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COUNTY PROFILE

JEFFERSON COUNTY

Little Blue NRD and Lower Big Blue NRD Hazard Mitigation Plan 2021

Local Planning Team

Table JEF.1: Jefferson County Local Planning Team

Name	Title	Jurisdiction
John McKee	Emergency Manager	Jefferson County
Matthew Schmitz	Deputy County Sheriff	Jefferson County

Location, Geography, & Climate

Jefferson County is located in southwest Nebraska and is bordered by Saline County, Gage County, Thayer County, and Fillmore County. Jefferson also shares a border with Washington County and Republic County in Kansas.

The total area of Jefferson County is 573 square miles. Major waterways within the county include the Little Blue River, Big Indian Creek, Big Sandy Creek, Buckley Creek, Coon Creek, Cub Creek, Dry Branch Creek, Little Sandy Creek, Rock Creek, Rose Creek, Silver Creek, Smith Creek, Wishy Creek, and Wiley Creek. The county is not heavily forested. Jefferson County has had 7 recorded landslides; however, the exact location of these landslides is unknown. Most of Jefferson County lies in the plains topographic region, with the vast majority of the county's land characterized by agricultural fields.

Climate

The average high temperature in Jefferson County for the month of July is 89.0 degrees and the average low temperature for the month of January is 14.4 degrees. On average, Jefferson County gets 32 inches of rain and 23 inches of snowfall per year. The following table compares these climate indicators with those of the entire nine-county planning area. Climate data is helpful in determining if certain events are higher or lower than normal. For example, if the high temperatures in the month of July are running well into the 90s, high heat events may be more likely which could impact vulnerable populations.

Table WEB.2: Webster County Climate Normals

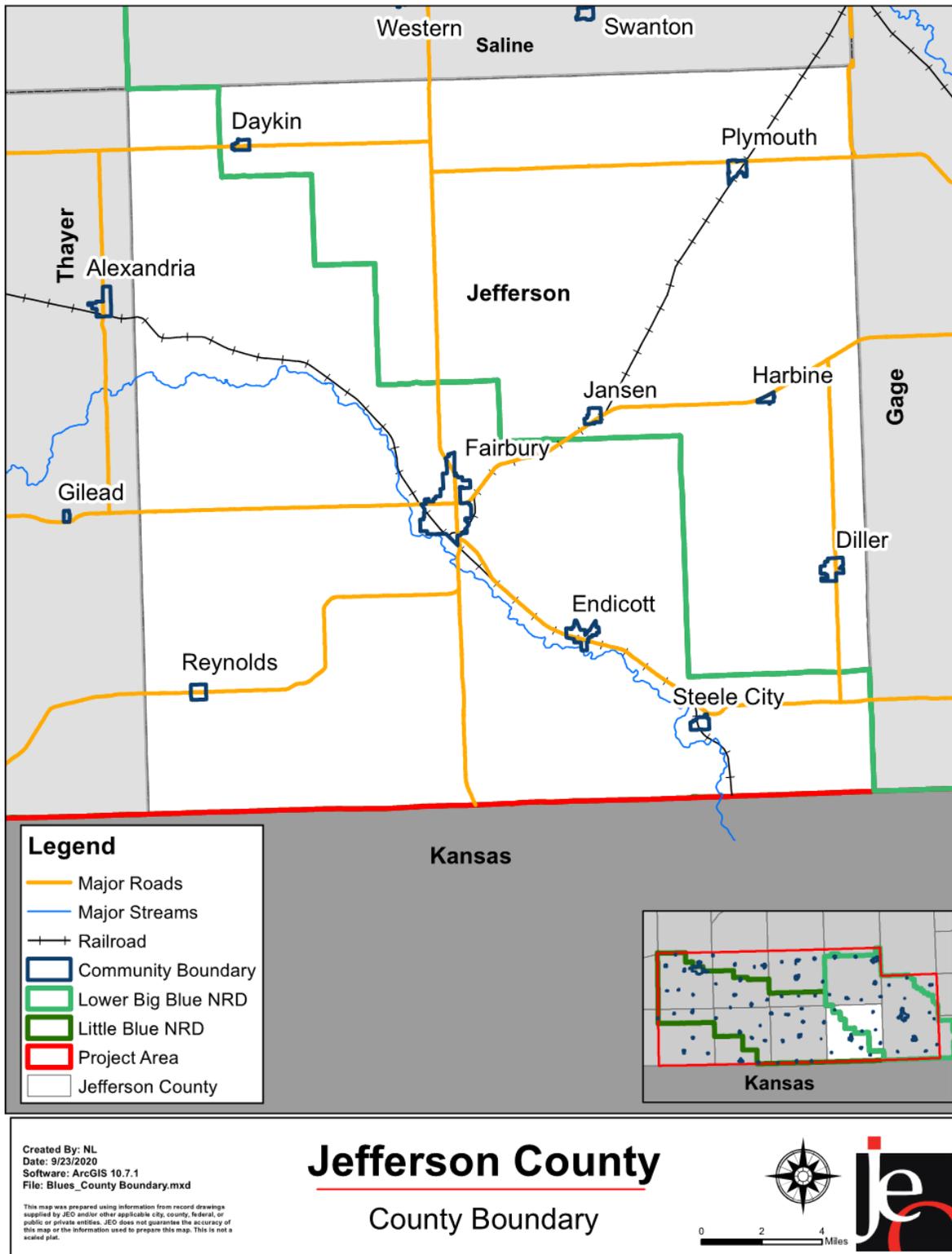
	Jefferson County	Planning Area Average
July Normal High Temp	89.0°F	88.5°F
January Normal Low Temp	14.4°F	14.2°F
Annual Normal Precipitation	32.38"	29.37"
Annual Normal Snowfall	23.4"	21.63"

Source: NCEI 1981-2010 Climate Normals¹, High Plains Regional Climate Center, 1981-20102
Precipitation includes all rain and melted snow and ice.

1 NOAA National Centers for Environmental Information. August 2020. "Data Tools: 1981-2010 Normals." [datafile]. <https://www.ncdc.noaa.gov/cdo-web/datatools/normals>.

2 High Plains Regional Climate Center. 2020. "CLIMOD." <http://climod.unl.edu/>.

Figure JEF.1: Jefferson County Jurisdictional Boundary



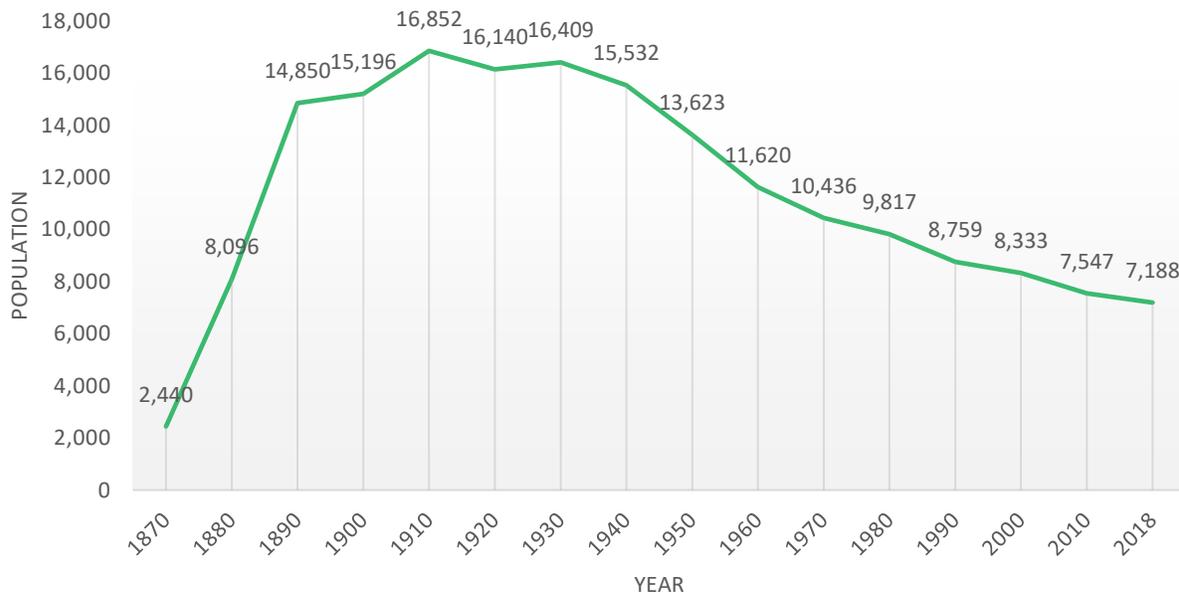
Transportation

Jefferson County’s major transportation corridors include State Highway 136, which runs east-west through the center of the county, and State Highway 15, which runs north-south through Fairbury. Highway 4 passes through the upper half of the county, running east-west, and Highway 8 passes through the lower half of the county, running east-west. Other major transportation corridors of concern include 537 Avenue, Union Pacific Line, and Plymouth Road. The county also has one rail road operated by UPPR. The county also has a number of air landing strips dispersed throughout the county. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Demographics

The following figure displays the historical population trends from 1870 to 2018 (estimated). This figure indicates that the population of Jefferson County has declined steadily since the 1930s. This is notable for hazard mitigation as communities with declining population have a higher probability of unoccupied housing that is not being maintained and may be less prone to pursuing residential/commercial development, which may reduce the number of structures vulnerable to hazards in the future.

Figure JEF.2: Jefferson County Population 1870-2018



Source: U.S. Census Bureau³

The following table indicates the State of Nebraska has a higher percentage of people under the age of 5 and between the ages of 5 and 64 than Jefferson County. Jefferson County has a higher median age and percentage of people over the age of 65. This is relevant to hazard mitigation insofar as the very young and elderly populations may be at greater risk from certain hazards than

³ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

others. For a more elaborate discussion of this vulnerability, please see *Section Four: Risk Assessment*.

Table JEF.2: Population by Age

Age	Jefferson County	State of Nebraska
<5	5.7%	6.9%
5-64	71.0%	78.1%
<64	23.2%	15%
Median Age	45.7	36.2

Source: U.S. Census Bureau⁴

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

Table JEF.3: Housing and Income

Age	Jefferson County	State of Nebraska
Median Household Income	\$43,295	\$59,116
Per Capita Income	\$29,439	\$31,101
Median Home Value	\$80,100	\$147,800
Median Rent	\$594	\$805

Source: U.S. Census Bureau^{5,6}

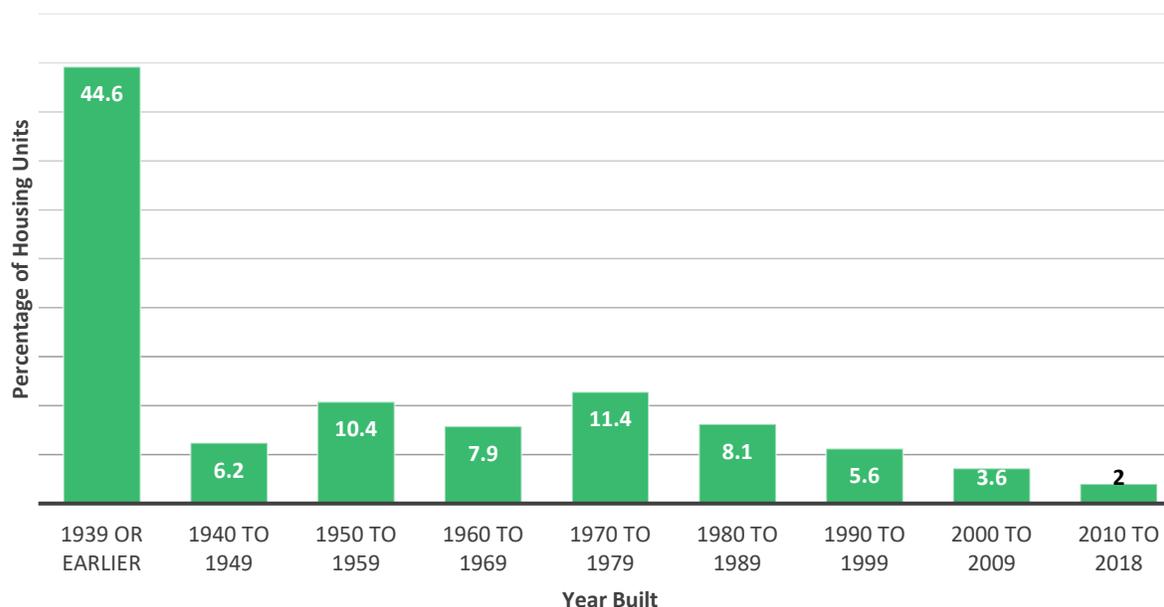
The following figure indicates that the majority of the housing in Jefferson County was built prior to 1940. According to Census Bureau, the county has 3,905 housing units; with 84.1 percent of those units occupied. Approximately 2.4 percent of the county's housing is classified as mobile homes and 80.5 percent of the county's housing was built before 1980. There are no large scale mobile home parks in the county. Housing age can serve as an indicator or risk as structures built prior to state building codes being developed may be at greater risk. The State of Nebraska first adopted building codes in 1987, the state currently has adopted the 2018 International Building Code. Finally, communities with a substantial number of mobile homes may have a higher number of residents vulnerable to the impacts of high winds, tornados, and severe winter storms.

⁴ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁵ United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

⁶ United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Figure JEF.3: Housing Units by Age



Source: U.S. Census Bureau⁷

Table JEF.4: Housing Units

Jurisdiction	Total Housing Units				Occupied Housing Units			
	Occupied		Vacant		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Jefferson County	3,283	84.1%	622	15.9%	2,364	72.0%	919	28.0%
Nebraska	754,063	90.8%	76,686	9.2%	498,567	66.1%	255,496	33.9%

Source: U.S. Census Bureau⁸

Employment Factors

The following table presents the number of establishments, number of paid employees, and the annual payroll in thousands of dollars. Communities which have a diverse economic makeup may be more resilient following a hazardous event, especially if certain industries are more impacted than others.

Table JEF.5: Businesses in Jefferson County

	Total Businesses	Number of Paid Employees	Annual Payroll (in thousands)
Total for All Sectors (2012)	235	1,140	\$48,111
Total for All Sectors (2016)	238	2,656	\$88,393
Total for All Sectors (2018)	233	2,583	\$91,904

Source: U.S. Census Bureau⁹

7 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

8 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

9 United States Census Bureau. 2020. "2018 County Business Patterns and Nonemployer Statistics Combined Report."

Agriculture is also important to the economic fabric of Jefferson County, and the state of Nebraska as a whole. Jefferson County’s 454 farms cover 267,279 acres of land. Both the number of farms and acres of harvested cropland have decreased since 2012. Crop and livestock production are the visible parts of the agricultural economy, but many related businesses contribute as well by producing, processing and marketing farm and food products. These businesses generate income, employment and economic activity throughout the region.

Table JEF.6: Jefferson County Agricultural Inventory

	2012 Census	2017 Census	Percent Change
Number of Farms with Harvested Cropland	627	454	-38.1%
Acres of Harvested Cropland	312,234 acres	267,279 acres	-16.8%

Source: USDA Census of Agriculture^{10,11}

Future Development Trends

Several changes have taken place in communities throughout Jefferson County. These are listed below by community:

- Diller - Twelve new structures have been built in Diller since 2011: two houses, three garages, three home additions, and four additions to existing businesses. The structures were built throughout the village, and none of them were located in floodplains or other hazardous areas. A new packing plant is under construction as of 2020.
- Daykin - Four new structures have been built in the village since 2011: two storage bins at the co-op, a chemical facility at the co-op, and a seed business with bins. This development occurred in the east end of the village. The grain storage bins were built near the Agronomy Building. Additional storage bins planned for the co-op in 2020.
- Plymouth - A new fire department building on Main Street in Plymouth was completed in April 2015. It is not sited in a floodplain. A new auto repair shop, also located on Main Street has been constructed.
- Reynolds - Since 2011, three 180,000-bushel grain bins were built in the southwestern part of Reynolds, at the Farmers Cooperative. None of these bins are sited in a floodplain or other hazardous area. No known future development in the village is planned through 2025.
- Steele City - Since 2011, a new town hall and an addition to the fire hall were built in Steele City, in the northwest part of town. Both are sited near the floodplain. No known additional structures are planned in town through 2025.

Numerous homes were also demolished in Fairbury, Plymouth, and Diller. However no other major changes have occurred in unincorporated areas of the county.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures

10 United States Department of Agriculture, National Agricultural Statistics Server. 2014. "2012 Census of Agriculture – County Data."

11 United States Department of Agriculture, National Agricultural Statistics Server. 2019. "2017 Census of Agriculture – County Data."

on each parcel. A summary of the results of this analysis is provided in the following table. A structure in unincorporated Jefferson County has been removed from the floodplain via LOMA. A summary of LOMAs can be found in the table below.

Table JEF.7: Jefferson County Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
9,637	3,979	\$306,058,640	481	12%	\$47,186,732

Source: County Assessor, GIS Workshop

Table JEF.8: Jefferson County Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	17-07-0312A-310477	12/8/2016	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

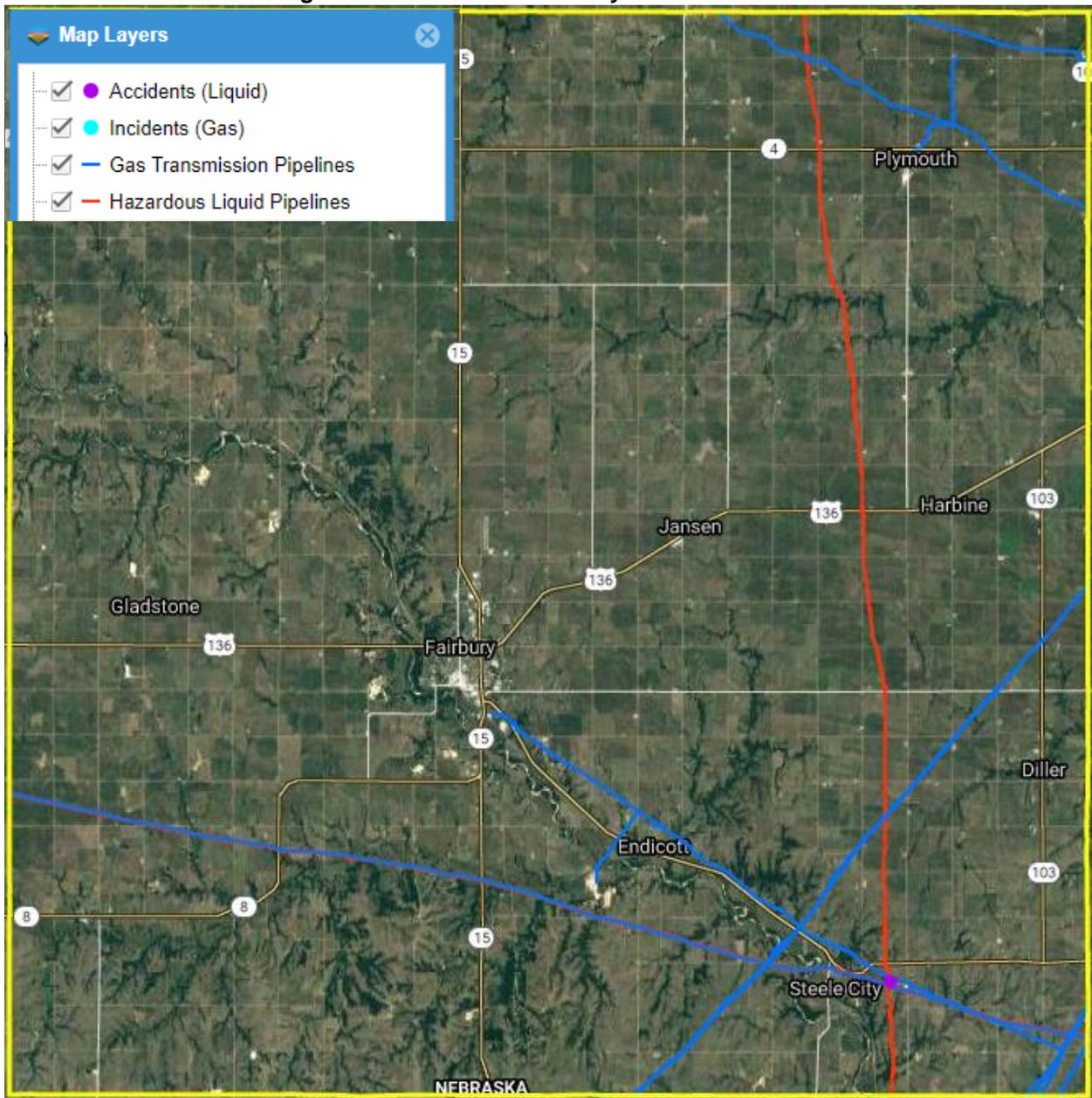
According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy in 2019, there are 23 chemical storage sites throughout Jefferson County which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. For a description and map of chemical sites located in incorporated areas, please see the jurisdiction's participant section.

Chemical Transportation

Hazardous chemicals, particularly agricultural based chemicals and some radioactive materials, are commonly transported through the county. The county has one rail road operated by UPRR. The line enters from the west, passing through Hendrix before entering Fairbury. Once in Fairbury, the line splits, with a divergent heading northeast and another headed southeast. The northeastern divergent passes through Jansen before exiting into Saline County. The southeastern divergent passes through Endicott and Steele City, before entering Kansas.

The local planning team indicated the type and quantities of chemicals transported through the county is unknown. While incident proximity will always occur near or on transportation methods, it is not possible to predict precise locations of possible future events. Proximity of pipelines, rail lines, and highways near critical facilities or vulnerable population centers, including schools, daycares, nursing homes, and/or hospitals, increases overall vulnerability to chemical transportation spills. No chemical transportation spills have been reported in the county; however, this does not mean events have not occurred. Private entities, local emergency response units, and state resources have strict regulatory oversight and emergency action plans in place to respond to significant chemical spills.

Figure JEF.4: Jefferson County Critical Facilities



Critical Facilities

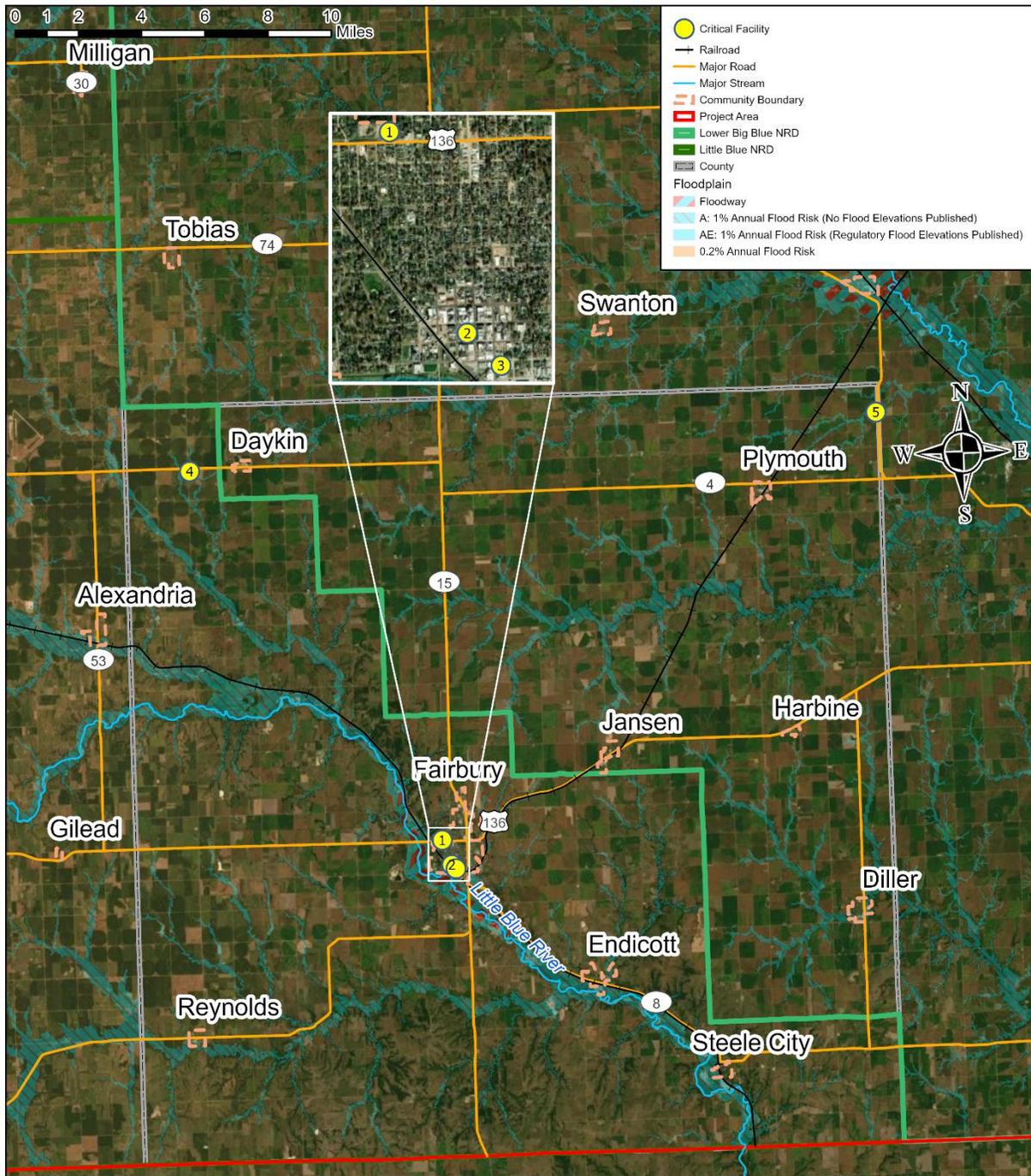
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

Critical facilities for Jefferson County are located primarily in the county's incorporated communities. All critical facilities for Jefferson County are located outside of the established floodplain. The National Register of Historic Places contains 10 entries for Jefferson County. The sites are located in Steele City, Diller, Fairbury, and Powell. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table JEF.9: Jefferson County Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Transportation	County Highway Dept	N	N	N
2	Safety and Security	County Courthouse	N	N	N
3	Safety and Security	Law Enforcement Center	N	Y	N
4	Food, Water, and Shelter	Meridian Public Schools	Y	N	N
5	Food, Water, and Shelter	Tri-County Public Schools	Y	N	N

Figure JEF.5: Jefferson County Critical Facilities



Created By: NL
Date: 5/21/2021
Software: ArcGIS Pro 2.8.0
File: Blues Critical Facilities.aprx
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 plan.

