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**Kearney County**

**Tri-Basin NRD  
Hazard Mitigation Plan**

**2023**

## Local Planning Team

Kearney County's local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by the county.

**Table KCO.1: Kearney County Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
<b>Craig Lupkes</b>	Emergency Manager	Kearney County	Minden	Minden
<b>Jason Sinsel</b>	County Commissioner	Kearney County	-	-
<b>Wayne Anderson</b>	Former County Commissioner	Kearney County	Minden	-
<b>Joseph Anderson</b>	Zoning Administrator / Floodplain Administrator	Kearney County	-	Minden
<b>Teresa Chramosta</b>	County Executive Director	Kearney County Farm Service Agency	Minden	Holdrege

## Location, Geography, and Climate

Kearney County is located in south-central Nebraska and is bordered by Adams, Buffalo, Franklin, Harlan, and Phelps Counties. There are five incorporated communities in the county, the City of Minden, Village of Axtell, Village of Heartwell, Village of Norman, and Village of Wilcox. The City of Minden serves as the county seat. The total area of Kearney County is 516 square miles. Major waterways within the county include the North Dry Creek and the Platte River which flows along the northern border of the county. Topographic regions in the county include plains, sand hills, and valleys.<sup>1</sup>

### Climate

Kearney County, like almost all of the Midwest, sits in the humid continental climate zone of the United States, and thus, experiences a wide temperature difference between its average high and low temperatures. The average high temperature in Kearney County for the month of July is 86.7 degrees Fahrenheit and the average low temperature for the month of January is 14.5 degrees Fahrenheit. On average, Kearney County receives over 25 inches of rain and 24.8 inches of snowfall per year. The table below compares county-wide climate indicators with those of the entire state. Climate data are 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 are likely to impact vulnerable populations.

**Table KCO.2: Kearney County Climate**

	Kearney County	State of Nebraska
<b>July Normal High Temp</b>	86.7°F	87.3°F
<b>January Normal Low Temp</b>	14.5°F	13.9°F
<b>Annual Normal Precipitation</b>	25.7"	24.2"
<b>Annual Normal Snowfall</b>	24.8"	25.9"

Source: NCEI 1991-2020 Climate Normals<sup>2</sup>

Precipitation includes all rain and melted snow and ice.

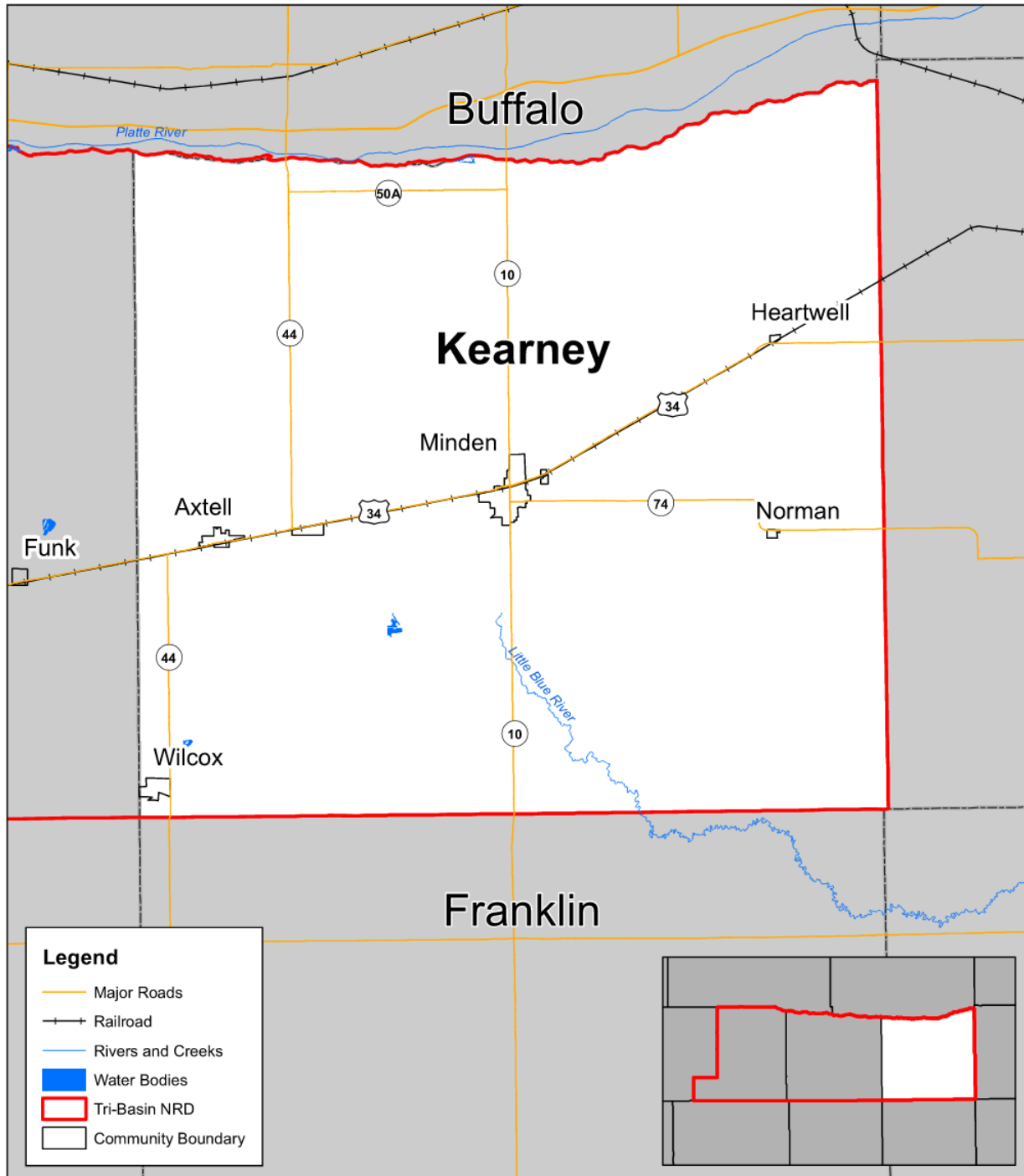
<sup>1</sup> University of Nebraska-Lincoln, 1973. "Topographic Regions Map".

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1461&context=conservationsurvey>.

<sup>2</sup> National Centers for Environmental Information. "Data Tools: 1991-2020 Normals." Accessed September 2022.

<https://www.ncei.noaa.gov/access/us-climate-normals/>.

Figure KCO.1: Kearney County



Created By: LV  
 Date: 9/23/2022  
 Software: ArcGIS 10.7.1  
 File Name: Tri-Basin\_NRD\_County Boundary Maps.mxd

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# Kearney County

County Boundary



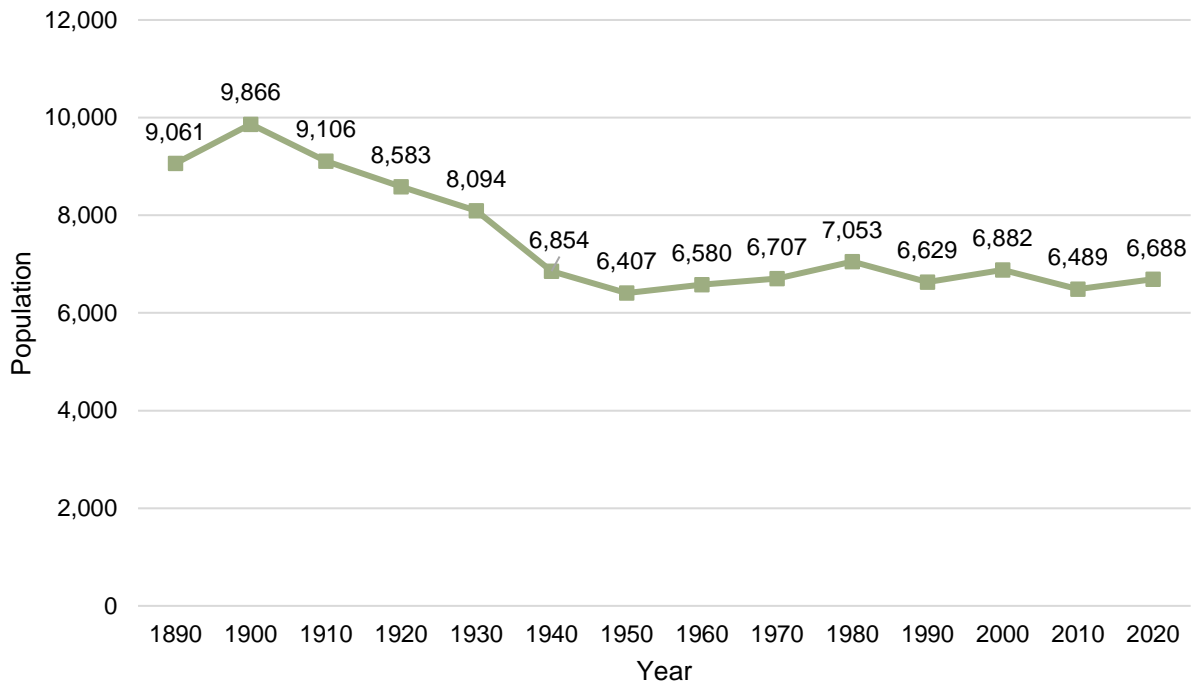




## Demographics

The following figure displays the historical population trend from 1890 to 2020. This figure indicates that the population of Kearney County has been increasing since 2010 to 6,688 people in 2020. Increasing populations are associated with more robust hazard mitigation and emergency planning requirements for development. Growing populations can also increase tax revenues, allowing communities to pursue additional mitigation projects. Kearney County’s population accounted for 0.34% of Nebraska’s population in 2020.<sup>3</sup>

**Figure KCO.2: Population 1890 - 2020**

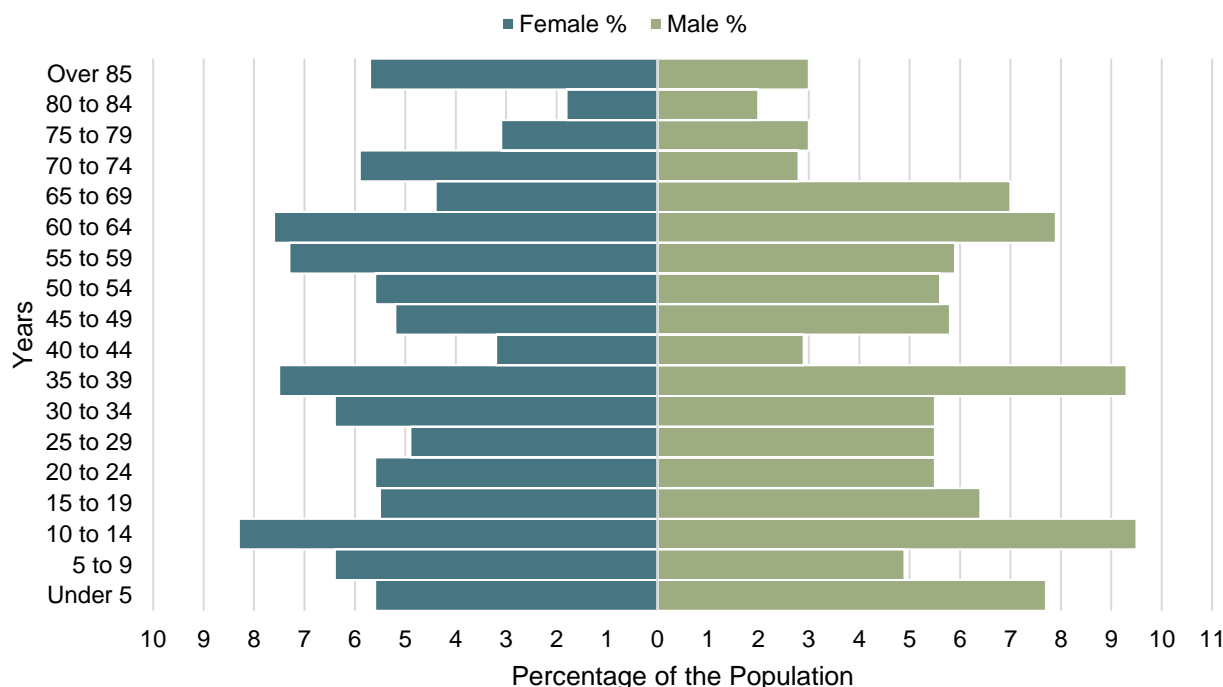


The young and elderly populations may be at greater risk from hazards than other age groups. The following figure shows Kearney County’s population percentage broken down by sex and five-year age groups.<sup>4</sup> Kearney County’s population is equally spread out between different age groups. This indicates that the population is likely to remain stable in the future. For a more elaborate discussion of this vulnerability, please see *Section Four | Risk Assessment*.

<sup>3</sup> United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.

<sup>4</sup> United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/>.

**Figure KCO.3: Kearney County’s Population Pyramid**



## Economics and Housing

The following table indicates that median household income, median home value, and median rent for the county is lower than the State of Nebraska. Per capita income is lower than the rest of the state. Areas with relatively low economic indicators may influence a county’s level of resilience during hazardous events.

**Table KCO.3: Housing and Income**

	Kearney County	State of Nebraska
<b>Median Household Income</b>	\$62,899	\$63,015
<b>Per Capita Income</b>	\$33,784	\$33,205
<b>Median Home Value</b>	\$162,000	\$164,000
<b>Median Rent</b>	\$692	\$857

Source: U.S. Census Bureau<sup>5,6</sup>

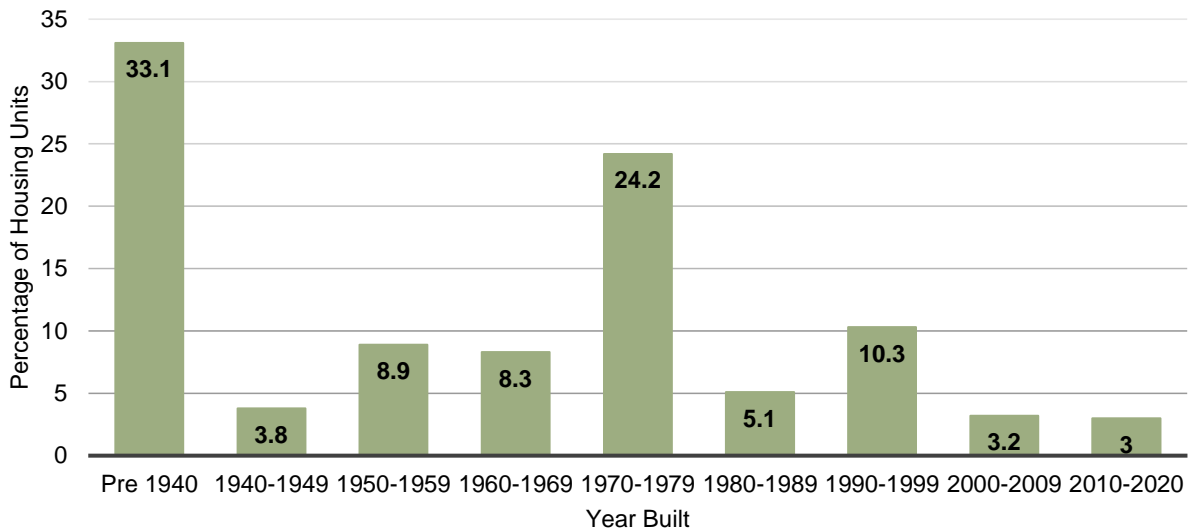
The following figure indicates that most of the housing in Kearney County was built prior to 1940 (33.1%). Housing age can serve as an indicator of risk, as structures built prior to the development of state building codes may be at greater risk. The State of Nebraska first adopted building codes in 1987, with the International Building Code (IBC) adopted in 2010. The current edition of the IBC was updated in 2018. According to the 2020 American Community Survey, the county has 2,976 housing units with 90.4% of those units occupied. There are approximately 200 mobile homes in the county with a large mobile home park near Highway 44 and U Road. Counties with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disaster. Renters are less likely than

5 United States Census Bureau. “2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/>.

6 United States Census Bureau. “2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics.” <https://data.census.gov/>.

homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards.

**Figure KCO.4: Housing Units by Year Built**



Source: U.S. Census Bureau<sup>5</sup>

**Table KCO.4: Housing Units**

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Kearney County</b>	2,961	90.4	285	9.6	1,969	73.2	722	26.8
<b>Nebraska</b>	766,663	90.8%	77,585	9.2%	507,291	66.2%	259,372	33.8%

Source: U.S. Census Bureau<sup>5</sup>

### Broadband Access

Internet or broadband access—through Wi-Fi or cellphone coverage—is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **84% of households have a broadband internet subscription.** Kearney County has a smaller share of households with broadband (84.0%) compared to the state (85.6%).<sup>7</sup>

### Employment

According to 2020 Business Patterns Census Data, Kearney County had 177 business establishments. The following table presents the number of businesses, number of paid employees, and the annual payroll in thousands of dollars.

<sup>7</sup> United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.

**Table KCO.5: Business in Kearney County**

	Total Businesses	Number of Paid Employees	Annual Payroll (In Thousands)
<b>Total for All Sectors</b>	177	1,781	\$69,457

Source: U.S Census Bureau<sup>8</sup>

Agriculture is the backbone of Nebraska’s economy. Kearney County’s 342 farms cover 291,307 acres of land, about 88% of the county’s total area. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute to agriculture by producing, processing, and marketing farm products. These businesses generate income, employment, and economic activity throughout the region.

**Table KCO.6: Agricultural Inventory**

Agricultural Inventory	
<b>Number of Farms with Harvested Cropland</b>	342
<b>Acres of Harvested Cropland</b>	291,307

Source: USDA Census of Agriculture, 2017<sup>9</sup>

## Governance

The county’s governmental structure impacts its capability to implement mitigation actions. Kearney County is governed by a board of commissioners. Other offices and departments that may be involved in implementing hazard mitigation initiatives are listed below.

- County Clerk
- County Assessor
- County Treasurer
- Emergency Management
- Highway Superintendent
- Planning and Zoning
- Floodplain Administrator
- Sheriff’s Department
- Surveyor

## Capability Assessment

The planning team assessed Kearney County’s hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the county’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. The county plans on improving existing capabilities by reviewing and updating the comprehensive plan and zoning regulations.

County funds are limited to maintaining current facilities and systems. However, a large portion of the budget has not already been dedicated to a specific project. Funds have stayed the same over recent years.

8 United States Census Bureau. “County Business Patterns and 2020 Nonemployer Statistics.” <https://data.census.gov/>.

9 United States Department of Agriculture. “2017 Census of Agriculture.” <https://www.nass.usda.gov/Publications/AgCensus/2017/>.



Table KCO.7: Capability Assessment

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes (State)
	National Flood Insurance Program	Yes
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes
	Other (if any)	-
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	Yes
	Civil Engineering	Yes
	Local staff who can assess county's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-
<b>Fiscal Capability</b>	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	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	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

Capability/Planning Mechanism	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	Yes
Other (if any)	-

**Table KCO.8: Overall Capability**

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

### Social Vulnerability

FEMA’s National Risk Index is a new mapping tool that analyzes a county’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>10</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.
- **Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruption when compared to the rest of the U.S.

An additional tool developed by Headwaters Economics, the Rural Capacity Index evaluates rural communities and counties across the country for local capacity. Capacity includes the staffing, resources, and expertise to both apply for funding and fulfill reporting requirements, as well as design, build, and maintain infrastructure products over the long term. Counties lacking local capacity often have the greatest need for infrastructure investments—particularly rural counties. The Rural Capacity Index helps identify communities and counties with limited capacity on a scale of 0 (no capacity) to 100 (high capacity). This index is based on 10 variables that can function as proxies for county capacity. The following table lists out the components and scores for Kearney County.

<sup>10</sup> Federal Emergency Management Agency. “National Risk Index”. Accessed September 2022. <https://hazards.fema.gov/nri/map>.

**Table KCO.9: Rural Capacity Index**

Components of Index	Kearney County
County is Metropolitan?	Yes
Has a Head of Planning?	Yes
Has a College or University?	No
Adults with Higher Education:	27%
Families Below Poverty Level:	6%
Households with Broadband:	81%
People without Health Insurance:	6%
Voter Turnout:	80%
Income Stability Score (0 to 100):	23
Population Change (2000 to 2019):	-387
<b>Overall Rural Capacity Index Score</b>	<b>76</b>

Source: Headwaters Economics<sup>11</sup>

### National Flood Insurance Program (NFIP)

Kearney County is a member of the NFIP having joined on 7/5/1984, and the county’s Floodplain Administrator (Joseph Anderson) oversees the commitments and requirements of the NFIP including enforcement of the local floodplain management regulations. The initial FIRM for the county was delineated on 7/5/1984 and the current effective map date is 11/26/2010, which has been adopted and incorporated into the county’s floodplain management regulations in 2018. As of April 12, 2023, there are 17 NFIP policies in-force covering \$2,844,000. Kearney County currently does not have any repetitive loss or severe repetitive loss structures. The county requires permits for any development in the floodplain and any violations are sent a notice of violation from the county which can include fines.

After a flood event, the county implements substantial improvement and substantial damage provisions as outlined in the Substation Damage Assessment Handbook from the Nebraska Department of Natural Resources, which can be found here: [https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301\\_eSDA\\_Handbook\\_FINAL.pdf](https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301_eSDA_Handbook_FINAL.pdf). The local planning team has said Kearney County will remain in good standing and will continue involvement with the NFIP in the future.

### Plan Integration

Kearney County has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the county updates these planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update.

### Comprehensive Plan (2015)

The comprehensive plan is designed to guide the future actions and growth of the county. It has not been integrated with the hazard mitigation plan. However, it contains goals aimed at safe growth, direct development away from the floodplain, direct hosing away from chemical storage sites, and encourages the elevation of structures in the floodplain. The comprehensive plan will be reviewed and updated starting in 2023.

<sup>11</sup> Headwaters Economics. January 2022. “Rural Capacity Map”. Accessed September 2022. <https://headwaterseconomics.org/equity/rural-capacity-map/>.

### **Floodplain Regulations, Zoning Ordinance (2018), and Subdivision Regulations (2018)**

The county's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. They have not been integrated with the hazard mitigation plan; however, the documents discourage development in the floodplain. There is no set time to update these documents, but they are updated as needed.

### **Kearney County Local Emergency Operations Plan (2018)**

The Kearney 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. The hazard mitigation plan has not been integrated with this plan. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

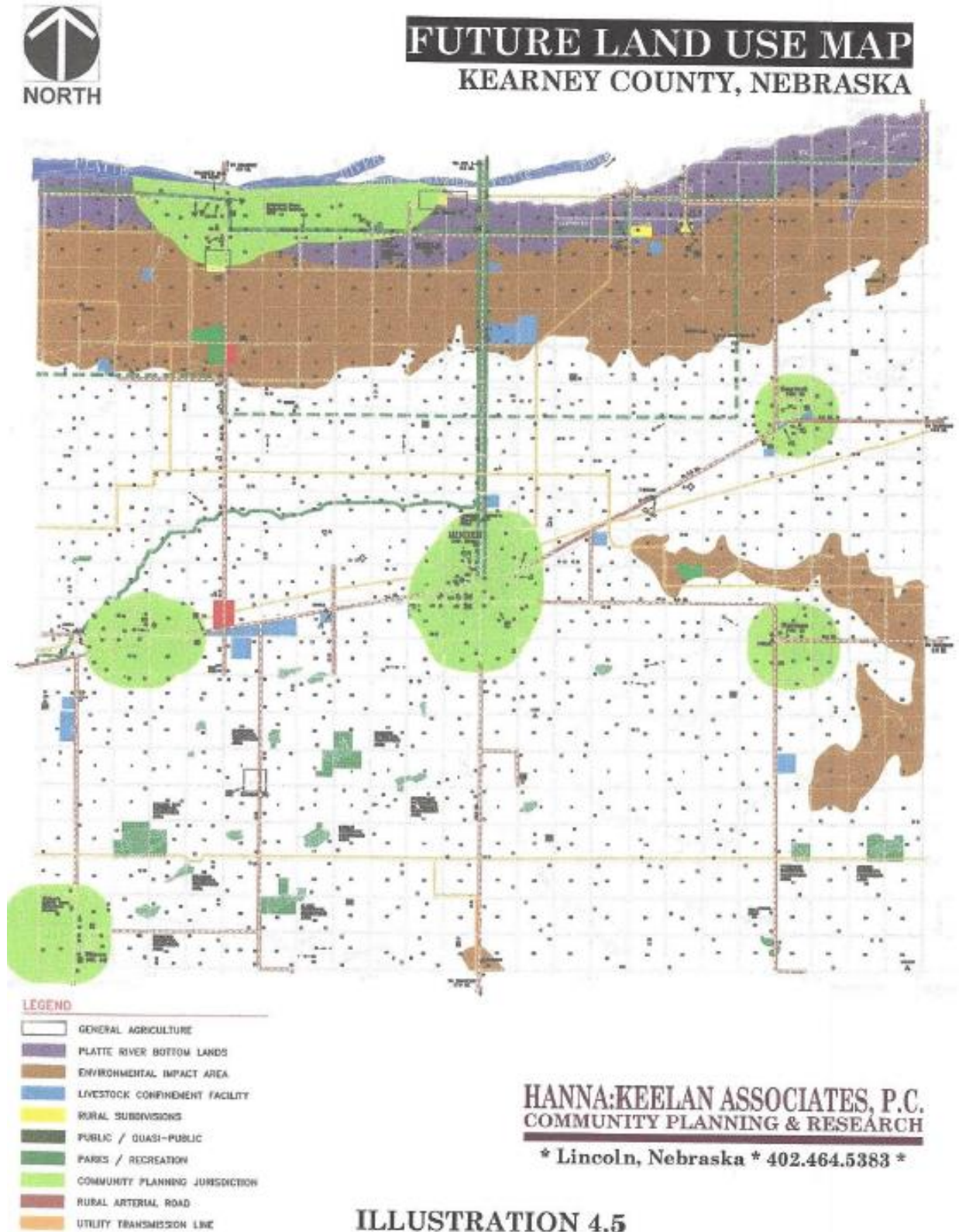
### **South Central West Nebraska Community Wildfire Protection Plan (2021)**

The purpose of the South Central West Nebraska Community Wildfire Protection Plan (CWPP) is to help effectively manage wildfires and increase collaboration and communication among organizations who manage fire. The CWPP discusses county-specific historical wildfire occurrences and impacts, identifies areas most at risk from wildfires, discusses protection capabilities, and identifies wildfire mitigation strategies. Wildfire projects and concerns from the 2018 HMP were included in the CWPP and wildfire projects in the current HMP will be included during the next CWPP update. Projects identified in the CWPP were reviewed for inclusion in this county profile. This document is updated every five years.

## **Future Development Trends**

Over the past five years, new housing has been built in the county. This likely makes the county more vulnerable to hazards as there are additional homes that could be damaged. However, that increase in vulnerability is minimized as none of the houses were built in the floodplain or other known hazardous areas. Other changes include the demolition of abandoned buildings and structures. This makes the county less vulnerable to hazards as the abandoned buildings and structures were more likely to be damaged during a hazard. In the next five years, there is a housing development planned on the west edge of the City of Minden. The figure on the page above shows Kearney County's future land use map. Many floodplain areas in the county are identified as Environmental Impact Area with most of the county being General Agriculture.

Figure KCO.5: Future Land Use Map





## Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and safety. The table below lists Safety and Security Lifelines for Kearney County.

**Table KCO.10: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	Axtell Fire Hall	-	N
2	Courthouse	-	N
3	Minden Fire Hall	-	N
4	Sheriff’s Office	G	N
5	Roads Department	-	N
6	Wilcox Fire Hall	-	N

### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines for Kearney County are included in the table below.

**Table KCO.11: Food, Water, and Shelter Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
7	Axtell Community Hall	S	N
8	Axtell Community School	S	N
9	C.L Jones School	S	N
10	Heartwell Town Hall	-	N
11	Kearney County Fair Grounds	-	N
12	Minden East Elementary School	S	N
13	Minden High School	S	N
14	Minden Water Treatment Plant	G	N
15	Mosaic	G,S	N
16	United Methodist Church	S	N
17	Wilcox-Hildreth Public School	S	N

### Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. The following medical and health facilities are located within the county.

**Table KCO.12: Health and Medical Lifelines**

CL Number	Name	Type of Facility	Number of Beds	Generator (G) Shelter (S)	Floodplain (Y/N)
18	Bethany Home, Inc	Assisted Living Facility & Long Term Care	139	G	N
19	Kearney County Health Services	Hospital & Rural Health Clinic	10	G	N
20	Craig Funeral Home	Funeral Home	0	-	N

Source: Nebraska Department of Health and Human Services<sup>12,13,14,15</sup>

### Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for the county.

**Table KCO.13: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
21	Casey's	-	N
22	Electrical Substation #1	-	N
23	Electrical Substation #2	-	N
24	Fill-n-Chill	-	N

### Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for Kearney County are included in the table below.

**Table KCO.14: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
25	Communications Tower	G	N

12 Department of Health and Human Services. 2022. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

13 Department of Health and Human Services. 2022. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

14 Department of Health and Human Services. 2022. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

15 Department of Health and Human Services. 2022. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

### Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Kearney County’s major transportation corridors include US Highway 34 and Nebraska State Highways 10, 44, and 74. The most traveled route is Highway 10 with an average of 5,470 vehicles daily, 340 of which are trucks.<sup>16</sup> A Burlington Northern Santa Fe Railway/Amtrak line runs east to west through the center of the county. The county also has two air landing strips. The private Cavanaugh Airport is located three miles west of Minden and the public Pioneer Village Field Airport is located one mile northeast of Minden. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors, as well as areas more at risk of transportation incidents. In 2019 a stalled vehicle on the train tracks derailed Amtrak in Minden. Minor injuries occurred and the car and train engine were damaged.

### Other Community Lifelines

Kearney County identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the county. The other community lifelines are listed in the table below.

