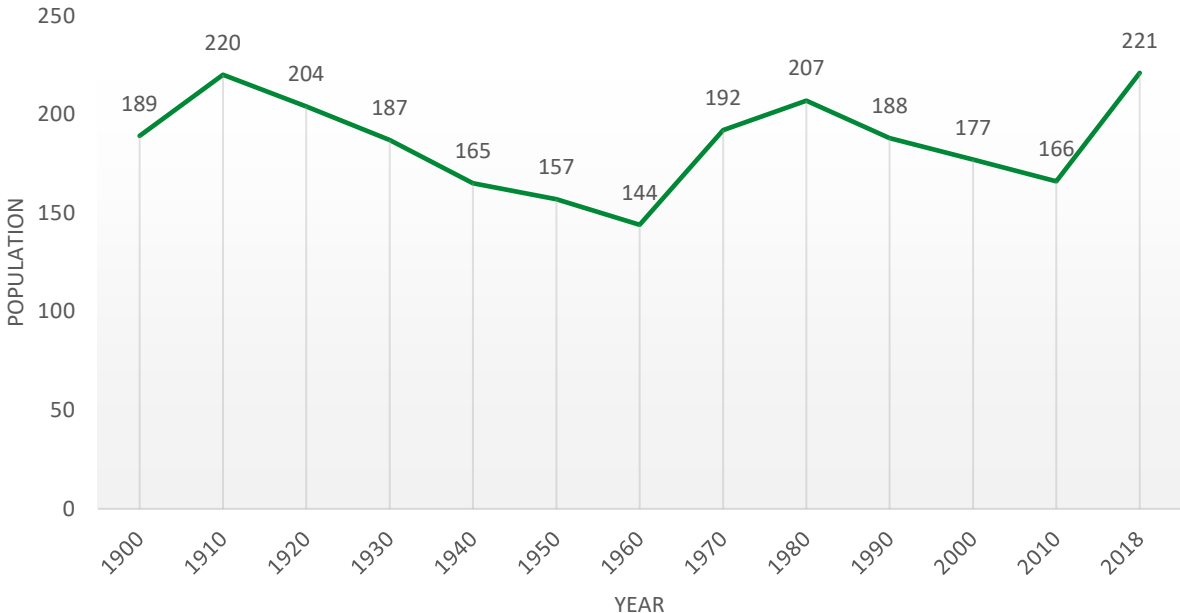
Figure BAR.1: Village of Bartlett Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2019 (estimated). This figure indicates that the population of Bartlett experienced a decline from 1910 through 1960. During the 1960s and 1970s the population grew, however, since 1980 the population has been in a steady decline. The most recent 2019 population estimate indicates an increase; however the 2020 Census should be reviewed in the future to indicate if this was accurate. 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 14% of Wheeler County’s Population in 2019.

Figure BAR.2: Bartlett Population 1900-2018



Source: U.S. Census Bureau¹²

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

- **Older.** The median age of Bartlett was 56.4 years old in 2019, compared with the County average of 45.8 years. Bartlett’s population has grown older since 2010, when the median age was 52.3 years old. Bartlett had a smaller proportion of people under 20 years old (3.6%) than the County (20.4%).¹³
- **Less ethnically diverse.** In 2010 100% of Bartlett’s population was White, non-Hispanic. By 2019 Bartlett’s population grew more diverse and 98.2% of the population was White and 1.8% of the population was two or more races. During that time, Wheeler County grew

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]

from 0.7% to 0.4% some other race, 0% to 0.3% Asian, and 0.9% to 0.3% two or more races from 2010 to 2019 respectively.¹⁴

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Bartlett (0.0%) was higher than the County (9.0%) in 2019.¹⁵

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Bartlett and Wheeler County included Agriculture and Education.¹⁶
- **Lower household income.** Bartlett's median household income in 2019 (\$48,750) was about \$2,800 lower than the County (\$51,591).¹⁷
- **Similar commuting.** About 46.8% percent of workers in Bartlett commuted for fewer than 15 minutes, compared with about 47.0% of workers in Wheeler County. About 29.9% of workers in Bartlett commute 30 minutes or more to work, compared to about 24.9% of the County workers.¹⁸

Major Employers

Major employers in the village include Wheeler County and Wheeler County Schools. However, the local planning team noted the majority of residents work in the surrounding agricultural area.