Jefferson County

Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021

Kansas

Historical Occurrences

The following table provides a statistical summary for hazards that have occurred in the planning area. The property damages from the NCEI Storm Events Database (January 1996 – April 2020) should be considered only as broad estimates. Sources include but are not limited to: emergency management; local law enforcement; Skywarn spotters; NWS damage surveys; newspaper clipping services; insurance industry; and the general public. Crop damages reports come from the USDA Risk Management Agency between 2000 and June 2020. For the complete discussion on historical occurrences, please refer to *Section 4: Risk Assessment*.

Table JEF.10: Hazard Risk Assessment – Jefferson County

Hazard		Count	Property Damage	Crop Damage ³
Agricultural Disease	Animal Disease ²	25	25,241 animals	N/A
	Plant Disease ³	39	N/A	\$245,206
Dam Failure ⁷		3	\$0	N/A
Drought ⁸		493 out of 1,504 months	\$0	\$29,195,580
Earthquakes ¹¹		1	\$0	\$0
Extreme Heat ⁹		Avg. 7 days per year	\$0	\$1,271,389
Flooding ¹ 1 death	Flash Flood	22	\$913,000	\$367,631
	Flood	18	\$5,148,900	
Grass/Wildfire ⁴		235	3,502 acres	\$34,109
Hazardous Materials	Chemical Fixed Site Spills ⁵	3	\$0	N/A
	Chemical Transportation Spills ⁶	7	\$12,110	N/A
Levee Failure ¹²		0	\$0	N/A
Public Health Emergency ¹³		~661 cases; 1 death	\$0	N/A
Severe Thunderstorms ¹	Hail	220	\$1,000	\$1,692,973
	Heavy Rain	1	\$0	\$1,825,611
	Lightning	3	\$4,000	N/A
	Thunderstorm Wind	88	\$1,689,700	N/A
Severe Winter Storms ¹	Blizzard	5	\$0	\$1,123,853
	Extreme Cold/Wind Chill	4	\$0	
	Heavy Snow	7	\$1,500,000	
	Ice Storm	6	\$0	
	Winter Storm	30	\$0	
	Winter Weather	8	\$0	
Terrorism ¹⁰		0	\$0	N/A
Tornadoes and High Winds ¹	High Winds 1 injury	16	\$0	\$396,506
	Tornadoes 1 injury	14	\$3,220,000	\$17,103
Totals		755	\$12,488,710	\$36,169,961

1 – NCEI, Jan 1996-April 2020

SECTION SEVEN: JEFFERSON COUNTY COMMUNITY PROFILE

- 2 – *USDA, 2014-June 2020*
- 3 – *USDA RMA, 2000-Aug 2020*
- 4 – *NFS, 2000-2020*
- 5 – *NRC, 1990-2019*
- 6 – *PHSMA, 1971-2020*
- 7 – *NeDNR Dam Safety Division, 2020*
- 8 – *NOAA, 1985-2020*
- 9 – *NOAA Regional Climate Center, 1983-2020*
- 10 – *Global Terrorism Database, 1970-2017*
- 11 – *USGS, 1960-2020*
- 12 – *USACE, 2020*
- 13 – *CDC, April 28 2021 (COVID only)*

SECTION SEVEN: JEFFERSON COUNTY COMMUNITY PROFILE

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

Table JEF.11: Jefferson County and Communities Hazard Matrix

Jurisdiction	Agricultural Animal and Plant Disease	Dam Failure	Drought & Ex Heat	Earthquakes	Flooding	Grass/ Wildfire	Hazardous Materials	Levee Failure	Public Health Emergency	Severe Thunderstorms	Severe Winter Storms	Terrorism	Tornadoes and High Winds
Jefferson County					X		X			X	X		X
Daykin							X			X	X		X
Diller							X			X	X		X
Endicott										X			
Fairbury					X		X			X	X		X
Harbine										X	X		X
Jansen							X			X			X
Plymouth							X				X		X
Reynolds					X		X			X			X
Steele City					X					X			X

Hazard Prioritization

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

Flooding

Flooding is a concern in Jefferson County, in part due to an unusual phenomenon. Per county officials, the 2003 Deshler tornado changed the flow of the Little Blue River, such that runoff from the diverted river flow poses a flood risk to neighboring communities.

Flooding throughout the county in May 2015 caused more than \$5.5 million in property damage and killed one person. Six to 10 inches of rain fell along the Little Blue River basin during this episode, causing the river to crest at nearly seven feet above flood stage, and flood the home of an 86-year-old woman who was killed. Fairbury in particular was severely flooded. A month later, in June 2015, Fairbury and Daykin experienced additional flooding, leading to \$60,000 in property damage. In 2008, another massive flooding event due to two to four inches of rains caused more than \$250,000 in damage, washing out several roads and a bridge near Daykin, and flooding farmland and Highway 15 near Fairbury. The March 2019 flood event did not significantly impact the county.

The county is concerned that flooding could block transportation routes in the county, resulting in disruptions to commerce, school closures, and an inability for police, fire, and rescue services to reach people in need during emergencies. In particular during heavy flood events, Highway 15 south of Fairbury becomes blocked and limits available transportation corridors.

Hazardous Materials (Transportation)

Jefferson County is concerned about the possibility of a significant chemical spill or leak along its transportation routes; and in particular, along the railways or pipelines that cross the county. In particular, hazardous materials such as crude oil and benzene are transported along the Union Pacific railroad that traverses the county; and natural gas is transported through a 40-inch pipeline in the county. The railroad crosses the western half of the county, and the pipeline crosses the southern half.

There have been no rail incidents in recent years, and only minor pipeline spills due to damage to pipelines caused by contractors. No county critical facilities are located in the immediate proximity of these transportation routes, though Steele City and other communities are sited nearby. The county has installed a reverse emergency notification system which can be used to notify residents when spill events occur. The county identified the need to conduct a public training or exercise for shelter in place or chemical spill events.

Severe Thunderstorms

Like much of Nebraska, Jefferson County is prone to violent and damaging thunderstorms. Thunderstorms include impacts from hail, lightning, heavy rain, and strong winds. Per the National Climatic Data Center, storms with severe-criteria hail (quarter size or greater) and severe-criteria winds (58 mph or greater) are common occurrences in the county. In addition to the damaging storms of May and June in 2015, as described above, notable events in recent years include storms in Steele City and Thomson on June 23, 2015 that produced tennis ball size hail; a storm with 69 mph winds in Daykin on April 14, 2012 that caused \$100,000 in damage, including to some homes and trees, and knocked over a welcome sign; and a storm in Plymouth on May 11, 2011 that generated 78 mph winds that damaged trees. Also, communication towers and the county law enforcement center have been struck by lightning in the past.

The county uses surge protectors and digital data backups to protect its municipal records. Law enforcement servers, in particular, are backed-up. Generators are used to ensure that the communication towers, law enforcement offices, and fire stations in the county maintain electric power during any outages. County critical facilities have weather radios, to keep track of dangerous weather conditions, and the county maintenance department is diligent in monitoring them. The law enforcement office does not have a weather radio and uses teletype to keep track of any severe weather developments. The county has installed a reverse emergency notification system which can be used to notify residents when hazardous conditions occur. The county has identified the need to purchase backup generators and build a safe room for 500 people.

Severe Winter Storms

Jefferson County frequently experiences winter storms – including heavy snowfall, snowstorms with blizzard-criteria winds (35 mph or greater winds for at least three hours), and ice storms – that knock out power, block roads, and create dangerous travel conditions. The blizzard of December 23-24, 2009 is especially remembered locally for the multi-day power outages it caused, thanks to 40 mph winds and in some locations, three-quarters of an inch of ice. In addition to these issues, the county is concerned that severe winter storms can disrupt commerce, close schools, and inhibit the ability of first responders to reach people in need. Fortunately, county critical facilities have not been damaged by these storms in recent years.

The county owns graders with snowplows and loaders. The county no longer utilizes snow fences. Power lines are buried on an as needed bases throughout the county. The county has identified the need to purchase additional backup generators for critical facilities or areas with vulnerable populations.

Tornadoes and High Winds

Jefferson County has experienced damaging high winds and violent tornadoes. The infamous Hallam Tornado of May 22, 2004, which maxed out at F-4 intensity and killed one person, began in northern Jefferson County near Daykin, causing \$220,000 in property damage as it crossed into Saline County at F-1 intensity. Other notable recent tornados include an EF-2 tornado that moved near Reynolds and Fairbury and caused \$1.75 million in property damage; and an EF-1 storm near Diller on April 29, 2010 that caused \$650,000 in damage. In May of 2014, an EF-1 tornado traveled through open country near Daykin. As recent as May 6, 2015, a tornado once again passed near Daykin. A high wind event in 2009 caused poor visibility on roads and flipped two semi-trucks. One truck accident led to injuries.

The county’s main concerns regarding tornadoes and high winds are damages to property and county infrastructure, such as airports, and the lack of shelter for residents. The county does not maintain a community safe room, meaning that persons needing shelter must use their own or a neighbor’s safe room, basement, or storm shelter. The county has received a grant to build additional shelters, which is a project in progress. Of particular concern is the lack of safe rooms at the county fairgrounds. The county has also installed a reverse emergency notification system which can be used to notify residents or hazardous events. To mitigate this hazard, the county plans to obtain backup generators, and build a safe room for 500 people.

Governance

A community’s governance structure impacts its capability to implement mitigation actions. The county is governed by a three-member board of supervisors. The county also has the following offices or departments: attorney, clerk, treasurer, sheriff, elections commissioner, register of deeds, veterans services officer, clerk of district court, emergency manager, highway superintendent, weed superintendent, and zoning administrator.

Capabilities

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

Table JEF.12: Capability Assessment

Survey Components		Yes/No
Planning Regulatory Capability	Comprehensive Plan	Yes – 2013
	Capital Improvements Plan	No
	Economic Development Plan	Yes
	Local Emergency Operational Plan	Yes – 2016
	Floodplain Ordinance	Yes -2002
	Zoning Ordinance	Yes – 2020
	Subdivision Regulation/Ordinance	Yes - 2007
	Building Codes	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	Yes
	Community Rating System	No
Other (if any)		
Administrative Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	Yes
	Chief Building Official	Yes
	Civil Engineering	No
	Local Staff Who Can Assess Community’s Vulnerability to Hazards	Yes
	Grant Manager	Yes

Survey Components		Yes/No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	1 & 6 Year Plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education Outreach and	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 JEF.13: Overall Capability

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

Plan Integration

Jefferson County has a Comprehensive Plan, Hazard Mitigation Plan, Economic Development Plan, Local Emergency Operations Plan (LEOP), Floodplain Management Plan, Zoning Ordinance, and Floodplain Ordinance.

The county’s Comprehensive Plan was completed in March 2013. Currently the Comprehensive plan does not include information relative to the hazard mitigation plan; however, the plan is anticipated to be updated in 2023 and hazard mitigation goals and objectives should be integrated in that revision.

The county LEOP, which was last updated in 2016, is an all-hazards plan that provides clear assignments of responsibility in case of emergencies. The plan includes, as annexes, LEOPs for the City of Fairbury, and Villages of Daykin, Diller, Endicott, Harbine, Jansen, Plymouth, Reynolds, and Steele City. The county's Subdivision Regulations were completed in March 2013.

The county's Floodplain Management Plan and Floodplain Ordinance were not available as of the time of this writing. The county understands the need to coordinate this plan and ordinance with its hazard mitigation planning. The local planning team noted the annual municipal budget is generally limited to maintaining current facilities. Any new capital projects would require additional bonds or grant funding.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the County Board, Planning and Zoning Administrator, County Roads Department Supervisor, Emergency Manager, Floodplain Administrator, County Clerk, and the County Attorney if needed. The local planning team will review the plan no less than annually and will include the public in the review and revision process by: updating the county website, social media posts, local media outlets, and sharing information at council meetings open to the public.

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Obtain a back-up power generator for the Hospital, Long Term Care, and Assisted Living Facility (150kW).
HAZARD(S)	All hazards
ESTIMATED COST	\$130,000+
FUNDING	Facility funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	EMA, Hospital CEO, Board
STATUS	Currently exploring funding opportunities.

SECTION SEVEN: JEFFERSON COUNTY COMMUNITY PROFILE

MITIGATION ACTION	BACKUP GENERATOR FOR FAIRGROUNDS (90kW)
DESCRIPTION	Obtain a back-up power generator for the county fairgrounds (90kW)
HAZARD(S)	All hazards
ESTIMATED COST	\$60,000
FUNDING	General Fund, HMGP, PDM
TIMELINE	1 year
PRIORITY	Low
LEAD AGENCY	EMA
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATOR FOR COUNTY COURTHOUSE (100kW)
DESCRIPTION	Obtain a back-up power generator for the county courthouse (100kW)
HAZARD(S)	All hazards
ESTIMATED COST	\$120,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	County Board
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATOR FOR COUNTY DEPARTMENT OF ROADS BUILDING (60kW)
DESCRIPTION	Obtain a back-up power generator for County Department of Roads Building (60kW)
HAZARD(S)	All hazards
ESTIMATED COST	\$20,000
FUNDING	General Fund, HMGP, BRIC
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Dept of Roads
STATUS	This project has not yet been started.

MITIGATION ACTION	STORM SHELTER/SAFE ROOM
DESCRIPTION	Construct a storm shelter /safe room (500 people)
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	\$619,000
FUNDING	County revenue, and revenue from the municipality where the shelter is to be located, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Low
LEAD AGENCY	EMA and municipality where shelter is to be located
STATUS	Currently exploring funding opportunities.

Removed Mitigation Actions

MITIGATION ACTION	NFIP CONTINUATION AND ENFORCEMENT
DESCRIPTION	Enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs).
REASON FOR REMOVAL	While the county will continue to participate in the NFIP, this is no longer considered a mitigation action by FEMA. Enforcement of floodplain policies is required as part of ongoing codes.

COMMUNITY PROFILE

VILLAGE OF DAYKIN

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table DAY.1: Village of Daykin Local Planning Team

Name	Title	Jurisdiction
Donna Rut	Village Clerk	Village of Daykin
Robert Brockmeyer	Board Chairperson	Village of Daykin

Location and Geography

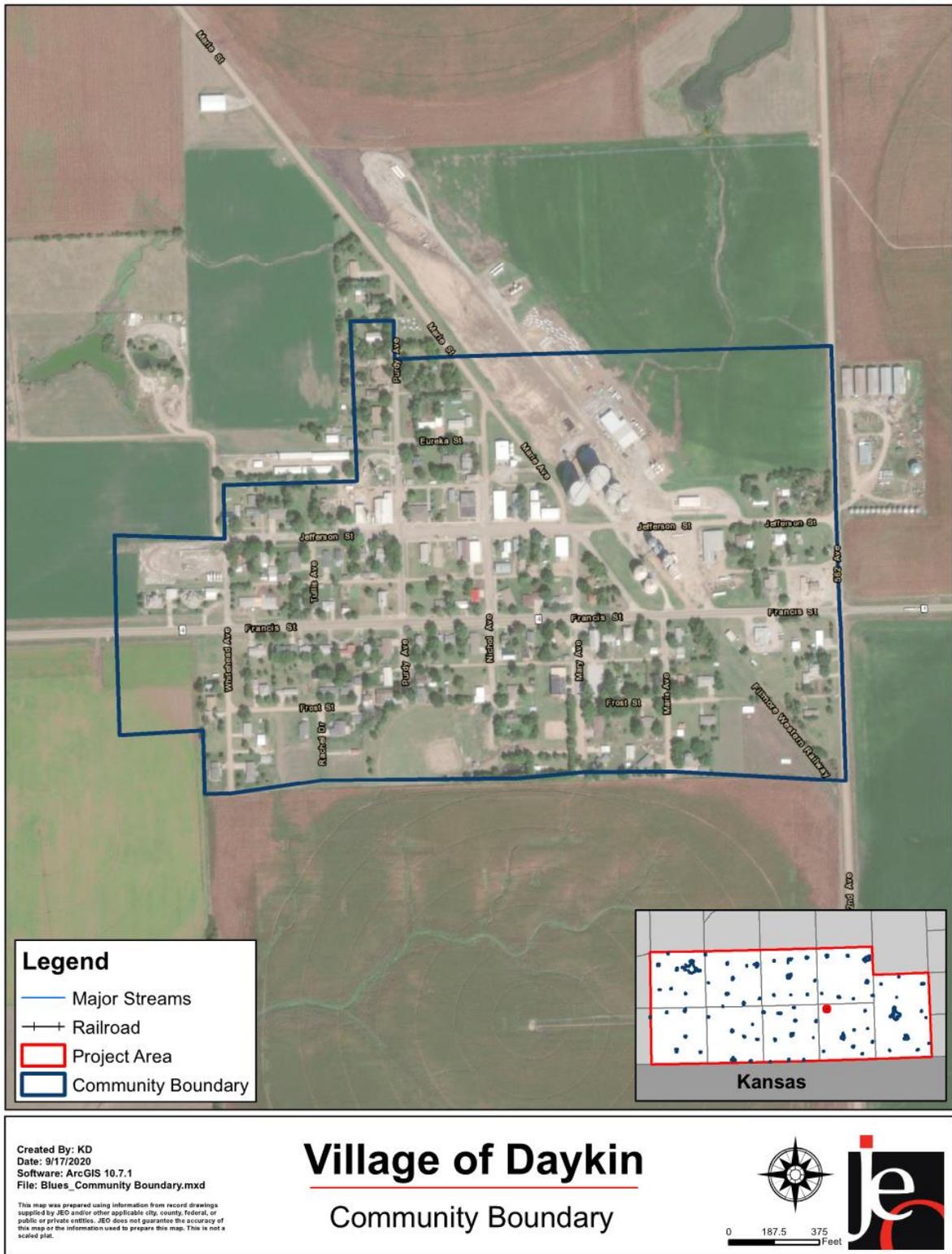
The Village of Daykin is located in the north western portion of Jefferson County. The Village of Daykin covers an area of 0.16 square miles. There are not major water ways near Daykin, although there is a small retention pond approximately 500 ft north of the village. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Daykin. Most of Daykin lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Daykin's major transportation corridors include Nebraska State Highway 4, which runs east-west, through the center of Daykin. Highway 4 accommodates on average 710 vehicles per day, 80 of which are heavy commercial vehicles. State Highway 15 was also identified as a local route of concern by the planning team. Highway 15 runs north-south seven miles east of the village and sees an average of 2,180 vehicles per day, 395 of those being heavy trucks. Chemicals such as ammonia are transported regularly along these local routes. Some critical facilities are located along the main route of Highway 4. These include the grain elevator (east end of Daykin) and Meridian School (1 ½ miles west of Daykin). Daykin does not have rail lines. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

SECTION SEVEN: VILLAGE OF DAYKIN COMMUNITY PROFILE

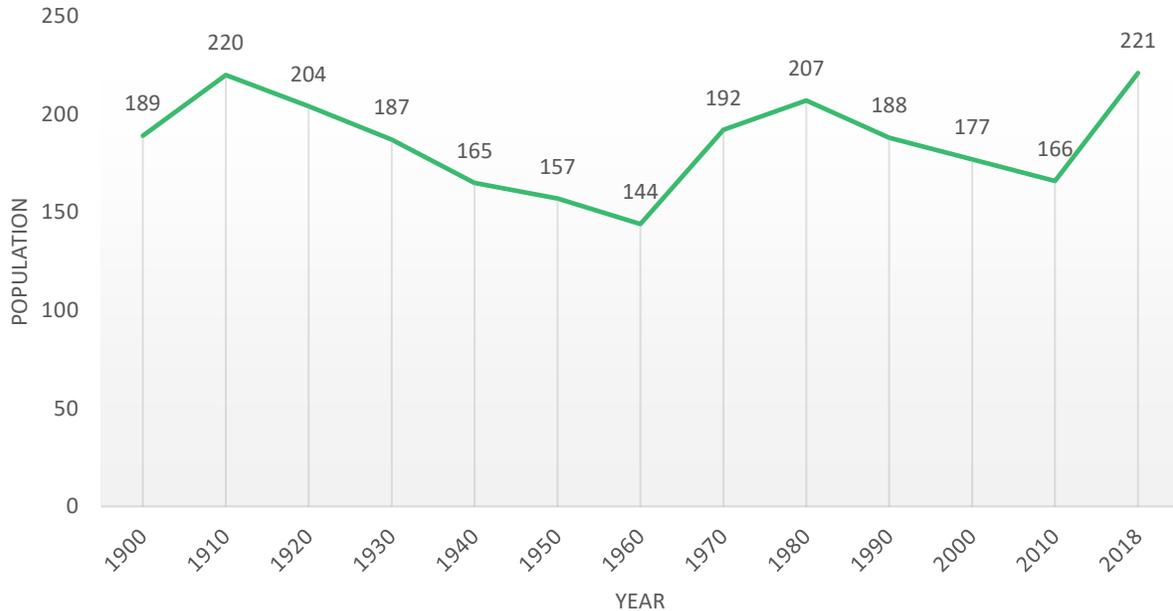
Figure DAY.1: Village of Daykin Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1910 to 2018 (estimated). This figure indicates that the population of Daykin experienced a decline from 1910 through 1960. During the 1960s and 1970s the population grew, however, since 1980 the population has been in a steady decline. The newest census estimates indicate the population in Daykin may be growing. The village's population accounted for 3% of Jefferson County's population in 2018.

Figure DAY.2: Daykin Population 1900-2018



Source: U.S. Census Bureau¹²

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

- **Younger.** The median age of Daykin was 38 years old in 2017, compared with the county average of 45.7 years. Daykin's population has grown younger since 2010, when the median age was 42.3 years old. Daykin had a larger proportion of people under 20 years old (38.5%) than the county (24.1%).¹³
- **Less ethnically diverse.** In 2010, 3% of Daykin's population was Black or African American, 1% was other races, and 1% were two or more races. By 2018, only about 8% of Daykin's population was two or more races. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.¹⁴
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Daykin (23.1%) was higher than the county (12.0%) in 2018.¹⁵

¹² United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

¹³ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

¹⁴ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

¹⁵ United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Daykin included Manufacturing, Retail, Finance, and Education. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.¹⁶
- **Lower household income.** Daykin's median household income in 2018 (\$38,750) was about \$4,500 lower than the county (\$43,295).¹⁷
- **Fewer long-distance commuters.** About 73.3% percent of workers in Daykin commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 6.4% of workers in Daykin commute 30 minutes or more to work, compared to about 19.3% of the county workers.¹⁸

Major Employers

Major employers in the community include Farmers Co-op and Meridian Schools, according to the local planning team. Approximately 15% of residents commute to other communities for work.

Housing

In comparison to the Jefferson County, Daykin's housing stock was:¹⁹

- **More owner occupied.** About 88.0% of occupied housing units in Daykin are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Smaller share of aged housing stock.** Daykin has fewer houses built prior to 1970 than the county (50.5% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the village is single family detached and Daykin contains more multifamily housing with five or more units per structure than the county (0.0% compared to 4.8%). About 89.2% of housing in Daykin was single-family detached, compared with 91.4% of the county's housing. Daykin has a smaller share of mobile and manufactured housing (8.6%) compared to the county (2.4%). The planning team indicated that mobile homes are scattered throughout the village.

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

16 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

17 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

18 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

19 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

Over the past five years, two new houses were built in the village. Additionally, a county building was constructed east of the chemical storage facility at the Farmers Co-op. No new housing or commercial development is currently planned for the next five years. The local planning team and past census data indicated Daykin's population is declining, which the local planning team attributed to an aging population.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Daykin.

Table DAY.2: Daykin Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
179	106	\$6,758,888	0	0%	\$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site in Daykin which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. A main concern for fixed chemical spills is the availability of trained personnel to properly respond. Roads at risk if spills were to occur include Jefferson Street and Marie Avenue. Critical Facilities that are located near chemical fixed sites include Farmers Co-op, Heartland Bank, and the post office. Some family dwellings are within two blocks from the chemical site, increasing their risk of exposure. No chemical spill events have occurred locally, according to the local planning team.