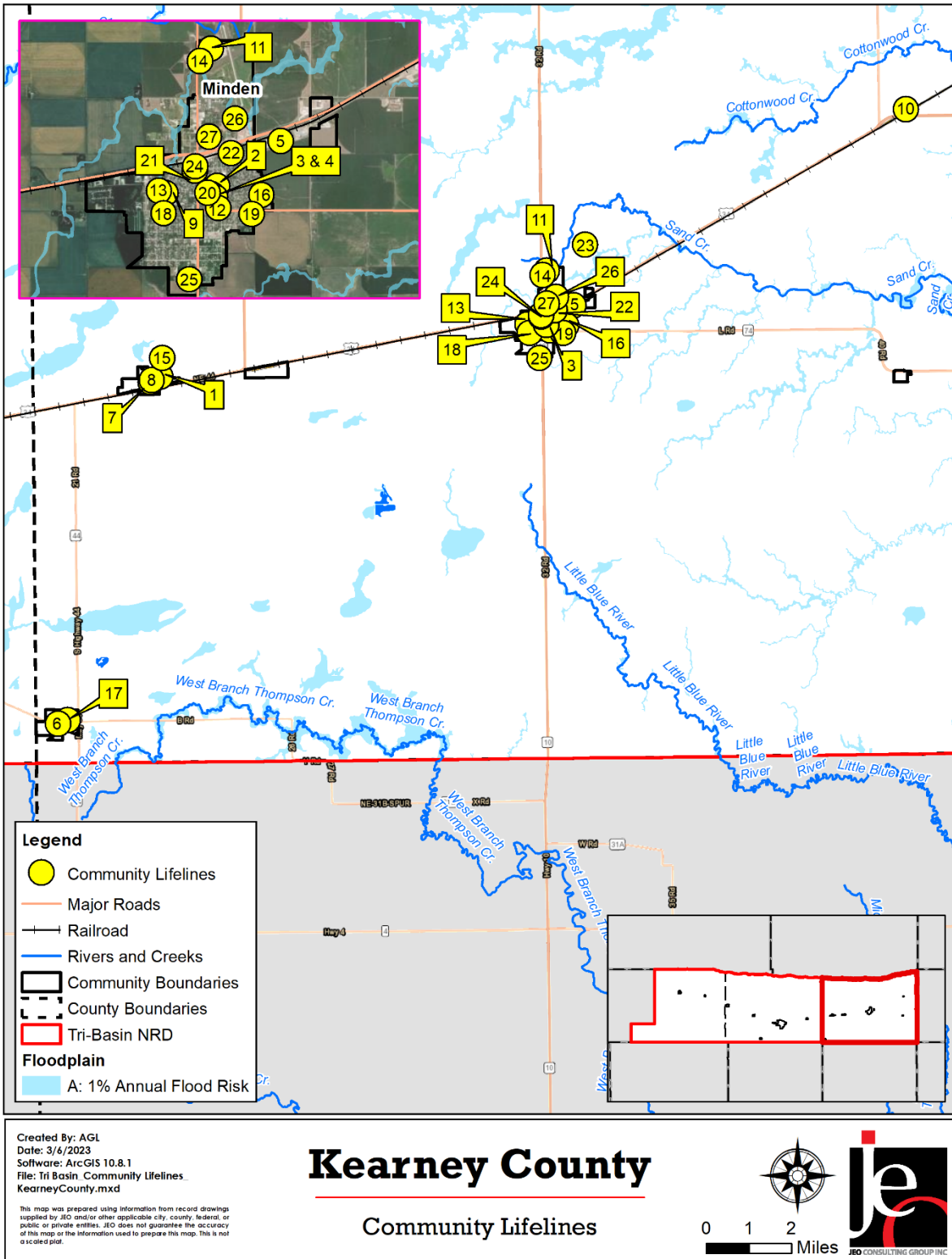
**Table KCO.15: Other Community Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
26	Minden Wastewater Treatment	G	N
27	Pioneer Village Campground	-	N

<sup>16</sup> Nebraska Department of Transportation. 2021. "Annual Average Daily Traffic Flow." Accessed September 2022. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.



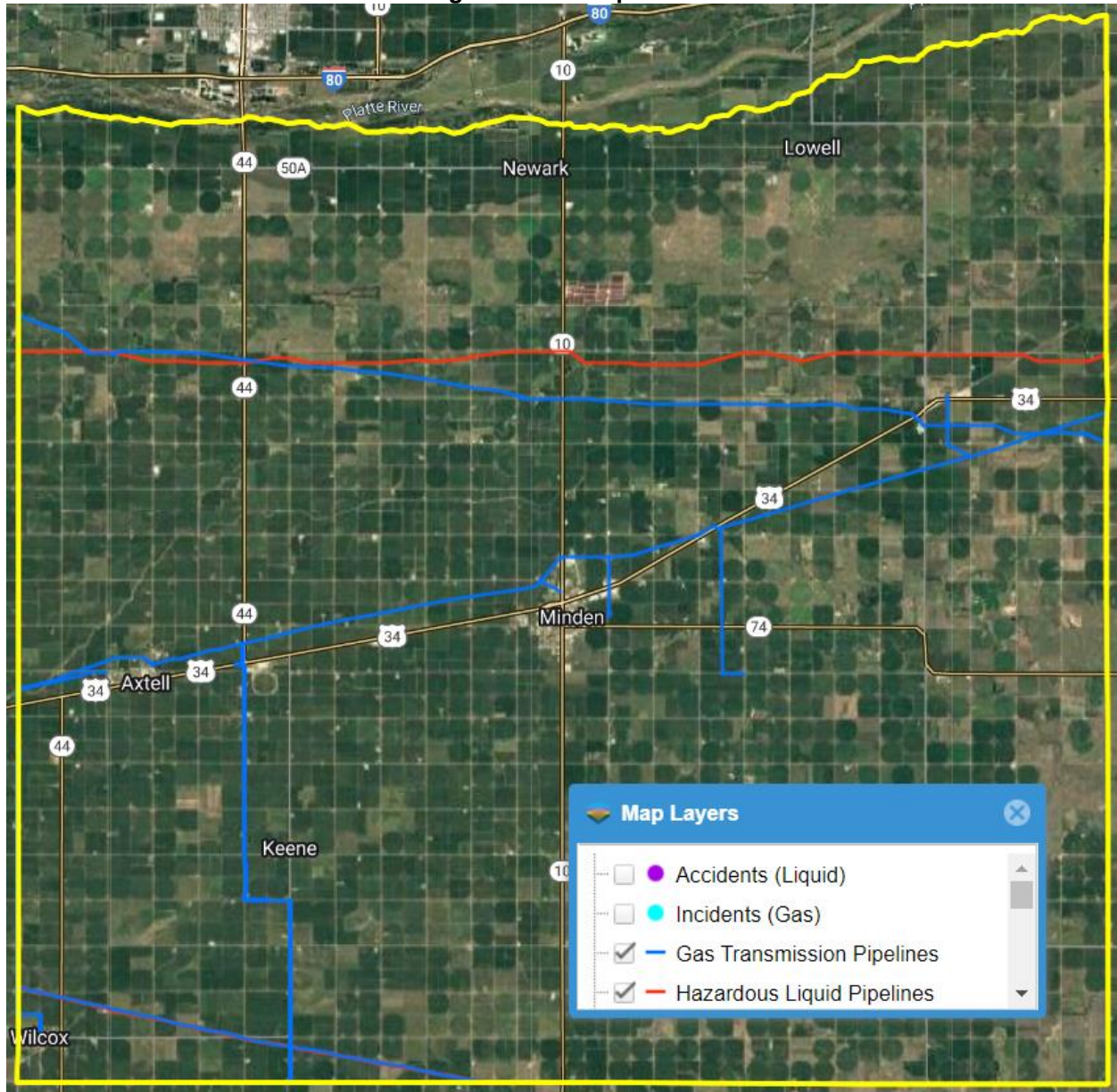
Figure KCO.6: Community Lifelines



### Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are several gas transmission pipelines and one hazardous liquid pipeline that travel through the county and can be seen in the figure below. Fertilizers, gas, diesel, and pesticides are the most common chemicals transported in the county.

Figure KCO.7: Pipelines



Source: National Pipeline Mapping System<sup>17</sup>

17 National Pipeline Mapping System. 2022. "Public Viewer." Accessed September 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 20 chemical storage sites throughout Kearney County which house hazardous materials. Figure KCO.8 shows the location of the chemical storage sites.

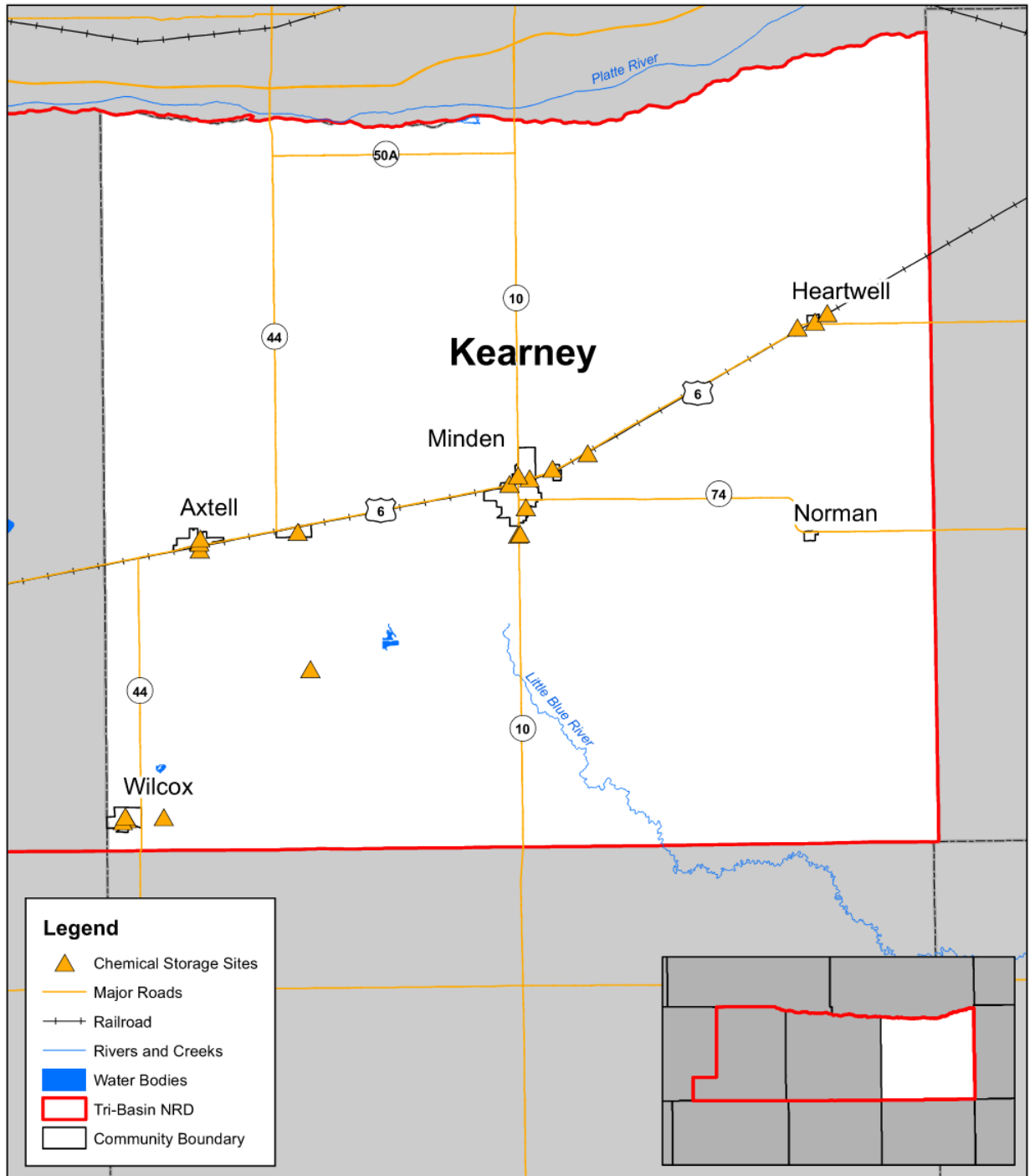
**Table KCO.16: Chemical Storage Sites**

Name	Generator (G)	Floodplain (Y/N)
Aurora Co-op Elevator Company	-	N
Aurora Co-op Elevator Company	-	N
CenturyLink	-	N
CenturyLink	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
Cooperative Producers Inc	-	N
CPI Bulk Fuel Plant	-	N
Gardels Farms Inc	-	N
KAAPA Ethanol LLC	-	N
Minden Machine Shop Inc	-	N
NDOT Minden Yard	-	N
Nutrien Ag Solutions	-	N
Nutrien Ag Solutions	-	N
Pioneer Ag Supply	-	N

Source: Nebraska Department of Environment and Energy<sup>18</sup>

<sup>18</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.

Figure KCO.8: Chemical Fixed Sites



**Legend**

- Chemical Storage Sites
- Major Roads
- Railroad
- Rivers and Creeks
- Water Bodies
- Tri-Basin NRD
- Community Boundary

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# Kearney County

## Chemical Storage Sites

## Parcel Improvements and Valuation

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

**Table KCO.17: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
2,633	\$387,710,725	361	\$63,472,360	13.7%

Source: County Assessor, 2022

## Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the county. The property damages from the NCEI Storm Events Database (January 1996 through April 2022) should be considered only as broad estimates. Crop damages reports come from the USDA Risk Management Agency for Kearney County between 2000 and 2021.

**Table KCO.18: County Hazard Loss History**

Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
<b>Animal &amp; Plant Disease</b>	Animal Disease <sup>1</sup>	6	7 Animals	N/A
	Plant Disease <sup>2</sup>	12	N/A	\$155,328
<b>Dam Failure<sup>5</sup></b>		1	\$0	N/A
<b>Drought<sup>6</sup></b>		489 out of 1,531 Months	\$0	\$12,593,755
<b>Earthquakes<sup>11</sup></b>		0	\$0	\$0
<b>Extreme Heat<sup>7</sup></b>		Avg 7 Days a Year	N/A	\$2,251,657
<b>Flooding<sup>8</sup></b>	Flash Flood	7	\$3,410,000	\$101,169
	Flood	4	\$15,000	
<b>Grass/Wildfires<sup>9</sup></b> <i>1 Fatality</i> <i>1 Injury</i>		147	\$129,725	\$423,260
<b>Hazardous Materials Release</b>	Fixed Site <sup>3</sup> <i>1 Injury</i>	17	\$0	N/A
	Transportation <sup>4</sup>	0	\$0	N/A
<b>Public Health Emergency</b>		2	N/A	N/A
<b>Severe Thunderstorms<sup>8</sup></b>	Hail Range: 0.75-4.5 in. Average: 1.28 in.	115	\$26,525,000	\$37,341,795
	Thunderstorm Wind Range: 40-77 mph Average: 60 mph	80	\$5,290,000	
	Heavy Rain	7	\$0	
	Lightning	0	\$0	
	Blizzard	10	\$325,000	
<b>Severe Winter Storms<sup>8</sup></b> <i>1 Injury</i>	Extreme Cold/Wind Chill	3	\$0	\$618,703
	Heavy Snow	5	\$0	
	Ice Storm	6	\$10,125,00	



Hazard Type		Count	Property Damage	Crop Damage <sup>2</sup>
	Winter Storm	40	\$230,00	
	Winter Weather	37	\$15,000	
<b>Terrorism and Cyber Security<sup>10</sup></b>		0	\$0	N/A
<b>Tornadoes and High Winds<sup>8</sup></b>	High Winds Range: 58-96 mph Average: 67.6 mph	44	\$1,087,080	\$3,341,194
	Tornadoes Range: EF0 Average: EF0	10	\$555,000	\$0
<b>Total</b>		<b>553</b>	<b>\$47,706,805</b>	<b>\$58,606,598</b>

N/A: Data not available  
 1 – NDA, 2014 – 2021  
 2 – USDA RMA, 2000 – 2021  
 3 – NRC, 1990 – July 2022  
 4 – PHSMA, 1971 – July 2022  
 5 – DNR Communication, June 2022

6 – NOAA, 1895 – July 2022  
 7 – High Plains Regional Climate Center, 1897 – 2022  
 8 – NCEI, 1996 - April 2022  
 9 – NFS, 2000 - 2021  
 10 – University of Maryland, 1970 – Aug 2022  
 11 – USGS, 1900 – Aug 2022

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Kearney County which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the county. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four | Risk Assessment*.

### Animal and Plant Disease

This hazard was identified as a top concern by the Farm Service Agency. The local economy in Kearney County is largely agriculture-based. There were 12 instances of plant disease recorded by the USDA RMA from 2000 – 2021 and six instances of animal disease since 2014. These events resulted in \$155,328 in crop damage and seven animal fatalities. There is one very large feedlot in the county located north of Minden along 32 Road and one smaller feedlot near Heartwell. Combined they have over 60,000 head of cattle. Animal disease outbreaks are more likely to occur at large feedlots due to the high number of animals in close contact.

### Drought

The county and Farm Service Agency identified drought as a primary concern, as the majority of the economy in the region is dependent on agriculture. A severe, prolonged drought could have a lasting economic impact on the county. The current ongoing drought in the region started in the fall of 2021. Impacts seen in the county include lower agricultural yields in non-irrigated areas, the selling of livestock due to a lack of water, and the City of Minden implementing water restrictions. The Farm Service Agency indicated that the northern portion of the county has low producing soil types and is more heavily impacted by drought. Since 2000, drought has caused over \$12 million in crop damages in the county. The county does not have the authority to implement county wide water restrictions and relies on the Tri-Basin NRD to implement any needed controls.

### Flooding

Flooding was identified as a top concern by the Farm Service Agency. According to the NCEI, there were 11 reported flood events in Kearney County from 1996 – April 2022. These events resulted in \$3,425,000 in property damages and \$101,169 in crop damage. The most recent events occurred in 2019. In March and April heavy rains and snow melt flooded a lot of agricultural land and affected calving season. Later in the year eight inches of rain caused a levee to break in Dawson County which caused the flooding of homes and farm structures in the Platte River area.

According to the Risk Factor website, Kearney County has a minor risk of flooding with 487 properties and 146 miles of roads having a greater than 26% chance of being affected by flooding over the next 30 years. That risk is unlikely to change and may even go down slightly in the next 30 years.<sup>19</sup>

Portions of Kearney County have gone through the Risk Mapping, Assessment, and Planning (MAP) process. Risk MAP is a FEMA program that provides communities with flood information and additional flood risk data (e.g., flood depth grids, percent chance grids, areas of mitigation interest, etc.). As part of that process, a HAZUS analysis was performed for the Risk MAP areas. The figure below shows the HAZUS analysis results for Kearney County.

**Figure KCO.9: Estimated Potential Losses for Flood Event Scenarios**

Type	Inventory Estimated Value	% of Total	10% (10-yr) Dollar Losses <sup>1</sup>	10% Loss Ratio <sup>2</sup>	2% (50-yr) Dollar Losses <sup>1</sup>	2% Loss Ratio <sup>2</sup>	1% (100-yr) Dollar Losses <sup>1</sup>	1% Loss Ratio <sup>2</sup>	0.2% (500-yr) Dollar Losses <sup>1</sup>	0.2% Loss Ratio <sup>2</sup>	Annualized Losses <sup>1</sup> (\$/yr)	Ann. Loss Ratio <sup>2</sup>
Residential Building & Contents	\$108,673,000	66%	\$28,000	0%	\$77,000	0%	\$94,000	0%	\$161,000	0%	\$2,000	
Commercial Building & Contents	\$11,500,000	7%	\$0	0%	\$0	0%	\$1,000	0%	\$4,000	0%	\$0	
Other Building & Contents	\$43,392,000	27%	\$11,000	0%	\$24,000	0%	\$28,000	0%	\$63,000	0%	\$1,000	
Total Building & Contents <sup>3</sup>	\$163,565,000	100%	\$39,000	0%	\$101,000	0%	\$123,000	0%	\$228,000	0%	\$3,000	
Business Disruption <sup>4</sup>	N/A	N/A	\$0	N/A	\$1,000	N/A	\$1,000	N/A	\$3,000	N/A	\$0	N/A
<b>TOTAL<sup>5</sup></b>	\$163,565,000		\$39,000		\$102,000		\$124,000		\$231,000		\$3,000	

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.

<sup>1</sup>Losses shown are rounded to nearest \$10,000 for values under \$100,000 and to the nearest \$100,000 for values over \$100,000.

<sup>2</sup>Loss ratio = Dollar Losses + Estimated Value. Loss Ratios are rounded to the nearest integer percent.

<sup>3</sup>Total Building and Contents = Residential Building and Contents + Commercial Building and Contents + Other Building and Contents.

<sup>4</sup>Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.

<sup>5</sup>Total = Total Building and Contents + Business Disruption

The figures in this table only represent information within the Upper Little Blue.

Source: FEMA<sup>20</sup>

### Severe Thunderstorms

Both the county and the Farm Service Agency identified severe thunderstorms as top hazard of concern. Concerns about severe thunderstorms focus on the potential of damage to property, infrastructure, and surrounding agricultural lands. Severe thunderstorms are an annual occurrence in the county. A severe event in 2014 produced over \$2,500,000 in damages. The most recent damaging event occurred in June of 2020. In the event a shed and brain bin were damaged, several trees downed, and two irrigation pivots were overturned near Newark. Residents are notified of severe weather through sirens in communities, television stations, radio

19 Risk Factor. "Flood Factor: Kearney County, Nebraska". Accessed November 2022. [https://riskfactor.com/county/kearney-county-ne/31099\\_fsid/flood](https://riskfactor.com/county/kearney-county-ne/31099_fsid/flood).

20 FEMA. March 2016. "Flood Risk Report: Upper Little Blue, 10270206".

stations, CODERED, and cellphone applications. The county experiences approximately two to 12 power outages each year. With only an estimated 3% of powerlines buried, the county is at high risk of power loss due to downed tree limbs and utility poles.

### **Severe Winter Storms**

Both the county and Farm Service Agency identified severe winter storms as a hazard of top concern. Severe winter storms have the potential to cause power outages, property damage, and damage to infrastructure. The buildup of ice and snow can also hinder transportation access along major roadways, delaying travel and deployment of emergency services. A severe storm in 1999 led to an injury and \$10,000 in damages. In December 2006, a large winter storm impacted south central Nebraska. Ice and snow accumulations led to widespread tree damage, power outages, and damage to power lines and poles. The storm caused a reported \$10,000,000 in damages. In 2019 extremely cold temperatures resulted in a lot of livestock death. Then quickly melting snow caused flooding during calving season. Snow removal on county roads is handled by the Kearney County Road Department using snowplows and road graders. The local planning team indicated that these resources are sufficient to handle an average snowstorm. To reduce the risk of extremely cold temperatures, the county has identified warming shelters where residents can go if needed. Identified shelters include the Kearney County Fairgrounds, Axtell Community Hall, Norman Community Hall, Wilcox Community Center, and Heartwell Community Center.

### **Terrorism and Cyber Security**

This hazard was identified as a top concern by the Farm Service Agency. While no terrorism events have occurred in the past, a terrorist attack or cyber security attack could occur at any time. The most likely targets in the county are government facilities and schools. The Farm Service Agency feels like the county needs to be proactive in addressing this issue rather than reactive after an event occurs.

### **Tornadoes and High Winds**

Both the county and Farm Service Agency identified tornadoes and high winds as a top hazard of concern. The local planning team is concerned with the potential of tornadoes to significantly damage communities and surrounding infrastructure in Kearney County. The county has experienced 10 tornadoes since 1996. On Christmas in 2016, severe storms throughout Nebraska and Kansas brought gusts up to 66 knots through the region which resulted in \$1,000,000 in damages. In December 2021, two EF0 tornadoes north of Minden caused \$500,000 in damages to trees and center pivots. In June 2022 high winds north of Minden damaged or destroyed 150 center pivots, broke power poles, and caused power outages. There have been no reports of injuries or deaths from tornadoes in the area. The county has recently increased the number of mass shelter locations in the county. Most of the locations are churches and schools.



## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Implement Actions Identified in the CWPP
<b>Description</b>	Implement actions identified in the CWPP and assist the county fire districts implement actions. Actions identified include increasing emergency preparedness, training and education, and fuels mitigation.
<b>Hazard(s) Addressed</b>	Grass/Wildfire
<b>Estimated Cost</b>	Staff Time - \$100,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	County Emergency Management, Local Fire Districts
<b>Status</b>	Not Started. The county does not have the capability to implement all of the actions identified in the CWPP.

### Kept Mitigation Actions

Mitigation Action	Alert Sirens
<b>Description</b>	Perform an evaluation of existing alert sirens in order to determine which sirens should be replaced, or to inform the placement of new sirens.
<b>Hazard(s) Addressed</b>	Severe Thunderstorms, Tornadoes and High Winds
<b>Estimated Cost</b>	\$15,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	County Emergency Management
<b>Status</b>	Not Started. The county currently does not have the capability to implement this project as it is not in the budget.

Mitigation Action	Backup Generators
<b>Description</b>	Provide a portable or stationary source of backup power to redundant power supplies, municipal wells, lift stations and other critical facilities and shelters.
<b>Hazard(s) Addressed</b>	Extreme Heat, Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Estimated Cost</b>	\$10,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	County Emergency Management
<b>Status</b>	Planning Stage. Currently looking into who needs generators and sizes. The county currently does not have the capability to implement this project as it is not in the budget.

<b>Mitigation Action</b>	<b>Cyber Security Planning Meeting</b>
<b>Description</b>	Have a cyber security planning meeting with county emergency management, school officials, local communities, and stakeholders to identify possible risks and what can be done to prepare for an event.
<b>Hazard(s) Addressed</b>	Terrorism and Cyber Security
<b>Estimated Cost</b>	Staff Time
<b>Local Funding</b>	Staff Time
<b>Timeline</b>	2-5 Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	County Emergency Management, Local Jurisdictions, Local School Districts, Phelps County Farm Service Agency
<b>Status</b>	Not Started. The county has the capability to implement this project.

<b>Mitigation Action</b>	<b>Code Red Participation</b>
<b>Description</b>	Implement county wide program to encourage residents to participate in the Code Red system for Kearney County.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	Staff Time
<b>Local Funding</b>	General Fund, Staff Time
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	County Emergency Management
<b>Status</b>	Ongoing. Emergency Management is always encouraging more residents to participate in Code Red.

<b>Mitigation Action</b>	<b>Public Awareness and Education</b>
<b>Description</b>	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.  The Kearney County Farm Service Agency would like to increase community education to mitigate animal and plant disease in the county.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$3,000+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	County Emergency Management, UNL Extension Office
<b>Status</b>	Planning Stage. The county has the capability to implement this project.

**Removed Mitigation Actions**

<b>Mitigation Action</b>	<b>Bury Power and Service Lines</b>
<b>Description</b>	Require powerlines installed as parts of new construction to be buried.
<b>Hazard(s) Addressed</b>	Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Status</b>	Removed. This is not included in the county’s zoning regulations and is no longer needed.

<b>Mitigation Action</b>	<b>Weather Radios</b>
<b>Description</b>	Conduct an inventory of weather radios at schools and other community lifelines. Provide new radios as needed.
<b>Hazard(s) Addressed</b>	Drought, Extreme Heat, Flooding, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Status</b>	Removed. This action is no longer needed as cell phones are more readily available and offer the same service.

### Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside county planning documents (e.g., 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 County Emergency Manager, Planning and Zoning Department, Kearney County Farm Service Agency Executive Director, and Roads Department will be responsible for reviewing and updating this county profile outside of the five-year update. Kearney County will review the plan bi-annually and the public will be notified using the county website and at county commissioners' meetings.

**Community Profile**

# **Village of Axtell**

**Tri-Basin NRD  
Hazard Mitigation Plan**

**2023**

## Local Planning Team

The Village of Axtell’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by the community.

**Table AXT.1: Axtell Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Jason Stoddard	Utility Superintendent	Village of Axtell	Elwood	Elwood

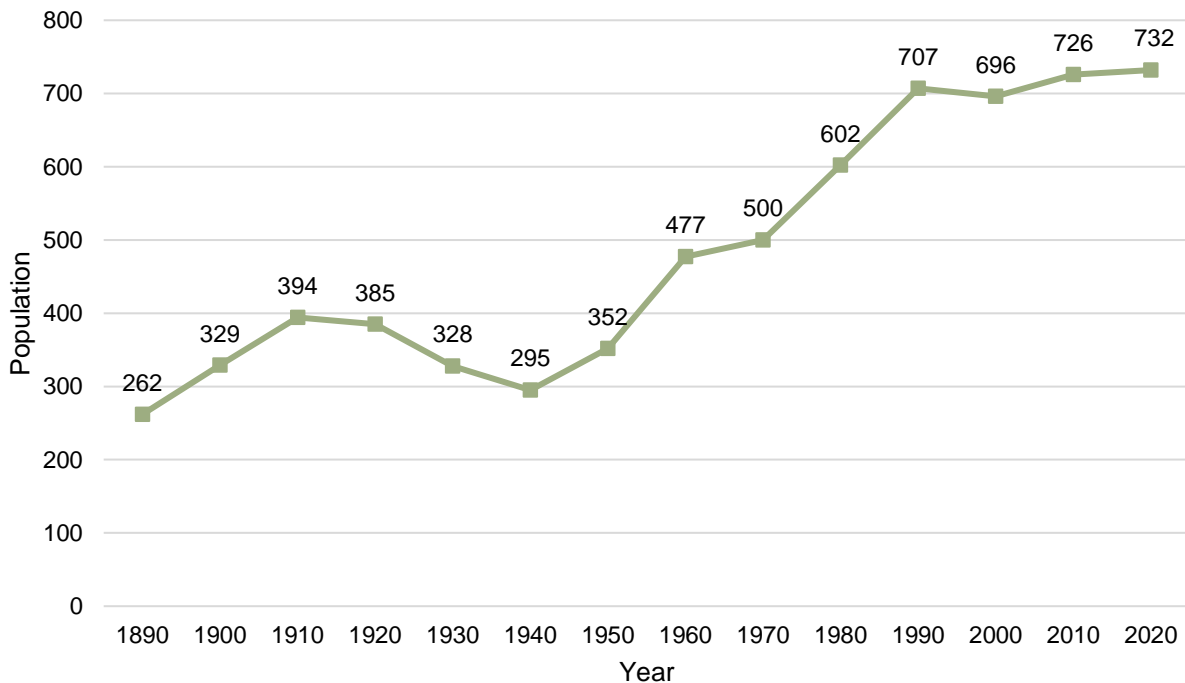
## Location and Geography

The Village of Axtell is in west-central Kearney County and covers an area of 0.46 square miles. Several irrigation canals are located near the community.