Housing

In comparison to the Wheeler County, Bartlett's housing stock was:¹⁹

- **Less owner occupied.** About 65.8% of occupied housing units in Bartlett are owner occupied compared with 67.1% of occupied housing in Wheeler County in 2019.
- **Greater share of aged housing stock.** Bartlett has more houses built prior to 1970 than the county (67.6% compared to 57.8%).
- **More multi-family homes.** The predominant housing type in the Village is single family detached and Bartlett contains more multifamily housing with five or more units per structure than the County (1.4% compared to 0.0%). About 77.0% of housing in Bartlett was single-family detached, compared with 77.2% of the County's housing. Bartlett has a smaller share of mobile and manufactured housing (10.8%) compared to the County (21.2%). The local planning team noted there are approximately eight mobile homes 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,

14 United States Census Bureau. "2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

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: DP03: Selected Economic Characteristics." [database file]

18 United States Census Bureau. "2019 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]

19 United States Census Bureau. "2019 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

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. Bartlett has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member council and the following offices: clerk/treasurer 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 BAR.2: Capability Assessment

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

SURVEY COMPONENTS		YES/NO
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
EDUCATION 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 Village USA	No
	Other (if any)	

Table BAR.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.

Annual Municipal Budget

Bartlett's annual budget is currently limited to maintaining current facilities and systems. Funds in the village have remained relatively stable in recent years. The village has applied for grants in the past to assist with project implementation. Currently there are no ongoing funding activities or grants being managed by the village.

Zoning Ordinance and Subdivision Regulations

The local zoning ordinances are updated on an as needed basis. There are currently no specific regulations adopted which restrict development in the floodplain. The village does not have or maintain specific floodplain ordinances; however, building permits require description of floodplain status. These documents are reviewed and amended as needed.

Wheeler County Local Emergency Operations Plan (2020)

The Village of Bartlett is an annex in the Wheeler 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 (2019)

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Wheeler 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

Few developments have occurred in Bartlett over the last five years. A new bar has opened in the village but no other businesses have opened or closed. 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 has remained relatively stable; but has not increased as estimated by the U.S. Census Bureau.

Community Lifelines

Transportation

Bartlett's major transportation corridors include Highway 281, which runs north-south to the east of Bartlett. The other major road through town is Randolph Street which is primarily used by local traffic. Bartlett does not have rail lines. This information is important to hazard mitigation plans insofar as 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 are three chemical storage sites throughout Bartlett which house hazardous materials. The local planning team also identified NNTC in Bartlett as housing hazardous chemicals in town. The local fire department would be first to respond to chemical spills or events. The nearest HAZMAT is located in either Ord or O'Neil.

Table BAR.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
NDOT BARTLETT YARD	210 Randolph St	No
COUNTRY PARTNERS COOPERATIVE	83167 Highway 281	No
SAPP BROS PETROLEUM PROPANE	Highway 281 S	No

Source: Nebraska Department of Environment and Energy²⁰

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 BAR.5: Bartlett Critical Facilities

CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Safety and Security	Fire Hall	N	N	N
2	Food, Water, and Shelter	Lagoons	Y	N	N
3	Food, Water, and Shelter	Village Well	N	N	N
4	Food, Water, and Shelter	Wheeler County Schools	N	N	N