Table DAY.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	602 Jefferson St	N

Source: Nebraska Department of Environment and Energy²⁰

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

Critical Facilities

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

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

Table DAY.4: Daykin Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Energy	Farmer's Cooperative Country Store/ Gas Station	N	N	N
2	Hazardous Materials	Farmers' Cooperative	N	N	N
3	Safety and Security	Daykin Fire Station	Y	N	N
4	Other	Heartland Bank	Y	Y	N
5	Food, Water, and Shelter	Daykin Water Tower	N	N	N
6	Food, Water, and Shelter	Daykin Well	N	Y	N
7	Food, Water, and Shelter	Daykin Well	N	N	N
8	Communications	Windstream Building	N	U	N
9	Communications	Daykin Post Office	N	N	N
10	Health and Medical	Day Care	N	N	N

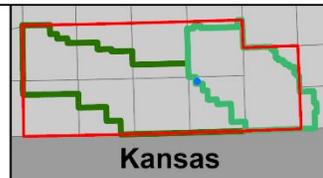
Figure DAY.3: Daykin Critical Facilities



Created By: NL
 Date: 5/20/2021
 Software: ArcGIS Pro 2.8.0
 File: Blues Critical Facilities.aprx
 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 plat.

Village of Daykin

Little Blue NRD and Lower Big Blue NRD
 Hazard Mitigation Plan 2021



Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials

While no significant chemical spills have occurred in Daykin in recent years, the village is concerned about the safety of employees, residents, and surrounding buildings should an incident occur. Highway 4 is the transportation route of most concern, as anhydrous ammonia and fertilizers are commonly transported along this road. Critical facilities are located along transportation routes to the west and south. These include a gas station and grain elevator (east end of Daykin) and Meridian School (1 ½ miles west of Daykin). Highway 4 and the fire department are located close to fixed chemical sites. There are houses to the south, east, and west of chemical fixed sites in the village.

Regarding mitigation, the village is concerned that local employees and the fire department lack the adequate training and gear to respond to a chemical incident, and that residents who live near chemical storage fixed sites are not well-educated about the risk and the appropriate response, should an incident occur.

Severe Thunderstorms

Jefferson County is prone to damage from severe thunderstorms, and Daykin has experienced significant damaging thunderstorm winds in recent years. According to NCEI data, the village has seen 23 thunderstorm events from 1996 to April 2020. A thunderstorm event on April 14, 2012, had 69 mph winds and caused \$100,000 in property damage. A storm with 60 mph winds on June 20, 2008 blew the door off a barn; and on May 29, 1998, a storm with 75 mph winds blew a garage off its foundation and into an alley. The local planning team noted that the community experienced three high wind events in 2020. The village is concerned about damage to property and that it lacks enough generators to run critical processes and facilities, such as shelters and wells. Power outages also are emergencies for those needing power to run medical equipment, such as oxygen generators.

The planning team stated that critical facilities in the village, such as the gas station, shelters, the fire hall, wells, and the town hall do not have backup power generators, nor do they have weather radios. There are also trees that may need removal. To mitigate this hazard, the village plans to obtain backup power generators for the fire hall, community buildings and shelters, as well as determine if additional alert sirens are needed, obtain portable lighting for critical facilities, and develop an emergency fuel supply plan.

Severe Winter Storms

Severe winter storms are a natural and regular occurrence for the region, which can cause significant impacts, and were identified as a top concern for the community. According to the NCEI, there have been 60 severe winter storm events in the county from 1996 to April 2020. These events have resulted in a total of \$1,500,000 in property damage. The main concerns for this hazard in Daykin are power outages and impediments to transportation, especially emergency vehicles. No structural damage to facilities has occurred in recent years from winter storms.

In terms of mitigation, the village owns a tractor with a blade and bucket, and the village maintenance personnel keep the streets clear. The village doesn't utilize snow fences or have snow emergency routes. These resources are believed to be sufficient to meet the village's needs. To mitigate this hazard, the village plans to obtain a backup power generator for the fire hall, obtain portable lighting for critical facilities, and develop an emergency fuel supply plan.

Tornadoes and High Winds

Due to previous occurrences of tornadoes impacting the village, tornadoes were identified as a top concern. According to NCEI data, there have been 16 high wind events in Jefferson County from 1996 to April 2020, resulting in one injury. During that same period, the Village of Daykin has seen four tornadoes. On May 11, 2014, an EF-1 tornado began two miles south-southeast of the village caused one injury and was part of a storm complex that caused straight-line winds in excess of 100 mph and an EF-3 tornado north of town. Another EF-1 tornado just south of town on May 22, 2004 damaged irrigation units and homes, and an EF-0 with the same episode also caused damage to outbuildings. The most significant tornado to affect the community also occurred on May 22, 2004, and was rated as an EF-1 and caused \$220,000 of property damage in Daykin before tracking northeast to Hallam, where it reached EF-4 strength, killed one person, injured 30, and caused \$100 million in damage. The village's main concerns from tornadoes include power outages, lack of shelter, impediments to transportation, and possible chemical leaks.

For mitigation, while the village does not have a community safe room, residents can shelter in a church basement. It is not known if there is a backup system for electronic municipal records. No critical facilities have been damaged by tornadoes in recent years. Jefferson County emergency management does offer text alerts for severe weather. The village does not promote emergency preparedness outreach in the community. The village has mutual aid agreements with neighboring jurisdictions. To mitigate this hazard, the village plans to obtain a backup power generator for the fire hall, determine if additional alert sirens are needed, obtain portable lighting for critical facilities, and develop an emergency fuel supply plan.

Flooding

Flooding was not identified as a hazard of top concern and there are no major floodplain areas in or directly around the village. The village does not participate in the NFIP.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Daykin has a number of offices or departments that

may be involved in implementing hazard mitigation initiatives. The village has a five-member council and the following offices: clerk/treasurer, attorney, fire chief, sewer/water commissioner, and street commissioner. Jefferson County Emergency Management would also be able to assist in some mitigation-related activities.

Capabilities

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

Table DAY.5: Capability Assessment

Survey Components		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Building Codes	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
Fiscal Capability	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	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No

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

Table DAY.6: Overall Capability

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

Plan Integration

Over the past five years, the village applied for a grant for its water wells. The NRD was also involved in assisting the community with installing new ditches and culverts. The planning team indicated that municipal funds are currently limited to maintaining current facilities and systems. Funds have remained the same in recent years.

The Village of Daykin is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

No other planning mechanisms were identified in Daykin and the village follows the county's zoning ordinances and building codes for safe future development.

Plan Maintenance

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

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will review the plan no less than annually and will include the public in the review and revision process by sharing information at board meetings and sending letters to residents.

Mitigation Strategy

Continued Mitigation Actions:

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced or the placement of new sirens
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	\$15,000+
FUNDING	General Fund, HMGP, BRIC
TIMELINE	1 year
PRIORITY	Medium
LEAD AGENCY	Fire Department
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Obtain backup power generators for fire hall and community hall.
HAZARD(S)	All hazards
ESTIMATED COST	\$35,000
FUNDING	Fundraiser, Possible tax revenue match, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	The village is currently waiting on bids for a backup generator.

MITIGATION ACTION	EMERGENCY EQUIPMENT PURCHASE AND/OR UPGRADES
DESCRIPTION	Purchase portable lighting for the fire hall and community building
HAZARD(S)	All hazards
ESTIMATED COST	\$8,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Fire Hall, Community Building
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF DAYKIN COMMUNITY PROFILE

MITIGATION ACTION	EMERGENCY FUEL SUPPLY PLAN
DESCRIPTION	Plan to adequate fuel supply is available during an emergency. Actions might include prioritization and rationing plan for gasoline and diesel uses in extended loss of fuel supply or electric power supply, and a plan to purchase local fuel supply.
HAZARD(S)	All hazards
ESTIMATED COST	\$1,000+ Staff Time
FUNDING	General Funds
TIMELINE	5+ years
PRIORITY	Low
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

COMMUNITY PROFILE

VILLAGE OF DILLER

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table DIL.1: Village of Diller Local Planning Team

Name	Title	Jurisdiction
Glenn Behrends	Mayor/Chairman	Village of Diller
Jeff Barnts	Vice-Chairman	Village of Diller
Lawrence Keuten	Board Member	Village of Diller
Rob Schlichtman	Board Member	Village of Diller
BJ Stein	Board Member	Village of Diller

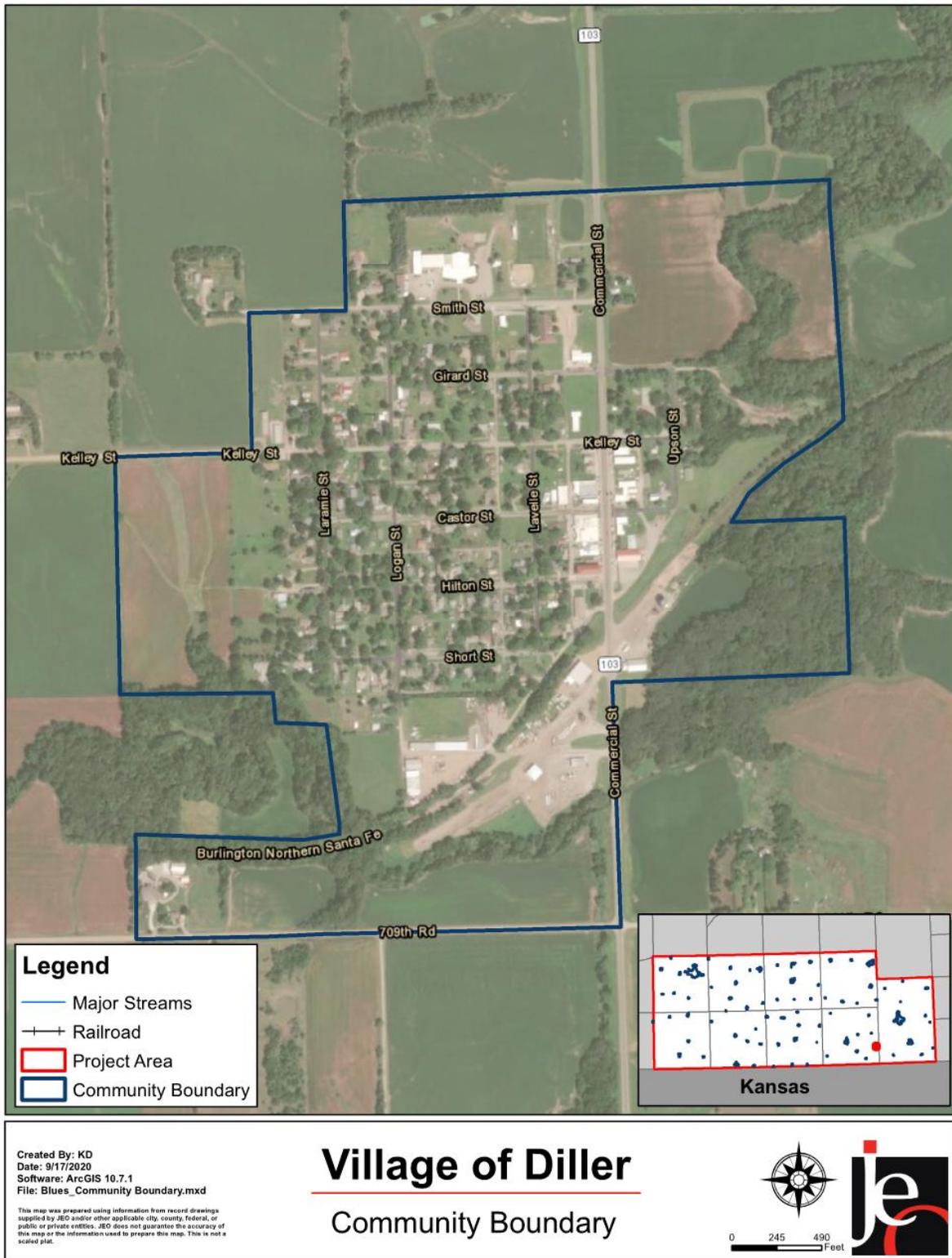
Location and Geography

The Village of Diller is located in the west central portion of Jefferson County. The Village of Diller covers an area of 0.42 square miles. There are no major waterways within the area, although there are two small retention ponds located northeast of the community and The Big Indian Reservoir 7-B is located approximately 1 mile due east of Diller. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Diller. Diller lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Diller's major transportation corridors include Nebraska Highway 103, which runs north-south, and accommodates on average 315 vehicles per day, 40 of which are heavy commercial vehicles. Diller does not have rail lines. Chemicals such as anhydrous ammonia are routinely transported along Highway 103. According to the local planning team, several critical facilities are located along main transportation routes, including: Diller-Odell Elementary School, Diller Telephone Company, Diller Post Office, Diller Community Building, Farmers Cooperative, State Bank of Odell, Diller Water Tower, Diller Fire Station, and the village lagoon. According to the planning team an anhydrous ammonia chemical spill occurred south of the village, but no impacts were reported. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Figure DIL.1: Village of Diller Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2018 (estimated). This figure indicates that the population of Diller experienced prolonged decline between 1910 and 1960. The population grew slightly during the 1960s and 1970s but has been in steady decline since then. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community that could make implementation of mitigation actions more fiscally challenging. The village's population accounted for 4% of Jefferson County's population in 2018.

Figure DIL.2: Diller Population 1890-2018



Source: U.S. Census Bureau²¹

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

- **Younger.** The median age of Diller was 44.8 years old in 2017, compared with the county average of 45.7 years. Diller's population has grown younger since 2010, when the median age was 49.3 years old. Diller had a larger proportion of people under 20 years old (25.4%) than the county (24.1%).²²
- **Less ethnically diverse.** In 2010, 3% of Diller's population was other races and 1% were two or more races. By 2018, only about 3% of Diller's population was two or more races. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.²³

²¹ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

²² United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

²³ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Diller (6.0%) was lower than the county (12.0%) in 2018.²⁴

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Diller included Construction, Manufacturing, and Education. In comparison Jefferson County’s included Agriculture, Manufacturing, Retail, and Education.²⁵
- **Higher household income.** Diller’s median household income in 2018 (\$50,000) was about \$7,000 higher than the county (\$43,295).²⁶
- **Similar number of long-distance commuters.** About 34.3% percent of workers in Diller commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 19.9% of workers in Diller commute 30 minutes or more to work, compared to about 19.3% of the county workers.²⁷

Major Employers

The major employers in the community include Diode Communications, Diller Locker, and Lottman Construction. According to the planning team, approximately 60% of residents commute to other communities for work.

Housing

In comparison to the Jefferson County, Diller’s housing stock was:²⁸

- **More owner occupied.** About 75.8% of occupied housing units in Diller are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Greater share of aged housing stock.** Diller has more houses built prior to 1970 than the county (80.2% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the village is single family detached and Diller contains fewer multifamily housing with five or more units per structure than the county (0.0% compared to 4.8%). About 91.1% of housing in Diller was single-family detached, compared with 91.4% of the county’s housing. Diller has a larger share of mobile and manufactured housing (7.5%) compared to the county (2.4%). The planning team indicated that there are two mobile homes in the community. One on Kelley Street and one by the village park.

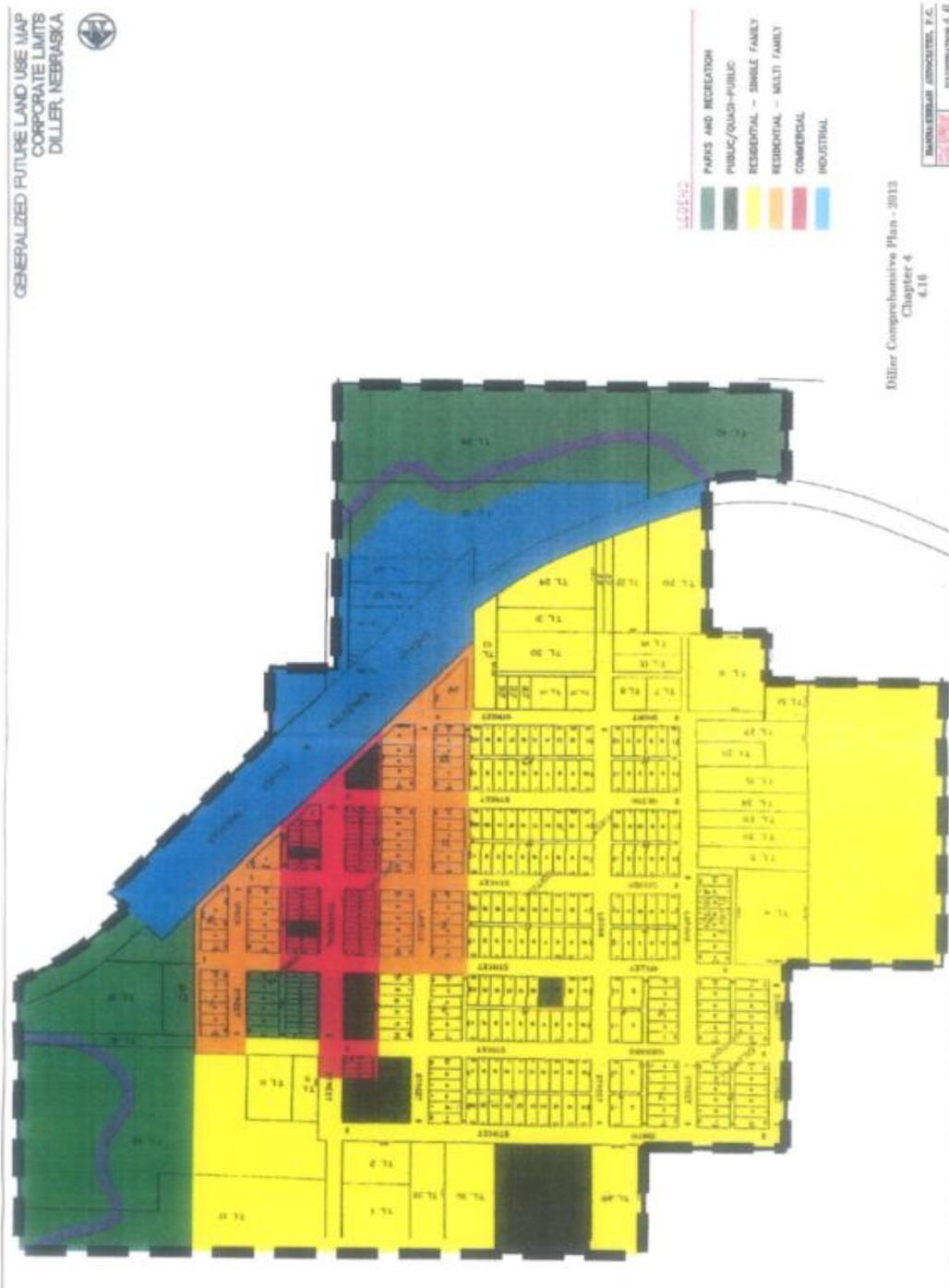
This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less likely to occur. Finally, communities with a substantial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

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

Future Development Trends

Over the last five years, there has been construction of a duplex, a triplex, and the Diller Locker facility. Two houses were demolished during that time. A new housing development and a mini-housing development are planned for the next five years. No new businesses or industry are planned at this time.

Figure DIL.3: Diller Future Land Use Map



Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. A structure in Diller has been removed from the floodplain via LOMA. A summary of LOMAs identified for Diller can be found in the table below.

Table DIL.2: Diller Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
280	153	\$10,043,368	11	7%	\$1,940,532

Source: County Assessor, GIS Workshop

Table DIL.3: Diller Flood Map Products

Type of Product	Product ID	Effective Date	Details
LOMA	16-07-0520A-310269	2/17/2016	Structure removed from SFHA

Source: FEMA Flood Map Service Center

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are two chemical storage sites throughout Diller which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The planning team indicated that village residents could be impacted by a chemical spill or leak at the nearby Farmers Cooperative. An anhydrous chemical spill occurred south of the village, but no impacts were reported.

Table DIL.4: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	603 Commercial St	N
Steele Flats Wind Energy Ctr	70548 580th Ave	N

Source: Nebraska Department of Environment and Energy²⁹

Critical Facilities

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

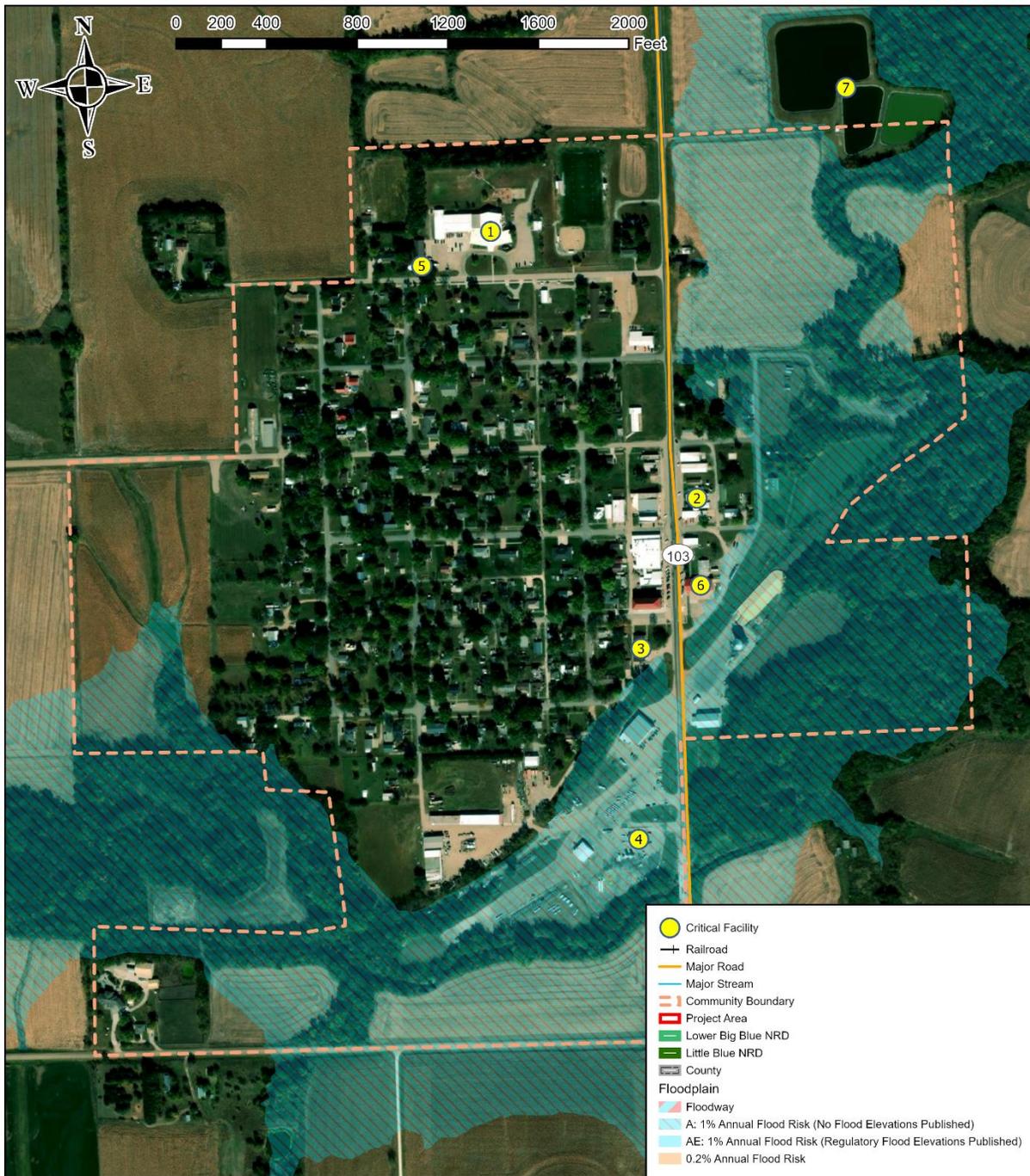
The following table and figure provide a summary of the critical facilities for the jurisdiction.

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

Table DIL.5: Diller Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Food, Water, and Shelter	Diller-Odell Elementary School	N	N	N
2	Communications	Diller Telephone Company	N	N	N
3	Food, Water, and Shelter	Diller Community Building	Y	N	N
4	Hazardous Materials	Farmers Cooperative	N	N	Y
5	Food, Water, and Shelter	Diller Water Tower	N	Y	N
6	Safety and Security	Diller Fire Station	N	Y	N
7	Health and Medical	Diller Village Lagoon	N	N	Y - Elevated

Figure DIL.4: Diller Critical Facilities




 Created By: NL
 Date: 5/21/2021
 Software: ArcGIS Pro 2.8.0
 File: Blues Critical Facilities.aprx
 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 plan.

Village of Diller

 Little Blue NRD and Lower Big Blue NRD
 Hazard Mitigation Plan 2021


Kansas

Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials

While no significant chemical spills have occurred in recent years, the village is concerned about storage of large amounts of hazardous farm chemicals at the farmer's co-op – especially since vulnerable populations live within a quarter-mile of the co-op, to the north. The risk of a large ammonia spill, in particular, is concerning to the village. Highway 103 is the transportation route of most concern, as ammonia, herbicides, and pesticides are commonly transported along this road. Critical facilities near this site also include the local volunteer fire department, village offices, and the village shop. The planning team noted that anhydrous ammonia spilled south of the village, but no impacts were reported.

For mitigation, it's not known if the local volunteer fire department is adequately trained and equipped to respond to chemical hazards; nor is it known if residents near fixed chemical storage sites are well-educated about the threat and appropriate response. The community hall has been identified as the EOC for the village. The village plans to improve emergency rescue and response equipment and facilities; and develop an education program to inform residents of risks related to chemical releases.