## Demographics

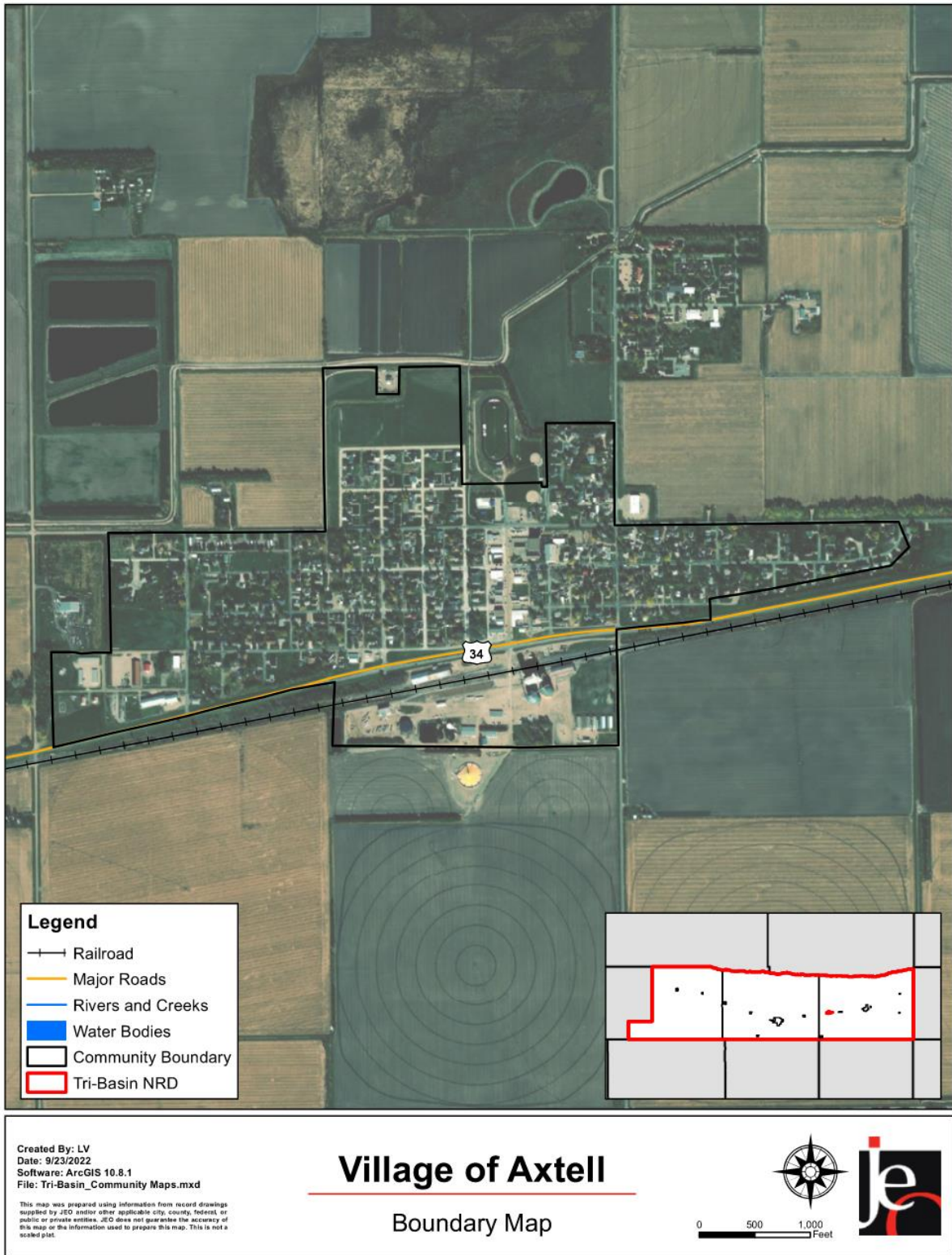
The following figure displays the historical population trend for the Village of Axtell. This figure indicates that the population of Axtell has been increasing since 2000 to 732 people in 2020. Increasing populations are associated with more robust hazard mitigation and emergency planning requirements for development. Growing populations can also increase tax revenues, allowing communities to pursue additional mitigation projects. Axtell’s population accounted for 10.9% of Kearney County’s population in 2020.<sup>21</sup>

**Figure AXT.1: Population 1890 - 2020**



21 United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.

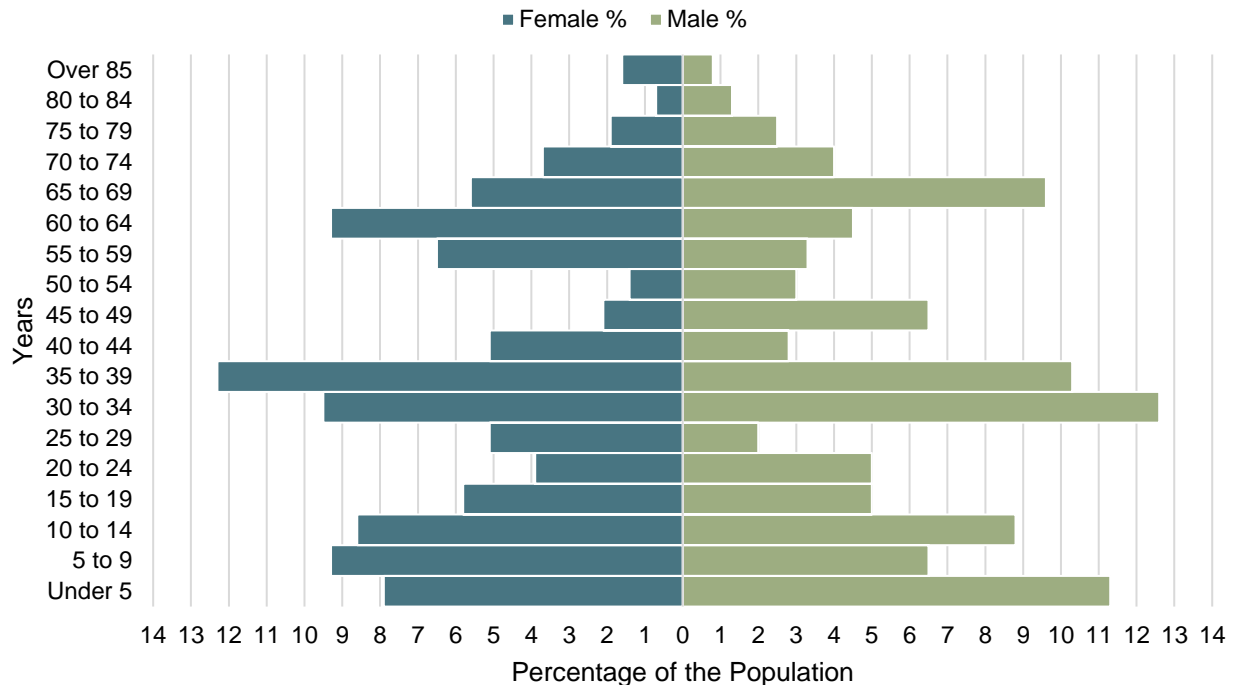
Figure AXT.2: Village of Axtell



The young, elderly, and minority populations may be more vulnerable to hazards than other groups. Looking at Axtell’s population:

- **6.1% is non-white.** Since 2010, Axtell has become more ethnically diverse. In 2010, 2.6% of the Axtell’s population was non-white. By 2020, 6.1% was non-white.<sup>22</sup>
- **Median age of 34.8.** The median age of Axtell was 34.8 years old in 2020. The population became younger since 2010, when the median age was 38.7.<sup>23</sup>

**Figure AXT.3: Axtell’s Population Pyramid**



The figure above shows Axtell’s population percentage broken down by sex and five-year age groups. Axtell’s population is bottom heavy, suggesting a greater number of young families and children who will likely contribute to an increasing population in the future.

### Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards like extreme heat and flooding than other groups. Axtell’s population has:

- **12.5% of people living below the poverty line.** The poverty rate (12.5%) in the Village of Axtell was higher than the state’s poverty rate (10.4%) in 2020.<sup>24</sup>
- **\$54,375 median household income.** Axtell’s median household income in 2020 (\$54,375) was \$8,640 lower than the state (\$63,015).<sup>24</sup>
- **0% unemployment rate.** In 2020 Axtell has a lower unemployment rate (0%) when compared to the state (3.4%).<sup>24</sup>

22 United States Census Bureau. “2020 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/>.

23 United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/>.

24 United States Census Bureau. “2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/>.



- **19.4% of workers commuted 30 minutes or more to work.** Slightly fewer workers in Axtell commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (19.4% compared to 20.3%).<sup>25</sup>

### Major Employers

Major employers include Mosaic, Axtell Community Schools, and CPI. A large percentage of residents commute to Kearney, Holdrege, and Minden for employment.

## Housing

Multiple factors inform the vulnerability of housing units to hazard events. Housing age, for example, may indicate which housing units were built prior to the development of state building codes. Older houses and vacant housing generally more vulnerable to hazards if poorly maintained. Additionally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. Renters are less likely than homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards. Axtell's housing stock has:

- **49.6% of housing built prior to 1970.** Axtell has a larger share of housing built prior to 1970 than the state (49.6% compared to 45.5%).<sup>26</sup>
- **3.5% of housing units vacant.** Axtell has a lower vacancy rate 3.5% compared to the rest of the state (9.2%).<sup>26</sup>
- **7.5% mobile and manufacture housing.** The Village of Axtell has a larger share of mobile and manufactured housing (7.5%) compared to the state (3.3%).<sup>26</sup> 15 mobile homes are located at Avenue F and West 6<sup>th</sup> Street and four mobile homes are located at Avenue D and West 3<sup>rd</sup> Street.
- **9.3% renter-occupied.** The rental rate of Axtell was 9.3% in 2020. This is lower than the state's rate of 33.8%.<sup>26</sup>

### Broadband Access

Internet or broadband access – through Wi-Fi or cellphone coverage – is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **88.3% of households have a broadband internet subscription.** Axtell has a larger share of households with broadband (88.3%) compared to the state (85.6%).<sup>27</sup>

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25 United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/>.

26 United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/>.

27 United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.



## Governance

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

- Clerk/Treasurer
- Volunteer Fire and Rescue Department
- Kearney Housing Agency
- Planning Commission
- Floodplain Administrator
- Utilities Department

## Capability Assessment

The planning team assessed the Village of Axtell's hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects.

According to the local planning team, municipal funds are sufficient for pursuing new projects. Some funds are currently being used for a subdivision development. Over recent years, the amount of municipal funds has increased.

**Table AXT.2: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes (State)
	National Flood Insurance Program	Yes
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes
	Other (if any)	Water System Emergency Response Plan, Wellhead Protection Plan
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No

Capability/Planning Mechanism		Yes/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)	-
<b>Fiscal Capability</b>	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
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	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	Yes
	Firewise Communities Certification	No
	Tree City USA	No
	Other (if any)	-

**Table AXT.3: Overall Capability**

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

**Social Vulnerability**

FEMA’s National Risk Index is a new mapping tool that analyzes a community’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County, which includes Axtell, is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>28</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.
- **Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

An additional tool developed by Headwaters Economics, the Rural Capacity Index, evaluates rural communities and counties across the country for local capacity. Capacity includes the staffing, resources, and expertise to both apply for funding and fulfill reporting requirements, as well as design, build, and maintain infrastructure products over the long term. Communities lacking local capacity often have the greatest need for infrastructure investments, particularly rural communities and communities of color. The Rural Capacity Index helps identify communities with limited capacity on a scale of 0 (no capacity) to 100 (high capacity). This index is based on 10 variables that can function as proxies for community capacity. The following table lists the components and scores for the Village of Axtell compared to the county.

**Table AXT.4: Rural Capacity Index**

Components of Index	Village of Axtell	Kearney County
County is Metropolitan?	Yes	Yes
Has a Head of Planning?	No	Yes
Has a College or University?	No	No
Adults with Higher Education:	29%	27%
Families Below Poverty Level:	6%	6%
Households with Broadband:	83%	81%
People without Health Insurance:	5%	6%
Voter Turnout:	80%	80%
Income Stability Score (0 to 100):	23	23
Population Change (2000 to 2019):	122	-387
<b>Overall Rural Capacity Index Score</b>	<b>57</b>	<b>76</b>

Source: Headwaters Economics<sup>29</sup>

**National Flood Insurance Program (NIFP)**

Axtell is a member of the NFIP, having joined on 1/16/2004. The village’s Floodplain Administrator (Vicki Nelson) oversees the commitments and requirements of the NFIP, including enforcement of the local floodplain management regulations. The initial FIRM for the village was delineated on 1/16/2004 and the current effective map date is 1/16/2004, which has been adopted and incorporated into the local floodplain management regulations on 1/5/2004. As of April 12, 2023, there are no NFIP policies in-force for the village. Axtell does not currently have any repetitive loss or severe repetitive loss structures. The village requires a permit for any development in the floodplain, which is monitored by the Utilities Superintendent. If a floodplain management violation occurs, fines can be levied.

28 Federal Emergency Management Agency. “National Risk Index”. Accessed July 2022. <https://hazards.fema.gov/nri/map>.

29 Headwaters Economics. January 2022. “Rural Capacity Map”. Accessed July 2022. <https://headwaterseconomics.org/equity/rural-capacity-map/>.

After a flood event, the community implements substantial improvement and substantial damage provisions as outlined in the Substation Damage Assessment Handbook from the Nebraska Department of Natural Resources, which can be found here: [https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301\\_eSDA\\_Handbook\\_FINAL.pdf](https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301_eSDA_Handbook_FINAL.pdf). The local planning team has stated that Axtell will remain in good standing and continue involvement with the NFIP in the future.

## Plans and Studies

Axtell has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the village updates these planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update.

### **Comprehensive Plan (2011)**

The comprehensive plan is designed to guide the future actions and growth of the village. The hazard mitigation plan has not been integrated; however, it contains goals aimed at safe growth and encourages infill development. There is currently no timeline to update the comprehensive plan.

### **Floodplain Regulations (2016), Zoning Ordinance (2020), and Subdivision Regulations (2020)**

The village's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. The hazard mitigation plan has not been integrated with these documents. However, the documents restrict development in hazard prone areas and discourage development in the floodplain. There is no timeline to update any of these documents.

### **Kearney County Local Emergency Operations Plan (2018)**

Axtell is an annex in the Kearney County Local Emergency Operations Plan (LEOP). The hazard mitigation plan has not been integrated with this plan, however, 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. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

### **Water System Emergency Response Plan (2022)**

A water system emergency response plan serves as a guideline for water operators and city administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events. The hazard mitigation plan has not been integrated with this plan.

### Wellhead Protection Plan (2014)

The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources. The wellhead protection plan has not been integrated with the hazard mitigation plan.

### Future Development Trends

In the past five years, a subdivision with 18 lots was developed with all but one being built, likely due to the growing population. A second phase with 27 lots is currently being developed and should start selling by the end of 2022. These new homes increase Axtell’s vulnerability to hazard as there is more property that could be damaged. However, none of the structures were developed in the floodplain or known hazardous areas, which helps to minimize that increased vulnerability. A new housing development on the north side of town is planned to be built in the next five years. This is consistent with the projected growth in population.

### Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

#### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Axtell.

**Table AXT.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	Community Hall / Village Office / Siren #1	G, S	N
2	Fire Department	G	N

#### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines for the Village of Axtell are included in the table below.

**Table AXT.6: Food, Water, and Shelter Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
3	Kat’s Korner Market	-	N
4	Well #6	-	N
5	Well #7 & Auxiliary Engine	-	N
6	Well #8	-	N
7	Water Tower	-	N

### Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. According to DHHS and the local planning team, there are no medical and health facilities located within the community.<sup>30,31,32,33</sup>

### Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for Axtell.

**Table AXT.7: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
8	CPI Gas Station	-	N

### Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the Village of Axtell are included in the table below.

**Table AXT.8: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
9	Siren #2	G	N
10	Siren #3	-	N

### Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Axtell’s major transportation corridors include U.S. Highway 34 and a railroad line. Highway 34 is traveled by an average of 5,355 vehicles daily, 665 of which are trucks.<sup>34</sup> The Burlington Northern Santa Fe Railway/Amtrak line travels along the southern edge of the community. According to the local planning team, chemicals are regularly transported along local routes. Ethanol is transported on the railroad. Fuel and fertilizer are regularly transported on the highway. No significant transportation events have occurred locally. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

### Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are two gas transmission pipelines that travel through or near the community and can be seen in the figure below. According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are four chemical sites within or near Axtell which house hazardous materials (listed below).

30 Department of Health and Human Services. 2022. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.  
 31 Department of Health and Human Services. 2022. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.  
 32 Department of Health and Human Services. 2022. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.  
 33 Department of Health and Human Services. 2022. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).  
 34 Nebraska Department of Transportation. 2021. "Annual Average Daily Traffic Flow." Accessed July 2022. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.



**Table AXT.9: Chemical Storage Lifelines**

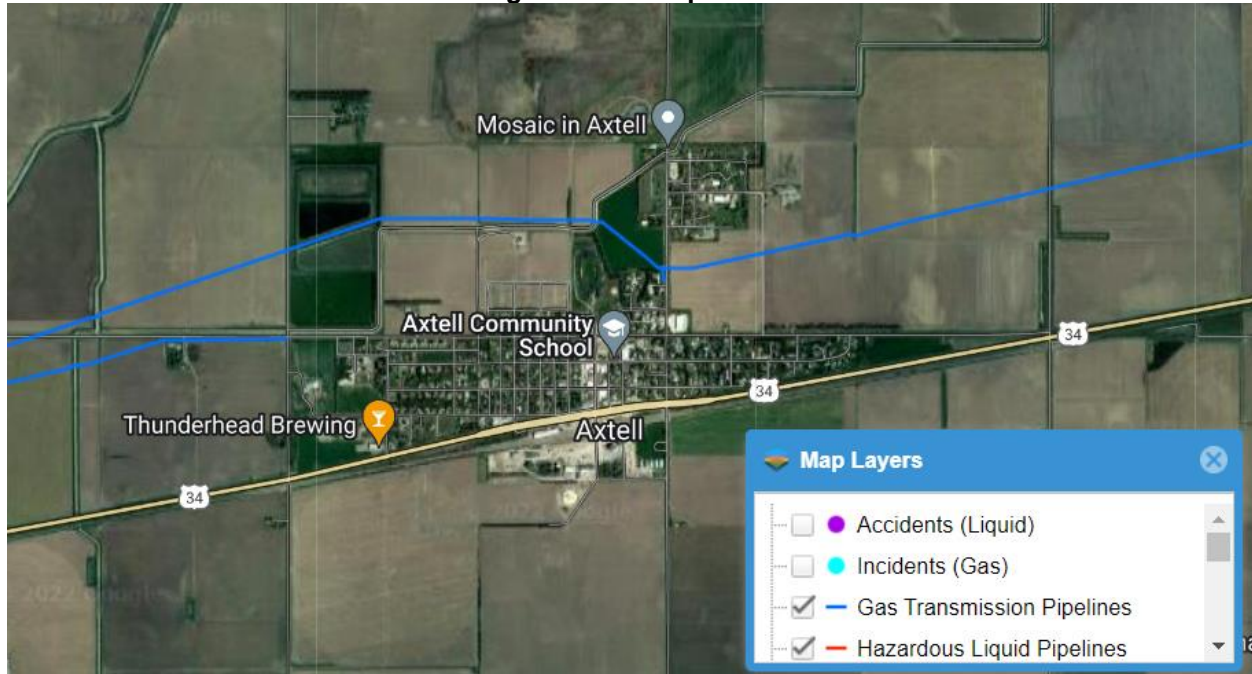
CL Number	Name	Generator (G)	Floodplain (Y/N)
11	CenturyLink	G	N
12	CPI Chemical Storage Building	-	N
*	CPI Gas Station	-	N
13**	Aurora Co-op	-	N

Source: Nebraska Department of Environment and Energy<sup>35</sup>

\* CPI Gas Station is noted in the Energy table as #8.

\*\*Co-op is located five miles southeast of Axtell and is not included on the map.

**Figure AXT.4: Pipelines**



Source: National Pipeline Mapping System<sup>36</sup>

**Other Community Lifelines**

The Village of Axtell identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the community. The other community lifelines are listed in the table below.

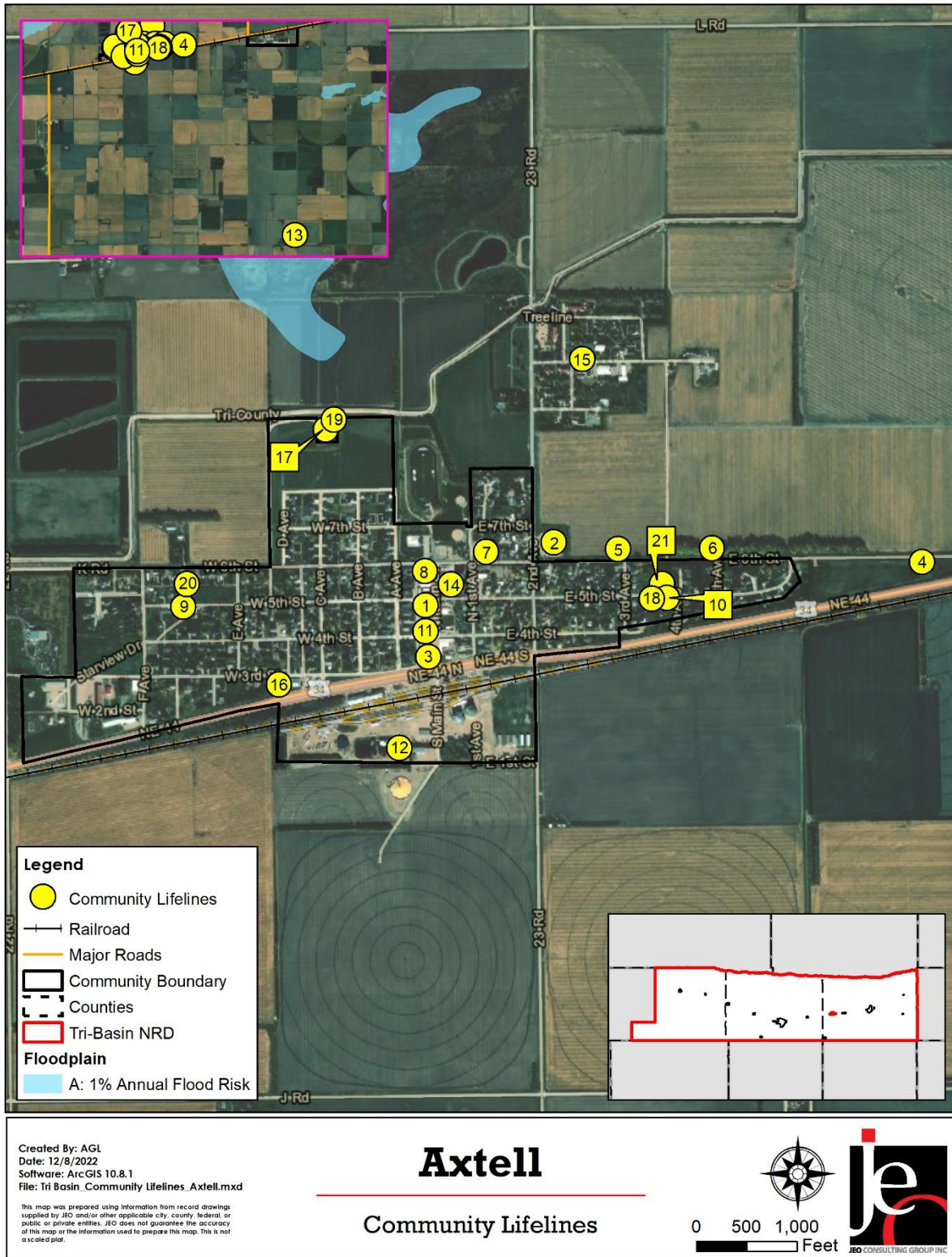
**Table AXT.10: Other Community Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
14	Axtell Community Schools	S	N
15	Mosaic – Bethany Mission	G, S	N
16	Trailer Court #1	-	N
17	City Maintenance Storage Building	-	N
18	Sewer Lift Station #1	-	N
19	Sewer Lift Station #2	G	N
20	Trailer Court #2	-	N
21	Windmill Manor	-	N

35 Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed May 2022.

36 National Pipeline Mapping System. 2022. “Public Viewer.” Accessed July 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.

Figure AXT.5: Community Lifelines



\*No streams within community boundary.



## Parcel Improvements and Valuation

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

**Table AXT.11: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
284	\$39,547,800	0	\$0	0%

Source: County Assessor, 2022

## Historical Occurrences

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

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Axtell which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the Village of Axtell. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Severe Thunderstorms

Local concerns regarding severe thunderstorms focus on the potential for property damages, power outages, damages from wind, and drainage infrastructure. According to the NCEI, there were 60 severe thunderstorm events in Axtell from 1996 to April 2022. These events resulted in \$551,000 in property damages and \$8,350,000 min crop damages. To reduce risk and vulnerability to this hazard, Axtell has data backup systems for municipal records. Municipal records are also protected with surge protectors on electronic devices. In the event of a power outage, the community has backup generators at City Hall, Fire Hall, and Sewer Lift Station. There is also an auxiliary engine on one of the wells. Well houses are fitted with hail resistant building materials. The community’s critical facilities are insured for hail damages. People are notified of severe weather via local TV, radio, and an emergency siren in the case of tornado warning. Approximately 10% of power lines are buried in the community.

### Severe Winter Storms

Severe winter storms have the potential to cause power outages and hinder transportation. In 2016, one winter storm led to 18 inches of snowfall and strong winds within Axtell. The utility superintendent is in charge of removing snow within the community. Axtell has a loader with plow and a dump truck to aid in snow removal. The village recently purchased a tractor with loader to help speed up the snow removal process. Local snow removal resources are sufficient for local needs most years. During heavy snow events, Cooperative Producers Inc. (CPI) will loan people and equipment to assist in snow removal.

### Tornadoes and High Winds

The NCEI reports four tornadoes between 1996 to April 2022, with all being either F0 or EF0. No damage was reported. Kearney County Emergency Management offers text alerts to warn residents of impending events. Axtell has warning sirens that are activated by the sheriff dispatcher. In the event of a disaster, Axtell has mutual aid agreements in place with neighboring communities, including Wilcox and Minden.

High winds have the potential to cause property damage, tree damage, and block transportation routes. Previous high wind events have resulted in tree damage throughout Axtell. The mobile home park on W 6<sup>th</sup> Street has a safe room for residents of the park. There are a few hazardous trees scattered throughout town that need to be removed.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Public Awareness and Education
<b>Description</b>	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started. The village has the capability to implement this project.

### Kept Mitigation Actions

Mitigation Action	Backup Generators
<b>Description</b>	Provide a portable or stationary source of backup power to produce redundant power supplies at critical facilities.
<b>Hazard(s) Addressed</b>	All hazards
<b>Estimated Cost</b>	\$75,000
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Village Board, Fire Department, Emergency Manager
<b>Status</b>	Discussion Phase. The village has the capability to implement this action.

<b>Mitigation Action</b>	<b>Improve and Revise Snow/Ice Removal Program and Resources</b>
<b>Description</b>	Revise and improve the snow and ice removal program for streets. Revisions should address situations such as plowing snow, ice removal, parking during snow and ice removal, and removal of associated storm debris. This would include equipment that is needed and paving routes.
<b>Hazard(s) Addressed</b>	Severe Winter Storms
<b>Estimated Cost</b>	Staff Time - \$100,000
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Medium
<b>Lead Agency</b>	Utilities Department
<b>Status</b>	The village recently purchased a tractor and loader to use for snow removal. There are still some streets that have not been paved yet. The village has the capability to implement this action.

<b>Mitigation Action</b>	<b>Tree Maintenance Program</b>
<b>Description</b>	Develop and implement tree maintenance program to remove hazardous trees/tree limbs.
<b>Hazard(s) Addressed</b>	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Estimated Cost</b>	\$75,000
<b>Local Funding</b>	General Fund
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	Utilities Department
<b>Status</b>	Ongoing. Trees are continually being trimmed as needed.

## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., 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 Utilities Superintendent will be responsible for reviewing and updating this community profile outside of the five-year update. Axtell will review the plan bi-annually and the public will be notified through village board meetings.

## **Community Profile**

# **Village of Heartwell**

## **Tri-Basin NRD Hazard Mitigation Plan**

**2023**

## Local Planning Team

The Village of Heartwell’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by members of the local planning team.

**Table HRT.1: Heartwell Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Randy Smith	Street Superintendent	Village of Heartwell	Minden	-
Christopher Kuehn	Village Clerk/Treasurer	Village of Heartwell	-	Minden
Chris Hopkins	Village Chairman	Village of Heartwell	-	Minden

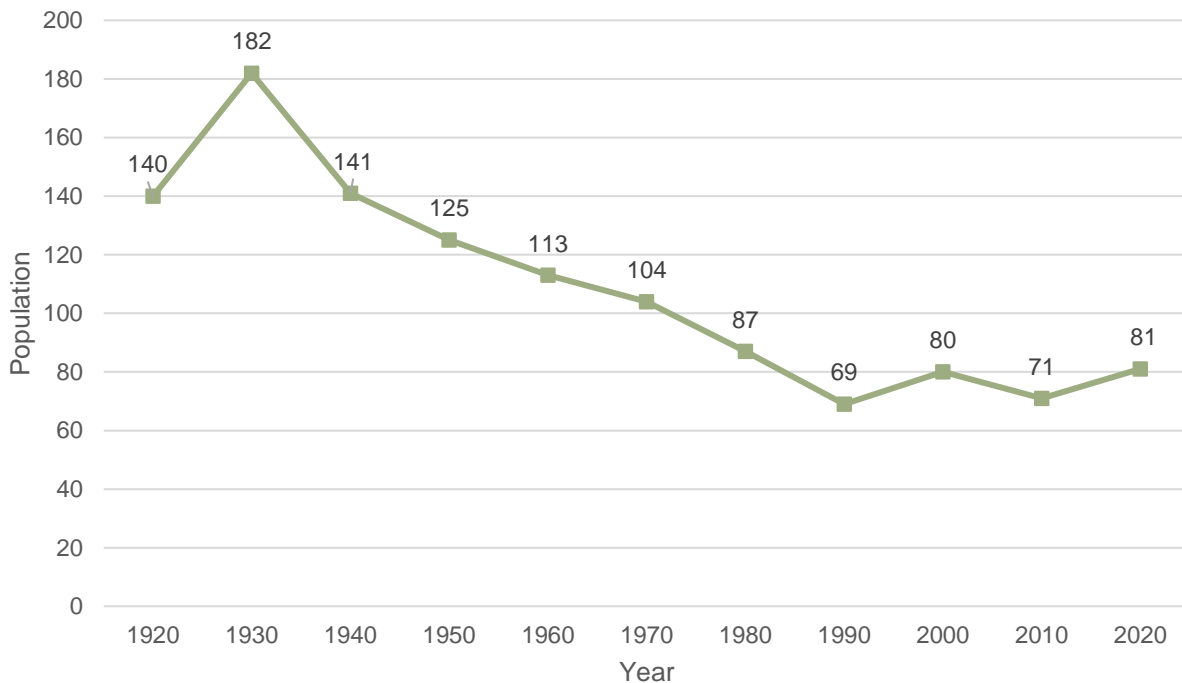
## Location and Geography

The Village of Heartwell is in northeastern Kearney County and covers an area of 0.07 square miles. There are no large bodies of water located near the community.