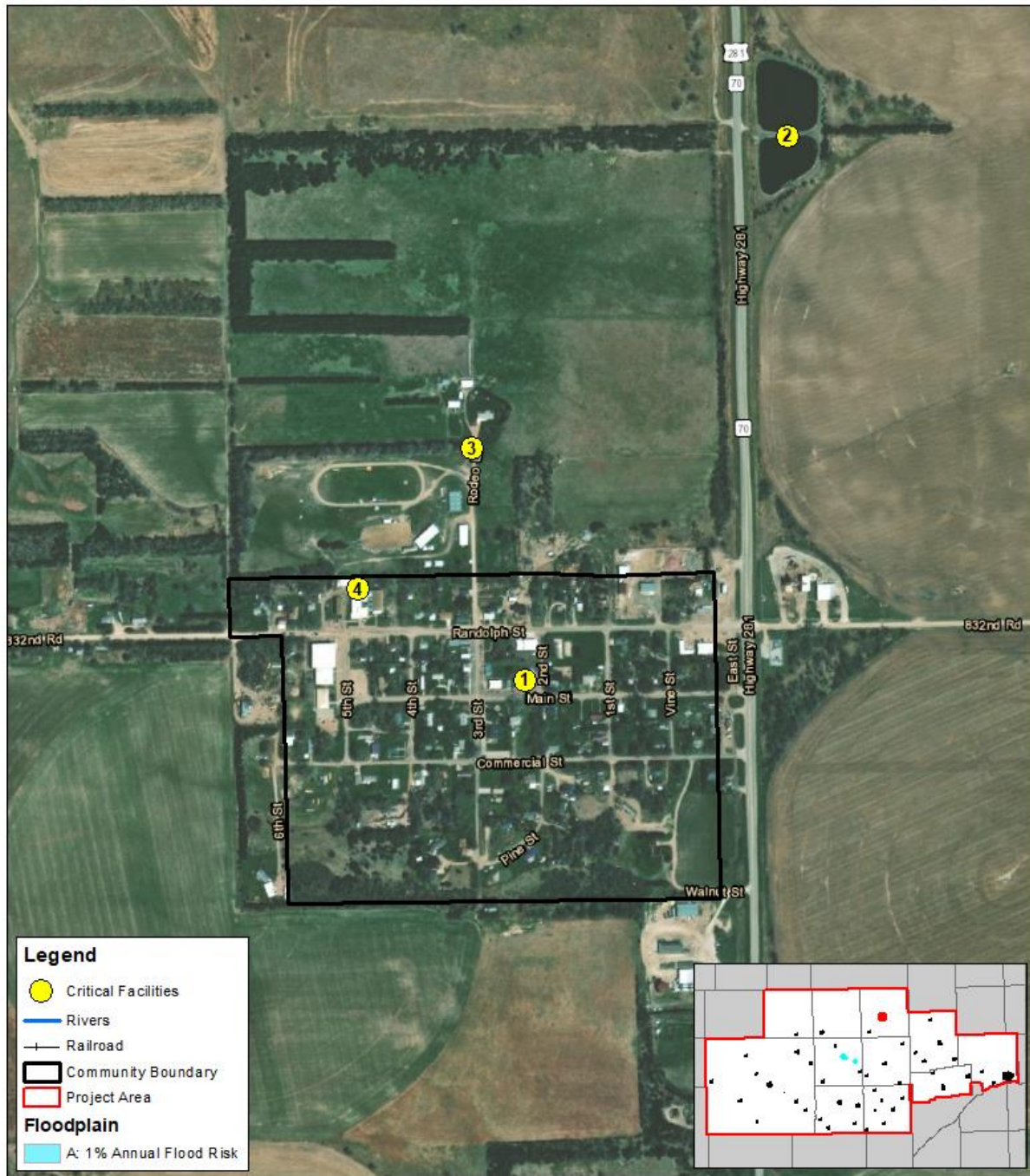
Although not listed in the table above, critical infrastructure also include power substations, cell towers, and alert sirens in the community. These assets are typically owned and maintained by other agencies and are not the responsibility of the jurisdiction.

Health and Medical Facilities

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

²⁰ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Figure BAR.3: Bartlett Critical Facilities



Created By : KV
 Date : 9/28/2021
 Software : ArcGIS 10.8.1
 File : Lower Loup_Critical Facilities.mxd

This map was prepared using information from recent drawings supplied by J&E and/or other applicable city, county, federal, or public or private entities. J&E does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plan.

Village of Bartlett

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 BAR.7: Bartlett 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
118	78	3,124,725	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 Wheeler 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 concern due to the potential economic impacts an outbreak would cause. The local economy, much like the rest of Nebraska, is largely agriculturally based. An outbreak of animal disease could lead to loss of income and loss of employment. The local planning team noted hunting is a very active economic boost for the county and communities and there are numerous concentrated animal feeding operations (CAFOs) surrounding the area. Local concerns from CAFOs pertain to soil contamination and stream runoff from animal waste. The Wheeler County LEOP has an emergency response plan for agricultural disease. The NDA has reported at least one animal disease outbreak per year in the county since 2014. The largest outbreaks included an outbreak of Tuberculosis in 250 animals in 2017 and an outbreak of paratuberculosis in 107 animals in 2018.

Hazardous Materials (Transportation)

Hazardous materials are commonly transported along Highway 281 which runs along the east side of town. While no major spill events have occurred, if an accident were to occur near the Highway 281 and Randolph Street intersection impacts would likely affect the entire village. Due to the size of Bartlett, it is likely that a chemical spill along Highway 281 would affect a large portion of the village. No major events have occurred in the village. The local volunteer fire department has approximately 30 active volunteers and would be first to respond to an event. However, the nearest HAZMAT team is located outside of the county in Ord or O'Neil Nebraska.

Severe Winter Storms

Severe winter storms were identified as a concern by the local planning team due to the potential for power outages, damages to infrastructure, and the hindrance of transportation. These storms

can include impacts from heavy snow, ice accumulation, blizzards, extreme cold, and winter storms. In the case of emergency events an ambulance is stationed in Bartlett which is maintained by the local fire department. The fire department has roughly 30 active volunteers. Bartlett identified the need for backup generators and tree maintenance program to mitigate the impacts from winter storms.