Severe Thunderstorms

Due to previous occurrences, severe thunderstorms were identified as a top concern for the community. The combination of heavy rain, high winds, lightning, and hail can often cause significant impacts to the community. According to the NCEI, there have been 23 severe thunderstorm events in Diller from 1996 to April 2020, resulting in \$50,000 in property damage. However, no injuries or deaths were reported. Multiple storms produced hailstones that ranged in size from 0.75 inches to 3 inches in diameter. Diller has experienced several storms in recent years with wind gusts of more than 60 mph. A storm with 72 mph winds on May 19, 2001 caused \$50,000 in property damage from toppled power poles, damaged roofs, and uprooted trees. Storms in 2015 also caused flooding in the village. The village's main concern from this hazard is building damage and poor stormwater drainage.

The planning team indicated that critical municipal records are protected with surge protectors and communications lines in the village are buried. The Norris Public Power District maintains an annual program to trim problematic trees. Additionally, a ditch drainage project is currently in progress to reduce street flooding after heavy rains. The local planning team noted areas on the

south end of town by the Co-Op and on the east side of town by the park experience poor stormwater drainage.

The village has evaluated and updated sirens in town and designated the community hall as the local EOC. A backup generator has been purchased for the fire hall but the community center still needs one. Projects previously identified to mitigate this hazard include improving emergency rescue and response equipment and facilities; increasing public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards; and obtaining backup generators for critical facilities.

Severe Winter Storms

Severe winter weather is part of the regular climate for Diller and was identified as a top concern for the village. Severe winter storms include blizzards, ice accumulation, extreme cold, heavy snow, and winter storms. These storms can cause power outages during bitterly cold temperatures, road closures, and economic impacts. According to the NCEI, there have been 60 severe winter storm events in the county from 1996 to April 2020. These events have resulted in a total of \$1,500,000 in property damage. The village's main concern about this hazard is the removal of snow from the roads or blocked transportation routes.

The planning team indicated that the village owns a snowplow and tractor loader for snow removal purposes. The equipment is sufficient to meet the village's snow removal needs. The village does not currently use snow fences or snow routes. No power lines in the community are buried. The fire hall has a backup generator and municipal records are backed up in case of power loss.

Tornadoes and High Winds

Due to previous occurrences of tornadoes impacting the village, this hazard were identified as a top concern. According to NCEI data, there have been 16 high wind events in Jefferson County from 1996 to April 2020, resulting in one injury. During that same period, the Village of Diller was directly impacted by an EF-1 tornado on April 29, 2010. The tornado struck communities about four miles west of Diller and caused \$650,000 in property damage. It snapped 35 power poles, destroyed farm outbuildings and a house, damaged irrigation infrastructure, and toppled trees. The village's main concerns regarding high winds and tornadoes include the lack of a tornado siren in the southwestern portion of the village.

For mitigation, the village has mutual aid agreements with neighboring jurisdictions. The village does not have a community safety room, meaning residents seeking safety must rely on their own or a neighbor's basement or storm shelter. Jefferson County has text alerts for severe weather. The village does not conduct community outreach activities to promote tornado preparedness.

Flooding

Diller did not identify flooding as a hazard of top concern; however, floodplain areas surround the village to the east and south and particularly along major transportation routes. As of November 2020, Adams participates in the NFIP but has no active policies in force. According to NeDNR as of February 2020 there are no repetitive flood loss properties in Diller.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Diller has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a four-member board and the following offices: clerk/treasurer, utility superintendent, sewage plant operator, street/water commissioner, street superintendent. The Jefferson County Emergency Management Office can also assist with implementing mitigation measures.

Capabilities

The capability assessment consisted of a review of local existing policies, regulations, plans, and programs with hazard mitigation capabilities. The following tables summarize the jurisdiction's planning and regulatory capability; administrative and technical capability; fiscal capability; educational and outreach capability; and overall capability to implement mitigation projects. The planning team indicated that a large portion of municipal funds are already dedicated to projects, such as sewer and drainage ditch cleanup, sewer plant maintenance, water tower maintenance, and a water test hole for a new well. Municipal funds have generally stayed the same over recent years.

Table DIL.6: Capability Assessment

Survey Components		Yes/No
Planning Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Building Codes	No
	Floodplain Management Plan	Yes
	Storm Water Management Plan	Yes
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
Administrative Technical Capability	Planning Commission	No
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	1 & 6 Year Plan	No
	Applied for grants in the past	No
	Awarded a grant in the past	No

Survey Components		Yes/No
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education Outreach and	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 DIL.7: Overall Capability

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

Plan Integration

The village has a Comprehensive Plan which was last updated in 2012. The plan encourages future development aimed at safe growth practices and limits development in hazardous areas. Currently there is no scheduled update for the plan, however future plans should include hazard mitigation goals. The village uses zoning and building codes from Jefferson County.

The local planning team noted the current municipal budget is generally limited to maintaining current infrastructure and facilities and funds have remained relatively stable over recent years.

The Village of Diller is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The planning team will include the Board Chairman, Board Vice-Chairman, and three other board members. The team will review the plan every five years or as changes and major events occur in the community. The public will be included in the review and revision process by sharing information at board meetings.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced, particularly in the southwest corner of village
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	One non functional alert siren was removed in town. Remaining siren is tested regularly and updated on an as needed basis.

MITIGATION ACTION	BACKUP GENERATOR FOR FIRE STATION
DESCRIPTION	Obtain a backup power generator for the fire station.
HAZARD(S)	All hazards
STATUS	A backup generator was purchased for the fire station.

MITIGATION ACTION	BACKUP MUNICIPAL RECORDS
DESCRIPTION	Develop protocol for backup of critical municipal records
HAZARD(S)	All hazards
STATUS	All records have been backed up and have surge protectors.

MITIGATION ACTION	EMERGENCY OPERATIONS
DESCRIPTION	Identify and establish an Emergency Operations Center
HAZARD(S)	All hazards
STATUS	Completed. Emergency Operations Center is located at the Community Building.

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR COMMUNITY BUILDING
DESCRIPTION	Obtain a backup power generator for the community building
HAZARD(S)	All hazards
ESTIMATED COST	\$75,000
FUNDING	Village General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not started yet.

MITIGATION ACTION	BACKUP GENERATOR FOR VILLAGE WELL
DESCRIPTION	Obtain a backup power generator for the village well
HAZARD(S)	All hazards
ESTIMATED COST	\$150,000
FUNDING	Village General Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not started yet.

MITIGATION ACTION	CIVIL SERVICE IMPROVEMENTS
DESCRIPTION	Improve emergency rescue and response equipment and facilities by providing additional, or updating existing emergency response equipment
HAZARD(S)	All hazards
ESTIMATED COST	Varies by need
FUNDING	Village General Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Fire Department
STATUS	New equipment is purchased as funds become available.

MITIGATION ACTION	PUBLIC EDUCATION AND OUTREACH
DESCRIPTION	Through activities such as outreach projects, distribution of maps, and environmental education, increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards. Specifically, the village identified a goal to develop an education program to inform residents of risks related to chemical releases. This could include direct outreach to residents living in the immediate vicinity of chemical storage sites.
HAZARD(S)	All hazards
ESTIMATED COST	\$3,000+
FUNDING	Village General Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board, Co-Op
STATUS	The village intends to share additional information about home mitigation at board meetings.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	INTERIOR DITCHES AND CULVERT IMPROVEMENTS
DESCRIPTION	Clear out, deepen, and improve drainage ditches and culverts throughout town. Ditches need to be regraded and culverts need cleaned out.
HAZARD(S)	Flooding
ESTIMATED COST	\$300,000
FUNDING	Village General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	Three blocks in town were completed in 2020. Additional streets in town will be completed over the next five years as municipal funds allow.

MITIGATION ACTION	WELL SYSTEM IMPROVEMENTS
DESCRIPTION	Identify a new water source for an additional well
HAZARD(S)	Drought
ESTIMATED COST	\$400,000
FUNDING	Village General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	A test well will be drilled April 2021. Additional funding is being determined for new well.

Removed Mitigation Actions

MITIGATION ACTION		NFIP CONTINUATION AND ENFORCEMENT	
DESCRIPTION	Enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs).		
HAZARD(S)	Flooding		
REASON FOR REMOVAL	While the village will continue to participate in the NFIP, continued participation is no longer considered a mitigation action.		

MITIGATION ACTION		PORTABLE LIGHTING	
DESCRIPTION	Install portable lighting for service interruption at critical facilities		
HAZARD(S)	All hazards		
REASON FOR REMOVAL	This action was identified as no longer a priority for the village.		

COMMUNITY PROFILE

VILLAGE OF ENDICOTT

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table END.1: Village of Endicott Local Planning Team

Name	Title	Jurisdiction
Chris Zabokrtsky	Village Chair	Village of Endicott

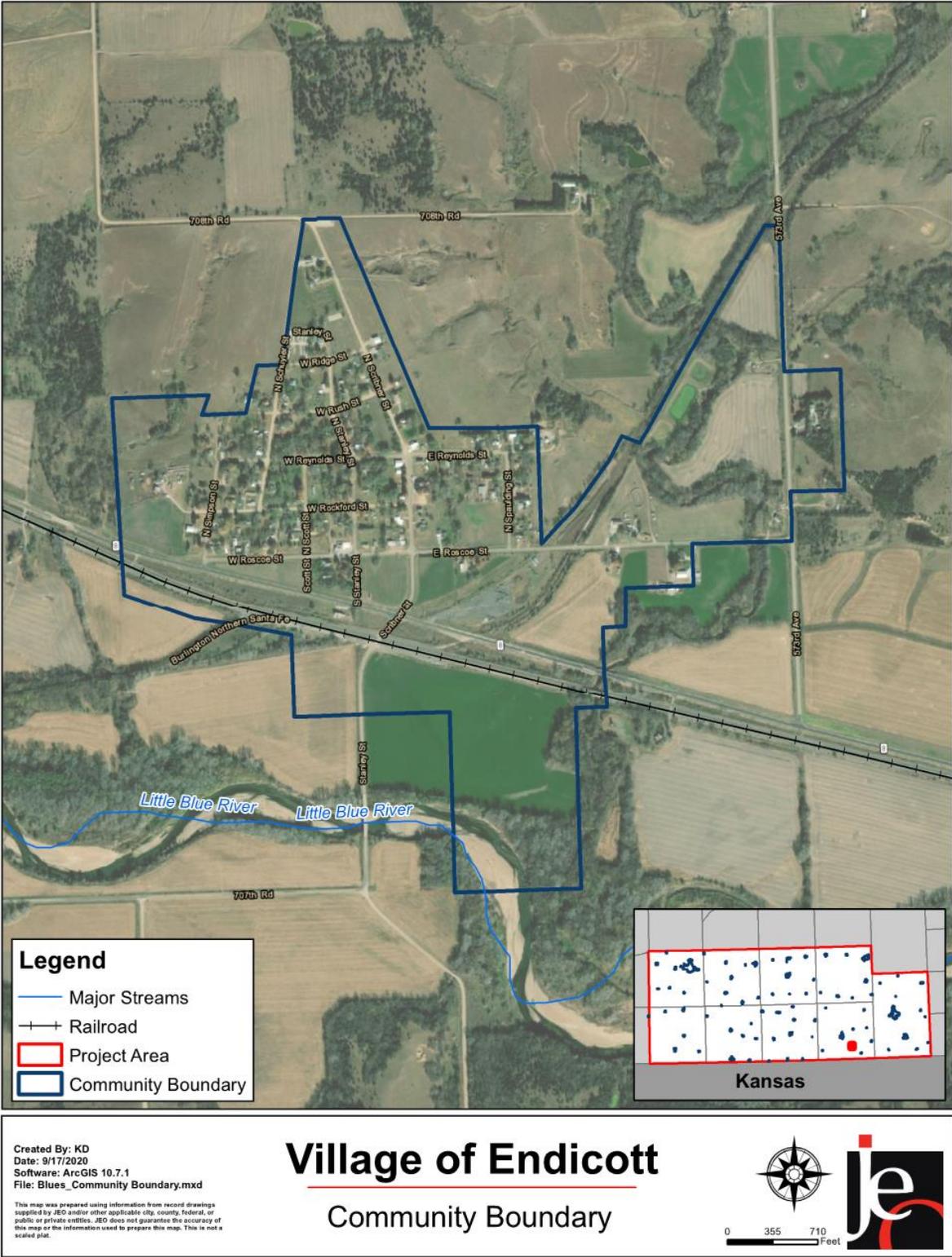
Location and Geography

The Village of Endicott is located in the south central portion of Jefferson County. The Village of Endicott covers an area of 0.47 square miles. Major waterways within the area include Little Blue River, which runs east to west and is located just north of the community. Spring Creek and Rock Creek run north to south and are located on the eastern portion of the community. The area is not heavily forested, although there is notable tree cover in the community and along the waterways framing the community. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Endicott. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Endicott’s major transportation corridors include County Road 8, which runs southeast to northwest through the center of Endicott. CR-8 accommodates on average of 635 vehicles per day, 140 of which are heavy commercial vehicles. Endicott has one railroad, the Union Pacific line. At Endicott, the UPRR runs east-west and connects Endicott to Hastings to the northwest. At Hastings, the UPRR continues to Kearney, and then turns east-west again to connect Endicott to the rest of the state. Hazardous chemicals are commonly transported through the community via highway and rail; however, no major incidents have occurred in the village. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

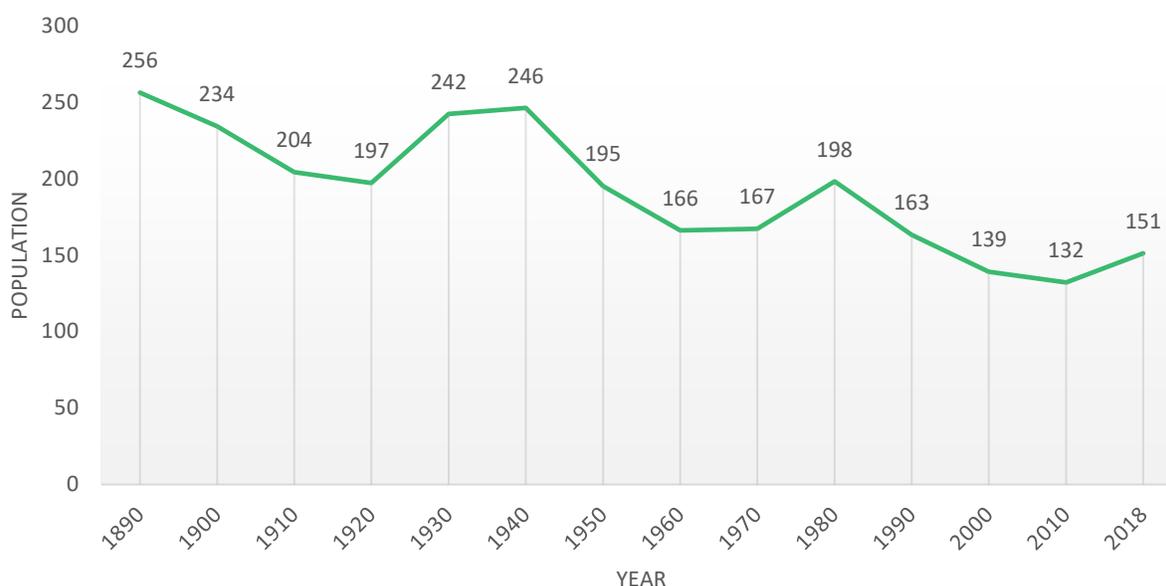
Figure END.1: Village of Endicott Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2018 (estimated). This figure indicates that the population of Endicott has experienced historical population fluctuations. The population peaked in 1940, followed by two decades of decline. There was a slight surge in the 1970s, but the population has been declining ever since 1980. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 2% of Jefferson County's Population in 2018.

Figure END.2: Endicott Population 1890-2018



Source: U.S. Census Bureau³⁰

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

- **Younger.** The median age of Endicott was 44.8 years old in 2017, compared with the County average of 45.7 years. Endicott's population has grown slightly older since 2010, when the median age was 44.6 years old. Endicott had a smaller proportion of people under 20 years old (23.2%) than the County (24.1%).³¹
- **Less ethnically diverse.** Between 2020 and 2018, 100% of Endicott's population was 100% White, non-Hispanic. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.³²

30 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

31 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

32 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Endicott (8.1%) was lower than the County (12.0%) in 2018.³³

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Endicott included Manufacturing, Professional Sciences, and Education. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.³⁴
- **Higher household income.** Endicott's median household income in 2018 (\$62,500) was about \$9,000 higher than the County (\$43,295).³⁵
- **Similar number of long-distance commuters.** About 52.5% percent of workers in Endicott commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 29.2% of workers in Endicott commute 30 minutes or more to work, compared to about 19.3% of the County workers.³⁶

Major Employers

The major employer in the village is Endicott Clay Products but approximately 75% of residents commute to Fairbury for work.

Housing

In comparison to the Jefferson County, Endicott's housing stock was:³⁷

- **More owner occupied.** About 89.1% of occupied housing units in Endicott are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Smaller share of aged housing stock.** Endicott has fewer houses built prior to 1970 than the county (67.3% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Endicott contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 4.8%). About 100% of housing in Endicott was single-family detached, compared with 91.4% of the County's housing. Endicott has a larger share of mobile and manufactured housing (0%) compared to the County (2.4%). Mobile homes are scattered throughout the village.

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

33 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

34 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

35 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

36 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

37 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

The local planning team noted no major development changes have occurred in the village in the past five years. However, the village is currently in the midst of a water system improvement project funded through a Rural Development loan. New water meters have been installed in Endicott and the system is currently being updated to connect the Village of Endicott and the Village of Steele City. This project is anticipated to be completed in the next five years. The village’s population is declining which the local planning team attributed to an aging population and younger people moving out of the village.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Endicott.

Table END.2: Endicott Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
232	88	\$3,729,668	4	5%	\$538,921

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

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

Table END.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Endicott Clay Products Co	57120 707th Rd	Y

Source: Nebraska Department of Environment and Energy³⁸

Critical Facilities

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

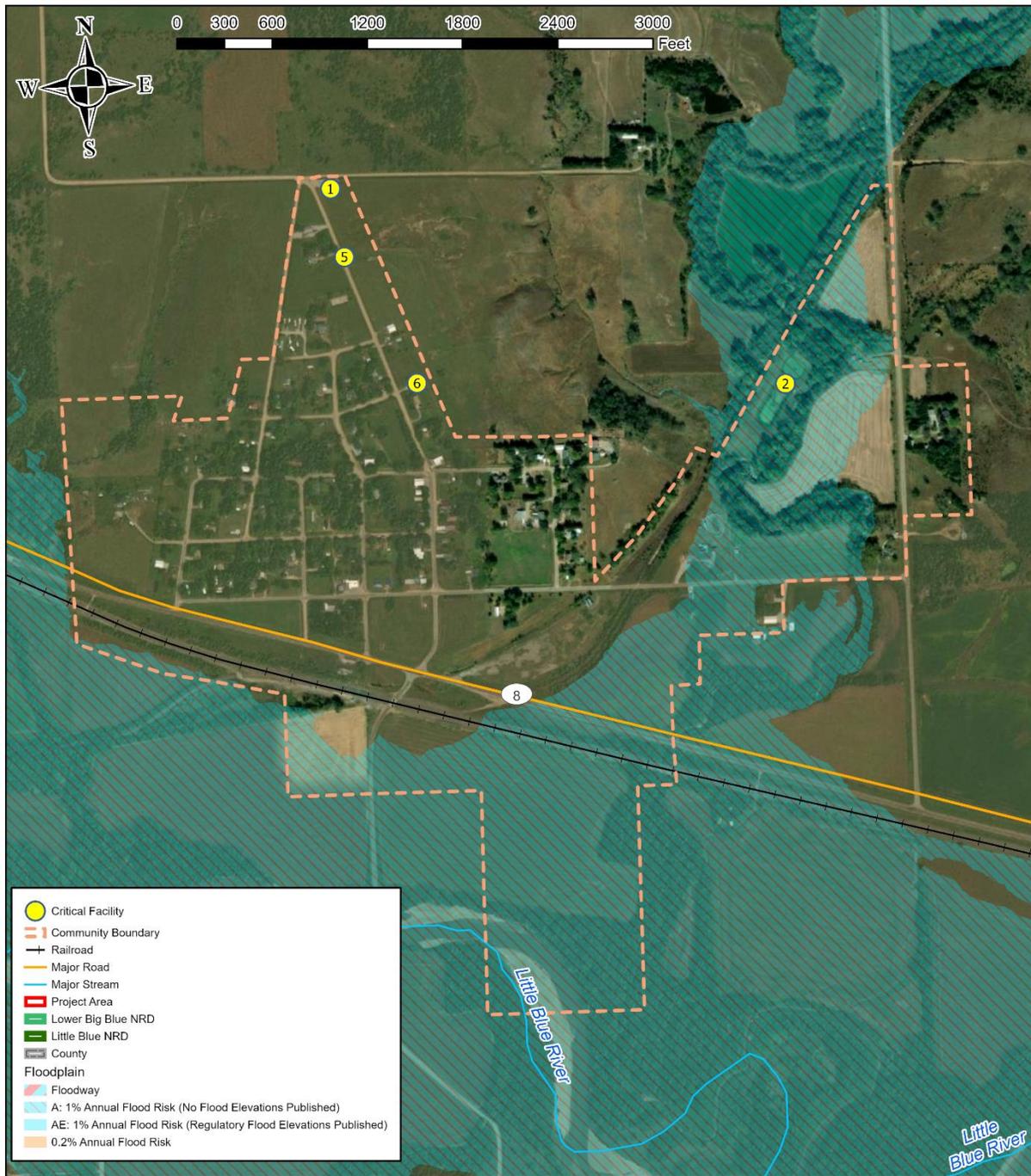
The following table and figure provide a summary of the critical facilities for the jurisdiction.

³⁸ Nebraska Department of Environment and Energy. “Search Tier II Data.” Accessed August 2020.

Table END.4: Endicott Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	BHE Northern Natural Gas Valve	N	U	N
2	Food, Water, and Shelter	Endicott Sewage Lagoon	N	N	Y
3	Transportation	Maintenance Shed	N	N	N
4	Safety and Security	Village Town/Community Hall	Y	N	N
5	Food, Water, and Shelter	Village Well (North)	N	N	N
6	Food, Water, and Shelter	Village Well (South)	N	Y	N

Figure END.3: Endicott Critical Facilities





Created By: NL
 Date: 5/21/2021
 Software: ArcGIS Pro 2.8.0
 File: Blues Critical Facilities.aprx
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 plat.

Village of Endicott

Little Blue NRD and Lower Big Blue NRD
 Hazard Mitigation Plan 2021



Kansas

Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Severe Thunderstorms

Jefferson County is prone to damage from severe thunderstorms and hailstorms. On April 29, 2010, rear-flank downdraft winds near 70 mph downed trees and power lines near town and dropped two-inch hail near the village, damaging a car. The village reports additional damage from a 2008 event. The main concern from these storms in Endicott is the lack of a community safe room to protect residents who lack a basement or storm shelter of their own and damage to power lines due to falling tree branches. While Rock Creek runs to the east and the Little Blue River runs along the south of the village; flood impacts to the village are generally limited during heavy rains. Highway 8 provides a general buffer from flood impacts to the village during high water events.

Critical municipal records in Endicott are not protected with surge protectors. Currently, critical facilities in the village are not fitted with hail resistant building materials but have yet to experience significant hail damage. About 20 percent of the power lines in the village are buried. While the village experiences power outages annually, the local power supply comes from Fairbury and is typically repaired within a few hours. The south well pumphouse has a portable generator; but the village reports that the community hall needs a backup generator. There is no ongoing program to trim problematic trees, but the village reports that multiple overgrown trees require attention. No critical facilities in the village have weather radios; however, the local planning team reported many residents have weather radios or receive emergency alerts on their phones through Jefferson County Emergency Management. Text alerts are the primary form of emergency communication as the siren in Endicott is currently non-operational. Repairs or replacement of the siren is currently financially prohibitive for the village.

Flooding

While flooding was not identified as a hazard of top concern, floodplain surrounds the village from southwest to southeast. The village does not participate in the NFIP. The largest concern regarding flooding is for a bridge crossing Rock Creek to the south of village. The bridge is maintained by NDOT and is the only transportation corridor to the south.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Endicott has a number of offices or departments that

may be involved in implementing hazard mitigation initiatives. The Village has a five member board and the following offices: utility superintendent, water operator, and assistant utility superintendent.

Capabilities

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

Table END.5: Capability Assessment

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

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

Table END.6: Overall Capability

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

Plan Integration

The Village of Endicott currently has an Emergency Operations Plan (EOP) and Zoning Ordinance. The village is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

The village's budget is primarily limited to maintaining current systems and infrastructure. A significant portion of the budget is allocated to a Rural Development loan to improve the water supply system and hook the Endicott and Steele City systems together. While the local planning team noted funds have increased in recent years, most of the available funding is set aside for general maintenance. Additional mitigation projects would require funding assistance for full implementation.

No other planning mechanisms were identified in the Village of Endicott which integrate hazard mitigation goals and objectives.

Plan Maintenance

Hazard Mitigation Plans should be living documents and updated regularly to reflect changes in hazard events, priorities, and mitigation actions. These updates are encouraged to occur after

every major disaster event, alongside community planning documents (i.e. annual budgets and Capital Improvement Plans), during the fall before the HMA grant cycle begins, and/or prior to other funding opportunity cycles begin including CDBG, Water Sustainability Fund, Revolving State Fund, or other identified funding mechanisms.