## Demographics

The following figure displays the historical population trend for the Village of Heartwell. This figure indicates that the population of Heartwell has been increasing since 2010 to 81 people in 2020. Increasing populations are associated with more robust hazard mitigation and emergency planning requirements for development. Growing populations can also increase tax revenues, allowing communities to pursue additional mitigation projects. Heartwell’s population accounted for 1.2% of Kearney County’s population in 2020.<sup>37</sup>

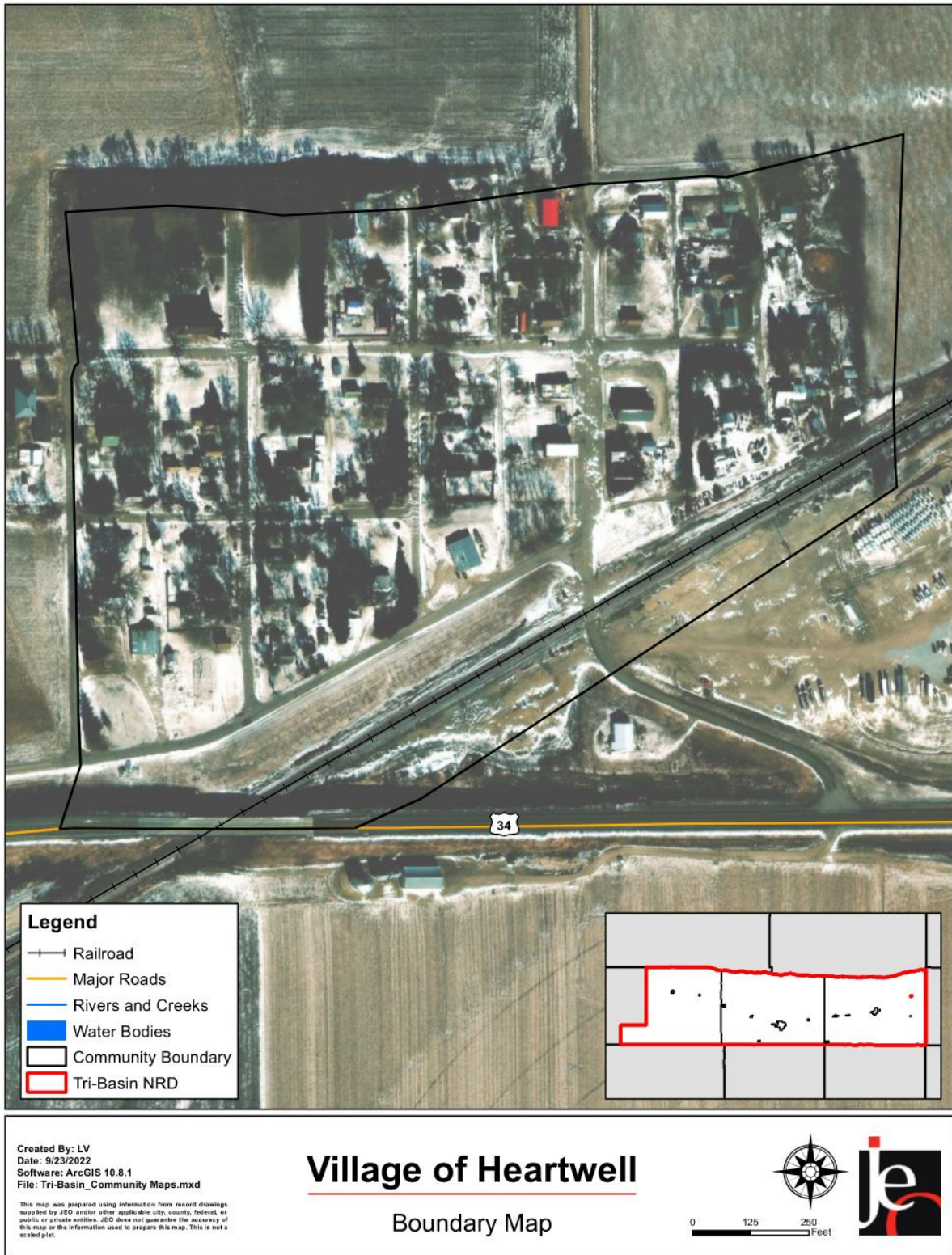
**Figure HRT.1: Population 1920 - 2020**



<sup>37</sup> United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.



Figure HRT.2: Village of Heartwell



The young, elderly, and minority populations may be more vulnerable to hazards than other groups. Looking at Heartwell’s population:

- **12.3% is non-white.** Since 2010, Heartwell has become more ethnically diverse. In 2010, 11.3% of the Heartwell’s population was non-white. By 2020, 12.3% was non-white.<sup>38</sup>
- **Median age of 29.8.** The median age of Heartwell was 29.8 years old in 2020. The population became older since 2010, when the median age was 24.5.<sup>39</sup>

**Figure HRT.3: Heartwell’s Population Pyramid**



The figure above shows Heartwell’s population percentage broken down by sex and five-year age groups. Heartwell’s population is bottom heavy, suggesting a greater number of young families and children who will likely contribute to an increasing population in the future.

### Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards like extreme heat and flooding than other groups. Heartwell’s population has:

- **6.5% of people living below the poverty line.** The poverty rate (6.5%) in the Village of Heartwell was lower than the state’s poverty rate (10.4%) in 2020.<sup>40</sup>
- **\$52,500 median household income.** Heartwell’s median household income in 2020 (\$52,500) was \$10,515 lower than the state (\$63,015).<sup>40</sup>
- **10.2% unemployment rate.** In 2020 Heartwell has a higher unemployment rate (10.2%) when compared to the state (3.4%).<sup>40</sup>

38 United States Census Bureau. “2020 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/>.

39 United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/>.

40 United States Census Bureau. “2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/>.



- **18.1% of workers commuted 30 minutes or more to work.** Fewer workers in Heartwell commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (18.1% compared to 43.2%).<sup>41</sup>

### Major Employers

The major employer within Heartwell is the Nutrien Plant. A large percentage of residents commute to Hastings, Minden, and Kearney for employment.

## Housing

Multiple factors inform the vulnerability of housing units to hazard events. Housing age, for example, may indicate which housing units were built prior to the development of state building codes. Older houses and vacant housing generally more vulnerable to hazards if poorly maintained. Additionally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. Renters are less likely than homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards. Heartwell's housing stock has:

- **86.3% of housing built prior to 1970.** Heartwell has a larger share of housing built prior to 1970 than the state (86.3% compared to 45.5%).<sup>42</sup>
- **0% of housing units vacant.** Heartwell has a lower vacancy rate 0% compared to the rest of the state (9.2%).<sup>42</sup>
- **0% mobile and manufacture housing.** The Village of Heartwell has a smaller share of mobile and manufactured housing (0%) compared to the state (3.3%).<sup>42</sup>
- **47.7% renter-occupied.** The rental rate of Heartwell was 47.7% in 2020. This is higher than the state's rate of 33.8%.<sup>42</sup>

### Broadband Access

Internet or broadband access – through Wi-Fi or cellphone coverage – is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **86.4% of households have a broadband internet subscription.** Heartwell has a slightly larger share of households with broadband (86.4%) compared to the state (85.6%).<sup>43</sup>

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41 United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/>.

42 United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/>.

43 United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.

## Governance

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

- Clerk/Treasurer
- Volunteer Fire and Rescue Department
- Kearney Housing Agency
- Street Superintendent

## Capability Assessment

The planning team assessed the Village of Heartwell's hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. The local planning team does not anticipate improving on or adding to existing capabilities due to limited funding, time, and staff.

Municipal funds are limited to maintaining current facilities and systems. However, a large portion of the budget is not already dedicated to a specific project. Funds have stayed the same over recent years.

**Table HRT.2: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	No
	Building Codes	Yes (State)
	National Flood Insurance Program	No
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes
Other (if any)	-	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No

Capability/Planning Mechanism		Yes/No
	Local staff who can assess community's vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
<b>Fiscal Capability</b>	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	No
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	Yes (Sewer Only)
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	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 HRT.3: Overall Capability**

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

### Social Vulnerability

FEMA’s National Risk Index is a new mapping tool that analyzes a community’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County, which includes Heartwell is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>44</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.
- **Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

An additional tool developed by Headwaters Economics, the Rural Capacity Index, evaluates rural communities and counties across the country for local capacity. Capacity includes the staffing, resources, and expertise to both apply for funding and fulfill reporting requirements, as well as design, build, and maintain infrastructure products over the long term. Communities lacking local capacity often have the greatest need for infrastructure investments, particularly rural communities and communities of color. The Rural Capacity Index helps identify communities with limited capacity on a scale of 0 (no capacity) to 100 (high capacity). This index is based on 10 variables that can function as proxies for community capacity. The following table lists the components and scores for the Village of Heartwell compared to the county.

**Table HRT.4: Rural Capacity Index**

Components of Index	Village of Heartwell	Kearney County
County is Metropolitan?	Yes	Yes
Has a Head of Planning?	No	Yes
Has a College or University?	No	No
Adults with Higher Education:	11%	27%
Families Below Poverty Level:	0%	6%
Households with Broadband:	84%	81%
People without Health Insurance:	4%	6%
Voter Turnout:	80%	80%
Income Stability Score (0 to 100):	23	23
Population Change (2000 to 2019):	3	-387
<b>Overall Rural Capacity Index Score</b>	<b>55</b>	<b>76</b>

Source: Headwaters Economics<sup>45</sup>

### National Flood Insurance Program (NFIP)

Heartwell is not a member of the NFIP because there has not been a need in the past. The village is not located in the floodplain. One flood event has occurred in the past, but it did not cause any damages. The initial FIRM for the village was delineated on 1/16/2004 and the current effective map date is 1/16/2004. Heartwell does not currently have any repetitive loss or severe repetitive loss structures. The village is not interested in joining the NFIP because it is not located in the floodplain.

44 Federal Emergency Management Agency. “National Risk Index”. Accessed July 2022. <https://hazards.fema.gov/nri/map>.

45 Headwaters Economics. January 2022. “Rural Capacity Map”. Accessed July 2022. <https://headwaterseconomics.org/equity/rural-capacity-map/>.

### Plans and Studies

Heartwell does not have any of its own planning documents that discuss or relate to hazard mitigation. It is an annex in the county’s local emergency operations plan and that is listed below along with a short description of how it contains hazard mitigation principles. If the village adds any planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan.

#### Kearney County Local Emergency Operations Plan (2018)

Heartwell is an annex in the Kearney County Local Emergency Operations Plan (LEOP). The hazard mitigation plan has not been integrated with this plan, however, 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. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

### Future Development Trends

Over the past five years, there have been no changes within the community. This likely keeps vulnerability to hazards the same. However, if existing buildings and infrastructure are not being well maintained then vulnerability may increase. There are no planned commercial or housing developments in the next five years. With a projected growth in population additional housing is likely to be built over the next decade.

### Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

#### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Heartwell.

**Table HRT.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1*	Kearney County Sheriff/Dispatch	-	N
2*	Minden Fire	-	N
3	Village Hall	-	N

\*Not mapped but located in Minden, NE.

## Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines for the Village of Heartwell are included in the table below.

**Table HRT.6: Food, Water, and Shelter Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
4	Community Center	-	N
5*	Masons Market	-	N

\*Not mapped but located in Minden, NE

## Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. The following medical and health facilities are located within the community.

**Table HRT.7: Health and Medical Lifelines**

CL Number	Name	Type of Facility	Number of Beds	Generator (G) Shelter (S)	Floodplain (Y/N)
6*	Kearney County Health Services	Hospital & Rural Health Clinic	10	G	N

Source: Nebraska Department of Health and Human Services<sup>46,47,48,49</sup>

\*Not mapped but located in Minden, NE

## Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for Heartwell.

**Table HRT.8: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
7	SPPD Substation	-	N

## Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the Village of Heartwell are included in the table below.

**Table HRT.9: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
8	Alert Siren	-	N

46 Department of Health and Human Services. 2022. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

47 Department of Health and Human Services. 2022. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

48 Department of Health and Human Services. 2022. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

49 Department of Health and Human Services. 2022. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).



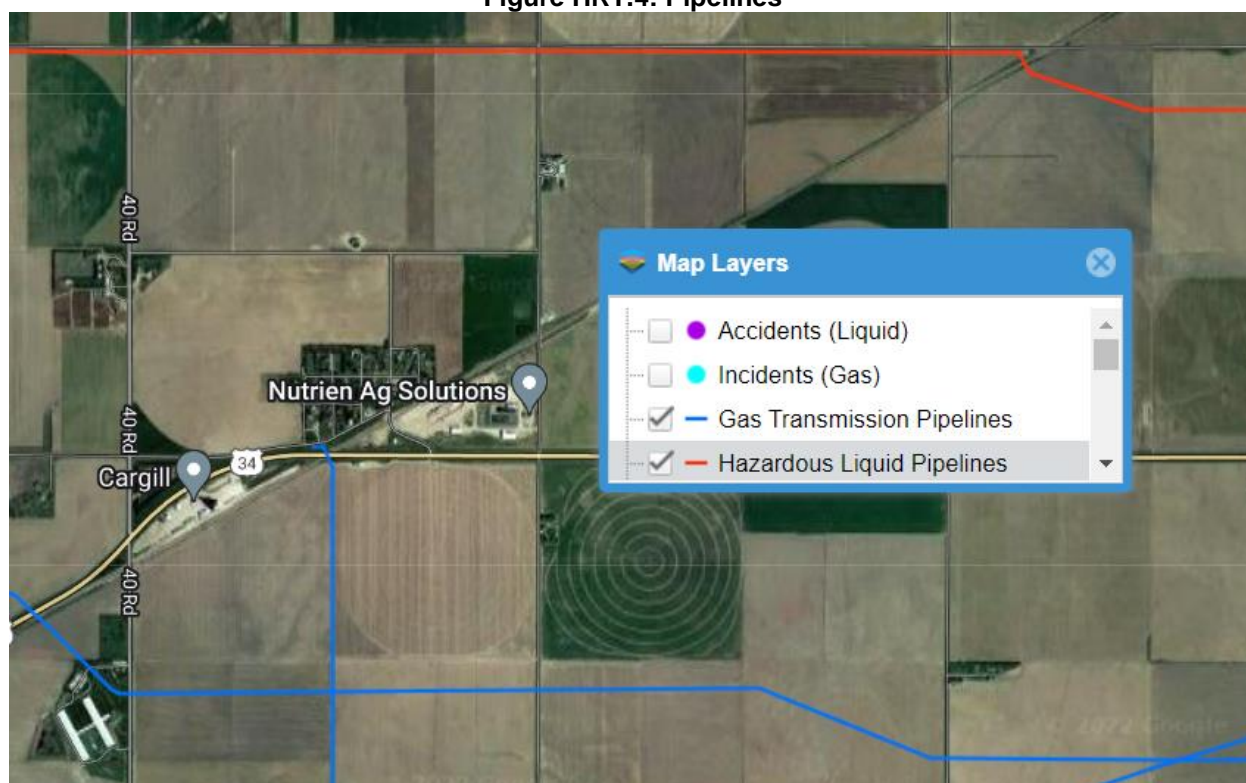
## Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Heartwell's major transportation corridor includes U.S. Highway 34. It is traveled by an average of 2,455 vehicles daily, 480 of which are trucks.<sup>50</sup> Heartwell has one Burlington Northern Santa Fe Railway/Amtrak line traveling through the southern portion of the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No significant transportation events have occurred locally.

## Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are two gas transmission and one hazardous liquid pipeline that travel through the community and can be seen on the figure below.

Figure HRT.4: Pipelines



Source: National Pipeline Mapping System<sup>51</sup>

50 Nebraska Department of Transportation. 2021. "Annual Average Daily Traffic Flow." Accessed July 2022.

<https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

51 National Pipeline Mapping System. 2022. "Public Viewer." Accessed July 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.



According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical sites within or near Heartwell which house hazardous materials (listed below).

**Table HRT.10: Chemical Storage Lifelines**

CL Number	Name	Generator (G)	Floodplain (Y/N)
9	CenturyLink	-	N
10	Nutrien Ag Solutions	-	N
11	Nutrien Ag Solutions	-	N

Source: Nebraska Department of Environment and Energy<sup>52</sup>

### Other Community Lifelines

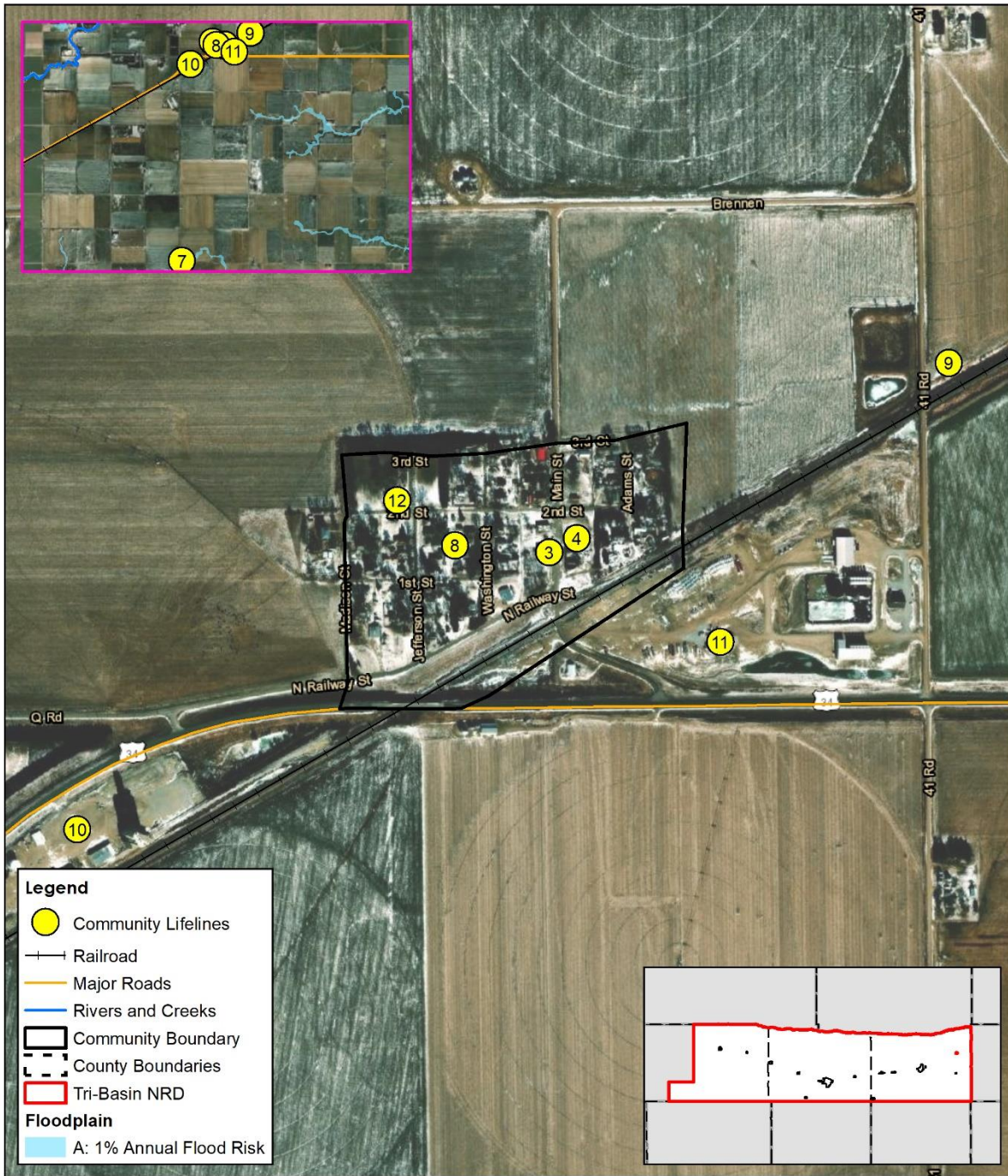
The Village of Heartwell identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the community. The other community lifelines are listed in the table below.

**Table HRT.11: Other Community Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
12	St. John's Catholic Church	-	N

<sup>52</sup> Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.

Figure HRT.5: Community Lifelines



Created By: AGL  
 Date: 12/13/2022  
 Software: ArcGIS 10.8.1  
 File: Tri Basin Community Lifelines Heartwell.mxd

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

**Heartwell**  
 Community Lifelines

A north arrow is located to the left of the JEI logo. Below the north arrow is a scale bar with markings for 0, 300, and 600 feet. The JEI logo consists of the letters 'je' in a stylized font, with 'je' in white on a black background and 'i' in red. Below the logo, it reads 'JEO CONSULTING GROUP INC'.

## Parcel Improvements and Valuation

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

**Table HRT.12: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
36	\$990,910	0	\$0	0%

Source: County Assessor, 2022

## Historical Occurrences

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

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Heartwell which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the Village of Heartwell. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Severe Thunderstorms

Hail has the potential to cause widespread property and crop damages. According to the NCEI, a storm with hailstones up to 4.5 inches swept through the area in May 1998, resulting in over \$50,000 in property damages. More recently Hail in April 2012, caused \$500,000 in damages to roofs, trees, and siding. As an agricultural community, a large hailstorm that damages crops would likely cause negative impacts on the local economy. Village owned buildings do not have hail resistant roofing but are insured against hail and other storm damages. Residents are notified of severe weather through the alert siren, television, radio, and phone applications.

### Severe Winter Storms

The local planning team indicated that heavy snow drifting tends to occur on the west side of town, on Madison Street, and on Railway Street. This can cause transportation issues due to hazardous roads. Snow removal in the community is handled by village employees using a small tractor. Snow fences are not used in the community. Heartwell has a higher vulnerability to power loss with no power lines buried and no backup generators. In addition, there is no identified shelter area that residents can use during a power outage and extremely low temperatures.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Public Awareness and Education
Description	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$500+
Local Funding	General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started. The village currently does not have the capability to implement this project.

### Kept Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide portable or stationary sources of backup power for community lifelines.
Hazard(s) Addressed	Extreme Heat, Flooding, Grass/Wildfire, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	\$75,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started. The village does not currently have the capability to implement this project and will have to plan and budget for the purchase.

## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., 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 Chairman and Village Clerk will be responsible for reviewing and updating this community profile outside of the five-year update. Heartwell will review the plan annually and the public will be notified through village board meetings.

**Community Profile**

**City of Minden**

**Tri-Basin NRD  
Hazard Mitigation Plan**

**2023**



## Local Planning Team

The City of Minden’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by members of the local planning team.

**Table MND.1: Minden Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Darin Fischer	Utility Superintendent	City of Minden	Minden	-
Chris Klahn	Street Superintendent	City of Minden	Minden	Minden
Bradley Butler	Chief of Police	City of Minden	Minden	-
Luke Poore	CEO	Kearney County Health Services	Minden	Minden
Kendra Brown	CNO	Kearney County Health Services	Minden	-

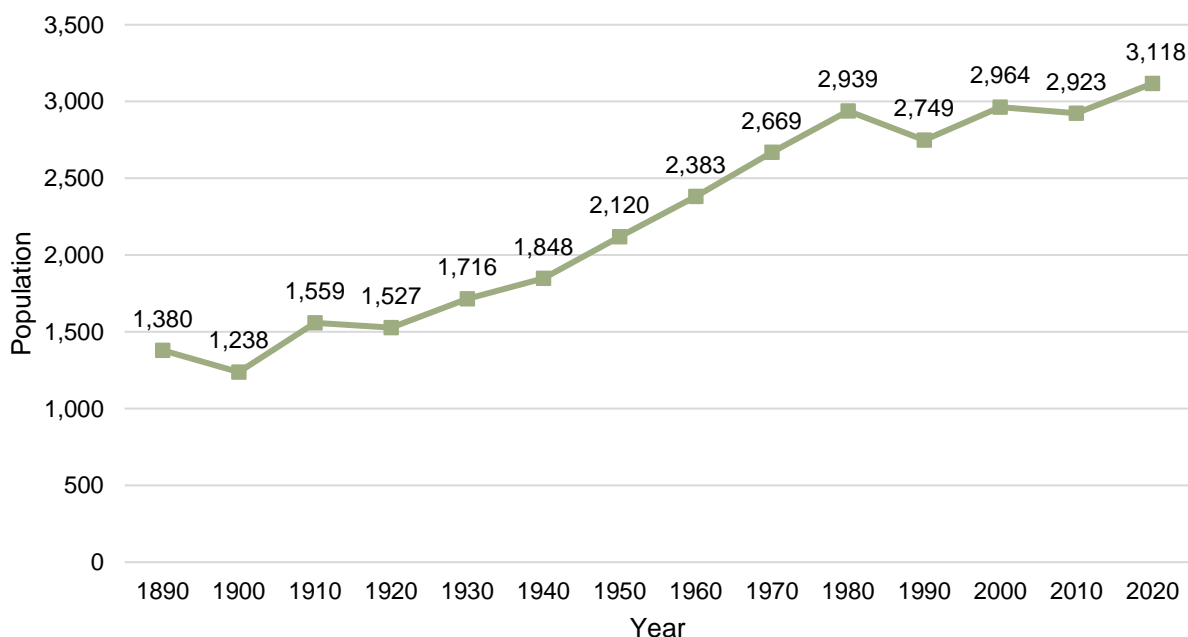
## Location and Geography

The City of Minden is in central Kearney County and covers an area of 2.2 square miles. It is the county seat and largest community in the county. No major bodies of water are located near the city.

## Demographics

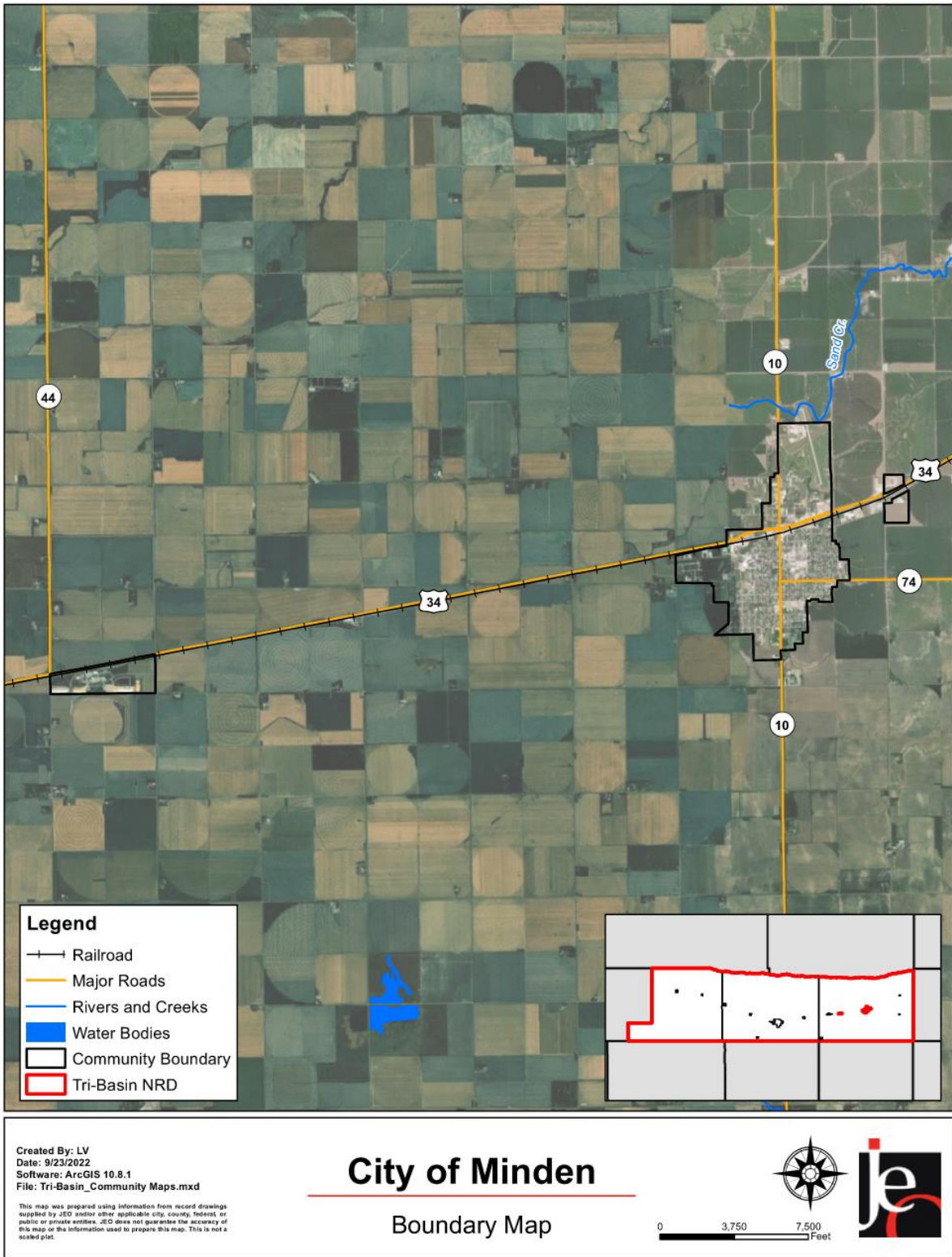
The following figure displays the historical population trend for the City of Minden. This figure indicates that the population of Minden has been increasing since 2010 to 3,118 people in 2020. Increasing populations are associated with more robust hazard mitigation and emergency planning requirements for development. Growing populations can also increase tax revenues, allowing communities to pursue additional mitigation projects. Minden’s population accounted for 15.2% of Kearney County’s population in 2020.<sup>53</sup>

**Figure MND.1: Population 1890 - 2020**



53 United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.

Figure MND.2: City of Minden

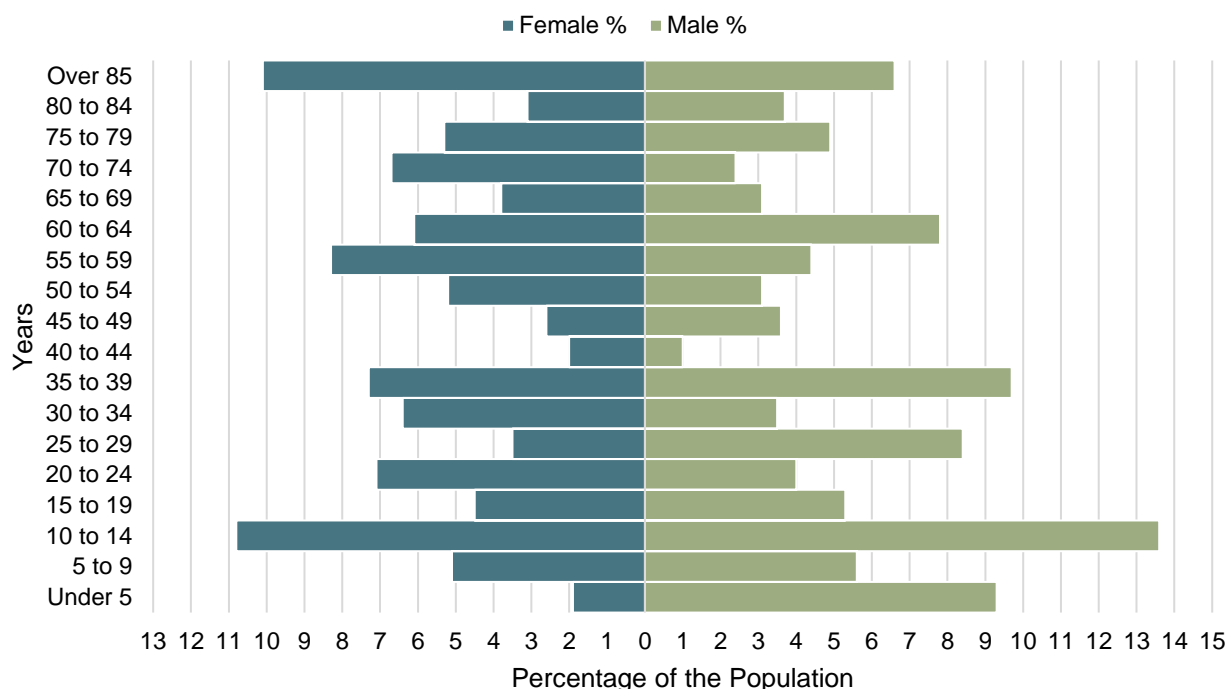




The young, elderly, and minority populations may be more vulnerable to hazards than other groups. Looking at Minden’s population:

- **10.2% is non-white.** Since 2010, Minden has become more ethnically diverse. In 2010, 3.4% of the Minden’s population was non-white. By 2020, 10.2% was non-white.<sup>54</sup>
- **Median age of 39.2.** The median age of Minden was 39.2 years old in 2020. The population became younger since 2010, when the median age was 47.1.<sup>55</sup>

**Figure MND.3: Minden’s Population Pyramid**



The figure above shows Minden’s population percentage broken down by sex and five-year age groups. Minden’s population is bottom heavy, suggesting a greater number of young families and children who will likely contribute to an increasing population in the future.

## Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards like extreme heat and flooding than other groups. Minden’s population has:

- **13.6% of people living below the poverty line.** The poverty rate (13.6%) in the City of Minden was higher than the state’s poverty rate (10.4%) in 2020.<sup>56</sup>
- **\$50,739 median household income.** Minden’s median household income in 2020 (\$50,739) was \$12,276 lower than the state (\$63,015).<sup>56</sup>
- **0% unemployment rate.** In 2020 Minden has a lower unemployment rate (0%) when compared to the state (3.4%).<sup>56</sup>

54 United States Census Bureau. “2020 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/>.

55 United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/>.

56 United States Census Bureau. “2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/>.

- **30.2% of workers commuted 30 minutes or more to work.** Fewer workers in Minden commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (30.2% compared to 47.0%).<sup>57</sup>

### Major Employers

Major employers within Minden include Minden Public Schools, Royal Engineered Composites, Kearney County Health Service, and Bethany Home. Residents also commute to Kearney, Hastings, and Holdrege for employment.

## Housing

Multiple factors inform the vulnerability of housing units to hazard events. Housing age, for example, may indicate which housing units were built prior to the development of state building codes. Older houses and vacant housing generally more vulnerable to hazards if poorly maintained. Additionally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. Renters are less likely than homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards. Minden's housing stock has:

- **51% of housing built prior to 1970.** Minden has a larger share of housing built prior to 1970 than the state (51.0% compared to 45.5%).<sup>58</sup>
- **8.8% of housing units vacant.** Minden has a lower vacancy rate 8.8% compared to the rest of the state (9.2%).<sup>58</sup>
- **6.0% mobile and manufacture housing.** The City of Minden has a larger share of mobile and manufactured housing (6.0%) compared to the state (3.3%).<sup>58</sup> Approximately 40 mobile homes are located south of Highway 6/34 along Highway 10.
- **27.6% renter-occupied.** The rental rate of Minden was 27.6% in 2020. This is lower than the state's rate of 33.8%.<sup>58</sup>

### Broadband Access

Internet or broadband access – through Wi-Fi or cellphone coverage – is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **78.7% of households have a broadband internet subscription.** Minden has a smaller share of households with broadband (78.7%) compared to the state (85.6%).<sup>59</sup>

57 United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/>.

58 United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/>.

59 United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.

**Governance**

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

- Clerk/Treasurer
- Fire Department
- Police Department
- Community Redevelopment Authority Board
- Planning and Zoning Commission
- Housing Agency
- Park and Recreation Board
- Floodplain Administrator
- Building Official
- Public Works
- Utilities

**Capability Assessment**

The planning team assessed the City of Minden’s hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the community’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. In the future the city plans on improving on existing capabilities by updating the comprehensive plan and renewing Tree City USA for 2022.

Municipal funds are sufficient to pursue new capital projects if they are budgeted ahead of time. A large portion of funds are already dedicated to the Minden West Estates Phase II housing development. Funds have stayed the same over recent years.

**Table MND.2: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	Yes
	Building Codes	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes

Capability/Planning Mechanism		Yes/No
	Other (if any)	-
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	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)	Water System Emergency Response Plan, Downtown Revitalization Plan, Recreational Master Plan
<b>Fiscal Capability</b>	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	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	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)	No
	Natural disaster or safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree City USA	Yes
	Other (if any)	

**Table MND.3: Overall Capability**

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

### Social Vulnerability

FEMA’s National Risk Index is a new mapping tool that analyzes a community’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County, which includes Minden is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>60</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.
- **Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

An additional tool developed by Headwaters Economics, the Rural Capacity Index, evaluates rural communities and counties across the country for local capacity. Capacity includes the staffing, resources, and expertise to both apply for funding and fulfill reporting requirements, as well as design, build, and maintain infrastructure products over the long term. Communities lacking local capacity often have the greatest need for infrastructure investments, particularly rural communities and communities of color. The Rural Capacity Index helps identify communities with limited capacity on a scale of 0 (no capacity) to 100 (high capacity). This index is based on 10 variables that can function as proxies for community capacity. The following table lists the components and scores for the City of Minden compared to the county.

**Table MND.4: Rural Capacity Index**

Components of Index	City of Minden	Kearney County
County is Metropolitan?	Yes	Yes
Has a Head of Planning?	Yes	Yes
Has a College or University?	No	No
Adults with Higher Education:	21%	27%
Families Below Poverty Level:	6%	6%
Households with Broadband:	79%	81%
People without Health Insurance:	7%	6%
Voter Turnout:	80%	80%
Income Stability Score (0 to 100):	23	23
Population Change (2000 to 2019):	-156	-387
<b>Overall Rural Capacity Index Score</b>	<b>64</b>	<b>76</b>

Source: Headwaters Economics<sup>61</sup>

60 Federal Emergency Management Agency. “National Risk Index”. Accessed July 2022. <https://hazards.fema.gov/nri/map>.

61 Headwaters Economics. January 2022. “Rural Capacity Map”. Accessed July 2022. <https://headwaterseconomics.org/equity/rural-capacity-map/>.

### **National Flood Insurance Program (NFIP)**

Minden is a member of the NFIP having joined on 9/24/1984. The city's Floodplain Administrator (Justin Cline) oversees the commitments and requirements of the NFIP including enforcement of the local floodplain management regulations. The initial FIRM for the city was delineated on 1/16/2004 and the current effective map date is 1/16/2004, which has been adopted and incorporated into the local floodplain management regulations on 1/5/2004. As of April 12, 2023, there is one NFIP policy in-force for the city covering \$42,000. Minden does not currently have any repetitive loss or severe repetitive loss structures. The city requires permits for developments in the floodplain and the permits officer reviews each construction permit to ensure compliance with the regulations.

After a flood event, the community implements substantial improvement and substantial damage provisions as outlined in the Substantial Damage Assessment Handbook from the Nebraska Department of Natural Resources, which can be found here: [https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301\\_eSDA\\_Handbook\\_FINAL.pdf](https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301_eSDA_Handbook_FINAL.pdf). The local planning team has stated that Minden will remain in good standing and continue involvement with the NFIP in the future.

### **Plans and Studies**

Minden has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the city updates these planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update. The city also has a Recreational Master Plan and Downtown Revitalization Plan both from 2016. However, those do not discuss or contain hazard mitigation principles.

#### **Building Code (2021)**

The building code sets standards for constructed buildings and structures. The city has adopted the 2018 International Building Code with no amendments made. Enforcement of the code is done by the permits officer. This officer reviews each building permit application for code compliance. The hazard mitigation plan has not been integrated into it.

#### **City of Minden Water Conservation, Drought and Emergency Contingency Plan**

As part of the city's ordinances, Minden has a water conservation, drought, and emergency contingency plan. This plan contains discusses a series of stages depending upon the severity of water demand. Each stage identifies a trigger, goals, education actions, management actions, regulator actions, and trigger declaration. It also outlines penalties for violation. This plan has not been integrated with the hazard mitigation plan.

#### **Comprehensive Plan (2013)**

The comprehensive plan is designed to guide the future actions and growth of the city. The hazard mitigation plan has not been integrated due to its age. However, it contains goals aimed at safe growth, directs housing away from chemical storage facilities, directs housing and vulnerable populations away from major transportation routes, and encourages infill. The comprehensive plan is currently undergoing an update.



### **Floodplain Regulations (2004), Zoning Ordinance (2009), and Subdivision Regulations (2004)**

The city's floodplain regulations, zoning ordinance, and subdivision regulations outline where and how development should occur in the future. Due to their age, the hazard mitigation plan has not been integrated with these documents; however, the documents discourage development in the floodplain, discourage housing and vulnerable populations near chemical storage sites, include well setback requirements, and include the ability to implement water restrictions. There is currently no plan to update any of these documents.

### **Kearney County Local Emergency Operation Plan (2018)**

Minden is an annex in the Kearney County Local Emergency Operations Plan (LEOP). The hazard mitigation plan has not been integrated with this plan, however, 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. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

### **Water System Emergency Response Plan (2021)**

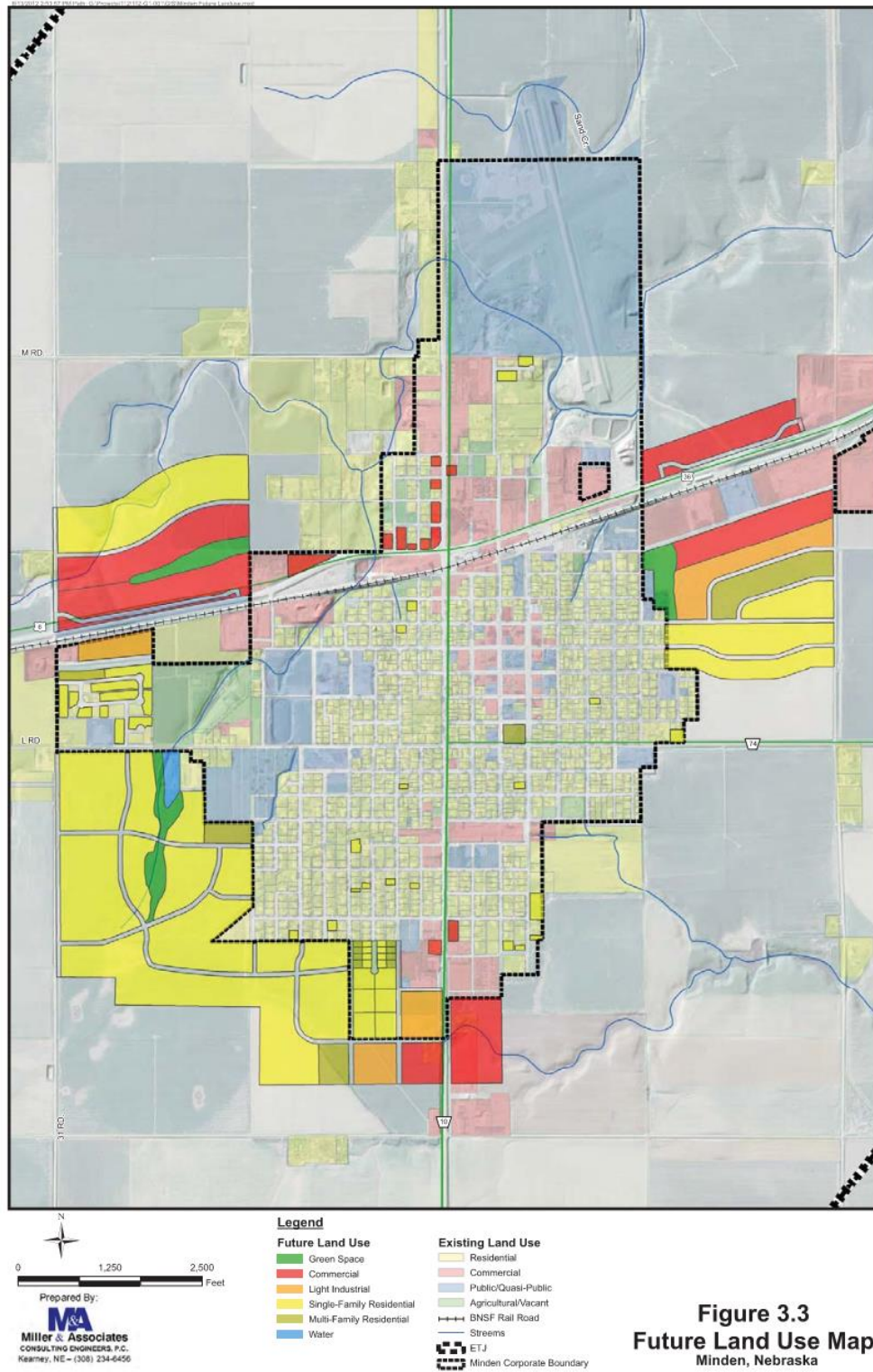
A water system emergency response plan serves as a guideline for water operators and city administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events. The hazard mitigation plan has not been integrated with this plan.

## **Future Development Trends**

Over the past five years, new housing has occurred in the Minden West Estates housing development and Lempka Addition. New businesses (BK Commodities, carwash, Midwest Meats) were added, a new lift station was constructed, and a new high school building was built. These types of developments are all consistent with the population growth the city has seen. The new developments likely increased the city's vulnerability to hazards as there is now more property that could be damaged. However, that increase in vulnerability is minimized as none of the newly constructed homes or buildings were located in the floodplain or other known hazardous areas. In addition to the new developments, the old high school building was torn down, five homes were demolished, new streets were paved, water mains were placed, new storm drains were installed, and the medical clinic/hospital was remodeled. These changes likely decreased the city's vulnerability to hazards as infrastructure was updated and buildings were removed that could have become dilapidated.

In the next five years, additional housing will be built in the Minden West Estates Phase II on the west side of Minden north of 1<sup>st</sup> Street. The figure below shows Minden's future land use map. Commercial developments will occur along the highway with single family residential occurring mostly on the southwestern portion of the city. These developments are likely due to the projected population growth that the city will see in the next decade.

Figure MND.4: Future Land Use Map



## Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Minden.

**Table MND.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	City Shop	-	N
2	County Courthouse	G	N
3	Minden City Hall	G	N
4	Minden Fire Department	G	N
5	Minden Police Department / County Dispatch	G	N

### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines for the City of Minden are included in the table below.

**Table MND.6: Food, Water, and Shelter Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
6	City Water and Light	-	N
7	CL Jones Middle School	S	N
8	Mason's Supermarket	G	N
9	Minden East Elementary	S	N
10	Minden High School	G,S	N
11	United Methodist Church	S	N
12	Water Tower #1	-	N
13	Water Tower #2	-	N
14	Water Treatment Plant	G	N

## Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. The following medical and health facilities are located within the community.

**Table MND.7: Health and Medical Lifelines**

CL Number	Name	Type of Facility	Number of Beds	Generator (G) Shelter (S)	Floodplain (Y/N)
15	Bethany Home, Inc	Assisted Living Facility & Long Term Care	139	Y	N
16	Kearney County Health Services	Hospital & Rural Health Clinic	10	Y	N

Source: Nebraska Department of Health and Human Services<sup>62,63,64,65</sup>

## Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for Minden.

**Table MND.8: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
17	Casey's General Store	-	N
18	Fill-N-Chill	-	N
19	Substation	-	N

## Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the City of Minden are included in the table below.

**Table MND.9: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
20	Cell Tower #1	-	N
21	Cell Tower #2	-	N
22	Communications Tower	-	N
23	Tornado Siren #1	-	N
24	Tornado Siren #2	-	N
25	Tornado Siren #3	-	N
26	Tornado Siren #4	-	N
27	Tornado Siren #5	-	N

62 Department of Health and Human Services. 2022. "State of Nebraska: Assisted Living Facilities." <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

63 Department of Health and Human Services. 2022. "State of Nebraska Roster: Hospitals." <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

64 Department of Health and Human Services. 2022. "State of Nebraska Roster: Long Term Care Facilities." <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

65 Department of Health and Human Services. 2022. "State of Nebraska Roster: Rural Health Clinic." [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).



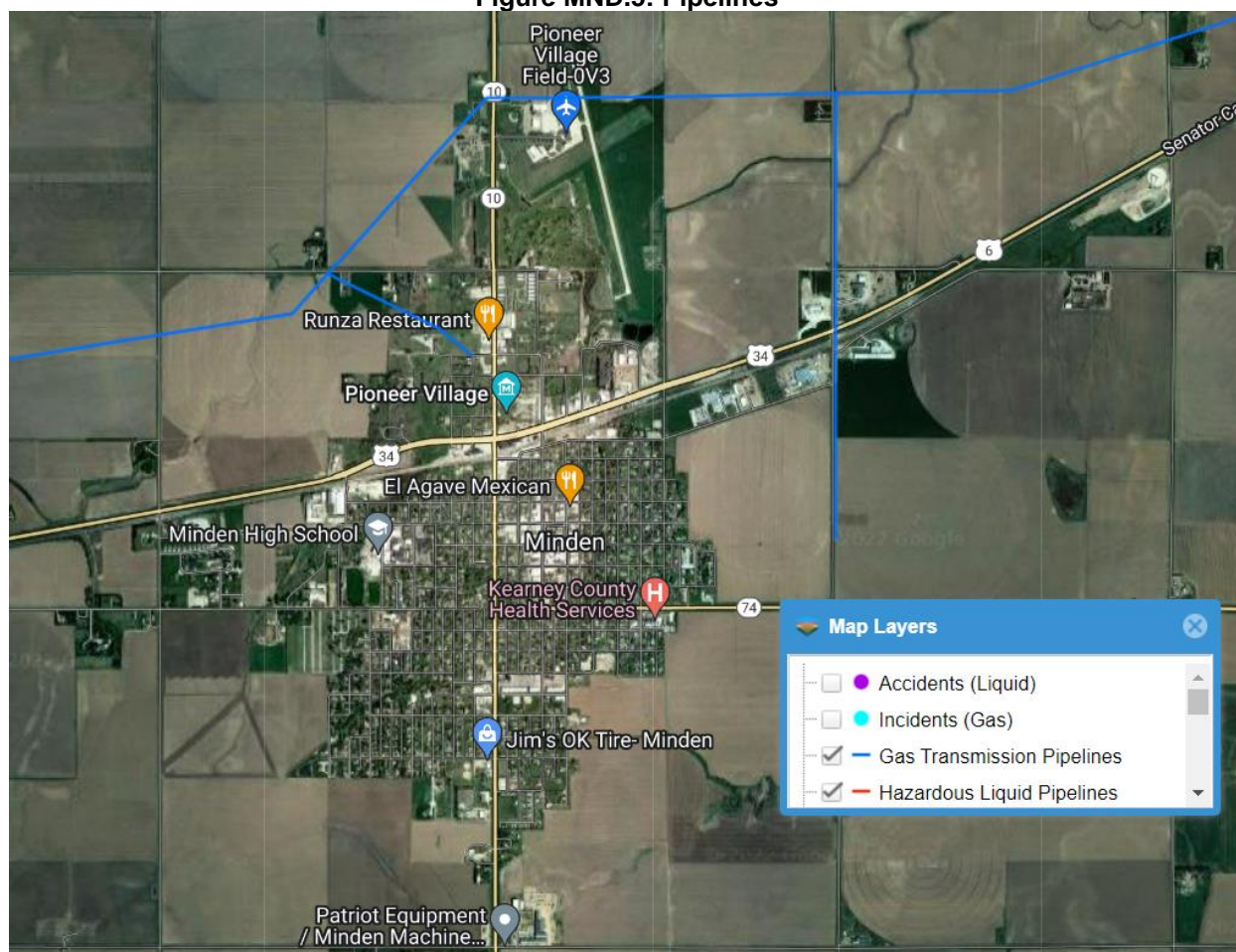
## Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Minden’s major transportation corridors include U.S. Highway 34 and State Highways 10 and 74. The most traveled route is Highway 10 with an average of 5,470 vehicles daily, 340 of which are trucks.<sup>66</sup> Minden has one Burlington Northern Santa Fe Railway/Amtrak line traveling on the northern portion of the community. There are two airports located near the city. The private airport Cavanaugh Airport is located three miles east and Pioneer Village Field public airport is one mile northeast of Minden. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents.

## Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are several gas transmission pipelines that travel through the community and can be seen in the figure below.

Figure MND.5: Pipelines



Source: National Pipeline Mapping System<sup>67</sup>

66 Nebraska Department of Transportation. 2021. “Annual Average Daily Traffic Flow.” Accessed July 2022.

<https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

67 National Pipeline Mapping System. 2022. “Public Viewer.” Accessed July 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are eight chemical sites within or near Minden which house hazardous materials (listed below). The local planning team identified two other chemical storage locations (#36 & 37).

**Table MND.10: Chemical Storage Lifelines**

CL Number	Name	Generator (G)	Floodplain (Y/N)
28	Aurora Co-op Elevator Company	-	N
29	Cooperative Producers Inc.	-	N
30	Cooperative Producers Inc.	-	N
31	Cooperative Producers Inc.	-	N
32	Cooperative Producers Inc.	-	N
33	Minden Machine Shop Inc.	-	N
34	NDOT Minden Yard	-	N
35	Pioneer Ag Supply	-	N
36*	Midwest Chemical	-	N
37*	Minden Lawn & Sprinklers	-	N

Source: Nebraska Department of Environment and Energy<sup>68</sup>

\*Identified by the Local Planning Team

### Other Community Lifelines

The City of Minden identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the community. The other community lifelines are listed in the table below.

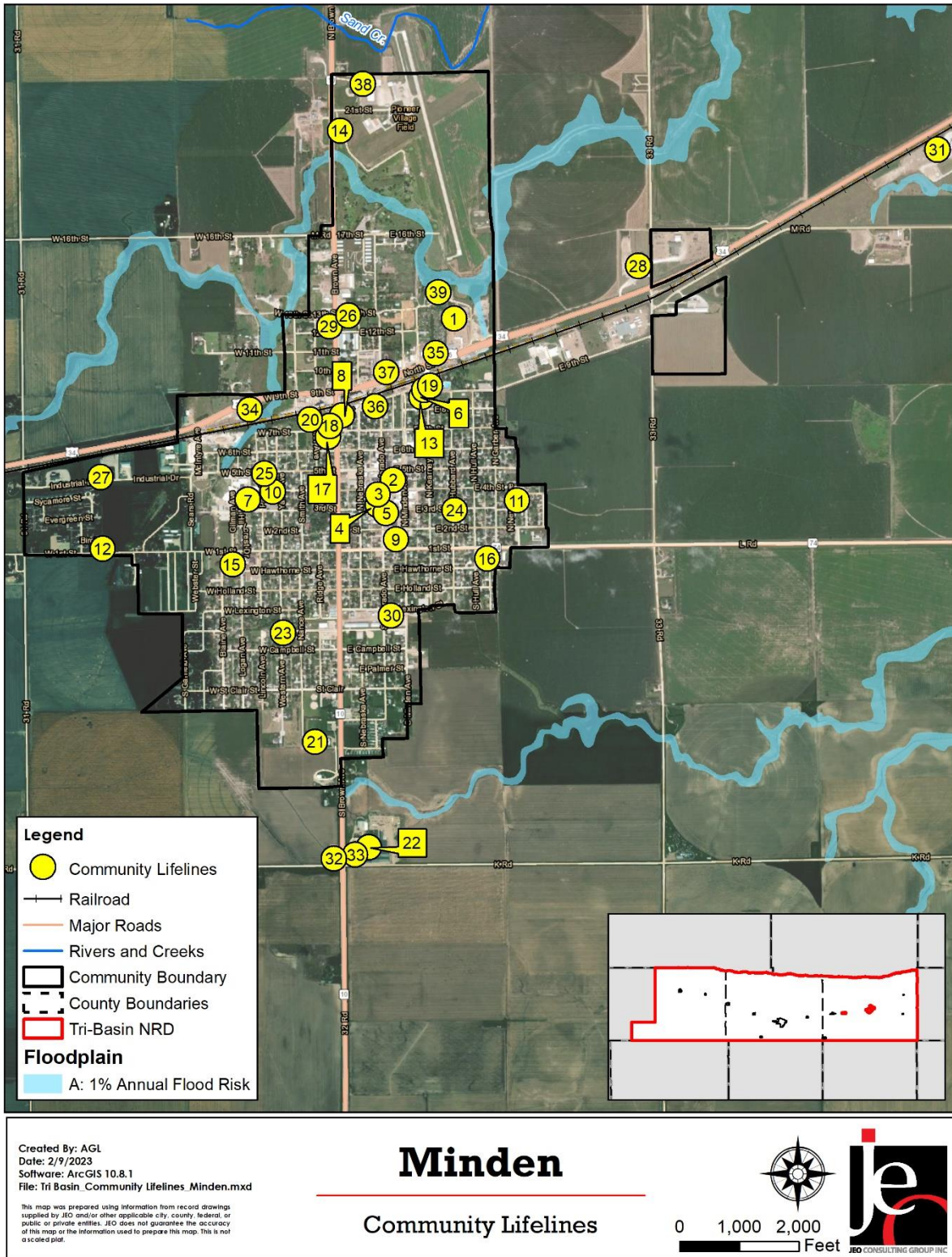
**Table MND.11: Other Community Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
38	Kearney County Fair Grounds	-	N
39	Wastewater Treatment Plant	G	N

68 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.



Figure MND.6: Community Lifelines



## Parcel Improvements and Valuation

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

**Table MND.12: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
1,163	\$164,801,160	2	\$140,225	0.2%

Source: County Assessor, 2022

## Historical Occurrences

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

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Minden which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the City of Minden. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Drought

Drought is a concern to the city because a large portion of the economy is centered around agriculture. A severe, prolonged drought could have a lasting economic impact on the community. Another concern is the increase in fires during drought periods due to a greater amount of dry vegetation. The city has four wells, two water towers, and a water treatment plant. During the summer months, the city has limited water availability due to residential lawn watering. This increase in water usage has caused water restrictions during past droughts for residents and businesses. A summary of the water restrictions is given in the table below. The city has also raised water rates to discourage excessive lawn watering and done water use education. In the future, the city would like to add more wells, a new water tower, and expand the water treatment plant in order to increase capacity.

**Table MND.13: Minden Water Restriction Summary**

Stage	Trigger	Restrictions
Stage 1	Water system demand equals 60% of plant capacity	Public asked to voluntarily reduce outdoor water consumption
Stage 2	Water system demand equals 70% of plant capacity	Staggered lawn watering system imposed and only to be done from 7pm – 11am
Stage 3	Water system demand equals 80% of plant capacity	No outdoor watering

### **Grass/Wildfire**

This hazard was selected as a top concern for Kearney County Health Services. Past wildfire events have caused an increase in patients with burn injuries and smoke inhalation injuries. Concerns related to wildfires include having enough equipment to treat burn patients, having safe indoor air if smoke is in the area, and having to evacuate if a wildfire was near the hospital. In the future, the health service would like to optimize their evacuation plan.

### **Hazardous Materials Release**

This hazard was selected as a top concern for Kearney County Health Services. There have been numerous events where patients have arrived with hazardous chemicals on them. This is a concern because staff may not know which chemicals the patient has been exposed to, putting both the staff and patient in danger. It may also hinder the ability to contain chemicals after entering the building. The hospital has installed a decontamination shower in the ambulance bay and uses the Wiser program to identify hazardous chemicals and proper treatment. In the future, the hospital needs a better way to decontaminate patients who do not arrive by ambulance.

### **Public Health Emergency**

This hazard was selected as a top concern for Kearney County Health Services because of the ongoing COVID-19 pandemic. During this time the hospital had upgrades to the facility for infection control reasons. Upgrades included negative pressure room additions, HVAC ionization, PPE updates, technology updates, and facility workflow changes. This hazard was selected as a top concern because of the potential health impacts for vulnerable populations. In the future the hospital would like to perform a review of patient logistics and focus on enhancing the patient experience.

### **Severe Thunderstorms**

This hazard was selected as a top concern for the city. Concerns regarding severe thunderstorms focus on the potential for damage to property, infrastructure, and surrounding agricultural land. In June 2002, 4.5-inch hail caused \$20,000,000 in property damage to roofs, siding, cars, windows, and trees. Severe Thunderstorms are an annual occurrence for the city and region. Residents are notified of severe weather through radio, television, local media, and social media. The local planning team estimates that power is lost throughout the city less than once a year. However, with less than 10% of power lines buried, individual areas may experience power loss more often. Several community lifelines have backup power generators.