Tornadoes and High Winds

According to the NCEI, there have been nine tornadoes in or near Bartlett from 1996 to 2020. These tornadic events have led to \$379,000 in property damages and two injuries. In July of 2004, an F1 tornado touched down in a cornfield near Bartlett, overturning a center pivot irrigation system, destroying a farmstead, and injuring a mother and daughter. Region 26 Emergency Management Agency activates sirens in the village and offers Code RED alerts for Bartlett residents. The local planning team noted the siren is located on the water tower but is old and is in need of replacement. The Bartlett Fire Department is currently working to replace the roof and harden the community building which can be used as a community shelter if needed.

Flooding

Flooding was not identified as a hazard of top concern but there are floodplain areas to the south to the village. Bartlett participates in the NFIP but had no active policies in force as of August 2021.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	BACKUP AND EMERGENCY GENERATORS
DESCRIPTION	<ol style="list-style-type: none"> 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	All Hazards
ESTIMATED COST	\$20,000 to \$75,000+ per generator
POTENTIAL FUNDING	Private entities
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF BARTLETT COMMUNITY PROFILE

OBJECTIVE	DEVELOP/IMPLEMENT HAZARD/EMERGENCY OPERATIONS & RESPONSE PLAN
DESCRIPTION	<ol style="list-style-type: none"> 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
ESTIMATED COST	Unknown
POTENTIAL FUNDING	Bartlett General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 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	HMGP, PDM, Bartlett General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF BARTLETT COMMUNITY PROFILE

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 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	HMGP, PDM, Bartlett General Fund
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 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, Bartlett General Fund
TIMELINE	5+ Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

OBJECTIVE	REDUCE TREE DAMAGE & DAMAGE FROM TREES
DESCRIPTION	<ol style="list-style-type: none"> 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/Wildfires
ESTIMATED COST	\$2,000+; Staff Time
POTENTIAL FUNDING	Bartlett General Fund
TIMELINE	5+ Years
PRIORITY	Low
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This project has not yet been started.

New Mitigation Actions – 2022 Plan

OBJECTIVE	FACILITY IMPROVEMENTS
DESCRIPTION	1. Update, improve, and harden community building including a new roof, updated utilities, and backup generator
HAZARD(S) ADDRESSED	All hazards
ESTIMATED COST	\$45,000+
POTENTIAL FUNDING	Bartlett General Fund
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager, Village Board
STATUS	This is a new mitigation action. Bartlett Fire Department is assisting with project management.

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 members will annually review Bartlett's community profile.

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COMMUNITY PROFILE

VILLAGE OF ERICSON

Lower Loup Natural Resources District Hazard Mitigation Plan 2022

Local Planning Team

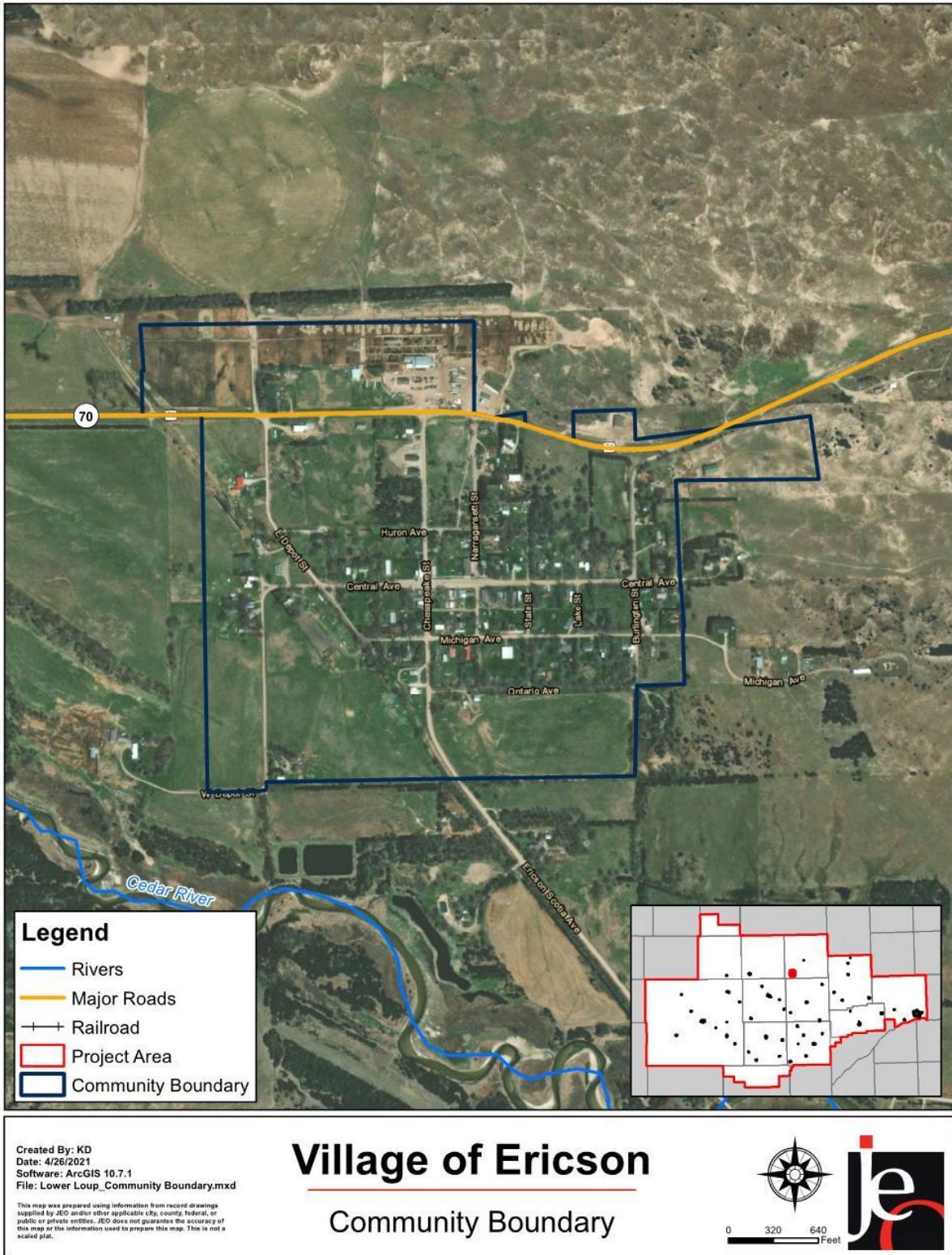
Table ERI.1: Village of Ericson Local Planning Team