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

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced, particularly in the southwest corner of village
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	\$15,000+
FUNDING	Taxes, HMGP, PDM
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project is currently cost prohibitive for the village. The siren in town is currently non-operational and should be replaced if funding becomes available. The village is currently using weather radios in residential homes. Jefferson County EMA provides emergency text alerts and phone call rosters to notify residents of hazardous weather.

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Obtain backup power generators for community building, and other critical facilities
HAZARD(S)	All hazards
ESTIMATED COST	\$35,000+
FUNDING	Taxes, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Backup generators are needed for the village/community hall.

SECTION SEVEN: VILLAGE OF ENDICOTT COMMUNITY PROFILE

MITIGATION ACTION	PUBLIC EDUCATION AND OUTREACH
DESCRIPTION	Through activities such as outreach projects, distribution of maps, and environmental education, increase public awareness of natural hazards to both public and private property owners, renters, businesses, and local officials about hazards and ways to protect people and property from these hazards.
HAZARD(S)	All hazards
ESTIMATED COST	\$3,000+
FUNDING	Village funds, HMGP
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Additional information should be shared via newsletter and at board meetings. Information may include sign up for emergency text alerts, sheltering, supplies to keep, and where to go during events.

COMMUNITY PROFILE

CITY OF FAIRBURY

Little Blue NRD and Lower Big Blue NRD Hazard Mitigation Plan 2021

Local Planning Team

Table FAI.1: City of Fairbury Local Planning Team

Name	Title	Jurisdiction
Mary Renn	City Administrator	City of Fairbury
Nathan Francis		City of Fairbury
Laura Bella	Zoning Administrator	City of Fairbury
Jeff Sweetse	Utility Superintendent	City of Fairbury

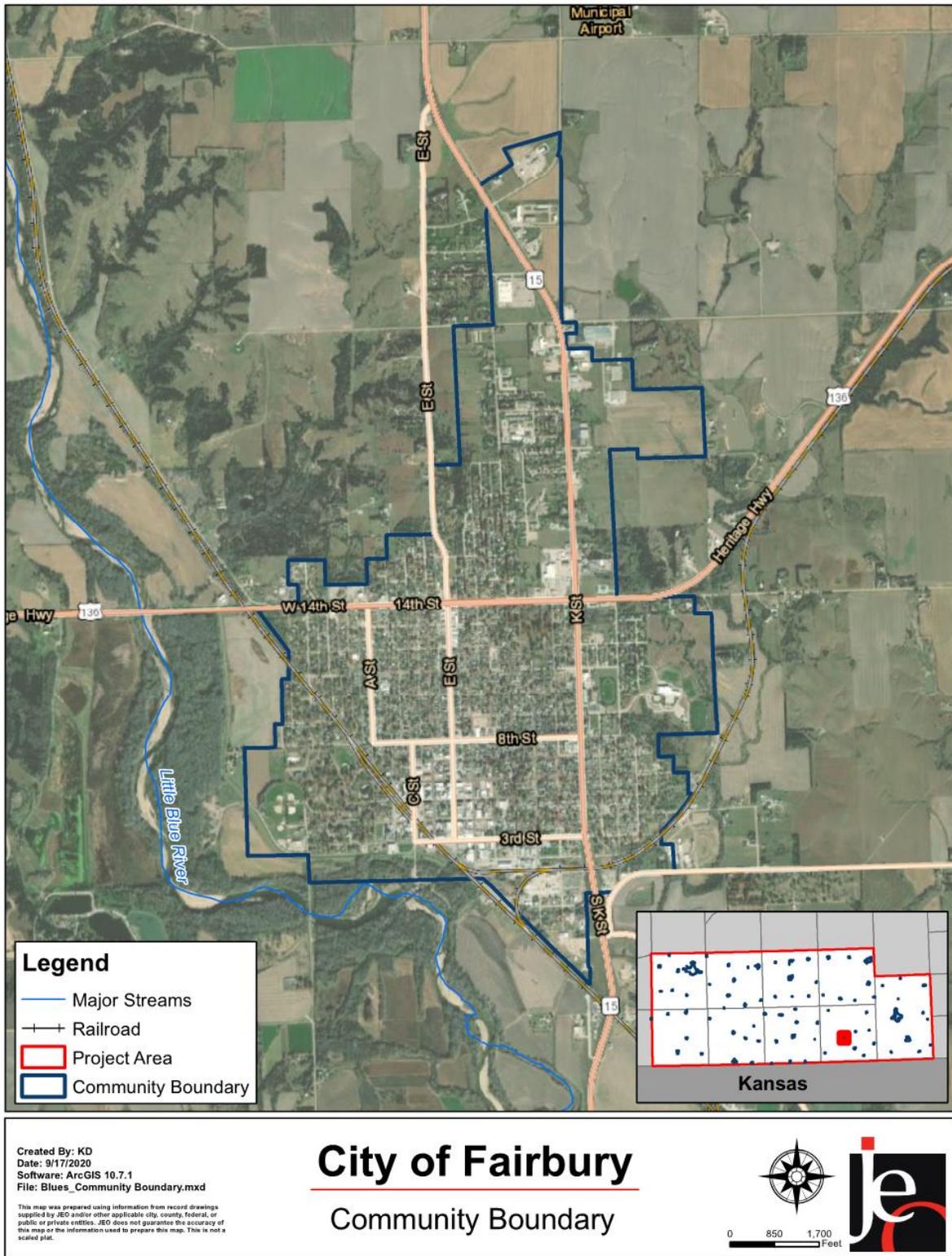
Location and Geography

The City of Fairbury is located in the central portion of Jefferson County. The City of Fairbury covers an area of 2.4 square miles. Major waterways within the area include the Little Blue River, which runs north to south along the city's western and southern borders. The area is not heavily forested, although there is thick tree cover towards the western and southern boundaries of the city. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Fairbury. The city lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Fairbury's major transportation corridors include Highway 15, which runs north-south, just east of Fairbury. Highway 15 accommodates on average 3,805 vehicles per day, 410 of which are heavy commercial vehicles. State Highway 136 runs north south, just north of Fairbury. NE-136 accommodates on average 2,115 vehicles per day, 210 of which are heavy commercial vehicles. Other local routes of concern include Highway 8, H Street, Frederick Street, and E Street. Fairbury has one railroad, Union Pacific line. At Fairbury the UPRR runs east-west and connects Fairbury to Hastings to the northwest. At Hastings, the UPRR continues to Kearney, and then turns east-west again to connect Fairbury to the rest of the state. Hazardous chemicals are transported through town to and from the Aurora Co-Op and via rail and highway. Critical facilities are located along major transportation routes including state and county shops, the city's street shop, fire department, and the Co-Op. However, no major transportation spills or incidents have occurred in the city. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

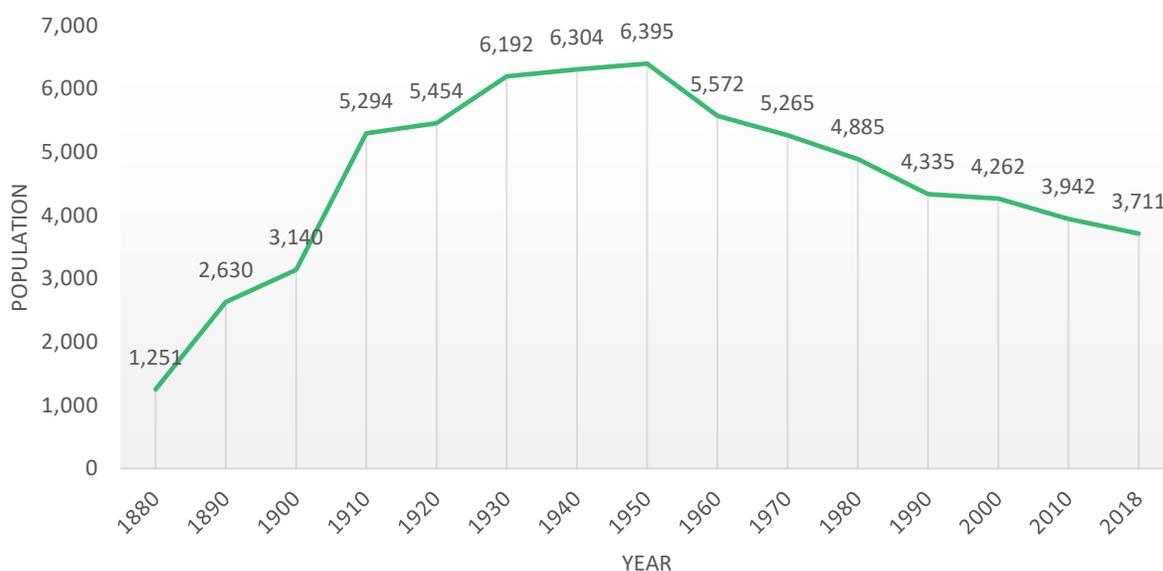
Figure FAI.1: City of Fairbury Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2018 (estimated). This figure indicates that the population of Fairbury steadily rose between 1910 and 1950. Since peaking in 1950, the population has been in notable decline. The local planning team noted the estimated population in 2019/2020 was 3,649 which is consistent with U.S. Census Bureau estimates. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The City's population accounted for 52% of Jefferson County's Population in 2018.

Figure FAI.2: Fairbury Population 1880-2018



Source: U.S. Census Bureau³⁹

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

- Younger.** The median age of Fairbury was 40.1 years old in 2017, compared with the County average of 45.7 years. Fairbury's population has grown younger since 2010, when the median age was 43.8 years old. Fairbury had a larger proportion of people under 20 years old (26.9%) than the County (24.1%).⁴⁰
- Less ethnically diverse.** In 2010, Fairbury's population included 1% American Indian, 1% Other Races, and 2% two or more races. By 2018, 1% of Fairbury's population was American Indian and 2% was two or more races. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁴¹

³⁹ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁴⁰ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁴¹ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **More likely to be at the federal poverty line.** The poverty rate of all persons in Fairbury (15.1%) was higher than the County (12.0%) in 2018.⁴²

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Fairbury included Agriculture, Manufacturing, Retail, and Education. In comparison Jefferson County’s included Agriculture, Manufacturing, Retail, and Education.⁴³
- **Lower household income.** Fairbury’s median household income in 2018 (\$37,386) was about \$6,000 lower than the County (\$43,295).⁴⁴
- **More long-distance commuters.** About 34% percent of workers in Fairbury commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 39.5% of workers in Fairbury commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁴⁵

Major Employers

Major employers in the city include: Lambert Vet Supply, Westin Packaged Meats, Black Hills, Farmer Co-Ops, Beatrice Concrete, PVI, Union Pacific, Livingston Enterprises, Jefferson County, City of Fairbury, Walmart, JCH&L, and the public school district. While the majority of residents live and work in Fairbury, approximately a quarter of residents commute to Beatrice or Deshler for employment.

Housing

In comparison to the Jefferson County, Fairbury’s housing stock was:⁴⁶

- **Less owner occupied.** About 59.9% of occupied housing units in Fairbury are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Greater share of aged housing stock.** Fairbury has more houses built prior to 1970 than the county (80.4% compared to 69.1%).
- **More multi-family homes.** The predominant housing type in the City is single family detached and Fairbury contains more multifamily housing with five or more units per structure than the County (9.3% compared to 4.8%). About 86.5% of housing in Fairbury was single-family detached, compared with 91.4% of the County’s housing. Fairbury has a smaller share of mobile and manufactured housing (2.0%) compared to the County (2.4%). There is a mobile home district off of 8th Street.

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

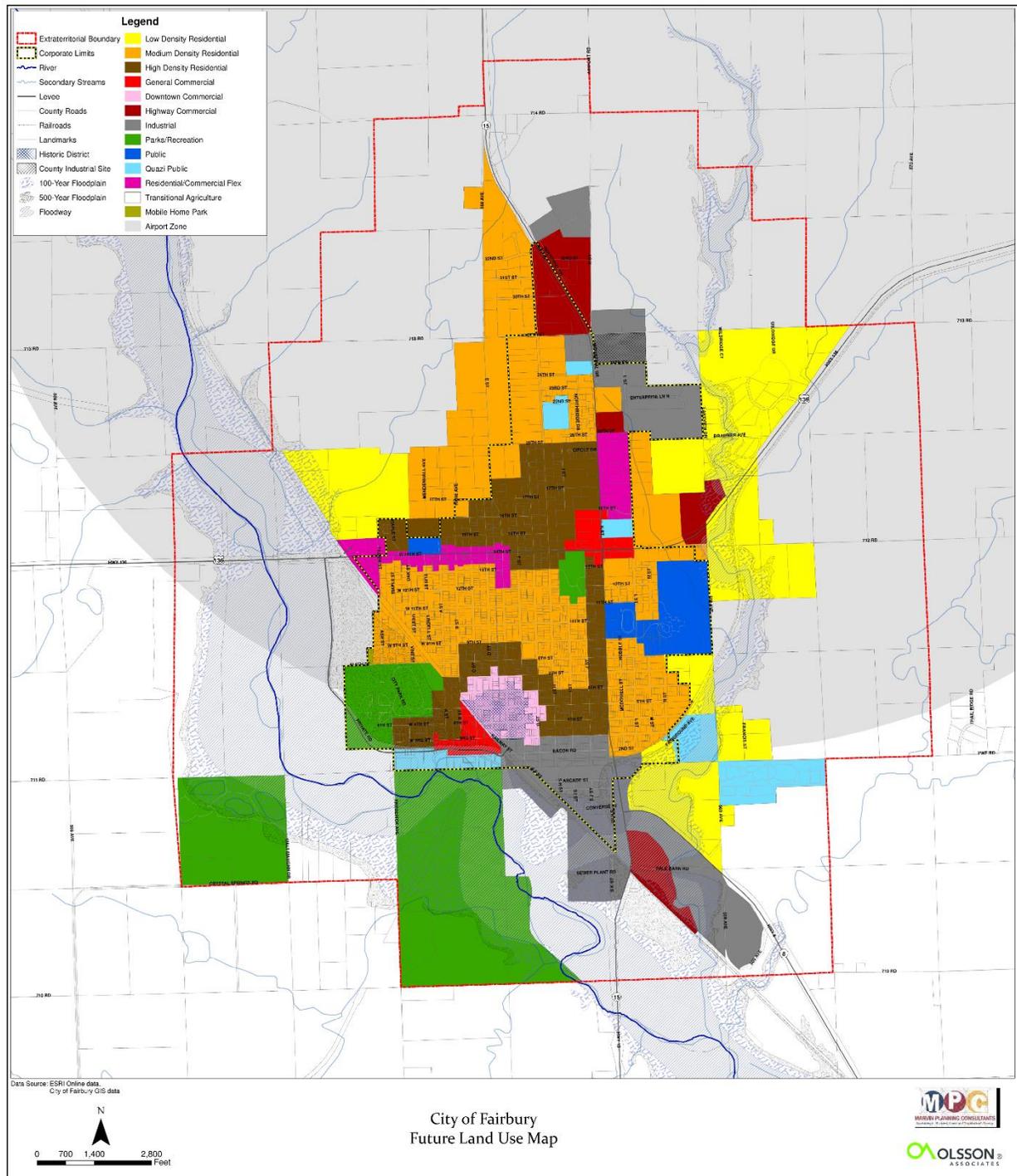
42 United States Census Bureau. “2018 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]
43 United States Census Bureau. “2018 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]
44 United States Census Bureau. “2018 American Fact Finder: DP03: Selected Economic Characteristics.” [database file]
45 United States Census Bureau. “2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics.” [database file]
46 United States Census Bureau. “2018 American Fact Finder: DP04: Selected Housing Characteristics.” [database file]

Future Development Trends

Fairbury has experienced limited development in the past five years, none of which has occurred in the floodplain. In accordance with the comprehensive plan, there is an explicit future land use action to “work with FEMA and NEMA to eliminate structures, in the floodplain, when they become damaged by flooding or other natural disasters.” Over the past five years the city has demolished approximately 100 homes, relocated one business to Industrial Park, conducted street improvement projects (H Street), developed additional housing in Jefferson Estates and Northwind subdivisions, conducted a park drainage project, updated the water tower and municipal pool, and submitted a grant application for HMA funding. No new structures were developed in the floodplain or known hazard areas.

The population in Fairbury has declined in recent years which the local planning team attributed to several closing businesses, lack of available housing, and distance to the highway for easy commuting. The city has also identified potential annexation areas. If this land is annexed, certain portions would be located in the floodplain. Existing floodplain development restrictions would be applied to this land as well, if annexed in the future. Additional new developments planned for the next five years include an expansion at the hospitals and schools and new businesses opening in the downtown district.

Figure FAI.3: Fairbury Future Land Use Map



Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures

on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for Fairbury.

Table FAI.2: Fairbury Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
2,756	1,990	\$121,545,108	11	1%	\$757,535

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there are 12 chemical storage sites throughout Fairbury which house hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. Specific concerns for chemical spills events pertain to contaminated water resources and impacts to major transportation corridors. Several critical facilities are located near chemical fixed sites including the electrical distribution system, water department offices, and downtown water reservoir.

While not listed in the NDEE’s list, the city identified several additional sites which house hazardous chemicals in the city. These facilities are denoted with an Asterix in the table below.

Table FAI.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Fairbury Ready Mix	900 Arcade St	Y – 0.2%
Feaster Foods Fairbury	601 Bacon Rd	N
Loveland Products Inc	56906 Highway 8	N
Windstream Fairbury Central	521 6th St	N
Stanton Farm Services Inc	403 S K St	Y – 0.2%
NDOT Fairbury Yard	1500 K St	N
Maatsch Oil Bulk Plant	E 4th St	N
Farmers Cooperative	56845 Airport Rd	N
Nutrien Ag Solutions	71910 Highway 15	N
Aurora Co-op Elevator Company	2222 L St	N
L Street Warehouse	2302 L St	N
Consolidated Sand & Gravel	712 D St	N
Reservoir & East Wells*	4th Street/B Street & East Wells off of PWF	Reservoir, yes. East Wells, no.
Water Treatment Plant*	Crystal Springs	Y
North & South Substations*	3rd/B Street & Highway 15	South Substation, yes, North Substation, no
Swimming Pool Filter House*	515 City Pool Drive	Y
Pole yards*	3 rd and B Street	Y

Source: Nebraska Department of Environment and Energy⁴⁷; *Indicates city identified property

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

Critical Facilities

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

The local planning team identified numerous churches in the community which can be used as shelters during severe weather events. The following table and figure provide a summary of the critical facilities for the jurisdiction.

Table FAI.4: Fairbury Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Transportation	Maatsch's Express	N	N	N
2	Health and Medical	Heritage Care Center	N	Y	N
3	Health and Medical	Jefferson Community Health Center	N	Y	N
4	Food, Water, Shelter	Fairbury Water Tower	N	N	N
5	Food, Water, Shelter	Maatsch's Food Shop	N	N	N
6	Communications	Verizon Cell Phone Tower	N	Y	N
7	Food, Water, Shelter	Fairbury Jr. Sr. High school	N	N	N
8	Food, Water, Shelter	Fairbury Jefferson Middle School	N	N	N
9	Food, Water, Shelter	Central Elementary School	N	N	N
10	Food, Water, Shelter	Casey's General Store	N	N	N
11	Safety and Security	Fairbury City Offices	N	N	N
12	Safety and Security	Fairbury City Fire Station	N	N	N
13	Safety and Security	Jefferson County Courthouse	N	N	N
14	Safety and Security	Jefferson County Law Enforcement Center	N	Y	N
15	Energy	Norris Public Power District Substation	N	N	N
16	Energy	Fairbury Power Plant	N	Y	N
17	Energy	Fairbury Power Storage	N	Y	N
18	Energy	Fairbury Power Sub-station	N	Y	N

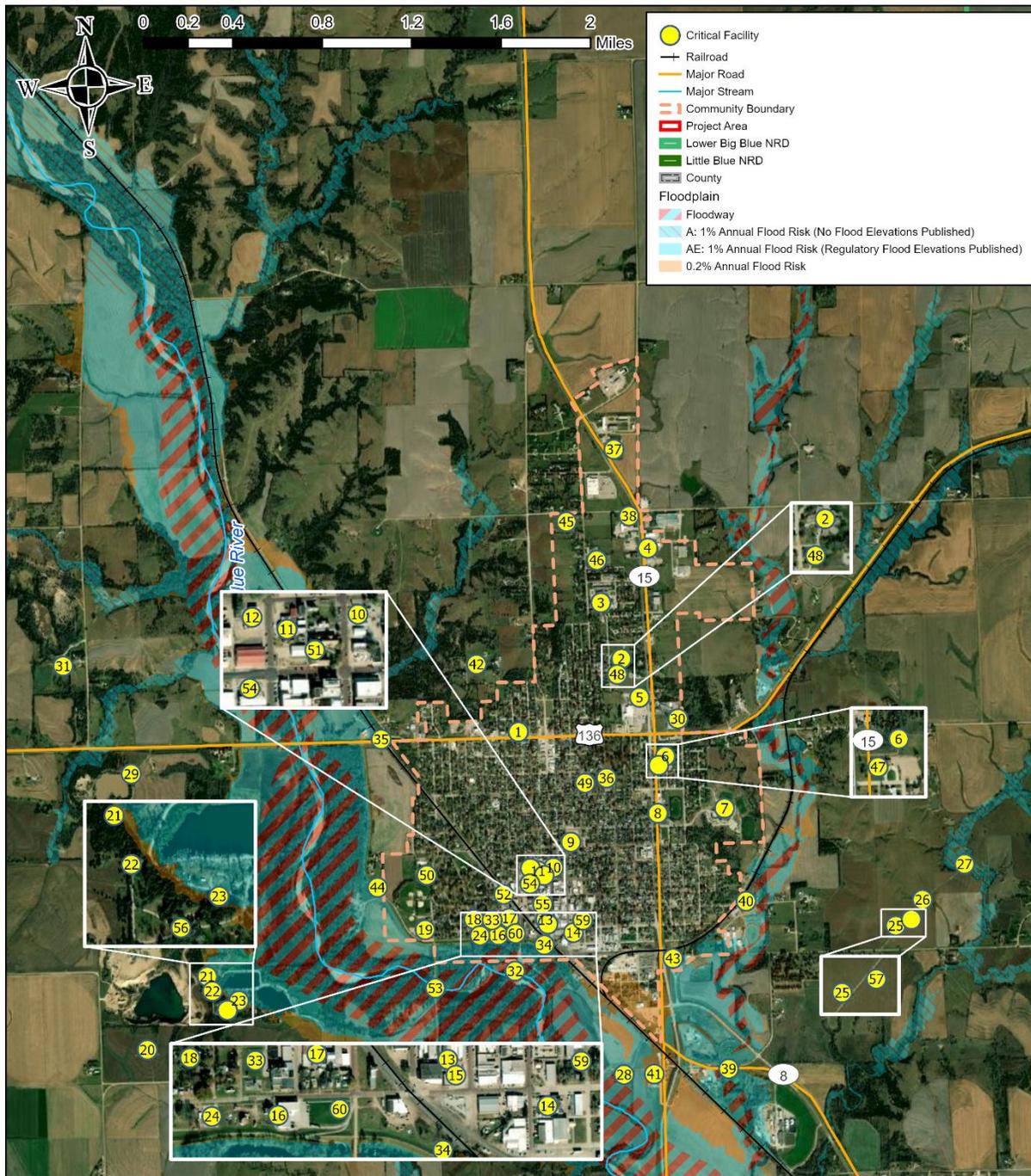
SECTION SEVEN: CITY OF FAIRBURY COMMUNITY PROFILE

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
19	Transportation	Fairbury Street and Alley Shop	N	N	N
20	Communications	Jefferson County Communications Tower	N	Y	N
21	Food, Shelter, Water,	Fairbury City Well	N	N	N
22	Food, Shelter, Water,	Fairbury City Well	N	N	N
23	Food, Shelter, Water,	Fairbury City Well	N	N	Y
24	Energy	Fairbury Power Sub-station	N	N	N
25	Food, Shelter, Water,	Fairbury East Well	N	N	N
26	Food, Shelter, Water,	Fairbury East Well	N	N	N
27	Food, Shelter, Water,	Fairbury East Well	N	N	N
28	Food, Shelter, Water,	Fairbury Waste Water Treatment Plant	N	N	Y
29	Communications	Cell Phone Tower	N	Y	N
30	Communications	Diode Communications Fiber Optic Building	N	N	N
31	Other	Garbage Station	N	N	N
32	Other	City Dam	N	N	Y
33	Food, Shelter, Water,	Large Underground Drinking Water Storage	N	Y	N
34	Hazardous Materials	Natural Gas Valve	N	N	N
35	Hazardous Materials	Gate on UPRR To Prevent Water from Fairbury	N	N	Y
36	Energy	Electric Substation	N	Y	N
37	Safety Security and	Fairbury Rural Fire Station	N	Y	N
38	Energy	Electric Substation	N	N	N
39	Hazardous Materials	Natural Gas Line	N	N	Y
40	Hazardous Materials	Maatsch's Bulk Fuel	N	N	Y
41	Health and Medical	Fairbury Animal Clinic	N	N	Y
42	Communications	Cell Phone Tower	N	Y	N

SECTION SEVEN: CITY OF FAIRBURY COMMUNITY PROFILE

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
43	Communications	Cell Phone Tower	N	Y	Y
44	Other	Fairbury Little Blue River Levee	N	N	N
45	Other	First Christian Church	Y	N	N
46	Food, Water, and Shelter	First United Presbyterian Church	Y	N	N
47	Food, Water, and Shelter	American Lutheran Church	Y	N	N
48	Food, Water, and Shelter	Faith Lutheran Church	Y	N	N
49	Food, Water, and Shelter	Grace Lutheran Church	Y	N	N
50	Food, Water, and Shelter	Fairbury Community Building	Y	N	N
51	Food, Water, and Shelter	United Methodist Church	Y	N	N
52	Communications	Communication Tower	N	N	N
53	Transportation	Little Blue River Bridge	N	N	Y
54	Safety and Security	Fire Hall	N	N	N
55	Safety and Security	City Hall	N	N	N
56	Food, Water, and Shelter	Water Supply	N	N	N
57	Food, Water, and Shelter	Water Supply	N	Y	N
58	Food, Water, and Shelter	Water Tower	N	N	N
59	Safety and Security	Police Station	N	N	N
60	Food, Water, and Shelter	Water System station	N	N	N

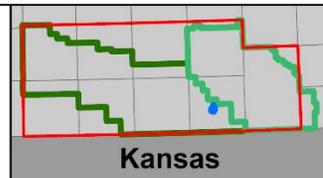
Figure FAI.4: Fairbury Critical Facilities



Created By: NL
 Date: 5/21/2021
 Software: ArcGIS Pro 2.8.0
 File: Blues Critical Facilities.aprx
 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 plat.