### **Severe Winter Storms**

This hazard was selected as a top concern for the city. Due to ice/snow buildup, severe winter storms have the potential to cause power outages, property damages, and damage to infrastructure. Severe winter storms can hinder transportation, and thus the response of emergency services. In December 2006, a large winter storm impacted south central Nebraska, including Minden. Ice and snow accumulations led to widespread tree damage, power outages, and damage to power lines and poles. Snow removal in the city is handled by the public works department. Equipment includes four plow trucks, a motor grader, two front end loaders, and snow blowers. This equipment is sufficient to handle most snowstorms. Snow fences are used in various places and emergency snow routes are listed below. Warming locations have not been identified.

Emergency Snow Routes:

- Garber from First Street to Hwy. 6 / 34
- Colorado from St. Clair Street to Hwy. 6 / 34
- First Street from the west city limits to Brown Avenue
- St. Clair from Garfield Street to Colorado Street
- Campbell from Blaine Street to Colorado Street
- Third Street from Brown Avenue to Minden Avenue
- Fifth Street from Gilman Street to Garber Street
- Gilman Avenue from First Street to Third Street
- Blaine Street from First Street to St. Clair Street

**Terrorism and Cyber Security**

This hazard was selected as a top concern for Kearney County Health Services due to cyber security concerns. While cyber security issues have never occurred to the hospital, other facilities and health systems have been attacked. This has decreased the ability to share data between health systems, hindering patient care. If a cyber-attack was to occur to the hospital, it would become very difficult to provide safe patient care. Firewall and upgrades in technology have been done to help reduce the likelihood of a cyber-attack. However, additional IT infrastructure is always needed.

**Tornadoes and High Winds**

The city and Kearney County Health Services are both concerned with the potential of tornadoes and high winds to cause significant damage to property and infrastructure, loss of life, loss of emergency services, transportation issues from downed lines/tree, and ultimately, the loss of the community. In May 1998, two F0 tornadoes briefly touched down west of Minden. Luckily, these tornadoes did not cause any reported damages or injuries. In October 1996, a strong cold front brought sustained high winds of 35 – 50mph with gusts up to 70mph into Minden. Trees and roofs were damaged, and power was knocked out for a period during the evening. The event caused a reported \$40,000 in property damages. In the fall of 2021, the hospital sustained damage to the awning, roofing, and HVAC system. There are no safe rooms or storm shelters in the city. There are five tornado sirens in Minden, and they provide coverage to the entire city. To help reduce the risk of power loss trees near electrical lines are trimmed on an annual basis. The hospital would like to expand their generator capacity to power larger equipment.

**Mitigation Strategy**

**Completed Mitigation Actions**

Mitigation Action	Electrical System Looped Distribution/Redundancies
Description	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	Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Status	Completed. Both feeds to the city are now underground.



### New Mitigation Actions

Mitigation Action	Public Awareness and Education
Description	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$500+
Local Funding	General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	City Administrator
Status	Not Started. The city has the capability to implement this project.

### Kept Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide a portable or stationary source of backup power to produce redundant power supplies at community lifelines.
Hazard(s) Addressed	Extreme Heat, Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	\$75,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	City Administration, Kearney County Health Services
Status	In Progress. A backup generator has been purchased for the Recycle/Street Department. Kearney County Health Services would like to expand their generator capacity at the hospital.

Mitigation Action	Bury Power and Service Lines
Description	Bury power lines underground or retrofit existing structures to be less vulnerable to storm events. Electrical utilities should be required to use underground construction methods where possible for future installation of power lines.
Hazard(s) Addressed	Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	\$1,000,000 per Mile
Local Funding	Utility Rates
Timeline	1 Year
Priority	High
Lead Agency	Electrical Department
Status	In Progress. A buried transmission line from the north substation to the city was completed in 2016.  In 2023, residential power lines will be buried in the new west housing subdivision.

Mitigation Action	Implement Water System Improvements
<b>Description</b>	Jurisdictions can update/improve water distribution system. This may include but is not limited to identifying and replacing leaky pipes, assisting homeowners in identifying inefficiencies, transitioning to smart irrigations systems, new water wells, new water tower, and water treatment plant additions.
<b>Hazard(s) Addressed</b>	Drought
<b>Estimated Cost</b>	\$2,500,000+
<b>Local Funding</b>	Utility Rates
<b>Timeline</b>	1 Year
<b>Priority</b>	High
<b>Lead Agency</b>	Water Department
<b>Status</b>	In Progress. New water mains were installed on West Campbell and West Holland when streets were replaced. In 2020, new fire hydrants were installed around the downtown square.  In 2023, new water mains will be installed in the new west residential area.
Mitigation Action	Stormwater System and Drainage Improvements
<b>Description</b>	Improve stormwater drainage on the northeast and south parts of the city.
<b>Hazard(s) Addressed</b>	Flooding
<b>Estimated Cost</b>	\$1,750,000
<b>Local Funding</b>	General Obligation Bond, General Fund, Tax Funds
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	Street Department
<b>Status</b>	In Progress. Engineering plans are currently underway for the southeast part of the city.
Mitigation Action	Tree Maintenance Program
<b>Description</b>	Develop and implement tree maintenance program to remove hazardous trees/tree limbs.
<b>Hazard(s) Addressed</b>	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Estimated Cost</b>	\$500,000
<b>Local Funding</b>	Utility Rates
<b>Timeline</b>	Ongoing
<b>Priority</b>	Medium
<b>Lead Agency</b>	Electrical/Light Department
<b>Status</b>	Ongoing. Tree maintenance is done on an annual basis as issues are identified and funding is available.

## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., 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 Administrator will be responsible for reviewing and updating this community profile outside of the five-year update. Minden will review the plan bi-annually and the public will be notified through city council meetings.



**Community Profile**

**Village of Norman**

**Tri-Basin NRD  
Hazard Mitigation Plan**

**2023**

## Local Planning Team

The Village of Norman’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by the community.

**Table NRM.1: Norman Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Dawn Thompson	Clerk/Treasurer	Village of Norman	-	Minden
Randy Smith	Street Superintendent	Village of Norman	Minden	-

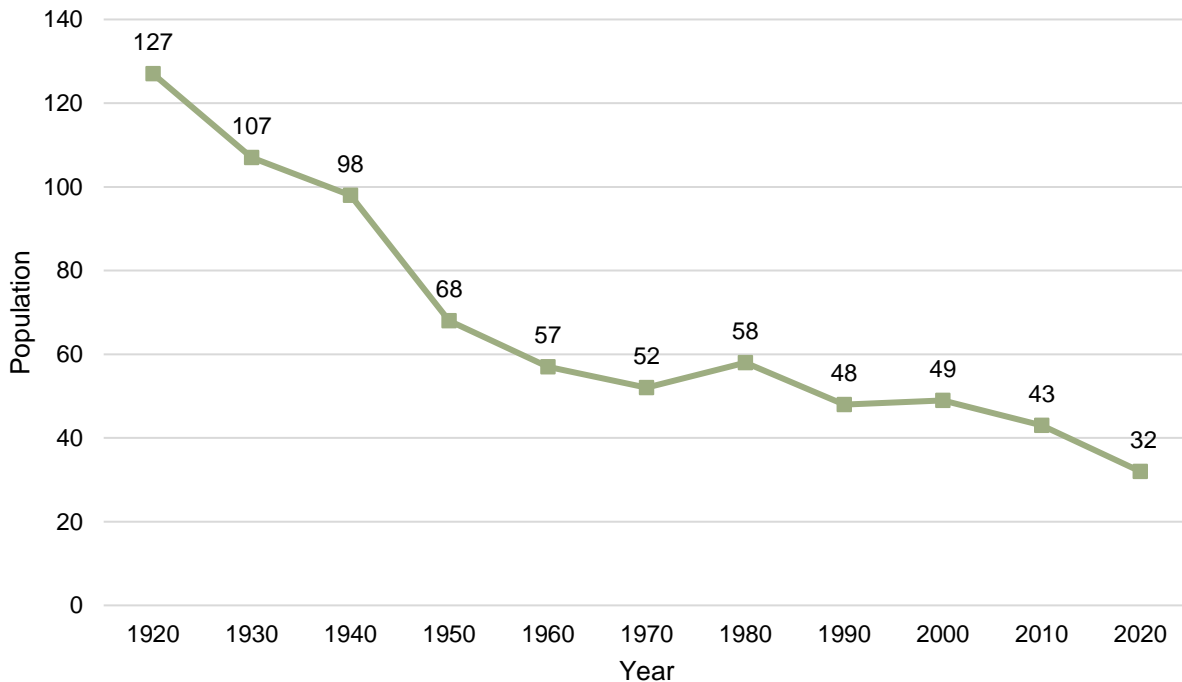
## Location and Geography

The Village of Norman is in east central Kearney County and covers an area of 0.1 square miles. There are no major bodies of water located near the village.

## Demographics

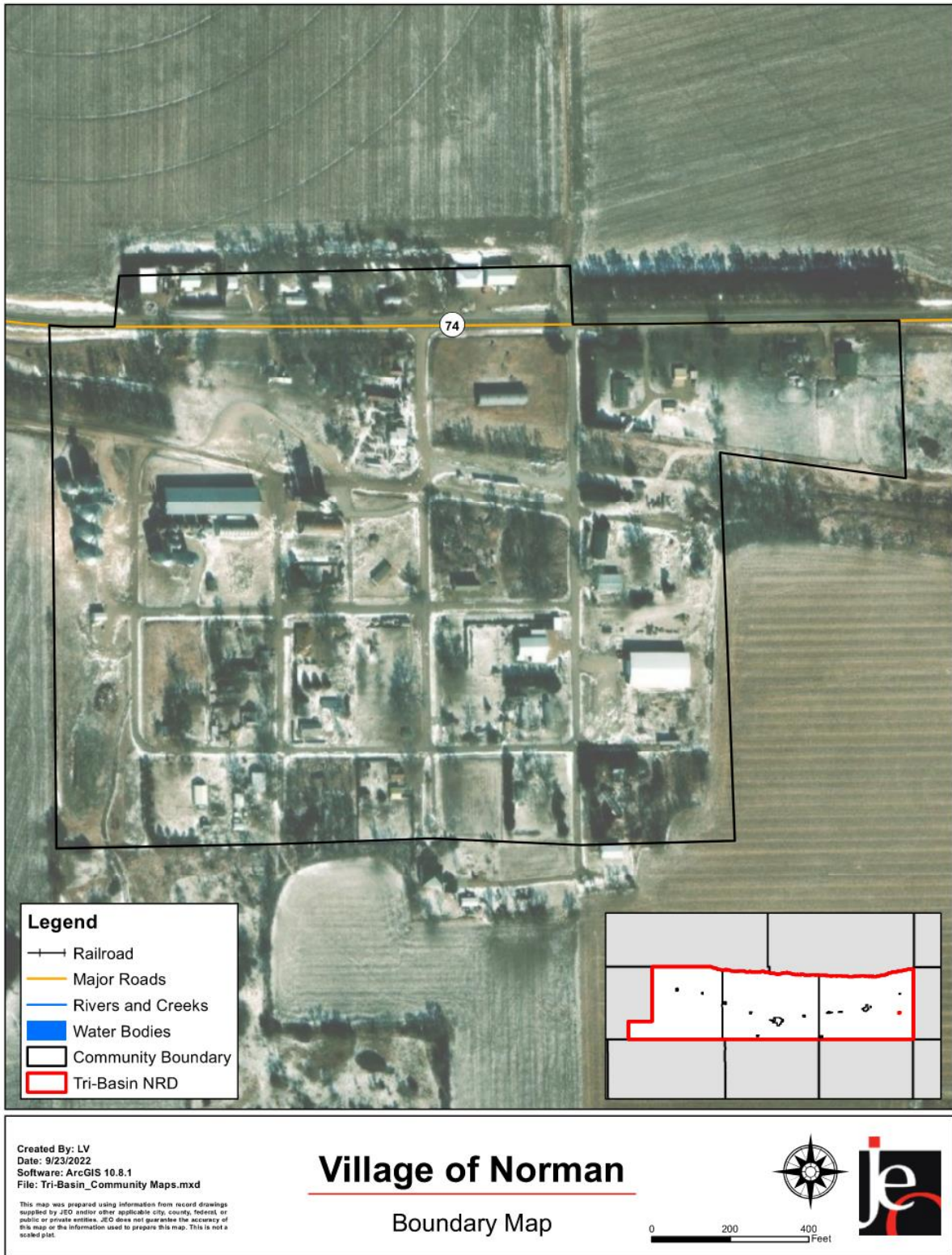
The following figure displays the historical population trend for the Village of Norman. This figure indicates that the population of Norman has been declining since 2000 to 32 people in 2020. A declining population can lead to more unoccupied and unmaintained housing that is then at risk to high winds and other hazards. Unoccupied housing may also be an economic indicator that future development is unlikely to occur. Furthermore, with fewer residents, tax revenue decreases for the community, which could make implementing mitigation projects more fiscally challenging. Norman’s population accounted for 0.5% of Kearney County’s population in 2020.<sup>69</sup>

**Figure NRM.1: Population 1920 - 2020**



69 United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.

Figure NRM.2: Village of Norman



The young, elderly, and minority populations may be more vulnerable to hazards than other groups. Looking at Norman's population:

- **0% is non-white.** Since 2010, Norman has stayed ethnically diverse. In 2010, 0% of the Norman's population was non-white. By 2020, 0% was non-white.<sup>70</sup>
- **Median age of 50.3.** The median age of Norman was 50.3 years old in 2020. The population became older since 2010, when the median age was 40.6.<sup>71</sup>

## Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards like extreme heat and flooding than other groups. Norman's population has:

- **7.9% of people living below the poverty line.** The poverty rate (7.9%) in the Village of Norman was lower than the state's poverty rate (10.4%) in 2020.<sup>72</sup>
- **\$59,286 median household income.** Norman's median household income in 2020 (\$59,286) was \$3,729 lower than the state (\$63,015).<sup>72</sup>
- **0% unemployment rate.** In 2020 Norman has a lower unemployment rate (0%) when compared to the state (3.4%).<sup>72</sup>
- **30.2% of workers commuted 30 minutes or more to work.** Fewer workers in Norman commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (30.2% compared to 47.0%).<sup>73</sup>

## Major Employers

There are no major employers in the community. Most residents are self-employed or travel to Minden, Kearney, Hastings, or Holdrege for employment.

## Housing

Multiple factors inform the vulnerability of housing units to hazard events. Housing age, for example, may indicate which housing units were built prior to the development of state building codes. Older houses and vacant housing generally more vulnerable to hazards if poorly maintained. Additionally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. Renters are less likely than homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards. Norman's housing stock has:

- **80% of housing built prior to 1970.** Norman has a larger share of housing built prior to 1970 than the state (80.0% compared to 45.5%).<sup>74</sup>

70 United States Census Bureau. "2020 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates." <https://data.census.gov/>.

71 United States Census Bureau. "2020 Census Bureau American Community Survey: S0101: Age and Sex." <https://data.census.gov/>.

72 United States Census Bureau. "2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics." <https://data.census.gov/>.

73 United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/>.

74 United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/>.

- **10% of housing units vacant.** Norman has a slightly higher vacancy rate 10.0% compared to the rest of the state (9.2%).<sup>74</sup>
- **15% mobile and manufacture housing.** The Village of Norman has a larger share of mobile and manufactured housing (15.0%) compared to the state (3.3%).<sup>74</sup> Mobile homes are mixed in with other housing throughout the community.
- **0% renter-occupied.** The rental rate of Norman was 0% in 2020. This is lower than the state's rate of 33.8%.<sup>74</sup>

### Broadband Access

Internet or broadband access – through Wi-Fi or cellphone coverage – is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **72.2% of households have a broadband internet subscription.** Norman has a smaller share of households with broadband (72.2%) compared to the state (85.6%).<sup>75</sup>

### Governance

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

- Clerk/Treasurer
- Street Superintendent
- Mayor
- Planning Commission

### Capability Assessment

The planning team assessed the Village of Norman's hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the community's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. The local planning team plans to improve on existing capabilities by updating the village's comprehensive plan, zoning ordinance, and subdivision regulations by 2025.

According to the planning team, municipal funds are currently limited to maintaining current facilities and systems. Funds have stayed about the same in recent years. The village has discussed using COVID funds to replace the HVAC in the village hall.

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<sup>75</sup> United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.

**Table NRM.2: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	Yes
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Floodplain Ordinance	No
	Building Codes	Yes (State)
	National Flood Insurance Program	No
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes
	Other (if any)	-
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	No
	GIS Capabilities	Yes
	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)	-
<b>Fiscal Capability</b>	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	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)	-
<b>Education &amp; Outreach Capability</b>	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



Capability/Planning Mechanism	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 City USA	No
Other (if any)	

**Table NRM.3: Overall Capability**

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

**Social Vulnerability**

FEMA’s National Risk Index is a new mapping tool that analyzes a community’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County, which includes Norman, is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>76</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.
- **Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

An additional tool developed by Headwaters Economics, the Rural Capacity Index, evaluates rural communities and counties across the country for local capacity. Capacity includes the staffing, resources, and expertise to both apply for funding and fulfill reporting requirements, as well as design, build, and maintain infrastructure products over the long term. Communities lacking local capacity often have the greatest need for infrastructure investments, particularly rural communities and communities of color. The Rural Capacity Index helps identify communities with limited capacity on a scale of 0 (no capacity) to 100 (high capacity). This index is based on 10 variables that can function as proxies for community capacity. The following table lists the components and scores for the Village of Norman compared to the county.

<sup>76</sup> Federal Emergency Management Agency. “National Risk Index”. Accessed July 2022. <https://hazards.fema.gov/nri/map>.

**Table NRM.4: Rural Capacity Index**

Components of Index	Village of Norman	Kearney County
County is Metropolitan?	Yes	Yes
Has a Head of Planning?	No	Yes
Has a College or University?	No	No
Adults with Higher Education:	14%	27%
Families Below Poverty Level:	0%	6%
Households with Broadband:	61%	81%
People without Health Insurance:	30%	6%
Voter Turnout:	80%	80%
Income Stability Score (0 to 100):	23	23
Population Change (2000 to 2019):	-2	-387
<b>Overall Rural Capacity Index Score</b>	<b>50</b>	<b>76</b>

Source: *Headwaters Economics*<sup>77</sup>

### National Flood Insurance Program

Norman is not a member of the NFIP. No flood events have been reported for the village. The initial FIRM for the village was delineated on 1/16/2004 and the current effective map date is 1/16/2004. Norman does not currently have any repetitive loss or severe repetitive loss structures. As there is no floodplain or streams within the village or ETJ, Norman has historically elected to not participate in the NFIP. The village may explore participating in the future if a need is found.

### Plans and Studies

Norman has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the village updates these planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update.

#### Comprehensive Plan (2015)

The comprehensive plan is designed to guide the future actions and growth of the village. The hazard mitigation plan has not been integrated as it is the first time the village has participated in the plan. The comprehensive plan contains goals aimed at safe growth, directs development away from the floodplain, directs housing away from chemical storage facilities, and encourages the elevation of structures located in the floodplain. Norman is currently working on an updated plan to be in place by 2025.

#### Kearney County Local Emergency Operations Plan (2018)

Norman is an annex in the Kearney County Local Emergency Operations Plan (LEOP). The hazard mitigation plan has not been integrated with this plan, however, 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. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

77 Headwaters Economics. January 2022. "Rural Capacity Map". Accessed July 2022.  
<https://headwaterseconomics.org/equity/rural-capacity-map/>.

### Zoning Ordinance (2015) and Subdivision Regulations (2015)

The village’s zoning ordinance and subdivision regulations outline where and how development should occur in the future. The hazard mitigation plan has not been integrated with these documents because this is the first time the village has participated in the plan. However, the documents prohibit the development in the floodplain and discourage housing and vulnerable populations near chemical storage sites. The zoning ordinance and subdivision regulations are currently being updated with the comprehensive plan.

### Future Development Trends

Over the past five years, there have been no changes within the village. This likely makes the village more vulnerable to hazards due to aging buildings and infrastructure. The local planning team does not anticipate any housing or commercial developments in the next five years.

### Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

#### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Norman.

**Table NRM.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	Village Hall	-	N

#### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. No Food, Water, and Shelter Lifelines were identified for the Village of Norman.

#### Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. No medical and health facilities are located within the community.<sup>78,79,80,81</sup>

#### Energy

Energy Lifeline components include power, the power grid, and fuel. The local planning team did not identify any Energy Lifelines for the village.

78 Department of Health and Human Services. 2022. “State of Nebraska: Assisted Living Facilities.” <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

79 Department of Health and Human Services. 2022. “State of Nebraska Roster: Hospitals.” <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

80 Department of Health and Human Services. 2022. “State of Nebraska Roster: Long Term Care Facilities.” <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

81 Department of Health and Human Services. 2022. “State of Nebraska Roster: Rural Health Clinic.” [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).

## Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the Village of Norman are included in the table below.

**Table NRM.6: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
2	Alert Siren	-	N

## Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Norman's major transportation corridor includes State Highway 74. It is traveled by an average of 740 vehicles daily, 85 of which are trucks.<sup>82</sup> No rail lines travel near the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No significant transportation events have occurred locally.

## Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are no gas transmission or hazardous liquid pipelines that travel through the community.<sup>83</sup> According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are no chemical sites within or near Norman which house hazardous materials.<sup>84</sup> Chemicals are not regularly transported along any local routes in the village.

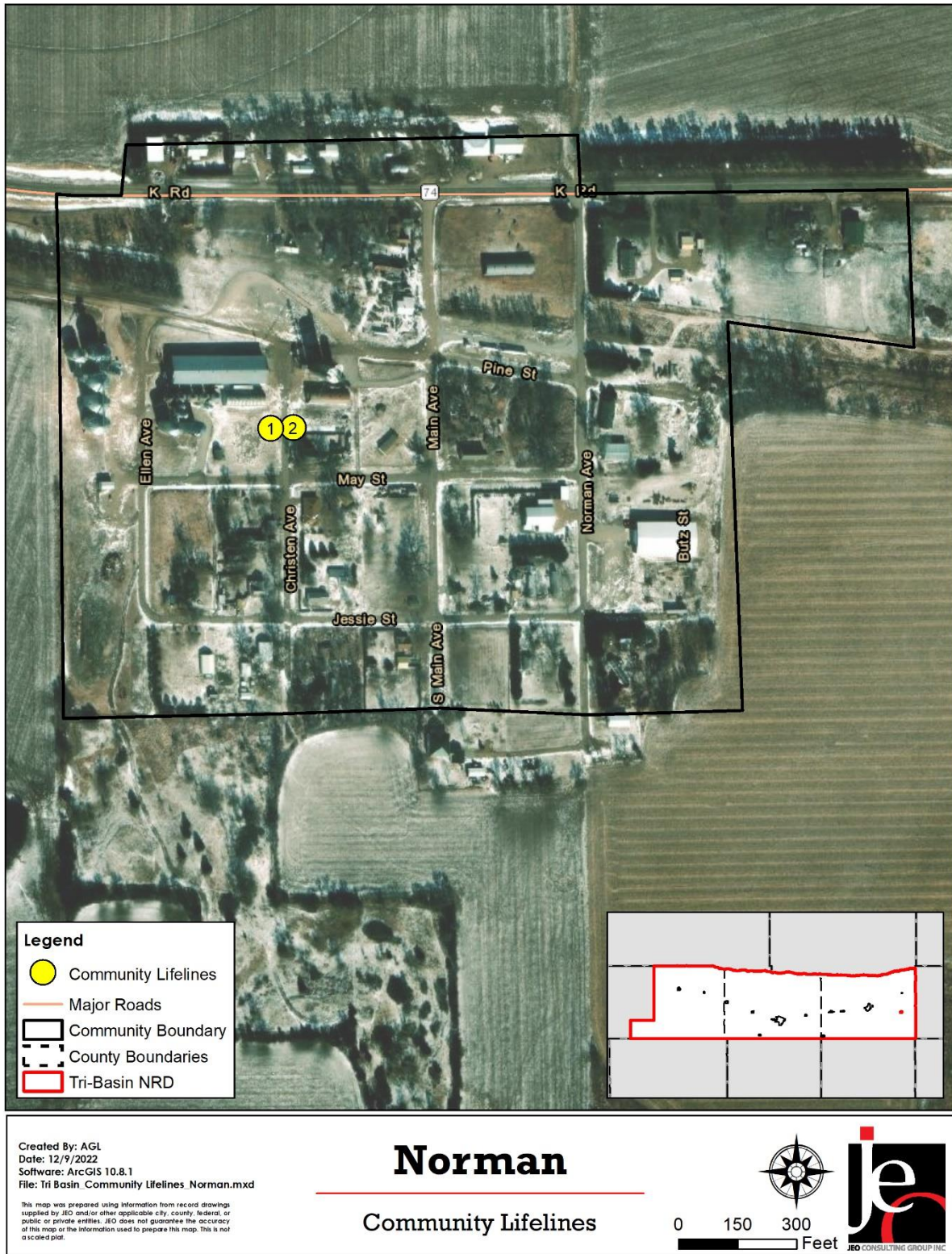
82 Nebraska Department of Transportation. 2021. "Annual Average Daily Traffic Flow." Accessed July 2022. <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

83 National Pipeline Mapping System. 2022. "Public Viewer." Accessed July 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.

84 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.



Figure NRM.3: Community Lifelines



\*No mapped floodplain or streams located in the community.

## Parcel Improvements and Valuation

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

**Table NRM.7: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
22	\$884,075	0	\$0	0%

Source: County Assessor, 2022

## Historical Occurrences

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

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Norman which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the Village of Norman. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Grass/Wildfires

The current drought conditions and being surrounded by farmland increases the village's vulnerability to wildfires. Adding to the vulnerability is the fact that the nearest fire department (Minden Volunteer Fire Department) is located 10 miles from the village. This impacts response times and could cause additional damage during a fast-moving fire. According to the local planning team, no wildfires have impacted the village in the past. The village does not currently have a water supply for the fire department to use if a fire occurs, resulting in the need for tankers to be brought in. According to the Nebraska Forest Service's *Wildfire Risk Explorer*, the majority of the area around the community has low wildfire risk.<sup>85</sup>

### Public Health Emergency

This hazard was selected by the local planning team because of the ongoing COVID-19 pandemic. With a small number of board members and employees, if one of those individuals is sick for an extended period of time, it could have large impacts on the operation of the community. One impact resulting from COVID was postponed board meetings. No measures were taken by the village to reduce the spread of COVID and other pathogens because the community is so small.

<sup>85</sup> Nebraska Forest Service. "Nebraska Wildfire Risk Explorer". Accessed October 2022. <https://nebraskawildfirerisk.com/>.



### Severe Thunderstorms

There have been 28 reported severe thunderstorms impacting Norman since 1996. These storms have caused \$1,705,000 in property damages. The most damaging event occurred in July 2014, when a thunderstorm wind event caused \$1,000,000 in damages to trees, buildings, and irrigation systems. The local planning team is most concerned about downed powerlines and trees resulting from this hazard. Almost all power lines are currently above ground. Residents are notified of severe weather by a warning siren for tornadoes or radio/television.

### Severe Winter Storms

The local planning team’s main concerns for this hazard are power outages and road closures, as these have impacted the village in the past. The county handles snow removal for roads within the village. No projects have been completed to reduce the risk of severe winter storms; however, the planning team indicated that a backup generator is needed at the village hall. The facility could then act as a place of shelter for residents as well.

### Tornadoes and High Winds

One tornado event has occurred near the village; however, the tornado only caused \$5,000 in damages to a farmstead outside of the community. While tornadoes haven’t impacted the village in the past, if one were to touch down it could cause damage to every building in the community. Norman has one alert siren which can be heard throughout the village. Past impacts from high wind events include downed tree limbs, debris, and power outages. Various trees throughout the village need to be trimmed or removed, according to the planning team. The basement of the village hall currently acts as a shelter for residents to use during severe weather events. However, the air conditioning does not work and there is no generator if the village loses power.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide a portable or stationary source of backup power to produce redundant power supplies at critical facilities.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started. A generator is needed at the village hall. The village currently does not have the capability to implement this project.

<b>Mitigation Action</b>	<b>Public Awareness and Education</b>
<b>Description</b>	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Local Funding</b>	General Fund
<b>Timeline</b>	5+ Years
<b>Priority</b>	Low
<b>Lead Agency</b>	Village Board
<b>Status</b>	Not Started. The village has the capability to implement this project.

### Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., 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 Mayor, Clerk, and board members will be responsible for reviewing and updating this community profile outside of the five-year update. Norman will review the plan bi-annually and the public will be notified via board meetings and/or letters to residents.

## **Community Profile**

# **Village of Wilcox**

## **Tri-Basin NRD Hazard Mitigation Plan**

**2023**

## Local Planning Team

The Village of Wilcox’s local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by the community.

**Table WLX.1: Wilcox Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Blair Johnson	Utility Superintendent / Floodplain Administrator	Village of Wilcox	Recording	Minden
Melinda Feree	Clerk / Treasurer	Village of Wilcox	-	-

## Location and Geography

The Village of Wilcox is in southwestern Kearney County and covers an area of 0.5 square miles. No major bodies of water are located near the village, but the Sacramento-Wilcox State Wildlife Management area is located less than a mile to the west.