NAME	TITLE	JURISDICTION
JACK PAULSEN	Village Clerk	Village of Ericson

Location and Geography

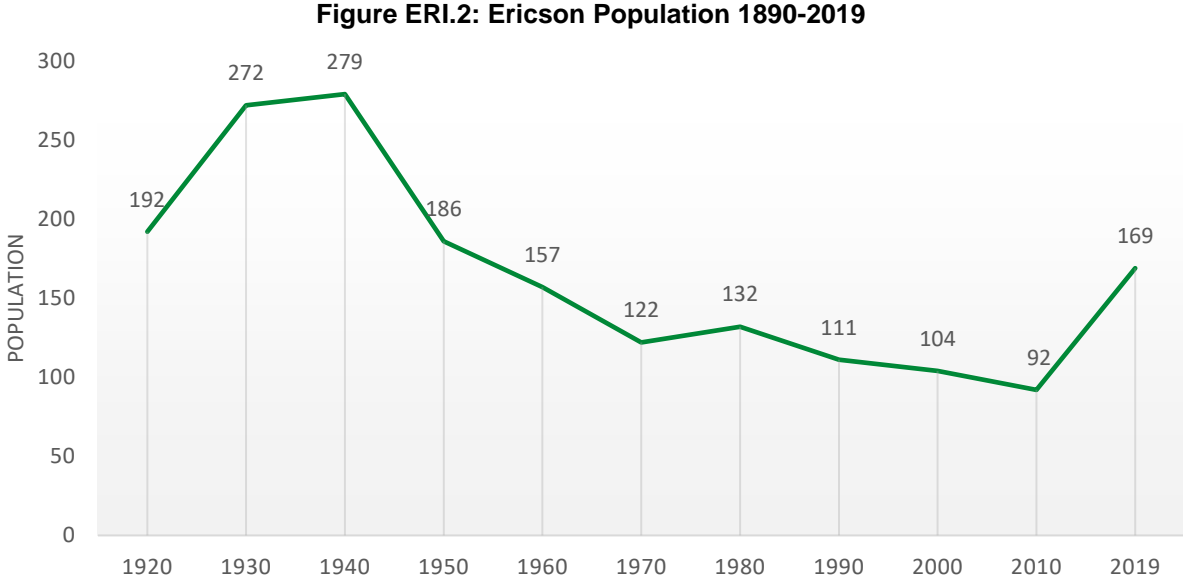
The Village of Ericson is located in the southwestern portion of Wheeler County. The Village of Ericson covers an area of 0.38 square miles. Cedar River is located to the west and south of the village which runs to Ericson Lake and Ericson Reservoir. No floodplain areas are located in the village. Most of Ericson lies in the plains topographic region and is surrounded by agricultural fields.