City of Fairbury

Little Blue NRD and Lower Big Blue NRD
 Hazard Mitigation Plan 2021



Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Flooding

Fairbury has experienced multiple flood events, including in 2015, 2013, 2012, and 2008. The majority of the reported events since 2000 have been flash floods resulting from heavy rainfall, though some events also involved river flooding. The city has identified storm sewer overload as a factor in flash flooding, such as in the 2008 event. The City has a levee system along the southeast side of the city. The Fairbury Levee System was a Provisionally Accredited Levee system as of March 2021. The City of Fairbury has expressed intent to improve flood protection provided by the levee and work through the accreditation process. Areas of Fairbury along the Little Blue River and down south by the levee are especially prone to flooding in town; and the city's water filtration system and treatment plant have been damaged in previous flooding. There is also concern over the integrity of the city's trunk line, due to flooding caused by storm sewer overload.

During the 2015 flood the city experienced numerous flooded roadways, significant property damage, water intrusion in basements, utility disconnects, and evacuations. The March 2019 flood event did not significantly impact the city. The city participates in the NFIP and has two policies in force for \$269,000 as of November 2020.

Regarding mitigation, the city reports that the entire storm sewer system is undersized. The city has updated the system and improved the road along H Street to help address localized flooding issues. Additional projects in the work include stormwater management and storm sewer upgrades in the City Park and updating the levee's emergency plan. Approximately one third of the city has been impacted by past flood events and is at risk to future floods. The city has also been working to remove properties in the floodplain and has submitted a HMA grant application for additional property acquisition. To mitigate this hazard, Fairbury identified the following mitigation actions during this plan update: levee / floodwall construction and/or improvements, property acquisition, and stormwater system and drainage improvements.

Hazardous Materials

While no significant spills from fixed sites or chemical transportation have occurred in Fairbury in recent years, the city is concerned that a spill along the railroad may isolate certain areas of the city southwest of the tracks. Other concerns also exist for blocked transportation routes, loss of life, and community wide contamination or long-term impacts from chemical spills. Highways 136 and 15 are also of concern, due to the transport of chemicals along those routes. Chemicals that

are transported through the city include many hazardous chemicals, including some that are radioactive. Critical facilities are located along the river, downtown commercial district, the light plant, water facilities, the city park, highways, and near housing. Fairbury has identified the need to conduct GIS mapping of critical infrastructure and develop action plans and training with Union Pacific in case of significant spill.

Severe Thunderstorms

Fairbury frequently experiences severe thunderstorms, with damaging winds, lightning, hail, and heavy rains. One notable event occurred on April 10, 2001, when 86 mph straight-line winds caused extensive damage to trees, roofs, and outbuildings, and overturned vehicles, in and around the city. More recent years have featured multiple storms with winds in excess of 60 mph and hail up to three inches in diameter. The city's main concerns from these storms include public safety, power and communications outages, and flooding. The city experienced significant localized flooding during heavy rain events due to an undersized storm sewer system.

Critical municipal records are protected with surge protectors. Most critical facilities do not have backup generators and about 10 percent of the city's power lines are buried. However, Fairbury also identified projects to rebuild the 306 transmission line and loop, and implement electrical system looped distribution/redundancies. The city is currently exploring the option of an alternate emergency transmission line. Many older hazardous trees are in need of removal and the city conducts tree trimming on an as needed basis. Critical facilities have weather radios.

Severe Winter Storms

Fairbury has experienced multiple severe winter storms such as on December 7 and December 24 of 2009, with 11 inches of snow and blizzard conditions for the first storm, and five inches of snow with 40 mph winds creating seven-foot snow drifts for the second storm. The city reports an additional severe winter storm struck in 2011. The city's main concerns for this hazard are blocked transportation routes, utility disruptions, and public safety. Electrical lines and power poles have been damaged by this weather in the city. About 10 percent of the city's power lines are buried and city is currently exploring the option of an alternate emergency transmission line..

For snow removal, the city owns four snowplows, a grader, two loaders, a blower, six dump trucks, and a skid loader. The public works department is in charge of snow removal. The city noted additional fleet management is a priority to maintain adequate equipment. The city doesn't utilize snow fences. There are multiple routes designated as snow routes in town. To mitigate the impacts of power outages from winter storms, Fairbury identified projects to rebuild the 306 transmission line and loop, and implement electrical system looped distribution/redundancies.

Tornadoes and High Winds

While Fairbury hasn't been directly impacted by a tornado strike in recent years, Jefferson County is prone to tornadoes and high winds. Significant storms with tornadic conditions have affected Fairbury in 2008, 2002, and 2001. The 2008 event caused the city to lose power due to damage to a substation north of town, and each of the three above-noted events damaged transmission lines. The village's main concerns about tornadoes and high winds include disruptions to electric power and communications, road blockages, damage to structures, impacts to emergency care facilities, and the availability of shelter for any dislocated residents.

The city does not have a community safe room, so residents must find shelter in basements or storm shelters of their own. The city backups their electronic municipal records externally, with the exception of the utility showroom, which uses an on-site backup. Jefferson County emergency management offers text alerts for severe weather. The city does not conduct emergency preparedness outreach efforts to the public. The city does have mutual aid agreements with MNPP, and other entities. During this plan update, Fairbury included a project to update alert sirens.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Fairbury has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The City has a mayor and an eight member board and the following offices: city administrator, clerk/treasurer, attorney, electric distribution superintendent, water and sewage plant superintendent, street superintendent, & development services director.

Capabilities

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

Table FAI.5: Capability Assessment

Survey Components		Yes/No
Planning Regulatory Capability	Comprehensive Plan	Yes
	Capital Improvements Plan	Yes
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	Yes
	Zoning Ordinance	Yes
	Subdivision Regulation/Ordinance	Yes
	Building Codes	Yes
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	Yes
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	Yes
	Floodplain Administration	Yes
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	Yes
	Grant Manager	Yes
	Mutual Aid Agreement	Yes

Survey Components		Yes/No
	Other (if any)	
Fiscal Capability	1 & 6 Year Plan	Yes
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education Outreach and	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 FAI.6: Overall Capability

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

Plan Integration

The city is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

The city’s comprehensive plan was last updated in 2013 along with the zoning ordinance. While the comprehensive plan does not address any hazard in depth, it does encourage all future residential and commercial development to consider flooding hazards in development initiatives.

The plan does state Fairbury’s commitment to environmental goals, and has objective to participate in the NFIP, restrict development in the floodplain, encourage land preservations, protect water supplies, minimize impacts on groundwater system, and engage in stormwater management.

The comprehensive plan has an explicit future land use action to “work with FEMA and NEMA to eliminate structures, in the floodplain, when they become damaged by flooding or other natural disasters.” Existing, future, and potential annexation area maps from this plan are located at the end of this participant section.

In the past the city has applied for grants including HMGP, CDBG, Trains, Environmental Trust, NRD, and EDC to implement mitigation actions. The local planning team noted the annual municipal budget’s funds have decreased over the past few years and are limited to maintaining current systems and facilities. Large portions of the current budget have been allocated for electrical distribution, stormwater system, water tower, water transmission system, and wastewater treatment plant updates. Any new capital projects would require additional bonds or grant funding.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the City Administrator and the Director of Development Services. The local planning team will review the plan no less than annually and will include the public in the review and revision process by: updating the city website, sending letters to residents, and sharing information at city council meetings open to the public.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	STREET STORM SEWER REPAIR
DESCRIPTION	Repair H Street storm sewer
HAZARD(S)	Flooding, Severe Thunderstorms
STATUS	This project was completed in the past five years.

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIRENS
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens which should be replaced or the placement of new sirens.
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	\$60,000+
FUNDING	Local Funds, HMGP, BRIC
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	City Administrator
STATUS	Quotes for new sirens have been received, determination needs to be made by Council if funds are available to purchase new sirens to replace non-working sirens or if the City of Fairbury wants to pursue notifications through website, phones, weather radios, mainstream news only.

MITIGATION ACTION	CITY PARK AND CRITICAL FACILITY FLOOD PROTECTION PROJECT
DESCRIPTION	Conduct a city park and critical facility flood protection project
HAZARD(S)	Flooding
ESTIMATED COST	\$500,000
FUNDING	General Fund, NRD cost share, DFBG, Bonds, UPRR, HMGP, BRIC
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	City Administrator, Director of Development Services
STATUS	City is currently finalizing a storm sewer project in the city park to reduce flooding. Anticipated completion is summer 2021. Phase 1 is to review the levee system and new flood maps. The city is meeting with USACE and working to remap problem areas.

MITIGATION ACTION	DAM/LEVEE/FLOODWALL CONSTRUCTION AND IMPROVEMENTS
DESCRIPTION	Levees and floodwalls serve to provide flood protection to businesses and residents during large storm events. Improvements to existing levees and floodwalls will increase flood protection. If possible, the structure should be designed to FEMA standards to provide 1-percent flood protection providing additional flood insurance benefits.
HAZARD(S)	Flooding, Levee Failure
ESTIMATED COST	Varies
FUNDING	Local Funds, HMGP, BRIC
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	Director of Development Services
STATUS	Currently the levee is a Provisionally Accredited Levee (PAL agreement). The city is currently holding in Phase 1 is to review the levee system and new flood maps. The city is meeting with USACE and working to remap problem areas. The city is currently interested in pursuing an automatic floodwall protection measure for additional protection.

SECTION SEVEN: CITY OF FAIRBURY COMMUNITY PROFILE

MITIGATION ACTION		EMERGENCY EXERCISE: HAZARDOUS SPILL	
DESCRIPTION	Develop and facilitate an exercise to identify gaps in planning and to ensure that community response plans are sufficient to meet the needs of the jurisdiction.		
HAZARD(S)	Hazardous Chemicals, Flooding		
ESTIMATED COST	\$5,000+		
FUNDING	Local funds, HMGP, BRIC, FMA		
TIMELINE	1 year		
PRIORITY	High		
LEAD AGENCY	City Administrator		
STATUS	One exercise was held in 2017 with an additional exercise yet to be scheduled.		

MITIGATION ACTION		IMPROVE OR ACQUIRE PROPERTY AT HIGH RISK TO FLOODING	
DESCRIPTION	Voluntary acquisition and demolition of properties prone to flooding will reduce the general threat of flooding for communities. Additionally, this can provide flood insurance benefits to those communities within the NFIP. Repetitive loss structures are typically highest priority.		
HAZARD(S)	Flooding		
ESTIMATED COST	Varies by property		
FUNDING	General funds, HMGP, BRIC, FMA		
TIMELINE	5+ years		
PRIORITY	Medium		
LEAD AGENCY	City Administrator		
STATUS	Additional homes have been identified for removal from the floodplain. The city has submitted a HMGP grant for assistance.		

MITIGATION ACTION		MAP/RELOCATE CRITICAL INFRASTRUCTURE	
DESCRIPTION	Conduct GIS mapping of critical utilities infrastructure, at the city office and shop		
HAZARD(S)	All hazards		
ESTIMATED COST	\$100,000		
FUNDING	Utility Fund, HMA		
TIMELINE	1 year		
PRIORITY	High		
LEAD AGENCY	Mapping Department, Electrical Distribution, Water & Sewer Departments		
STATUS	Critical facilities were mapped as a part of this planning process and will be adopted by the departments.		

SECTION SEVEN: CITY OF FAIRBURY COMMUNITY PROFILE

MITIGATION ACTION	PROVIDE BACKUP POWER SYSTEMS AND 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)	All hazards
ESTIMATED COST	\$50,000+
FUNDING	General funds, HMGP, BRIC
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	City Council
STATUS	The city is currently exploring the option of an alternate emergency transmission line.

MITIGATION ACTION	REBUILD 306 TRANSMISSION LINE AND LOOP
DESCRIPTION	Reconstruct 306 transmission line and loop to 308 line and power plant substation
HAZARD(S)	All hazards
ESTIMATED COST	\$10,000,000
FUNDING	Municipal funds and bonding, HMGP
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Electric Department, City Administrator
STATUS	The city is currently evaluating transmission line redundancy options.

MITIGATION ACTION	STORMWATER SYSTEM AND DRAINAGE IMPROVEMENTS
DESCRIPTION	Larger communities generally utilize underground stormwater systems comprising of pipes and inlets to convey runoff. Stormwater system improvements may include pipe upsizing, additional inlets, and improving streets and roads drainageways. Retention and detention facilities may also be implemented to decrease runoff rates while also decreasing the need for other stormwater system improvements.
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	\$1,000,000
FUNDING	5% sales tax, LB 840, local revenue, bond, HMGP, BRIC, FMA
TIMELINE	5+ years
PRIORITY	High
LEAD AGENCY	City Administrator, Director of Development Services, Public Works Department
STATUS	Current stormwater and sewer system is undersized. Upgrades are in the works in the City Park. H Street improvements have been made. Other areas in the city also need updates.

New Mitigation Action – 2021 Plan

MITIGATION ACTION	IMPROVE WATER SUPPLY RESOURCES
DESCRIPTION	Explore additional water sources for the city.
HAZARD(S)	Drought and Extreme Heat
ESTIMATED COST	\$4,267,000
FUNDING	USDA loan, General Fund
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Council
STATUS	This is a new mitigation action

MITIGATION ACTION	WATER SYSTEM IMPROVEMENTS
DESCRIPTION	Purchase and install additional water improvements and equipment including a second clarifier for wastewater treatment plan, confined space for HVAC, grit building, and a SCADA system.
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	\$3,500,000
FUNDING	General Fund, CWFRS
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	City Council
STATUS	This is a new mitigation action

Removed Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR CITY OFFICE
DESCRIPTION	Obtain a backup power generator for city office
HAZARD(S)	All hazards
REASON FOR REMOVAL	This project was identified as no longer needed for the city. Electrical system transmission redundancies will address this need.

MITIGATION ACTION	NFIP CONTINUATION AND ENFORCEMENT
DESCRIPTION	Enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHA).
HAZARD(S)	Flooding
REASON FOR REMOVAL	While the City will continue to participate in the NFIP, this is no longer considered a mitigation action by FEMA.

MITIGATION ACTION	STORM SEWER REPAIR
DESCRIPTION	Conduct storm sewer repair
HAZARD(S)	Flooding, Severe Thunderstorms
REASON FOR REMOVAL	This project was identified as redundant and is covered under “Stormwater System and Drainage Improvements”.

SECTION SEVEN: CITY OF FAIRBURY COMMUNITY PROFILE

MITIGATION ACTION	STORMWATER MANAGEMENT
DESCRIPTION	Upgrade combined sewer system to improve storm water management.
HAZARD(S)	Flooding, Severe Thunderstorms
REASON FOR REMOVAL	This project was identified as redundant and is covered under "Stormwater System and Drainage Improvements".

COMMUNITY PROFILE

VILLAGE OF HARBINE

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table HAR.1: Village of Harbine Local Planning Team

Name	Title	Jurisdiction
Elaine Blobaum	Village Clerk	Village of Harbine

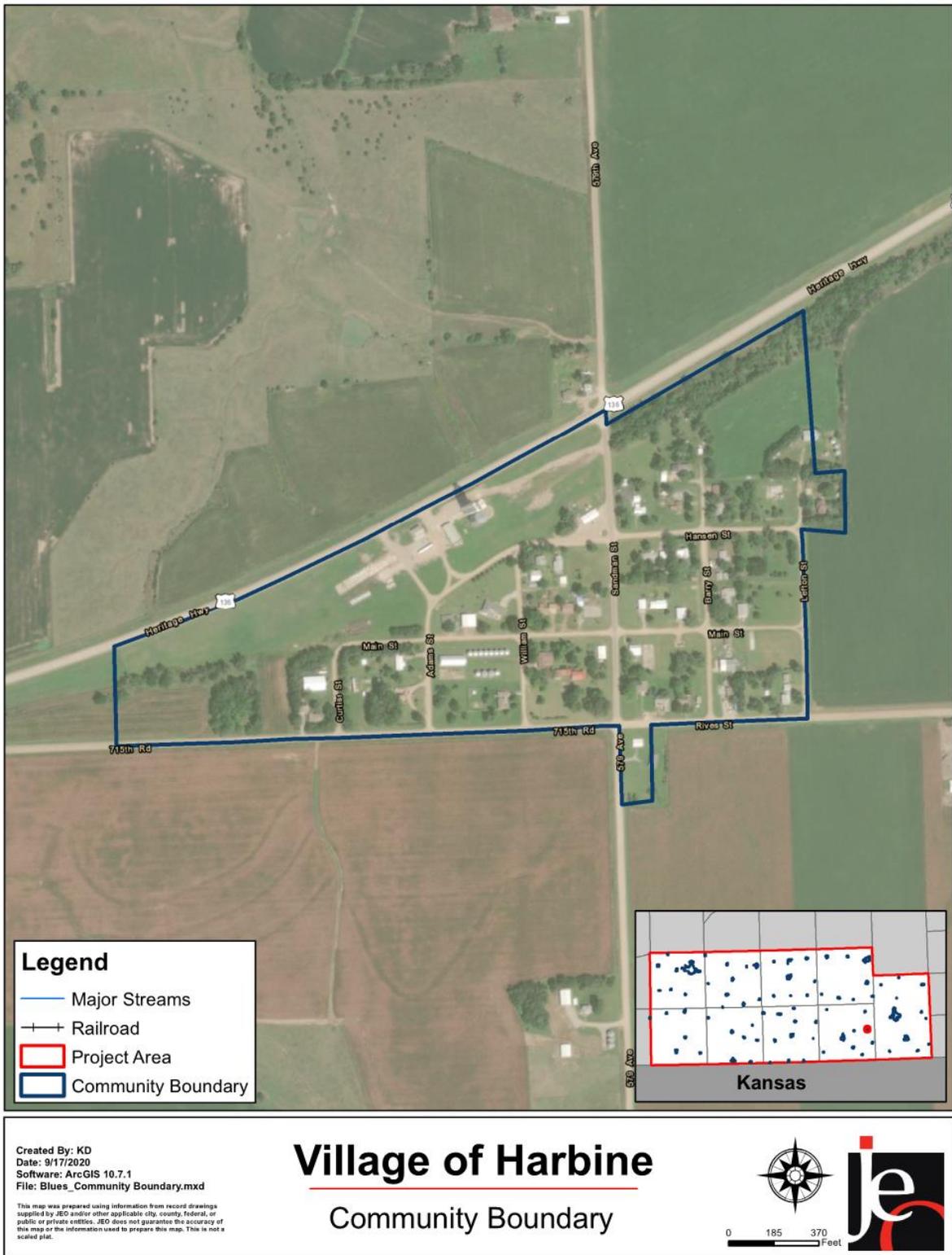
Location and Geography

The Village of Harbine is located in the east central portion of Jefferson County. The Village of Harbine covers an area of 0.11 square miles. There are no major waterways within the area. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Harbine. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Harbine's major transportation corridors include Highway 136, which runs southwest to northeast to the north of Harbine and accommodates on average 2,295 vehicles per day, 255 of which are heavy commercial vehicles. Harbine does not have any rail lines. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

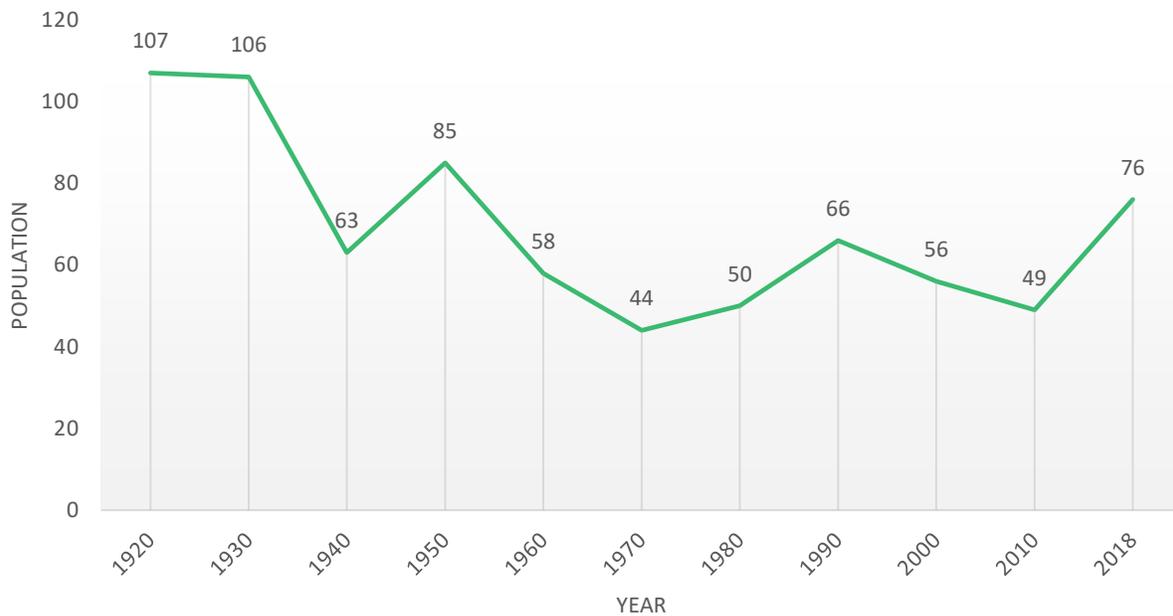
Figure HAR.1: Village of Harbine Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2018 (estimated). This figure indicates that the population of Harbine has experienced unstable population trends over the past century. Since 1990, the village has been declining steadily with an increase since 2010. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 1% of Jefferson County's Population in 2018.

Figure HAR.2: Harbine Population 1890-2018



Source: U.S. Census Bureau⁴⁸

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

- **Older.** The median age of Harbine was 55.3 years old in 2017, compared with the County average of 45.7 years. Harbine's population has grown older since 2010, when the median age was 51.7 years old. Harbine had a larger proportion of people under 20 years old (29%) than the County (24.1%).⁴⁹
- **Less ethnically diverse.** Between 2020 and 2018, 100% of Harbine's population was 100% White, non-Hispanic. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁵⁰

48 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

49 United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

50 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Harbine (0.0%) was lower than the County (12.0%) in 2018.⁵¹

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Harbine included Retail, Transportation, Finance, Professional Sciences, and other services. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.⁵²
- **Higher household income.** Harbine's median household income in 2018 (\$76,094) was about \$32,800 higher than the County (\$43,295).⁵³
- **Fewer long-distance commuters.** About 55.2% percent of workers in Harbine commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 4.5% of workers in Harbine commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁵⁴

Major Employers

The local planning team noted there are no major employers in the village. Many residents may work the surrounding agricultural lands or commute to Beatrice, Crete, or Fairbury for employment.

Housing

In comparison to the Jefferson County, Harbine's housing stock was:⁵⁵

- **More owner occupied.** About 93.5% of occupied housing units in Harbine are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Smaller share of aged housing stock.** Harbine has fewer houses built prior to 1970 than the county (50% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Harbine contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 4.8%). About 100% of housing in Harbine was single-family detached, compared with 91.4% of the County's housing. Harbine has a smaller share of mobile and manufactured housing (0%) compared to the County (2.4%). There is one mobile home located in the southeast corner of the village.

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

51 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

52 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

53 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

54 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

55 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

No major changes have occurred in the Village over the past five years and no residential or commercial developments are currently planned for the next five years. The U.S. census bureau current estimates indicate the population in Harbine is increasing; however, the 2020 official census was not available for this plan development. The local planning team indicated the population has declined recently due to an aging population.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs have been reported in the Village of Harbine.