## Demographics

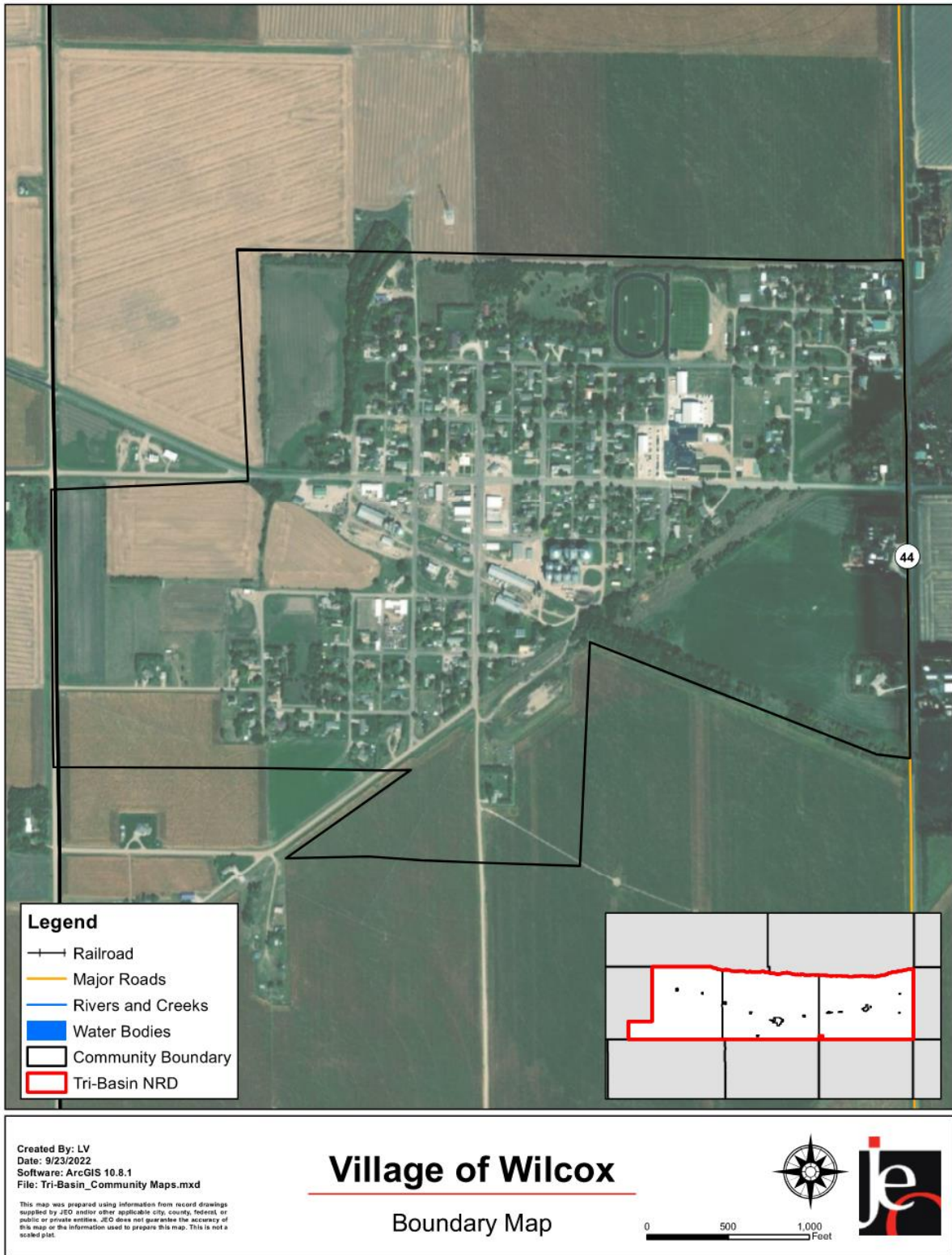
The following figure displays the historical population trend for the Village of Wilcox. This figure indicates that the population of Wilcox has been declining since 2000 to 330 people in 2020. A declining population can lead to more unoccupied and unmaintained housing that is then at risk to high winds and other hazards. Unoccupied housing may also be an economic indicator that future development is unlikely to occur. Furthermore, with fewer residents, tax revenue decreases for the community, which could make implementing mitigation projects more fiscally challenging. Wilcox’s population accounted for 4.9% of Kearney County’s population in 2020.<sup>86</sup>

**Figure WLX.1: Population 1890 - 2020**



86 United States Census Bureau. “2020 Census Bureau Decennial Census: P1: Race.” <https://data.census.gov/>.

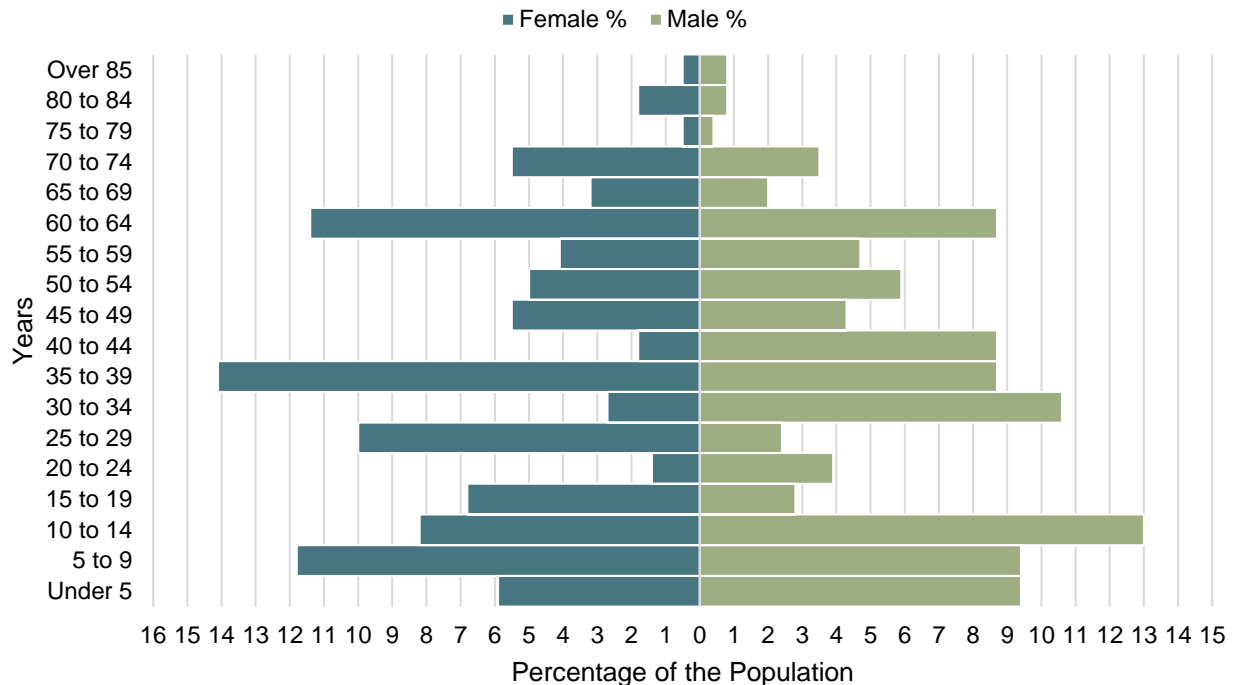
Figure WLX.2: Village of Wilcox



The young, elderly, and minority populations may be more vulnerable to hazards than other groups. Looking at Wilcox’s population:

- **6.7% is non-white.** Since 2010, Wilcox has become more ethnically diverse. In 2010, 2.2% of the Wilcox’s population was non-white. By 2020, 6.7% was non-white.<sup>87</sup>
- **Median age of 35.4.** The median age of Wilcox was 35.4 years old in 2020. The population became younger since 2010, when the median age was 45.3.<sup>88</sup>

**Figure WLX.3: Wilcox’s Population Pyramid**



The figure above shows Wilcox’s population percentage broken down by sex and five-year age groups. Wilcox’s population is bottom heavy, suggesting a greater number of young families and children will likely contribute to an increasing population in the future.

## Employment and Economics

Low-income populations, long distance commuters, and the unemployed may be more vulnerable to certain hazards like extreme heat and flooding than other groups. Wilcox’s population has:

- **10.9% of people living below the poverty line.** The poverty rate (10.9%) in the Village of Wilcox was slightly higher than the state’s poverty rate (10.4%) in 2020.<sup>89</sup>
- **\$62,857 median household income.** Wilcox’s median household income in 2020 (\$62,857) was \$158 lower than the state (\$63,015).<sup>89</sup>
- **3.6% unemployment rate.** In 2020 Wilcox has a slightly higher unemployment rate (3.6%) when compared to the state (3.4%).<sup>89</sup>

87 United States Census Bureau. “2020 Census Bureau American Community Survey: DP05: ACS Demographic and Housing Estimates.” <https://data.census.gov/>.

88 United States Census Bureau. “2020 Census Bureau American Community Survey: S0101: Age and Sex.” <https://data.census.gov/>.

89 United States Census Bureau. “2020 Census Bureau American Community Survey: DP03: Selected Economic Characteristics.” <https://data.census.gov/>.



- **30.1% of workers commuted 30 minutes or more to work.** More workers in Wilcox commuted 30 minutes or more to work than compared to workers commuting less than 15 minutes (30.1% compared to 26.5%).<sup>90</sup>

### Major Employers

Major employers within Wilcox include the school, CPI, and South Central Sanitation. A large percentage of residents commute to Holdrege or Kearney for employment.

## Housing

Multiple factors inform the vulnerability of housing units to hazard events. Housing age, for example, may indicate which housing units were built prior to the development of state building codes. Older houses and vacant housing generally more vulnerable to hazards if poorly maintained. Additionally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe thunderstorms if those homes are not anchored correctly. Renters are particularly vulnerable, as renter-occupied housing depends on the initiative of landlords for proper maintenance and retrofitting to be resilient to disasters. Renters are less likely than homeowners to have flood insurance, have ready access to financial resources to evacuate, or to know their risks to flooding and other hazards. Wilcox's housing stock has:

- **52.6% of housing built prior to 1970.** Wilcox has a larger share of housing built prior to 1970 than the state (52.6% compared to 45.5%).<sup>91</sup>
- **8.5% of housing units vacant.** Wilcox has a slightly lower vacancy rate 8.5% compared to the rest of the state (9.2%).<sup>91</sup>
- **2.3% mobile and manufacture housing.** The Village of Wilcox has a smaller share of mobile and manufactured housing (2.3%) compared to the state (3.3%).<sup>91</sup>
- **42.6% renter-occupied.** The rental rate of Wilcox was 42.6% in 2020. This is higher than the state's rate of 33.8%.<sup>91</sup>

### Broadband Access

Internet or broadband access through Wi-Fi or cellphone coverage is a critical means of sharing and receiving information regarding hazardous events, including storm warnings, evacuation orders, or weather updates. Rural communities often lack adequate internet or broadband access. However, internet access is as vital a utility as electricity, as seen through the COVID-19 pandemic when many people worked or attended school from home.

- **82.7% of households have a broadband internet subscription.** Wilcox has a smaller share of households with broadband (82.7%) compared to the state (85.6%).<sup>92</sup>

## Governance

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

90 United States Census Bureau. "2020 Census Bureau American Community Survey: S0802: Means of Transportation to Work by Selected Characteristics." <https://data.census.gov/>.

91 United States Census Bureau. "2020 Census Bureau American Community Survey: DP04: Selected Housing Characteristics." <https://data.census.gov/>.

92 United States Census Bureau. "2020 Census Bureau American Community Survey: DP02: Selected Social Characteristics in the United States." <https://data.census.gov/>.

- Clerk/Treasurer
- Floodplain Administrator
- Fire Department
- Kearney County Sheriff Department
- Utilities Superintendent / Floodplain Administrator
- Village Maintenance

## Capability Assessment

The planning team assessed the Village of Wilcox’s hazard mitigation capabilities by reviewing local existing policies, regulations, plans, and programs related to hazard mitigation. The following tables summarize the community’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. The local planning team does not anticipate improving on or adding to existing capabilities due to limited funding, time, and staff.

Municipal funds are sufficient to pursue new capital projects and a large portion of funds are not already dedicated to a specific project. Funds have stayed the same over recent years.

**Table WLX.2: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning &amp; Regulatory Capability</b>	Comprehensive Plan	Yes
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operations Plan	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	No
	Floodplain Ordinance	Yes
	Building Codes	Yes (State)
	National Flood Insurance Program	Yes
	Community Rating System	No
	Regional Community Wildfire Protection Plan	Yes
Other (if any)	Water System Emergency Response Plan, Wellhead Protection Plan	
<b>Administrative &amp; Technical Capability</b>	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	Yes
	Local staff who can assess community’s vulnerability to hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	-

Capability/Planning Mechanism		Yes/No
<b>Fiscal Capability</b>	1- & 6-Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to levy taxes for specific purposes such as mitigation projects	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	Yes
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	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 WLX.3: Overall Capability**

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

**Social Vulnerability**

FEMA’s National Risk Index is a new mapping tool that analyzes a community’s risk to natural hazards on a scale of 0 (lowest possible value) to 100 (highest possible value). The overall risk for Kearney County, which includes Wilcox is Relatively Low (11.78). The average for the State of Nebraska is 9.43.<sup>93</sup>

- **Social Vulnerability:** Social groups in Kearney County have a Relatively Moderate (37.49) susceptibility to adverse impacts of natural hazards when compared to the rest of the U.S.

93 Federal Emergency Management Agency. “National Risk Index”. Accessed July 2022. <https://hazards.fema.gov/nri/map>.

- Community Resilience:** Communities in Kearney County have a Very High (58.87) ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

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**Table WLX.4: Rural Capacity Index**

Components of Index	Village of Wilcox	Kearney County
County is Metropolitan?	Yes	Yes
Has a Head of Planning?	No	Yes
Has a College or University?	No	No
Adults with Higher Education:	20%	27%
Families Below Poverty Level:	7%	6%
Households with Broadband:	80%	81%
People without Health Insurance:	11%	6%
Voter Turnout:	80%	80%
Income Stability Score (0 to 100):	23	23
Population Change (2000 to 2019):	48	-387
<b>Overall Rural Capacity Index Score</b>	<b>55</b>	<b>76</b>

Source: Headwaters Economics<sup>94</sup>

### National Flood Insurance Program (NFIP)

Wilcox is a member of the NFIP having joined on 9/24/1984, and the village’s Floodplain Administrator (Blair Johnson) oversees the commitments and requirements of the NFIP, including enforcement of the local floodplain management regulations. The initial FIRM for the village was delineated on 1/16/2004 and the current effective map date is 1/16/2004, which has been adopted and incorporated into the local floodplain management regulations. The local planning team indicated that the village plans to adopt a new floodplain ordinance in September 2023. Wilcox requires permits for developments in the floodplain and enforces its regulations through inspections and fines. As of April 12, 2023, there are no NFIP policies in-force for the village. Wilcox does not currently have any repetitive loss or severe repetitive loss structures.

After a flood event, the community implements substantial improvement and substantial damage provisions as outlined in the Substation Damage Assessment Handbook from the Nebraska Department of Natural Resources, which can be found here: [https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301\\_eSDA\\_Handbook\\_FINAL.pdf](https://dnr.nebraska.gov/sites/dnr.nebraska.gov/files/doc/floodplain/resources/20220301_eSDA_Handbook_FINAL.pdf). The local planning team has said the village will remain in good standing and continue involvement with the NFIP in the future.

94 Headwaters Economics. January 2022. “Rural Capacity Map”. Accessed July 2022. <https://headwaterseconomics.org/equity/rural-capacity-map/>.

## Plans and Studies

Wilcox has several planning documents that discuss or relate to hazard mitigation. Each plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the village updates these planning mechanisms, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update.

### **Comprehensive Plan (2019)**

The comprehensive plan is designed to guide the future actions and growth of the village. The hazard mitigation plan was not integrated into the plan during the last update; however, it does contain goals aimed at safe growth, directs housing away from chemical storage facilities, directs housing and vulnerable populations away from major transportation routes, and encourages infill development. The plan was updated in August 2019 and there are no current plans to update it.

### **Floodplain Regulations (2004) and Zoning Ordinance (2015)**

The village's floodplain regulations and zoning ordinance outline where and how development should occur in the future. The hazard mitigation plan has not been integrated with these documents. However, the documents discourage housing and vulnerable populations near chemical storage sites, include well setback requirements, and include the ability to implement water restrictions. In future updates the village would like to restrict development in hazard prone areas, prohibit or discourage development in the floodplain, limit population density in the floodplain, and require more than one foot of elevation above Base Flood Elevation in the floodplain. The village intends to adopt a new floodplain ordinance in 2023. There is no timeline to update the zoning ordinance.

### **Kearney County Local Emergency Operations Plan (2018)**

Wilcox is an annex in the Kearney County Local Emergency Operations Plan (LEOP). The hazard mitigation plan has not been integrated with this plan, however, 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. Flooding, dam failure, and mass shelter information from the LEOP was used to inform hazard prioritization and community lifelines.

### **Water System Emergency Response Plan (2023)**

A water system emergency response plan serves as a guideline for water operators and village administration to minimize the disruption of normal services to consumers and to provide public health protection during an emergency event. The document identifies several natural and human-caused events and discusses the water system's response during those events. The hazard mitigation plan has not been integrated with this plan.

### **Wellhead Protection Plan (2015)**

The purpose of wellhead protection plans is to protect the public drinking water supply wells from contamination. It includes identifying potential sources of groundwater contamination in the area and managing the potential contaminant sources. The wellhead protection plan has not been integrated with the hazard mitigation plan.

## Future Development Trends

Over the past five years a new housing development was added three old houses were demolished. None of the new homes were built in the floodplain or other known hazardous areas. This likely made the village less vulnerable to hazards. There are no planned housing or commercial developments in the next five years which coincides with the projected population decline.

## Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Wilcox.

**Table WLX.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	Fire Hall	G	N
2	Government Office	G	N
3	Wilcox Hildreth Public School	S	N
4	Wilcox Utility	-	N

### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines for the Village of Wilcox are included in the table below.

**Table WLX.6: Food, Water, and Shelter Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
5	Water Tower	-	N
6	Well	G	N

### Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. There are no medical and health facilities located within the community.<sup>95,96,97,98</sup>

95 Department of Health and Human Services. 2022. “State of Nebraska: Assisted Living Facilities.” <https://dhhs.ne.gov/licensure/Documents/ALF%20Roster.pdf>.

96 Department of Health and Human Services. 2022. “State of Nebraska Roster: Hospitals.” <https://dhhs.ne.gov/licensure/Documents/Hospital%20Roster.pdf>.

97 Department of Health and Human Services. 2022. “State of Nebraska Roster: Long Term Care Facilities.” <https://dhhs.ne.gov/licensure/Documents/LTCRoster.pdf>.

98 Department of Health and Human Services. 2022. “State of Nebraska Roster: Rural Health Clinic.” [https://dhhs.ne.gov/licensure/Documents/RHC\\_Roster.pdf](https://dhhs.ne.gov/licensure/Documents/RHC_Roster.pdf).



## Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for Wilcox.

**Table WLX.7: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
7	CPI Fuel Station	-	N
8	CPI Fuel Tanks	-	N
9	Southern Public Power Substation	-	N

## Communications

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the Village of Wilcox are included in the table below.

**Table WLX.8: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
10	Alert Siren #1	-	N
11	Alert Siren #2	-	N
12	Viaero Tower	G	N

## Transportation

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Wilcox's major transportation corridor includes State Highway 44. It is traveled by an average of 670 vehicles daily, 65 of which are trucks.<sup>99</sup> The local planning team also identified Polyline Road as a route of concern. No rail lines travel near the community. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the community, as well as areas more at risk of transportation incidents. No significant transportation events have occurred locally.

## Hazardous Materials

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are two gas transmission pipelines and one hazardous liquid pipeline that travel through the community and can be seen in the figure below. Sapp Street also carries bulk fuel.

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are four chemical sites within or near Wilcox which house hazardous materials (listed below). CPI fuel tanks and fuel station were identified under the energy lifeline.

**Table WLX.9: Chemical Storage Lifelines**

CL Number	Name	Generator (G)	Floodplain (Y/N)
13	Cooperative Producers Inc.	-	N
14	Gardels Farms Inc.	-	N

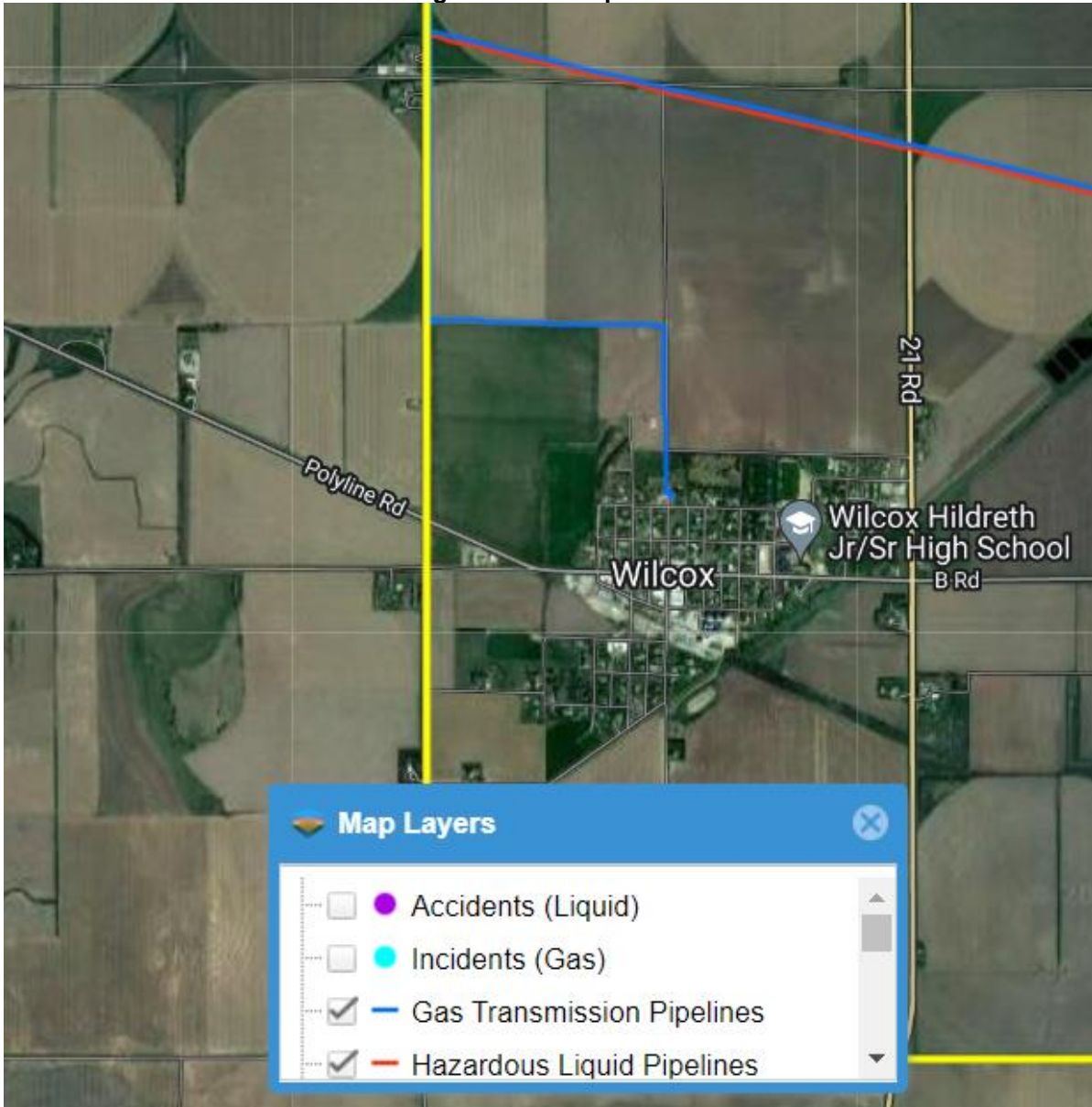
Source: Nebraska Department of Environment and Energy<sup>100</sup>

99 Nebraska Department of Transportation. 2021. "Annual Average Daily Traffic Flow." Accessed July 2022.

<https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.

100 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed May 2022.

**Figure WLX.4: Pipelines**



Source: National Pipeline Mapping System<sup>101</sup>

**Other Community Lifelines**

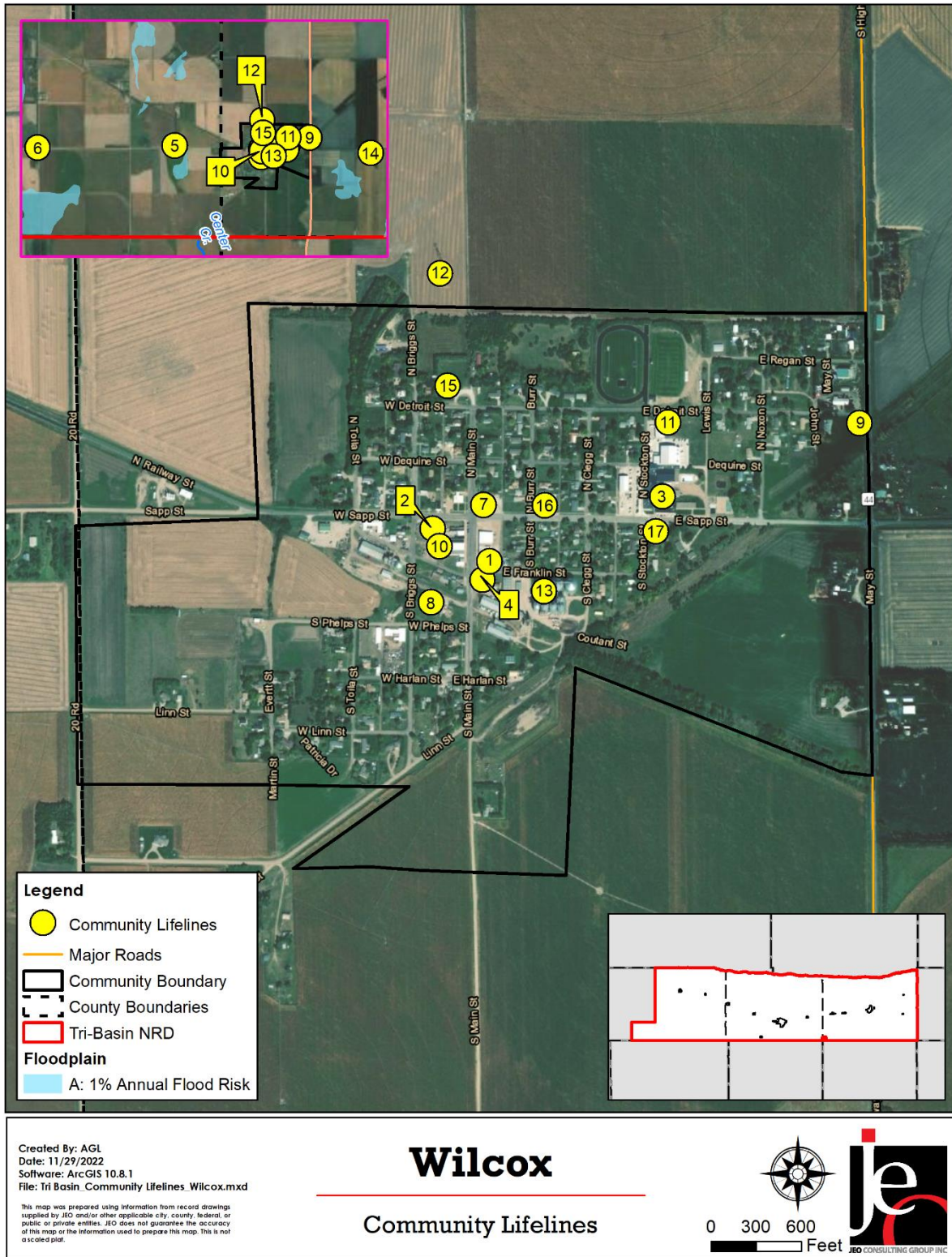
The Village of Wilcox identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the community. The other community lifelines are listed in the table below.

**Table WLX.10: Other Community Lifelines**

CL Number	Name	Generator (Y/N)	Floodplain (Y/N)
15	Community Church	-	N
16	Methodist Church	-	N
17	St. John's Lutheran Church	-	N

101 National Pipeline Mapping System. 2022. "Public Viewer." Accessed July 2022. <https://pvnprms.phmsa.dot.gov/PublicViewer/>.

Figure WLX.5: Community Lifelines



\*No streams in the community boundary.



## Parcel Improvements and Valuation

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

**Table WLX.11: Parcel Improvements and Value in the Floodplain**

Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Value of Improvements in Floodplain	Percentage of Improvements in Floodplain
139	\$12,245,490	0	\$0	0%

Source: County Assessor, 2022

## Historical Occurrences

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

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for Wilcox which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by the Village of Wilcox. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Severe Thunderstorms

Severe thunderstorms have the potential to cause property damages, power outages, and localized flooding. Hail and wind from previous thunderstorms have caused damage to municipal facilities. A storm on Father's Day in 2014 resulted in tree damage and two downed electrical service lines due to strong winds and falling limbs. Approximately one power outage occurs every year due to severe thunderstorms. Municipal records are protected with surge protectors on electronic devices. Residents are notified of severe weather through radio, television, and warning sirens. There are also weather radios, located in the town hall and fire hall, to help warn officials of impending events. The local planning team indicated that trees around power lines need to be trimmed to reduce the risk/vulnerability to this hazard.

### Severe Winter Storms

Local concerns include power outages and property damages. The most significant event occurred from December 2006 to January 2007. A large ice storm went through the planning area, damaging trees and downing power lines. Wilcox was off the Southern Power District's Electrical grid and without power for 28 and a half days. Fortunately, no injuries or fatalities occurred during this event. The Village Utility Superintendent oversees snow removal equipment for the community. Wilcox has the following snow removal resources: snowplow on two-ton truck, snowplow on a 524 JD loader, and a snow blower for sidewalks. Warming buildings are available for people to use during severe cold or power outages.

## Tornadoes and High Winds

Tornadoes have the potential to cause significant property damages and loss of life. The village has warning sirens that are activated by the Kearney County Sheriff’s dispatcher or the Wilcox Fire Department. The community does not have identified safe rooms. However, the school and town hall are available for community members seeking safe shelter. There are currently two warning sirens in the village. In the event of a disaster, the community has mutual aid agreements with neighboring communities such as Hildreth, Axtell, and Minden. The local planning team estimates that less than one percent of power lines are buried within the village. In June of 2014, a high wind event caused eight electrical poles and three light poles to break off and destroyed five transformers. A program to trim trees away from power lines has been implemented. The village has backup generators at the fire hall and the town hall. Additionally, the village has data backup systems for municipal records. The local planning team would ideally like backup power for all public buildings.

## Mitigation Strategy

### New Mitigation Actions

Mitigation Action	Backup Generators
Description	Provide a portable or stationary source of backup power to produce redundant power supplies at critical facilities.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$50,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board
Status	Not Started. The village currently does not have the capability to implement this project.

Mitigation Action	Public Awareness and Education
Description	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
Hazard(s) Addressed	All Hazards
Estimated Cost	\$500+
Local Funding	General Fund
Timeline	5+ Years
Priority	Low
Lead Agency	Village Board
Status	Not Started. The village has the capability to implement this project.