Figure ERI.1: Village of Ericson Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2019 (estimated). This figure indicates that the population of Ericson experienced a decline from 1910 through 2010; however the most recent Census Bureau estimate indicated a population increase. The Village’s population accounted for 22.5% of Wheeler County’s Population in 2019.



Source: U.S. Census Bureau²¹

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

- **Younger.** The median age of Ericson was 47.5 years old in 2019, compared with the County average of 45.8 years. Ericson’s population has grown younger since 2010, when the median age was 60.8 years old. Ericson had a larger proportion of people under 20 years old (27.9%) than the County (20.4%).²²
- **Less ethnically diverse.** In 2010, 100% of Ericson’s population was White. By 2019, Ericson’s population grew to 1.4% Asian and 2.1% some other races. During that time, Wheeler County grew from 0.7% to 0.4% some other race, 0% to 0.3% Asian, and 0.9% to 0.3% two or more races from 2010 to 2019 respectively.²³
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Ericson (0.0%) was lower than the County (9.0%) in 2019.²⁴

Employment and Economics

The community’s economic base is a mixture of industries. In comparison to Wheeler County, Ericson’s economy had:

²¹ United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
²² United States Census Bureau. “2019 American Fact Finder: S0101: Age and Sex.” [database file]
²³ United States Census Bureau. “2019 American Fact Finder: DP05: ACS Demographic and Housing Estimates.” [database file]
²⁴ United States Census Bureau. “2019 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Ericson included Agriculture and Construction. In comparison Wheeler County's included Agriculture and Education.²⁵
- **Lower household income.** Ericson's median household income in 2019 (\$41,250) was about \$10,300 lower than the County (\$51,591).²⁶
- **More long-distance commuters.** About 21.5% percent of workers in Ericson commuted for fewer than 15 minutes, compared with about 47.0% of workers in Wheeler County. About 40.5% of workers in Ericson commute 30 minutes or more to work, compared to about 24.9% of the County workers.²⁷

Major Employers

Major employers in the village include Ericson Spalding Livestock Market and Farmers and Merchants Bank. However, the local planning team noted that approximately 90% of residents work in the surrounding agricultural area.

Housing

In comparison to the Wheeler County, Ericson's housing stock was:²⁸

- **More owner occupied.** About 86.2% of occupied housing units in Ericson are owner occupied compared with 67.1% of occupied housing in Wheeler County in 2019.
- **Greater share of aged housing stock.** Ericson has more houses built prior to 1970 than the county (58.4% compared to 57.8%).
- **More mobile and manufactured homes.** The predominant housing type in the Village is single family detached and Ericson and the County have 0% multifamily housing with five or more units per structure. About 59.4% of housing in Ericson was single-family detached, compared with 77.2% of the County's housing. According to the U.S. Census Bureau, Ericson had approximately 40.5% mobile and manufactured housing (40.5%) however the local planning team noted only one to two mobile homes are 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.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Ericson has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member council and the following offices: clerk/treasurer, sewage plant operator, sewer/water commissioner, street commissioner, and volunteer fire department.

²⁵ United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

²⁶ United States Census Bureau. "2019 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

²⁷ United States Census Bureau. "2019 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]

²⁸ 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 ERI.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	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	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
FISCAL CAPABILITY	1 & 6 Year Plan	No
	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	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.	No

SURVEY COMPONENTS		YES/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 Village USA	No
	Other (if any)	

Table BAR.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.

Annual Municipal Budget

Ericson's annual budget is currently limited to maintaining current facilities and systems. Funds in the village have declined in recent years. Ericson received a grant from Nebraska Game and Parks Commission to update the local ballfields.

Zoning Ordinance and Subdivision Regulations

The local zoning ordinances are updated on an as needed basis. There are currently no specific regulations adopted which restrict development in the floodplain. The village does not have or maintain specific floodplain ordinances; however, building permits require description of floodplain status. These documents are reviewed and amended as needed.

Wheeler County Local Emergency Operations Plan (2020)

The Village of Bartlett is an annex in the Wheeler 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 (2019)

The Nebraska Forest Service updated the Central Sandhills Community Wildfire Protection Plan (CWPP), which includes Wheeler 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 few changes have occurred in the village. A few dilapidated homes have been demolished. In general, the village noted there is a lack of available housing stock for residents. No new residential or commercial development is anticipated in the next five years.

Community Lifelines

Transportation

Ericson’s major transportation corridors include Highway 70 with 910 vehicles per day, 100 of those being heavy commercial vehicles. Ericson does not have rail lines. This information is important to hazard mitigation plans insofar as 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 are two chemical storage sites throughout Ericson which house hazardous materials. The local planning team also identified NCTC in Ericson as housing hazardous chemicals in town. The local fire department would be first to respond to chemical spills or events. The nearest HAZMAT is located in either Ord or O’Neil.