Table HAR.2: Harbine Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
58	31	\$1,243,963	0	0%	\$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

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

Table HAR.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	57890 Highway 136	N

Source: Nebraska Department of Environment and Energy⁵⁶

⁵⁶ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

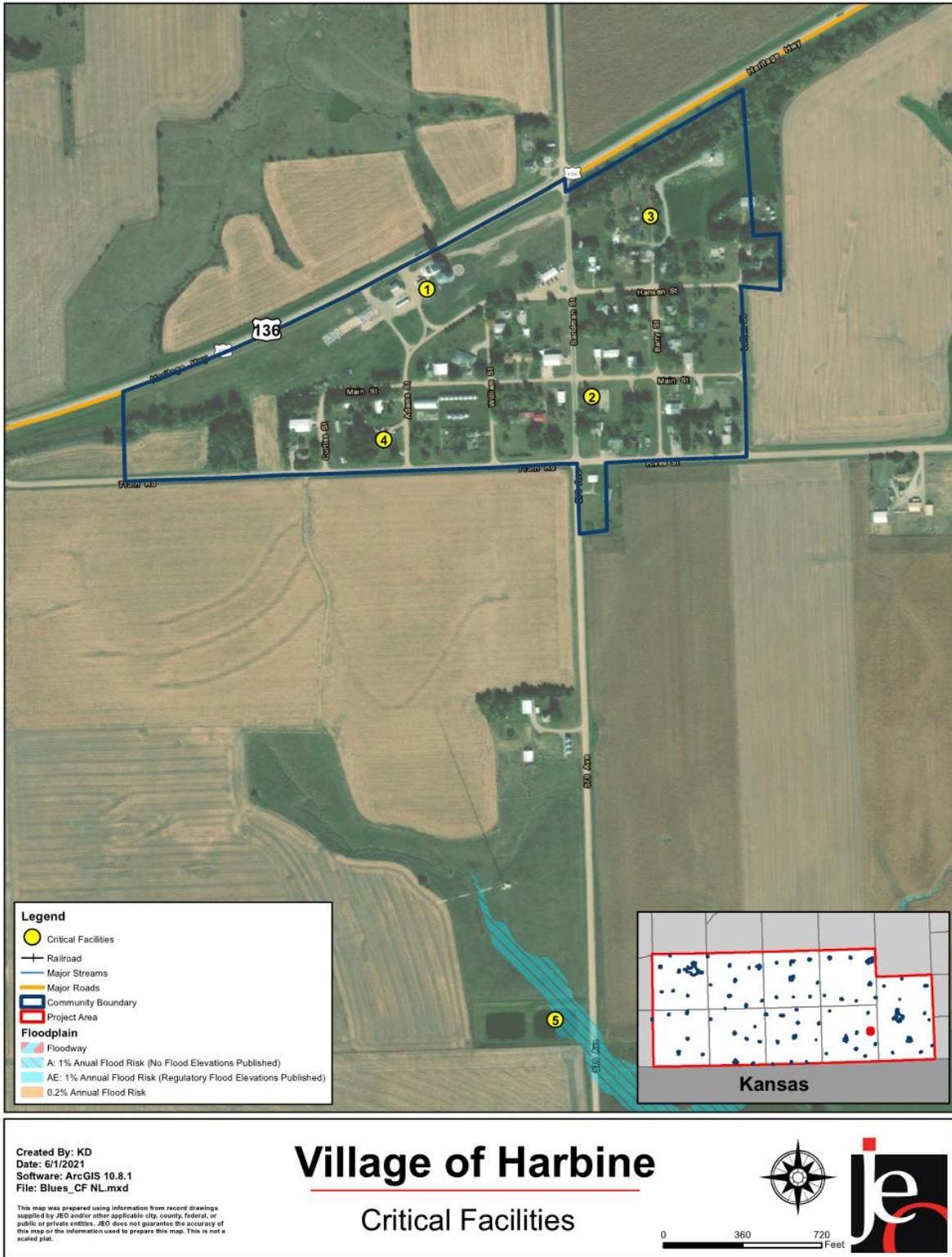
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

Table HAR.4: Harbine Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	Farmers' Cooperative	N	N	N
2	Food, Water, and Shelter	Harbine Community Building	N	N	N
3	Food, Water, and Shelter	Harbine Village Well	N	Y	N
4	Health and Medical	Day Care	N	N	N
5	Health and Medical	Sewer Lagoons	N	N	Y

Figure HAR.3: Harbine Critical Facilities



Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Severe Thunderstorms

Severe thunderstorms are frequent occurrences in Jefferson County, and Harbine is prone to these storms. The village's main concerns about severe thunderstorms are power outages and hail damage. On March 30, 2006, thunderstorm winds of nearly 60 mph blew an empty semi-truck off the road near the village. Past hail events have reported hail up to 1.75" in diameter which caused damage to roofs, crops, and other property.

Critical electronic municipal records are not protected with surge protectors. No power lines in the village are buried; however, the village has some portable generators to use in case of power outages. There are hazardous trees in town that need to be removed. There are no weather radios in critical facilities. To mitigate this hazard, the village plans to obtain stationary backup power generators for critical facilities; establish protocols for backup of critical municipal records; and construct storm shelters and safe rooms.

Severe Winter Storms

Jefferson County experiences severe winter storms annually. Two storms in particular, in November 2009 and December 2011, resulted in power outages in the village. The main concern for this hazard is loss of power, blocked transportation routes, and public safety. No structural damage to facilities has occurred in recent years from winter storms.

The village owns a truck with a blade and a tractor with loader, and village board members are in charge of snow removal. The village believes these resources are sufficient for snow removal. The village does utilize snow fences. There are no designated snow routes in town. None of the power lines in town are buried.

Tornadoes and High Winds

Harbine has experienced damaging high winds and tornadoes in recent years. Strong winds from thunderstorms destroyed the village's maintenance shop in 2008. An EF-2 tornado on May 27, 2013 destroyed outbuildings, damaged a home, and drove two-by-fours into the ground. An F-1 tornado on May 8, 1996 caused severe damage to farms, destroyed the town shop, and had a total reported property damage of \$350,000. The village's main concern about tornadoes is public safety and power outages.

The city does not have a community safe room, so residents must rely on their own basements or storm shelters for safety. The village does not backup its electronic municipal records. Jefferson County emergency management does offer text alerts for severe weather, and the village itself has a siren. The village does not conduct emergency preparedness outreach efforts in the community. The village does not have mutual aid agreements in place.

Flooding

Flooding was not identified as a hazard of top concern and there are no major floodplains in or near the village. The village does not participate in the NFIP and there are no reported repetitive loss properties in the village.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Harbine has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a four member board and the following offices: clerk/treasurer, attorney, street commissioner, and water commissioner.

Capabilities

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

Table HAR.5: Capability Assessment

Survey Components		Yes/No
Planning Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Building Codes	No - County
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	No
	Community Rating System	No
Other (if any)		
Administrative Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No

Survey Components		Yes/No
	Grant Manager	No
	Mutual Aid Agreement	No
	Other (if any)	
Fiscal Capability	1 & 6 Year Plan	No
	Applied for grants in the past	Yes
	Awarded a grant in the past	Yes
	Authority to Levy Taxes for Specific Purposes such as Mitigation Projects	Yes
	Gas/Electric Service Fees	No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education Outreach and	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree Village USA	No
	Other (if any)	

Table HAR.6: Overall Capability

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

Plan Integration

The local planning team noted the current municipal budget is generally limited to maintaining current infrastructure and facilities and funds have remained relatively stable over recent years.

The Village of Harbine is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

The Village of Harbine follows all county and state building and zoning requirements, but does not have any other identified planning mechanisms in which hazard mitigation goals are identified.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Clerk, Village Board, and Maintenance. The local planning team will review the plan annually with the local budget and will include the public in the review and revision process by posting information in the local paper and posted notices at the community hall.

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATORS
DESCRIPTION	Provide a portable or stationary source of backup power for critical facilities including community center
HAZARD(S)	All hazards
ESTIMATED COST	\$3,500+, depending on site requirements
FUNDING	General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet started.

MITIGATION ACTION	BACKUP MUNICIPAL RECORDS
DESCRIPTION	Develop protocols for backup of critical municipal records
HAZARD(S)	All hazards
ESTIMATED COST	\$100 for each external hard drive
FUNDING	Village Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	Currently copies of municipal records are kept at both the community hall and clerk's home. The village plans to convert to a cloud or backup system in the future.

SECTION SEVEN: VILLAGE OF HARBINE COMMUNITY PROFILE

MITIGATION ACTION	SAFE ROOM/STORM SHELTERS
DESCRIPTION	Construct a storm shelter or safe room for at least 30 people
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	\$40,000
FUNDING	General Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

Removed Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR THE COMMUNITY BUILDING
DESCRIPTION	Obtain a backup power generator for the community building
HAZARD(S)	All hazards
STATUS	This action was identified as redundant and is addressed by the “Backup Generators” action.

MITIGATION ACTION	EMERGENCY COMMUNICATION
DESCRIPTION	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies, with interoperable communications
HAZARD(S)	All hazards
STATUS	This project was identified as not a priority for the Village. Emergency communication and actions are outlined in the County LEOP which the village follows.

COMMUNITY PROFILE

VILLAGE OF JANSEN

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table JAN.1: Village of Jansen Local Planning Team

Name	Title	Jurisdiction
Matthew Leatherwood	Village Clerk/Treasurer	Village of Jansen
Kesha Eldridge	Board Chairperson	Village of Jansen

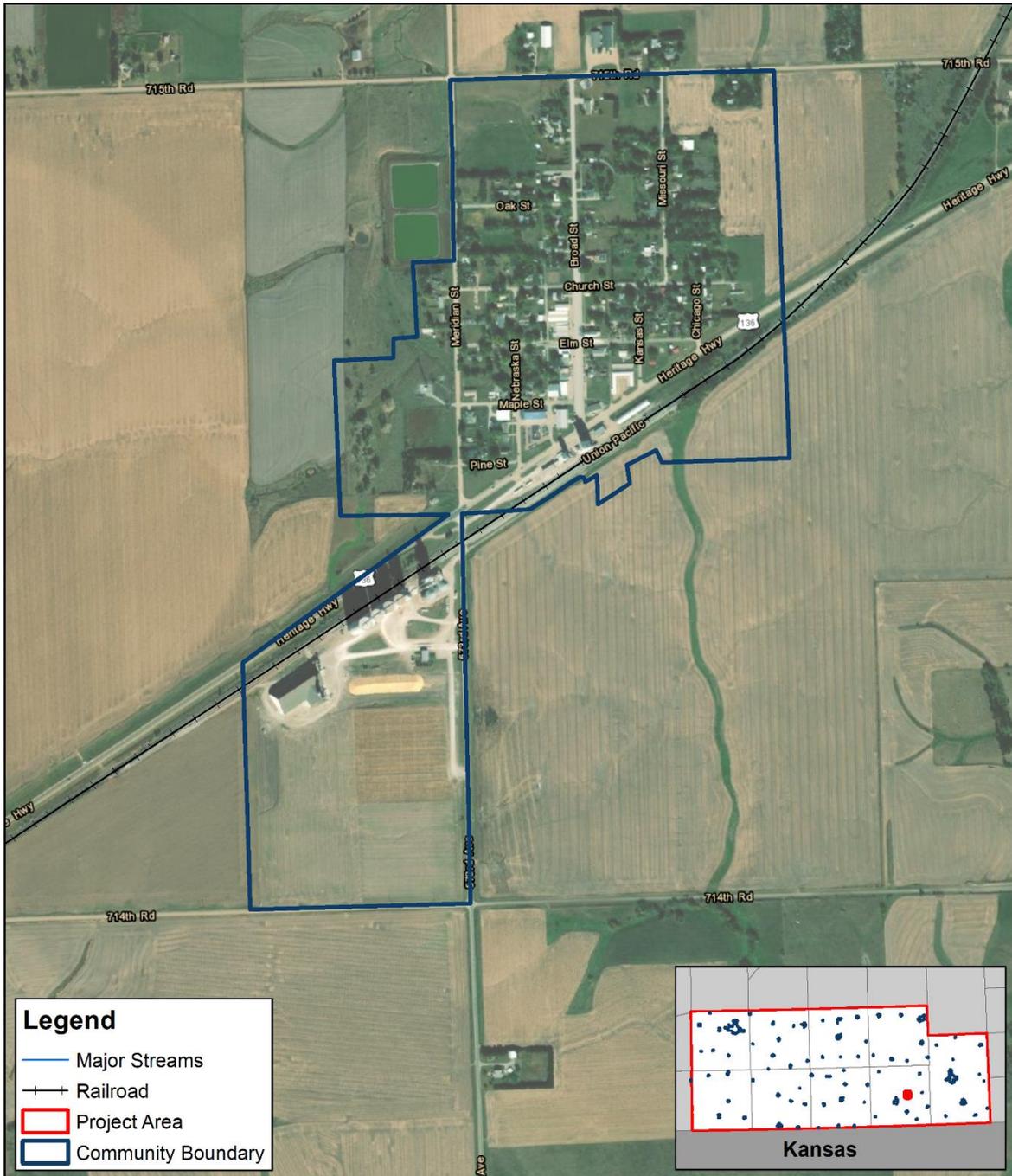
Location and Geography

The Village of Jansen is located in the central portion of Jefferson County. The Village of Jansen covers an area of 0.23 square miles. There are no major waterways within the area, although there are two small retention ponds just northwest of the village. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Jansen. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Jansen's major transportation corridors include Highway 136, which southwest to northeast to the south of Jansen. NE-136 accommodates on average 2,590 vehicles per day, 270 of which are heavy commercial vehicles. Jansen has one railroad, the Union Pacific line. At Jansen, the UPRR runs northeast to southwest. The local planning team is also concerned about County Road 573 which is heavily used for transporting agricultural chemicals such as anhydrous ammonia, gasoline, propane, and diesel. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

Figure JAN.1: Village of Jansen Jurisdictional Boundary



Created By: KD, MW
 Date: 5/17/2021
 Software: ArcGIS 10.8.1
 File: Blues_Community Boundary.mxd

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

Village of Jansen

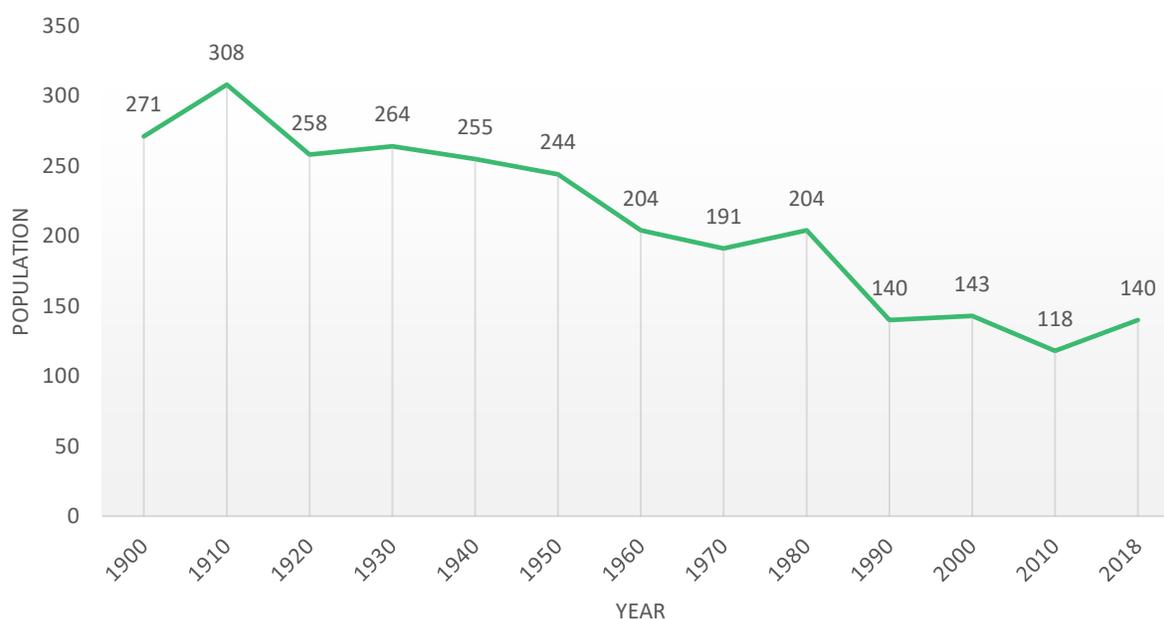
Community Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2018 (estimated). This figure indicates that the population of Jansen has experienced three decades of slight population growth and seven decades of population decline. The past decade saw a decline of approximately 17%. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 2% of Jefferson County's Population in 2018.

Figure JAN.2: Jansen Population 1990-2018



Source: U.S. Census Bureau⁵⁷

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

- **Similarly aged.** The median age of Jansen was 45.5 years old in 2017, compared with the County average of 45.7 years. Jansen's population has grown older since 2010, when the median age was 47.3 years old. Jansen had a larger proportion of people under 20 years old (24.3%) than the County (24.1%).⁵⁸
- **Less ethnically diverse.** In 2010 1% of Jansen's population was two or more races. By 2018 this grew to 6% of the population for two or more races. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁵⁹

⁵⁷ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁵⁸ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁵⁹ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Jansen (27.1%) was lower than the County (12.0%) in 2018.⁶⁰

Employment and Economics

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

- **Different mix of industries.** Employment sectors accounting for 10% or more of employment in Jansen included Construction, Manufacturing, Informational, and Education. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.⁶¹
- **Lower household income.** Jansen's median household income in 2018 (\$41,875) was about \$1,400 lower than the County (\$43,295).⁶²
- **Fewer long-distance commuters.** About 32.6% percent of workers in Jansen commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 11.8% of workers in Jansen commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁶³

Major Employers

Major employers in Jansen include the Farmers Co-op and Goebel Construction; however, the local planning team noted there are a lot of retired residents and some residents commute to either Beatrice or Fairbury.

Housing

In comparison to the Jefferson County, Jansen's housing stock was:⁶⁴

- **More owner occupied.** About 91.2% of occupied housing units in Jansen are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Smaller share of aged housing stock.** Jansen has fewer houses built prior to 1970 than the county (57.3% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Jansen contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 4.8%). About 88.0% of housing in Jansen was single-family detached, compared with 91.4% of the County's housing. Jansen has a larger share of mobile and manufactured housing (9.3%) compared to the County (2.4%). Mobile homes are located throughout the village.

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

60 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

61 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

62 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

63 United States Census Bureau. "2018 American Fact Finder: S0802: Means of Transportation to Work by Selected Characteristics." [database file]

64 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

In the past five years, the village had an annexation in 2017 and one new business in 2019. In addition, available housing in the community has been filled. The Co-op is in the process of moving old anhydrous ammonia tanks, which have been emptied and disconnected and will likely be removed from village limits in 2021. The population in Jansen is declining which the local planning team attributes to an aging population.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Jansen.

Table JAN.2: Jansen Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
144	83	\$2,748,664	0	0%	\$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage sites throughout Jansen which houses hazardous materials. Additionally, Goebel Construction at the corner of Maple Street and Nebraska Street houses hazardous chemicals. The local planning team noted specific concerns for critical facilities located along Highway 136 and for the communities aging population which would be vulnerable in the event of a chemical spill. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. The local planning team also noted there are several privately owned propane tanks at homes in Jansen.

Table JAN.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	200 S Broad St	N

Source: Nebraska Department of Environment and Energy⁶⁵

⁶⁵ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

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

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

Table JAN.4: Jansen Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	Alert Siren/Town Hall	Y	N	N
2	Energy	Electric Substation	N	N	N
3	Safety and Security	Jansen Fire Station	Y	N	N
4	Food, Water, and Shelter	Jansen Village Office / Well	N	N	N
5	Food, Water, and Shelter	New Well	N	N	N
6	Food, Water, and Shelter	North Well (disconnected)	N	N	N
7	Health and Medical	Sewage Lagoon	N	N	N
8	Food, Water, and Shelter	Water Tower	N	N	N

Figure JAN.3: Jansen Critical Facilities



Created By: NL
Date: 5/21/2021
Software: ArcGIS Pro 2.8.0
File: Blues Critical Facilities.aprx
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Village of Jansen

Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021

Kansas

Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials

The Village of Jansen has experienced at least one spill of anhydrous ammonia in recent years, due to a torn hose, and is desirous of moving storage of this chemical out of city limits. There are critical facilities on the east side of the village that are within proximity to stored anhydrous ammonia, and there are vulnerable populations near this site as well as are located near Highway 136, on the east side of the town, which is a route along with chemicals are transmitted. The village wants to re-route the transportation of the chemical, via tanks and trailers, away from the village

The local first responders do not have protective gear and training to resolve an anhydrous ammonia spill, and residents near these storage sites are not believed to be well-educated about the threat of such a spill and the proper response actions. To mitigate against this hazard, the local Co-op is in the process of moving old anhydrous ammonia tanks, which have already been emptied and disconnected. The planning team indicated that these tanks will likely be completely removed sometime in 2021.

Severe Thunderstorms

Severe thunderstorms are frequent occurrences in Jefferson County, and Jansen is prone to these storms. A storm on August 24, 2014 with 60 mph winds destroyed a 60 by 90 foot barn in the village, and a storm on May 29, 2008 with winds in excess of 60 mph dropped power lines along Highway 136. The latter storm had earlier caused a tornado near town. And the village has experienced multiple incidents of quarter size hail in the past decade; quarter-size hail being a threshold size in which significant damage can occur. The local planning team remains concerned about large storms with high winds downing trees. Additionally, there is concern about excessive rainfall impacting the village lagoon and causing high water levels which may flood basements and require the use of sump pumps in the community. There are also many homeowners in the village without sufficient shelter during a severe thunderstorm event.

Critical facilities including the village office, fire station, and water well system do have portable generators. The village has installed surge protectors and utilized a backup hard drive for city records. There has also been a generator obtained for a well. None of the power lines in the village are buried. There are no hazardous trees that need to be removed. The rural fire station is equipped with weather radios. To mitigate these hazards, the village is looking into a community safe room/storm shelter.

Tornadoes and High Winds

Jefferson County has experienced damaging tornados in recent years. While Jansen’s recent experience has been limited to an EF-0 touchdown two miles north of town on June 11, 2008, and while critical facilities in the village have not recently been damaged by tornados, the village remains prone to this hazard. The village’s main concern about tornados is public safety, downed power lines and broken trees as this has occurred in the past.

The city does not have a community safe room, so residents must rely on their own or a neighbor’s basement or storm shelter for safety. Jefferson County emergency management does offer text alerts for severe weather. The village has installed a surge protector and backs up municipal records on a hard drive. The village promotes emergency preparedness in the community. The village has mutual aid agreements in place with the rural fire district and with the City of Fairbury. To mitigate these hazards, the village is looking into a community safe room/storm shelter.

Flooding

Flooding was not identified as a hazard of top concern and there are no identified flood risk hazard areas within or adjacent to the village. At this time the village does not participate in the NFIP.

Governance

A community’s governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Jansen has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The village has a five member board and the following offices: clerk/treasurer, a utility superintendent, a sewage plant operator, and street/water commissioners.

Capabilities

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

Table JAN.5: Capability Assessment

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

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

Table JAN.6: Overall Capability

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

Plan Integration

In the past the village has applied for grants including LARM for safety, an owner occupied rehab grant, and another grant for water infrastructure in the community. The local planning team indicated that municipal funds are sufficient to pursue new capital projects and have increased over recent years due to new residents moving to town. A large portion of funds were dedicated to two large street projects and a grant match program for owner occupied housing rehabilitation.

The Village of Jansen is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board and rural fire department is familiar with the EOP.

The Zoning Ordinance was last updated circa 2008. The village has established a zoning and planning committee that is currently inactive since 2008. The village reports that zoning regulations have not been enforced since that time. The Comprehensive Plan was last updated in 2016. The village will work to incorporate the principals of hazard mitigation into the comprehensive plan in the future.

Plan Maintenance

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

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

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR VILLAGE SOUTH WELL
DESCRIPTION	Obtain a backup power generator for village south well
HAZARD(S)	All hazards
ESTIMATED COST	\$30,000
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	There is a generator currently on-site, but it hasn't been installed yet. It will be installed soon as part of the villages well project. Additional generator needs will be evaluated once installed.

MITIGATION ACTION	SAFE ROOM/STORM SHELTERS
DESCRIPTION	Construct a storm shelter or safe room capable of sheltering 50 people
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	\$65,000
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	Have identified community hall as a shelter location, but reinforced area is needed.

Removed Mitigation Actions

MITIGATION ACTION	BACKUP GENERATOR FOR VILLAGE NORTH WELL
DESCRIPTION	Obtain a backup power generator for village north well
HAZARD(S)	All hazards
REASON FOR REMOVAL	This well has been disconnected and does not need a backup generator.

MITIGATION ACTION	BACKUP GENERATOR FOR FIRE STATION
DESCRIPTION	Obtain a backup power generator for fire station
HAZARD(S)	All hazards
REASON FOR REMOVAL	This action was identified as the responsibility of the fire department, not the village.