**Kept Mitigation Actions**

Mitigation Action	Alert Sirens
Description	Perform an evaluation of existing alert sirens in order to determine which sirens should be replaced, or to inform the placement of new sirens.
Hazard(s) Addressed	Severe Thunderstorms, Tornadoes and High Winds
Estimated Cost	\$20,000
Local Funding	General Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Village Board, County Emergency Management
Status	Not Started. The village has the capability to implement this project.

Mitigation Action	Remove Flow Restrictions
Description	Replace or modify bridges and other flow constrictions to reduce the risk of flooding.
Hazard(s) Addressed	Flooding
Estimated Cost	\$50,000
Local Funding	Road Fund
Timeline	2-5 Years
Priority	Medium
Lead Agency	Roads Department
Status	In Progress.

Mitigation Action	Source Water Contingency Plan
Description	Evaluate and locate new sources of groundwater to ensure adequate supplies to support the existing community and any additional growth which may occur.
Hazard(s) Addressed	Drought
Estimated Cost	\$50,000
Local Funding	General Fund
Timeline	5+ Years
Priority	Medium
Lead Agency	Village Board, Wilcox Utility
Status	In Progress. The village is working on paying back its USDA loan.

Mitigation Action	Tree Maintenance Program
Description	Identify and remove hazardous trees and/or limbs. Educate public on appropriate tree planting and maintenance.
Hazard(s) Addressed	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
Estimated Cost	\$10,000
Local Funding	Electrical Fund
Timeline	Ongoing
Priority	Medium
Lead Agency	Wilcox Utility
Status	Ongoing. Trees are trimmed around power lines every year.



## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside community planning documents (e.g., 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 clerk, utility superintendent, and the village board will be responsible for reviewing and updating this community profile outside of the five-year update. Wilcox will review the plan bi-annually and the public will be notified during board meetings.

**School District Profile**

# **Axtell Community Schools**

**Tri-Basin NRD  
Hazard Mitigation Plan**

**2023**

## Local Planning Team

Axtell Community Schools' local planning team for the hazard mitigation plan are listed in the table below along with the meetings attended. All planning worksheets were filled out and returned by members of the local planning team.

**Table ACS.1: Axtell Community Schools Local Planning Team**

Name	Title	Jurisdiction	R1 Meeting	R2 Meeting
Rob Gregory	Superintendent	Axtell Community Schools	Holdrege	Elwood

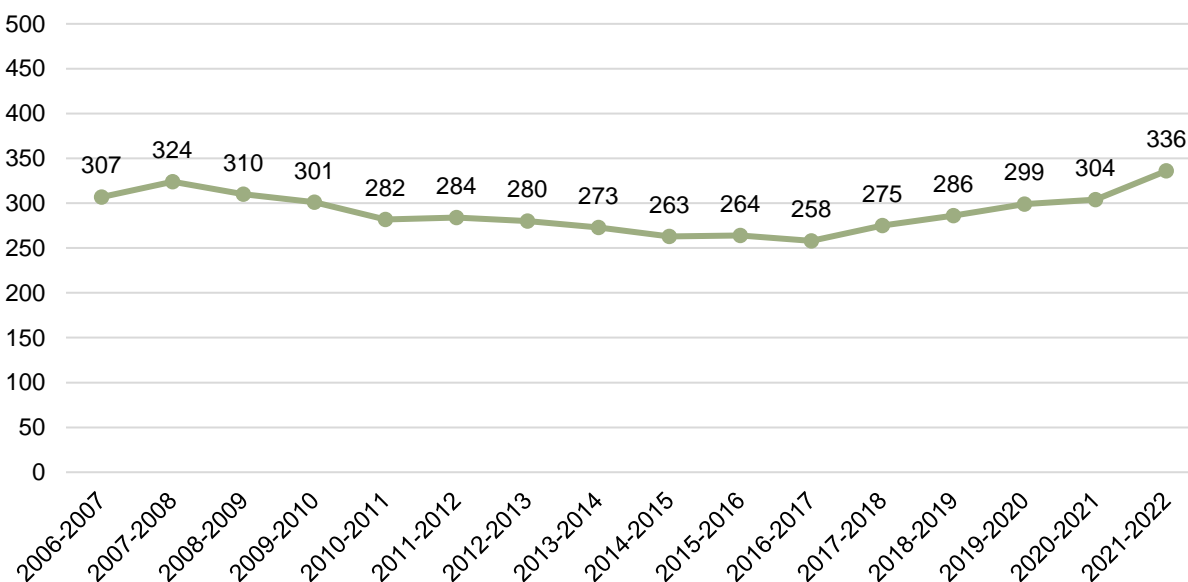
## Location

Axtell Community Schools is located in west-central Kearney County and east-central Phelps County and serves two schools located in one building, Axtell Elementary School and Axtell High School. Also included is the FFA and Shop Building located across the street to the west at 501 Main Street. The school district provides services to students in the communities of Axtell, Minden, and the rural areas surrounding them.

## Demographics

The following figure displays the historical student population trend starting with the 2006-07 school year and ending with the 2021-2022 year. It indicates that the student population has been increasing since 2017. There are 336 students enrolled in the district.<sup>102</sup> An increasing student population can mean there is increasing tax revenue for the school district, which could make implementation of mitigation projects easier. However, it is also associated with increased emergency planning requirements and increased development. The local planning team anticipates an increase in the student population due to a housing addition located on the north side of the old highway.

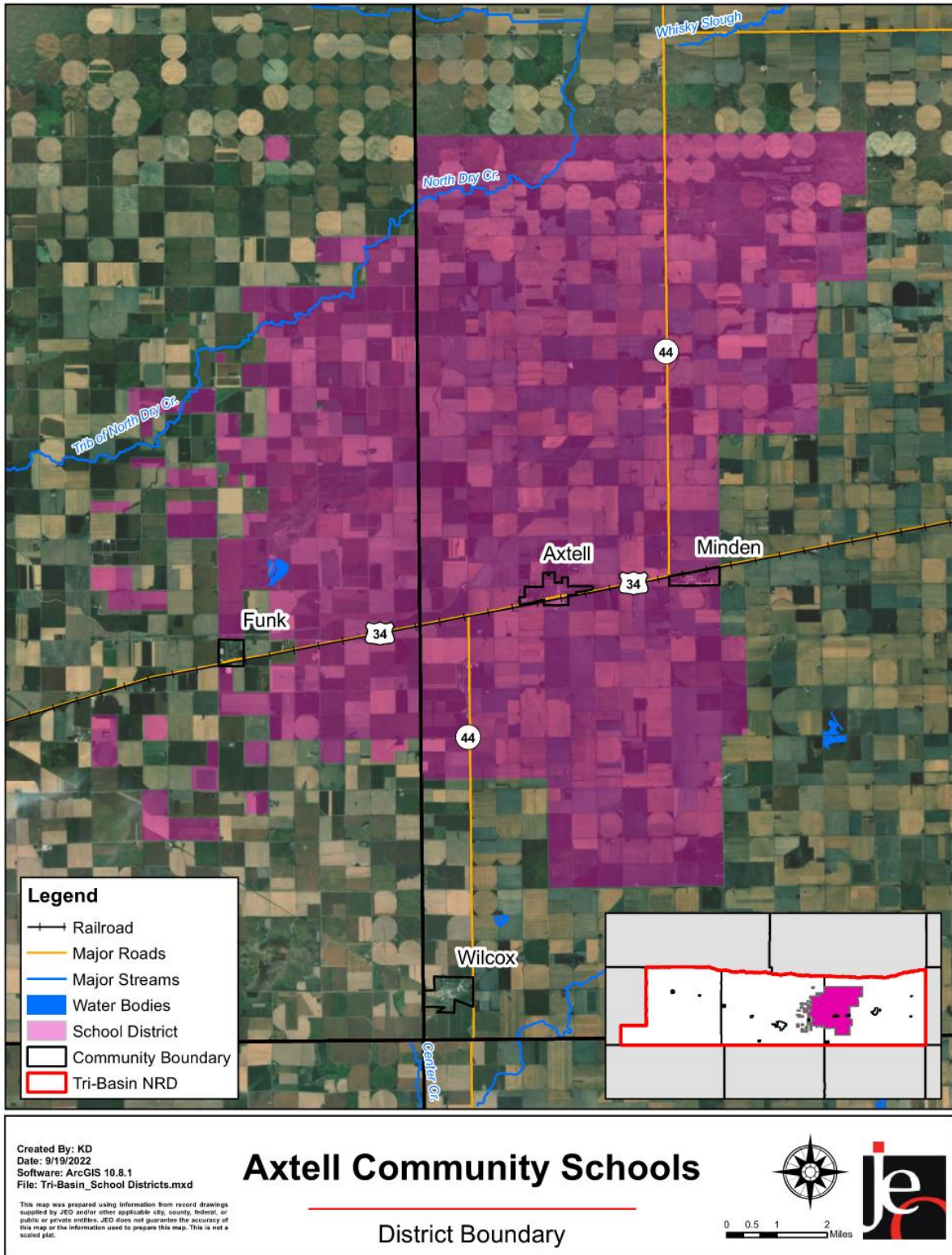
**Figure ACS.1: Student Population 2007-2022**



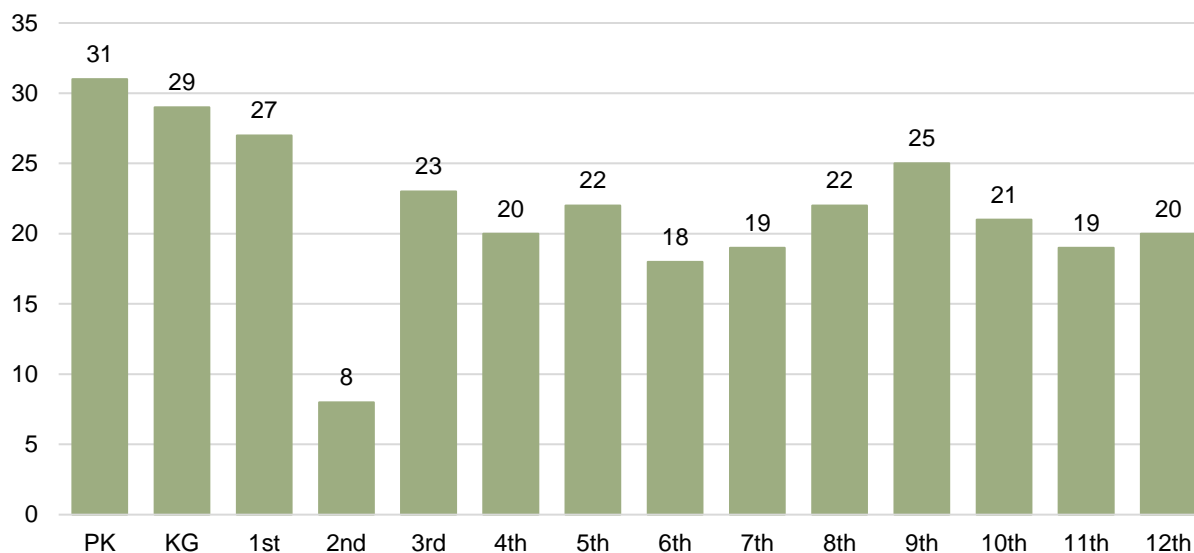
Source: Nebraska Department Education, Axtell Community Schools

<sup>102</sup> Nebraska Department of Education. September 2022. "Nebraska Education Profile." <https://nep.education.ne.gov/>.

Figure ACS.2: Axtell Community Schools



**Figure ACS.3: Number of Students by Grade, 2020-2021**



Source: Nebraska Department of Education

The figure above indicates that the largest number of students are in prekindergarten and kindergarten. The lowest population of students are in 2nd and 6th grades. According to the Nebraska Department of Education (NDE), 30.3% of students receive either free or reduced priced meals at school. This is lower than the state average of 46.3%. Additionally, 15.8% of students are in the Special Education Program. These particular students may be more vulnerable during a hazardous event than the rest of the student population.

**Table ACS.2: Student Statistics, 2020-2021**

	School District	State of Nebraska
Free/Reduced Priced Meals	30.3%	46.3%
School Mobility Rate	*	9.1%
English Language Learners	*	7.3%
Special Education Students	15.8%	15.7%

Source: Nebraska Department of Education<sup>1</sup>

\*Indicates fewer than 10 students.

## Administration and Staff

The school district has a superintendent and one principal. The school board is made up of a five-member panel. These individuals will be in charge of implementing hazard mitigation principles and actions. Axtell Community Schools has 100 employees district wide with 65 staff in the building daily. Staff are trained in emergency procedures through the crisis and EOP plan.

## Capability Assessment

The planning team assessed the school district’s hazard mitigation capabilities by reviewing local existing policies, plans, and programs related to hazard mitigation. The following tables summarize the district’s planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. Students and families are educated on emergency procedures through drills. The district partners with the fire department and occasionally the police department for education and exercises. The local planning team does not anticipate adding or improving capabilities.

District funds are limited to maintaining current facilities and systems. This is due to a low cash reserve and limited funding. A large portion of funds are currently being saved for a building addition. Funds have increased with the most recent budget.

**Table ACS.3: Capability Assessment**

Capability/Planning Mechanism		Yes/No
<b>Planning Capability</b>	Facility Improvements Plan	No
	Continuity of Operations Plan	No
	Crisis Response Plan	No
	Strategic Plan	No
	Other (if any)	Emergency Operations Plan
<b>Administration &amp; Technical Capability</b>	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	-
<b>Fiscal Capability</b>	Applied for grants in the past	No
	Awarded grants in the past	No
	Authority to levy taxes for specific purposes such as mitigation projects	Yes
	General Obligation Revenue or Special Tax Bonds	Yes
	Approved bonds in the past	Yes
	Flood Insurance	No
	Other (if any)	-
<b>Education &amp; Outreach Capability</b>	Local school groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc. (Ex. Parent groups, Crisis Response Teams, etc.)	Yes
	Hazard education or information program	No
	StormReady Certification	No
	Other (if any)	-
<b>Drills</b>	Fire	10 / year
	Tornado	2 / year
	Intruder	1 / year
	Bus evacuation	1 / year
	Evacuation	1 / year
	Other (if any)	

**Table ACS.4: Overall Capability**

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

## Plans and Studies

Axtell Community Schools has one document that discusses or relates to hazard mitigation. The plan is listed below along with a short description of how it is integrated with the hazard mitigation plan or how it contains hazard mitigation principles. When the school district updates this planning mechanism, the local planning team will review the hazard mitigation plan for opportunities to incorporate the goals and objectives, risk and vulnerability data, and mitigation actions into the plan update.



### Emergency Operations Plan (2020)

The purpose of the Emergency Operations Plan is to identify and respond to incidents by outlining the responsibilities and duties of Axtell Community School and its employees. It outlines the expectations of staff, roles and responsibilities, direction and control systems, internal and external communications, training and sustainability, common and specialized procedures, and response to specific hazards and vulnerabilities. High priority hazards discussed in the plan include severe storms, fire, chemical, intruder, and terrorism. A continuity of operations plan is also included in this document. The Emergency Operations Plan has not been integrated with the hazard mitigation plan. All staff are aware of the plan, and it gets reviewed annually and updated as needed.

### Future Development Trends

Over the past five years, the district has purchased the Breggen Building located across the street to the west of the existing school building. This likely increases the district’s vulnerability to hazards with an additional building at risk and to maintain. In the next five years, the district will continue to save money for a possible building addition.

### Community Lifelines

Each participating jurisdiction identified community lifelines that are vital for disaster response and essential for returning the jurisdiction’s functions to normal during and after a disaster per the FEMA Community Lifelines guidance. The following subsections list those community lifelines by type, as identified by the local planning team.

#### Safety and Security

The Safety and Security Lifeline includes law enforcement, security, fire services, search and rescue, government services, and community safety. The table below lists Safety and Security Lifelines for Axtell Community Schools.

**Table ACS.5: Safety and Security Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
1	Axtell Community School	S	N
2	Axtell Fire Department	-	N
3	Kearney County Sheriff	-	N

#### Food, Water, Shelter

Components of this lifeline include food, water, shelter, and agriculture. Food, Water, and Shelter Lifelines were already identified in other lifelines.

#### Health and Medical

Health and Medical Lifeline components can include medical care, patient transport, public health, fatality management, and the medical supply chain. Medical and health facilities have already been identified with other lifelines.

#### Energy

Energy Lifeline components include power, the power grid, and fuel. The table below lists Energy Lifelines for the district.

**Table ACS.6: Energy Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
4	CPI	-	N

**Communications**

Components of the Communications Lifeline include communication infrastructure, alerts, 911 dispatch, responder communications, and finance. Communication Lifelines for the school district are included in the table below.

**Table ACS.7: Communications Lifelines**

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
5	Village of Axtell	-	N

**Transportation**

Transportation Lifeline components include interstates, highways, major roadways, mass transit, railway, and aviation. Two major transportation corridors travel through the district: US Highway 6/34 and Nebraska State Highway 44. The most traveled route is Highway 6/34 with an average of 5,355 vehicles daily, 665 of which are trucks.<sup>103</sup> A Burlington Northern Santa Fe Railway/Amtrak line runs west to east through the district. Transportation information is important to hazard mitigation plans because it suggests possible evacuation corridors in the district, as well as areas more at risk of transportation incidents. The district owns one activity bus, three yellow buses, one short bus, four vans, and one suburban. Approximately 75-90 students are bused to and from school. No transportation events have impacted the school.

**Hazardous Materials**

The Hazardous Materials Lifeline includes chemical storage facilities, pipelines, and transported chemical tanks. There are two gas transmission pipelines that travel near the school and can be seen in the figure below. According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are three chemical sites within or near school buildings which house hazardous materials (listed below).

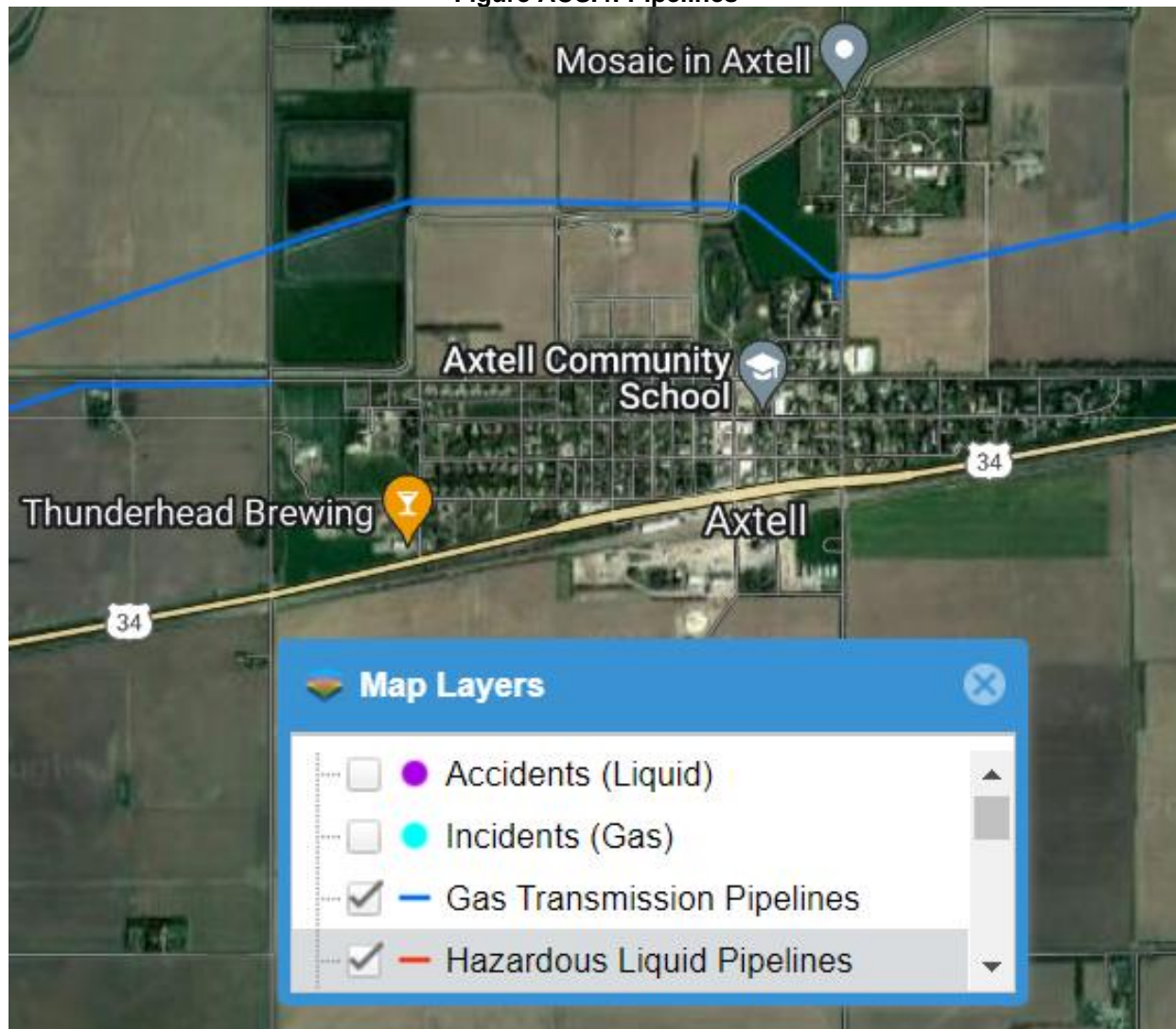
**Table ACS.8: Chemical Storage Lifelines**

CL Number	Name	Generator (G)	Floodplain (Y/N)
6	CenturyLink	-	N
7	Cooperative Producers Inc.	-	N

Source: Nebraska Department of Environment and Energy<sup>104</sup>

103 Nebraska Department of Transportation. 2021. "Interactive Statewide Traffic Counts Map." <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=bb00781d6653474d945d51f49e1e7c34>.  
 104 Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2022.

Figure ACS.4: Pipelines



Source: National Pipeline Mapping System<sup>105</sup>

### Other Community Lifelines

Axtell Community Schools identified lifelines that did not fit into the previous seven FEMA lifeline categories but are considered lifelines by the district. The other community lifelines are listed in the table below.

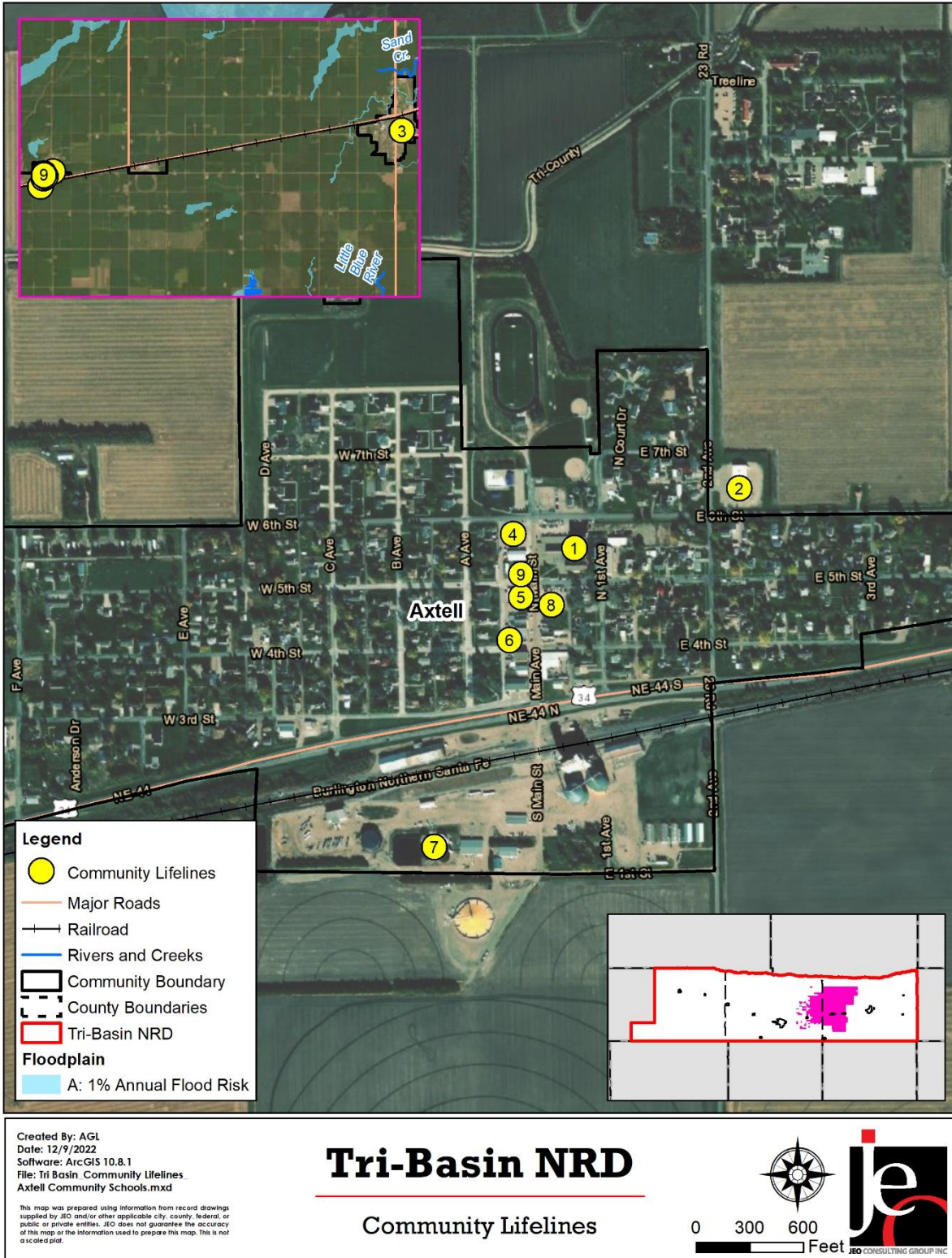
Table ACS.9: Other Community Lifelines

CL Number	Name	Generator (G) Shelter (S)	Floodplain (Y/N)
8	Bus Barn	-	N
9	Industrial Tech	-	N

105 National Pipeline Mapping System. 2022. "Public Viewer." Accessed September 2022. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.



Figure ACS.5: Community Lifelines



## Historical Occurrences

See the Kearny County and Phelps County profiles for historical hazard events, including the number of events, damage estimates, and any fatalities or injuries.

## Hazard Prioritization

The Tri-Basin NRD Hazard Mitigation Plan evaluates a range of natural and human-caused hazards which pose a risk to the counties, communities, and other participants. However, during the planning process, the local planning team identified specific hazards of top concern for the district which required a more nuanced and in-depth discussion of past local events, potential impacts, capabilities, and vulnerabilities. The following section expands on the hazards of top concern identified by Axtell Community Schools. Based on this analysis, the local planning team determined their vulnerability to all other hazards to be of low concern. For a review and analysis of other regional hazards, please see *Section Four: Risk Assessment*.

### Severe Thunderstorms

Past severe thunderstorm events have caused a loss of the bell system, partial loss of the phone system, and a loss temporary loss of the fire alarm system. All of these systems have been repaired and are now working properly. Severe thunderstorms can also lead to water damage and power outages affecting refrigeration and communication. If power is lost during the school day, students are located in one area and supervised until the power is back on. The school building has a weather radio to help warn of impending severe weather.

### Severe Winter Storms

Severe winter storms can cause power outages, impact communication infrastructure, and hinder the transportation of students. Poor road conditions are the most common impact the district has seen. The local planning team mentioned previous winter storms that have impacted the school district, such as the storm in December of 2006. Snow removal on school property is handled by custodial staff. Parking lot snow removal is contracted out. On average there are two to three snow days each school year where conditions cause the school to close. Students and staff are notified of a snow day through the district’s alert system, automated phone calls, automated text messages, and weathertthreat.com. The alert system has been recently updated.

### Tornadoes and High Winds

Tornadoes have the potential to cause significant damage to school buildings, power outages, and loss of life. Power outages can affect communication infrastructure and refrigeration. No tornadoes or high wind events have impacted the district. The school building has a safe room for students and teachers to go to in the event of a tornado. Tornado drills are done two times per school year. If a tornado happened to displace residents in Axtell or surrounding areas, the school building is designated as a temporary shelter by Kearney County Emergency Management. Power lines leading to the school building are not buried, which increases the risk of power loss.

## Mitigation Strategy

### Completed Mitigation Actions

Mitigation Action	School Continuity Plan
Description	Develop continuity plans for critical services in order to increase resilience after a hazardous event.
Hazard(s) Addressed	All Hazards
Status	Completed. The district’s continuity of operations plan is part of the Emergency Operations Plan.

<b>Mitigation Action</b>	<b>Weather Radios</b>
<b>Description</b>	Conduct an inventory of weather radios at schools and school facilities and provide new radios as needed.
<b>Hazard(s) Addressed</b>	Extreme Heat, Flooding, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Status</b>	Completed. Weather radios have been purchased.

**New Mitigation Actions**

<b>Mitigation Action</b>	<b>Public Awareness and Education</b>
<b>Description</b>	Through activities such as outreach projects, distribution of maps, and environmental education increase public awareness of natural and manmade hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
<b>Hazard(s) Addressed</b>	All Hazards
<b>Estimated Cost</b>	\$500+
<b>Local Funding</b>	General Budget
<b>Timeline</b>	Ongoing
<b>Priority</b>	Low
<b>Lead Agency</b>	District Administration
<b>Status</b>	Ongoing. Education of hazards occurs throughout the school year.

**Kept Mitigation Actions**

<b>Mitigation Action</b>	<b>Backup Generators</b>
<b>Description</b>	Provide portable or stationary source of backup power.
<b>Hazard(s) Addressed</b>	Extreme Heat, Flooding, Grass/Wildfires, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
<b>Estimated Cost</b>	\$200,000
<b>Local Funding</b>	General Budget
<b>Timeline</b>	2-5 Years
<b>Priority</b>	High
<b>Lead Agency</b>	Custodial Services, District Administration
<b>Status</b>	Not Started. The school currently has the capability to implement this project but would need additional electrical work done.

**Removed Mitigation Actions**

<b>Mitigation Action</b>	<b>Emergency Exercise: Hazardous Spill</b>
<b>Description</b>	Utilize exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place.
<b>Hazard(s) Addressed</b>	Hazardous Materials Release
<b>Status</b>	Removed. The district is no longer interested in this action.



## Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to ensure effectiveness and reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after every major disaster event, alongside district planning documents (e.g., annual budgets and Crisis Response 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 district's Superintendent will be responsible for reviewing and updating the school district profile outside of the five-year update. Axtell Community Schools will review the plan annually and will notify families through school district meetings and social media.