Table ERI.4: Chemical Storage Fixed Sites

FACILITY NAME	ADDRESS	LOCATED IN FLOODPLAIN?
GREAT WESTERN GAS CO	Highway 91 W	No
NEBRASKA CENTRAL TELEPHONE CO	423 Central Ave	No

Source: Nebraska Department of Environment and Energy²⁹

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.

²⁹ Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed August 2020.

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

Table ERI.5: Ericson Critical Facilities

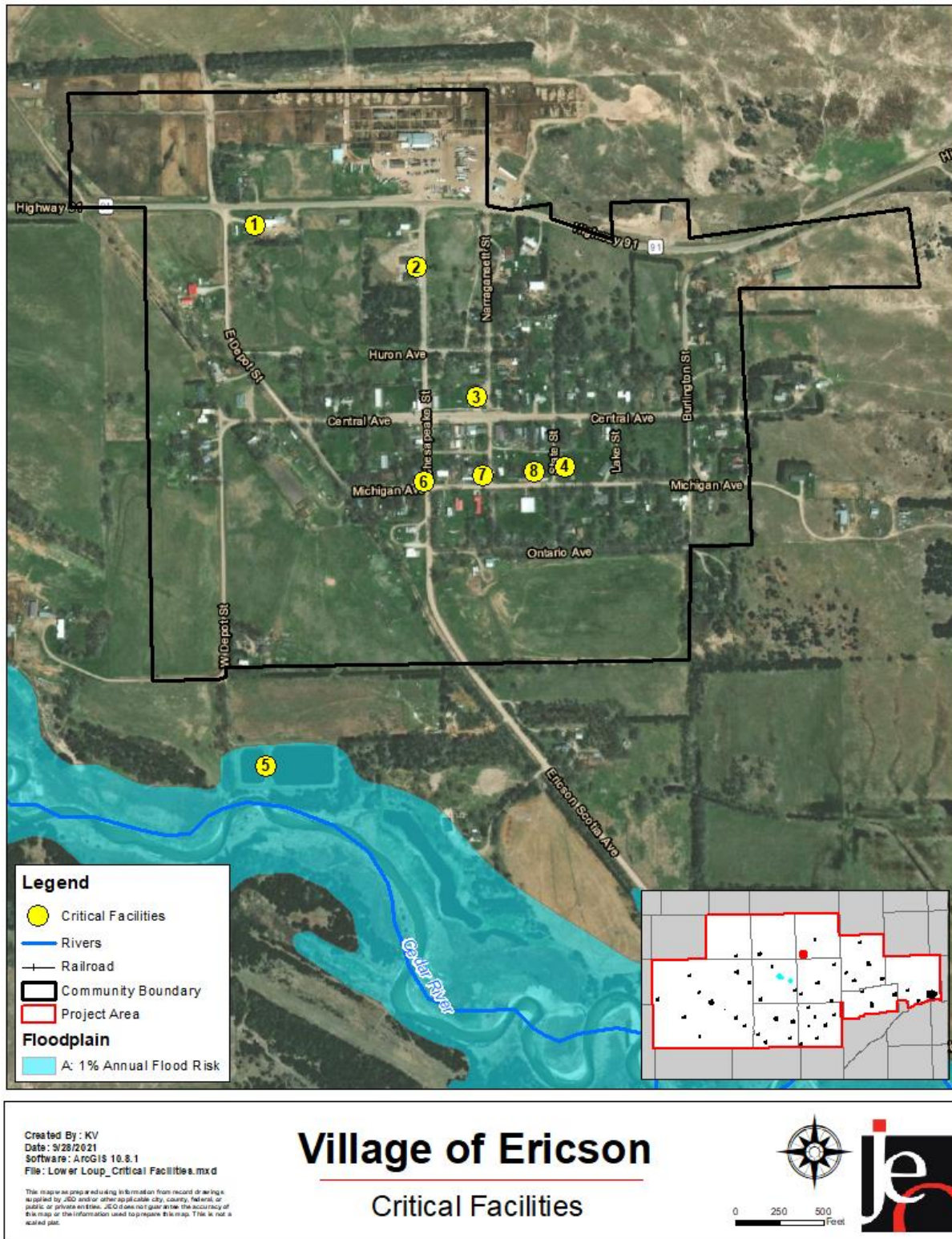
CF #	COMMUNITY LIFELINE	NAME	SHELTER (Y/N)	GENERATOR (Y/N)	FLOODPLAIN (Y/N)
1	Energy	Great Western Propane	N	N	N
2	Food, Water, and Shelter	Well	N	N	N
3	Safety and Security	Village Hall/Fire Hall	N	N	N
4	Food, Water, and Shelter	Well	N	N	N
5	Food, Water, and Shelter	Sewage Lagoon	N	N	Y
6	Food, Water, and Shelter	Catholic Church	Y	N	N
7	Food, Water, and Shelter	Water Tower	N	N	N
8	Food, Water, and Shelter	Methodist Church	Y	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 located within the community.

Figure ERI.3: Ericson 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 ERI.7: Ericson 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
146	71	3,038,225	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 Wheeler 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

Ericson does not participate in the NFIP. There are no repetitive flood loss properties in the Village of Ericson. During one flooding event in June 2010, flood waters took out dam at Lake Ericson. The Ericson Dam also overtopped during the March 2019 flood event. The inundation area includes primarily agricultural land and up to two or three homes in Ericson. The Ericson Dam is privately owned and maintained and has been undergoing repairs since March 2019.

Extreme northern and extreme southern areas of town are most prone to flooding. According to the NCEI, there have been two flooding events that have led to \$1,750,000 in property damages. The local planning team indicated that the town is very flat and has a high ground water level, which leads to poor stormwater drainage. There is roughly a 14" slope across the entire town which contributes to this poor drainage.

Hazardous Materials

Hazardous materials are commonly transported through the community via Highway 91. Additionally a large animal feeding lot and market is located north of the highway across from the village and directly next to the local Sinclair gas station. Local concerns regarding this hazard include several fertilizer trucks pass through center of town, Highway 91 traffic, and chemical releases from the Ericson Spalding Livestock Market. The livestock market is not located in the floodplain. The sewer lagoons for the village are located in the floodplain and have the potential to flood and spread hazardous waste material. No major events have occurred in the village. The local volunteer fire department has approximately 30 active volunteers and would be first to

respond to an event. However, the nearest HAZMAT team is located outside of the county in Ord or O'Neil Nebraska.

Severe Thunderstorms

Severe thunderstorms are a regular occurrence in Ericson and the rest of the planning area. Local concerns regarding this hazard include inadequate shelter. The basement of the Catholic Church is available for residents seeking shelter; however, many residential homes do not have basements. Critical municipal records are protected with surge protectors on electronic devices. Ericson has data backup systems for municipal records. In 2015, local businesses purchased a large generator that can be used for community needs. In the case of emergency events an ambulance is stationed in Ericson which is maintained by the local fire department. The fire department has roughly 30 active volunteers.

Tornadoes and High Winds

The village is at high risk to damages from high winds and tornadoes. Local concerns regarding this hazard include the potential for property damages and loss of life. According to the NCEI, there was an F2 tornado in Ericson in July 2004. This tornadic event uprooted numerous large trees and power poles. According to the local planning team, this tornadic event destroyed three homes. Region 26 Emergency Management Agency offers Code RED alerts for Ericson residents. According to the local planning team, there are no warning sirens within Ericson and, due to the high-water table, few homes have basements for sheltering.

Mitigation Strategy

Continued Mitigation Actions

OBJECTIVE	PUBLIC SAFE ROOMS & POST-DISASTER STORM SHELTERS
DESCRIPTION	<ol style="list-style-type: none"> 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, Local Tax, private contributions
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Emergency Manager
STATUS	This project has not yet been started. Determined that Ericson Town Hall as location for project.

OBJECTIVE	IMPROVE EMERGENCY COMMUNICATIONS
DESCRIPTION	<ol style="list-style-type: none"> 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	HMGP, PDM, Local Tax, private donations
TIMELINE	2-5 Years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

OBJECTIVE	IMPROVE WARNING SYSTEMS
DESCRIPTION	<ol style="list-style-type: none"> 4. Evaluate current warning systems 5. Improve warning systems/develop new warning system 6. Obtain/Upgrade warning system equipment and methods 7. Conduct evaluation of existing alert sirens for replacement or placement of new sirens 8. Identify location of weather warning radios 9. Improve weather radio system 10. Obtain/Upgrade weather radios
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	Varies by project
POTENTIAL FUNDING	HMGP, PDM, Local Tax, private donations
TIMELINE	2-5 Years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started. Determined that Ericson Town Hall as location for new siren.

New Mitigation Actions – 2022 Plan

OBJECTIVE	NEW WELL
DESCRIPTION	1. Design and construct a new well.
HAZARD(S) ADDRESSED	All Hazards
ESTIMATED COST	\$45,000
POTENTIAL FUNDING	Water Fund
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Water Operator
STATUS	This is a new mitigation action.

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 clerk and village board. The plan will be reviewed no less than annually and will include the public in the review and revision process by sharing information at local board meetings.