COMMUNITY PROFILE

VILLAGE OF PLYMOUTH

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table PLY.1: Village of Plymouth Local Planning Team

Name	Title	Jurisdiction
Bruce Wollenburg	Village Chairman	Village of Plymouth
Jim Mertens	Maintenance	Village of Plymouth
Tana Hofstetter	Clerk/Treasurer	Village of Plymouth

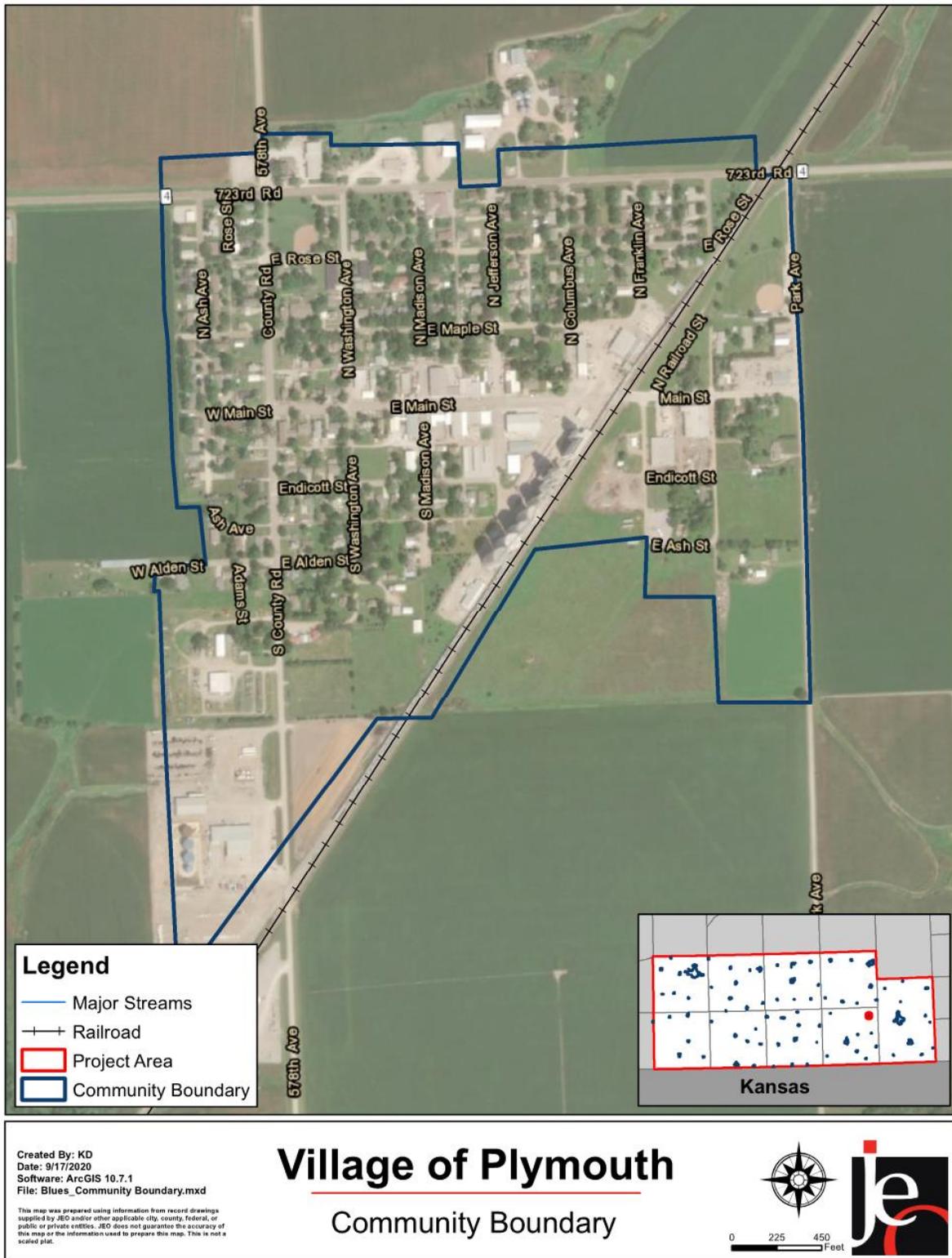
Location and Geography

The Village of Plymouth is located in the north eastern portion of Jefferson County. The Village of Plymouth covers an area of 0.32 square miles. There are no major waterways within the area include, although there is small retention pond just northwest of the village. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Plymouth. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Plymouth's major transportation corridors include State Highway 4 runs east-west, just north of Plymouth. Highway 4 accommodates on average 1,560 vehicles per day, 180 of which are heavy commercial vehicles. Plymouth has one railroad, the Union Pacific line which runs northeast to southwest. The planning team indicated that agricultural chemicals are regularly transported along local routes and that there is a Farmer's Cooperative located south of the community. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

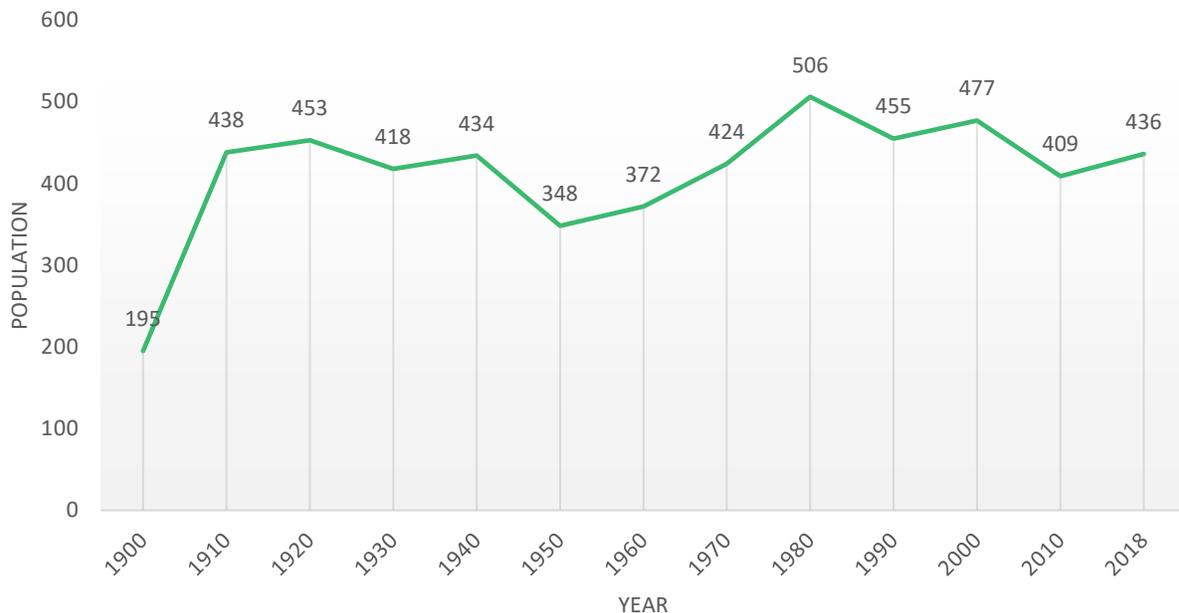
Figure PLY.1: Village of Plymouth Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1900 to 2018 (estimated). This figure indicates that the population of Plymouth was relatively stable until experiencing a significant decline in the 1940s. Between the 1950s and 1970s, the population steadily grew and peaked in 1980. Over the past decade the population has been in moderate decline. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community that could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 6% of Jefferson County's Population in 2018.

Figure PLY.2: Plymouth Population 1990-2018



Source: U.S. Census Bureau⁶⁶

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

- **Younger.** The median age of Plymouth was 43.4 years old in 2017, compared with the County average of 45.7 years. Plymouth's population has grown younger since 2010, when the median age was 47.1 years old. Plymouth had a smaller proportion of people under 20 years old (23.1%) than the County (24.1%).⁶⁷
- **Less ethnically diverse.** In 2010 100% of Plymouth's population was White, non-Hispanic. By 2018 1% of the population was other races and 5% was two or more races.

⁶⁶ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁶⁷ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁶⁸

- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Plymouth (8.7%) was lower than the County (12.0%) in 2018.⁶⁹

Employment and Economics

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

- **Similar mix of industries.** Employment sectors accounting for 10% or more of employment in Plymouth included Agriculture, Construction, Manufacturing, Retail, and Education. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.⁷⁰
- **Higher household income.** Plymouth's median household income in 2018 (\$44,792) was about \$1,400 greater than the County (\$43,295).⁷¹
- **Fewer long-distance commuters.** About 17.8% percent of workers in Plymouth commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 32.1% of workers in Plymouth commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁷²

Major Employers

Major employers in the community include Plymouth Electric, Plymouth Industries, Wells Implement, and the Farmer's Cooperative. The planning team noted that a large portion of residents commute to the surrounding communities of Fairbury and Beatrice.

Housing

In comparison to the Jefferson County, Plymouth's housing stock was:⁷³

- **More owner occupied.** About 80.8% of occupied housing units in Plymouth are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Smaller share of aged housing stock.** Plymouth has fewer houses built prior to 1970 than the county (66.7% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Plymouth contains fewer multifamily housing with five or more units per structure than the County (0.8% compared to 4.8%). About 94.6% of housing in Plymouth was single-family detached, compared with 91.4% of the County's housing. Plymouth has a smaller share of mobile and manufactured housing (0%) compared to the County (2.4%).

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

68 United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

69 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

70 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

71 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

72 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

73 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

of high winds, tornadoes, and severe winter storms. According to the local planning team, there are no mobile homes in the community.

Future Development Trends

Over the past five years, there have been three houses demolished in the community. The community also had approximately ten blocks of road resurfaced. Currently there are no new housing developments, businesses, or industry planned. The population in Plymouth has remained stable in recent years which the local planning team attributed to a lack of new housing.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Plymouth.

Table PLY.2: Plymouth Parcel Valuation

NUMBER OF PARCELS	NUMBER OF IMPROVEMENTS	TOTAL IMPROVEMENT VALUE	NUMBER OF IMPROVEMENTS IN FLOODPLAIN	PERCENT OF IMPROVEMENTS IN FLOODPLAIN	VALUE OF IMPROVEMENTS IN FLOODPLAIN
296	214	\$15,866,226	0	0%	\$0

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

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

Table PLY.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	501 E Main St	N
Farmers Cooperative Agronomy	72245 578th Ave	N

Source: Nebraska Department of Environment and Energy⁷⁴

⁷⁴ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

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

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

Table PLY.4: Plymouth Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	Black Hills Natural Gas	N	N	N
2	Health and Medical	Day Care	N	N	N
3	Health and Medical	Day Care	N	N	N
4	Hazardous Materials	Farmer's Cooperative County Store	N	N	N
5	Hazardous Materials	Farmer's Cooperative Grain	N	N	N
6	Hazardous Materials	Farmer's Cooperative Office	N	N	N
7	Hazardous Materials	Farmer's Cooperative Station	N	N	N
8	Hazardous Materials	Farmer's Cooperative Tire Store	N	N	N
9	Hazardous Materials	Farmer's Cooperative-Agronomy	N	N	N
10	Other	First Tri-County Bank	N	N	N
11	Other	Fox Funeral Home	N	N	N
12	Food, Water, and Shelter	Plymouth Community Building	N	N	N
13	Safety and Security	Plymouth Fire Station	Y	Y	N
14	Health and Medical	Plymouth Plaza	N	N	N
15	Other	Plymouth Vet Clinic	N	N	N
16	Food, Water, and Shelter	Plymouth Village Well #1	N	N	N
17	Food, Water, and Shelter	Plymouth Village Well #2	N	Y	N
18	Food, Water, and Shelter	Plymouth Water Tower	N	N	N
19	Communications	Post Office	N	N	N
20	Food, Water, and Shelter	St. Paul's Lutheran School	Y	N	N
21	Energy	Substation	N	N	N

Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Hazardous Materials

While no significant chemical spills have occurred in recent years in Plymouth (and it's believed locally that there have been none since the early 1970s), local concerns about this hazard include water supply pollution due to a chemical spill, or fuel runoff. As well, there are vehicles or tanks transporting hazardous chemicals tipping over or leaking in transit through the village. The route of primary concern for this hazard is the county road, where anhydrous ammonia, fuel (including diesel fuel), and other chemicals are transported. Despite the lack of a major spill, there have been leaks of fuel at the country store. Critical facilities are located south of Plymouth on the country road, and along Highway 4 on the north side of town. There are no vulnerable populations located near chemical fixed sites, but the planning team remains concerned about potential anhydrous ammonia leaks.

For mitigation, the local response resources include those of the fire department and emergency management. It is not believed that residents are well-educated about the threat of chemical spills from fixed sites, and appropriate responses to such spills.

Severe Winter Storms

Jefferson County has experienced many severe winter storms in recent years. The main concern for this hazard in Plymouth is power outages. No structural damage to facilities has occurred in recent years from winter storms. The village remains concerned about this hazard as winter storms can happen at any time in the winter months. Additionally, the village only has one water tower.

The village owns a tractor and loader and hires a local contractor for snow removal. The village plans to purchase a truck and snow blower to remove snow. The village does not utilize snow fences. There are no designated snow routes in town and none of the power lines in town are buried. To mitigate this hazard, the village has obtained a generator for a village well and the fire station, in case of power outages.

Tornadoes and High Winds

There are multiple incidents documented by the National Climatic Data Center of severe thunderstorms generating high winds in Plymouth. Most notably, on May 11, 2011, a storm generated 78 mph winds in Plymouth, causing tree damage. While Plymouth hasn't experienced a direct tornado strike in recent years, the surrounding county has experienced frequent tornados.

The village's main concern about tornados is a loss of water service, downed power lines, and the possibility of the village's siren being toppled by high winds. No critical facilities in town have been damaged by tornados in recent years.

The city does have a community safe room, located in the fire hall; otherwise, residents must rely on their own or a neighbor's basement or storm shelter for safety. The village does backup its electronic municipal records. Jefferson County emergency management does offer text alerts for severe weather. The village does not promote emergency preparedness in the community. The village's fire department has at least one mutual aid agreement in place.

Flooding

Flooding was not identified as a hazard of top concern for the village and there are no major flood hazard areas surrounding the village. The village does not participate in the NFIP.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Plymouth has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five member board and the following offices: clerk/treasurer, attorney, fire chief, maintenance, and water/sewer operator.

Capabilities

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

Table PLY.5: Capability Assessment

Survey Components		Yes/No
Planning Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Building Codes	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	No
	Community Rating System	No
	Other (if any)	
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No

SECTION SEVEN: VILLAGE OF PLYMOUTH COMMUNITY PROFILE

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

Table PLY.6: Overall Capability

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

Plan Integration

In the past five years, the village has applied for grants including NRD, and Nelnet to improve drainage ditches and internet equipment. The local planning team indicated that village funds have stayed the same and are sufficient to pursue new capital projects. Current funds are not dedicated to one specific project.

The Village of Plymouth is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency.

Plan Maintenance

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

The Village Board is responsible for reviewing and updating this district profile as changes occur or after a major event. The plan will be reviewed no less than bi-annually and will include the public in the review and revision process via public meetings.

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	STORM SHELTER
DESCRIPTION	Construct a public storm shelter (roughly 2,400 square feet)
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
STATUS	Completed. There is a storm shelter in the new fire hall.

Continued Mitigation Actions

MITIGATION ACTION	WASTEWATER SYSTEM IMPROVEMENTS
DESCRIPTION	Enlarge the village's sewer lagoon
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	\$250,000
FUNDING	General Funds
TIMELINE	5+ years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	The village is currently exploring alternative land application and evaporation techniques. The village is also currently locking into lift and meter systems to monitor the flow of lagoons.

COMMUNITY PROFILE

VILLAGE OF REYNOLDS

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table REY.1: Village of Reynolds Local Planning Team

Name	Title	Jurisdiction
Jerry Ginn*	Board Member, Sewer Commissioner	Village of Reynolds
Renice Bales	Board Member, Village Clerk	Village of Reynolds

*passed away 2021

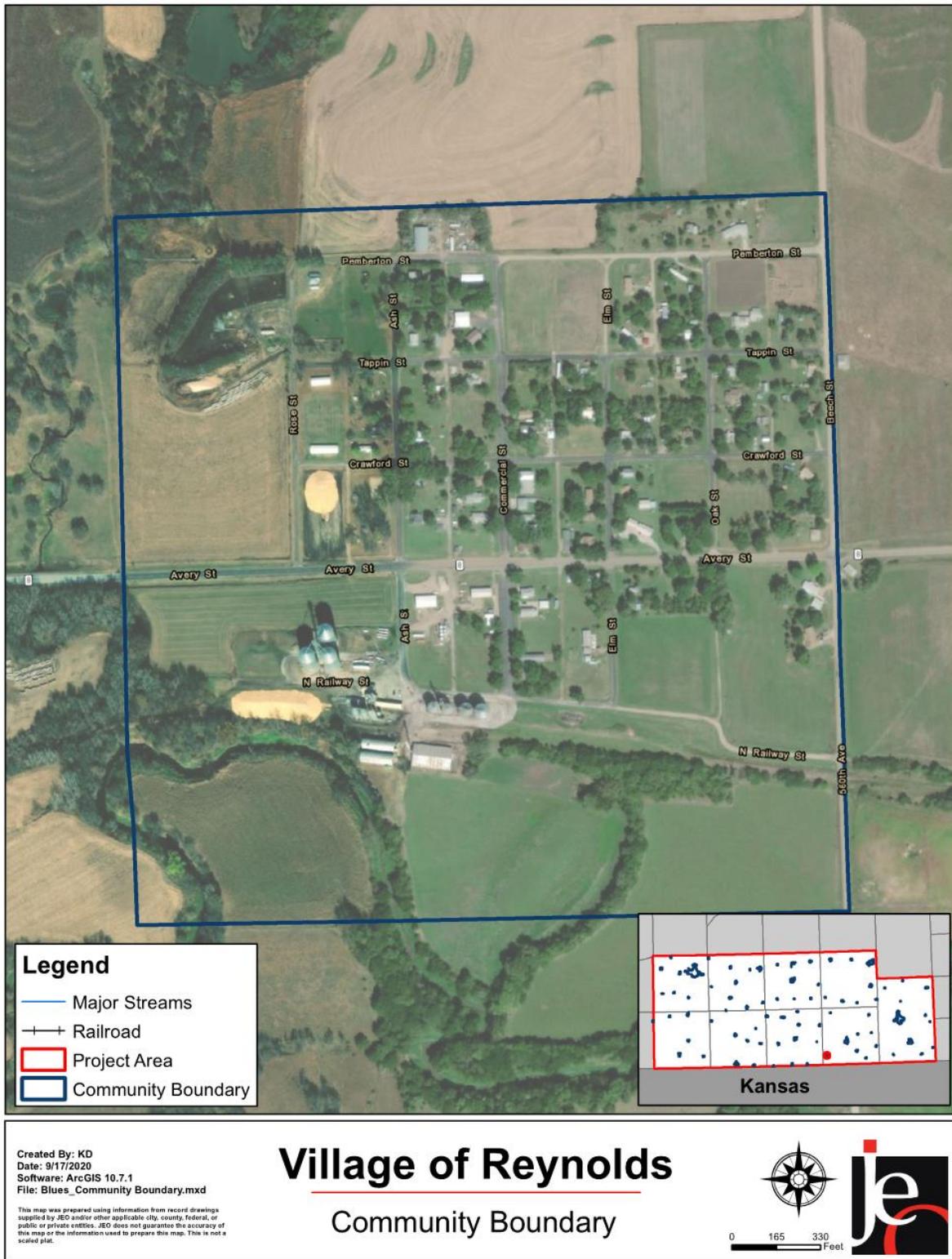
Location and Geography

The Village of Reynolds is located in the south western portion of Jefferson County. The Village of Reynolds covers an area of 0.25 square miles. Major waterways within the area include Rose Creek, which runs east to west through the southern portion of the village. The area is not heavily forested. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Reynolds. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Reynolds's major transportation corridors include County Road 8 (also known as Avery Street within the village) runs east-west, through the center of Reynolds. CR-8 accommodates on average 625 vehicles per day, 130 of which are heavy commercial vehicles. Additionally, Beech Street in town runs north from CR-8 along the eastern border of the village and is used heavily by residents, area farmers with tractors, grain wagons, grain trucks, and semi-trailers, and local gravel trucks and semi-trailers. Reynolds does not have rail lines; however, farm chemicals are commonly transported through the village along primary transportation corridors. These can include fertilizer, herbicides, propane, diesel, and gas. Many residents in town have propane tanks which require regular fuel deliveries. Numerous critical facilities are also located along major transportation routes including communication buildings, the village office, post office, the community building, and sewage lagoons. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

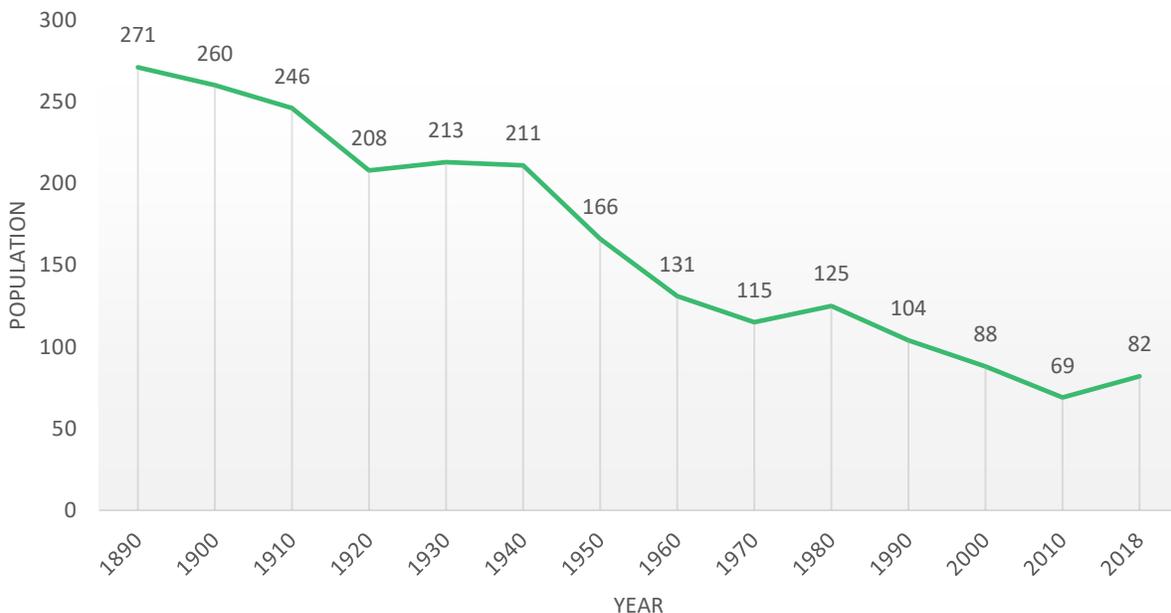
Figure REY.1: Village of Reynolds Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1890 to 2018 (estimated). This figure indicates that the population of Reynolds has generally been declining since 1910. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 1% of Jefferson County's Population in 2018.

Figure REY.2: Reynolds Population 1890-2018



Source: U.S. Census Bureau⁷⁵

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

- **Younger.** The median age of Reynolds was 32.8 years old in 2017, compared with the County average of 45.7 years. Reynolds's population has grown younger since 2010, when the median age was 50.8 years old. Reynolds had a smaller proportion of people under 20 years old (19.5%) than the County (24.1%).⁷⁶
- **Less ethnically diverse.** Between 2020 and 2018, 100% of Reynold's population was White, non-Hispanic. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁷⁷
- **More likely to be at the federal poverty line.** The poverty rate of all persons in Reynolds (18.3%) was higher than the County (12.0%) in 2018.⁷⁸

⁷⁵ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁷⁶ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁷⁷ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

⁷⁸ United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Similar mix of industries.** According to the U.S. Census Bureau, employment sectors accounting for 10% or more of employment in Reynolds included Agriculture, Manufacturing, Wholesale, Education, and Arts. However, the local planning team noted only Agriculture and Wholesale are prevalent in the village. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.⁷⁹
- **Lower household income.** Reynolds's median household income in 2018 (\$38,750) was about \$4,500 lower than the County (\$43,295).⁸⁰
- **More long-distance commuters.** About 17.4% percent of workers in Reynolds commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 38.1% of workers in Reynolds commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁸¹ However, the local planning team noted these commuting percentages do not accurately represent the population (see discussion under Major Employers.)

Major Employers

Major employers in the village include Reynolds Oil, the Farmers Co-Op, Reynolds Repair, and the post office. Assuming a population of 60 residents within the village boundaries, approximately 28 (47%) residents commute out to work driving less than 15 minutes (Fairbury area). Two of those 28 commute 30 minutes or more to work. Five (8%) residents work inside the boundaries of Reynolds. All others are assumed non-working.

Housing

In comparison to the Jefferson County, Reynolds's housing stock was:⁸²

- **Less owner occupied.** About 58.5% of occupied housing units in Reynolds are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Greater share of aged housing stock.** Reynolds has more houses built prior to 1970 than the county (70.7% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Reynolds contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 4.8%). About 84.6% of housing in Reynolds was single-family detached, compared with 91.4% of the County's housing. Reynolds has a larger share of mobile and manufactured housing (15.4%) compared to the County (2.4%).

There are 15 known mobile and manufactured homes located within the community, with two being uninhabitable as of 2020. This housing information is relevant to hazard mitigation insofar as the age of housing may indicate which housing units were built prior to state building codes being developed. Further, unoccupied housing may suggest that future development may be less

79 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

80 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

81 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

82 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

likely to occur. Finally, communities with a substantial number of mobile homes may be more vulnerable to the impacts of high winds, tornadoes, and severe winter storms.

Future Development Trends

The village has seen little change over the past five years. A new manufactured home was constructed in 2015, two mobile recreational vehicle trailers were bought in 2019, and five buildings have been demolished: three grain bins and two Farmer's Co-op facilities. In the next five years the Co-Op may expand and build an additional 500,000 bushel grain bin. However, the population of Reynolds have declined steadily which the local planning team attributed to an aging population and lack of available housing.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Reynolds.

Table REY.2: Reynolds Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
116	51	\$1,092,277	1	2%	\$3,817

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage site located one block south of CR-8 throughout Reynolds which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. Additionally, the Reynolds Oil facility is of concern due to its storage of propane, gas and diesel fuel at its primary location on CR-8. If a spill were to occur most roads and critical facilities in the village would likely be impacted in some way. These would include the village office, post office, communications building and Reynolds Oil.

Table REY.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
Farmers Cooperative	110 N Railway St	N

Source: Nebraska Department of Environment and Energy⁸³

⁸³ Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

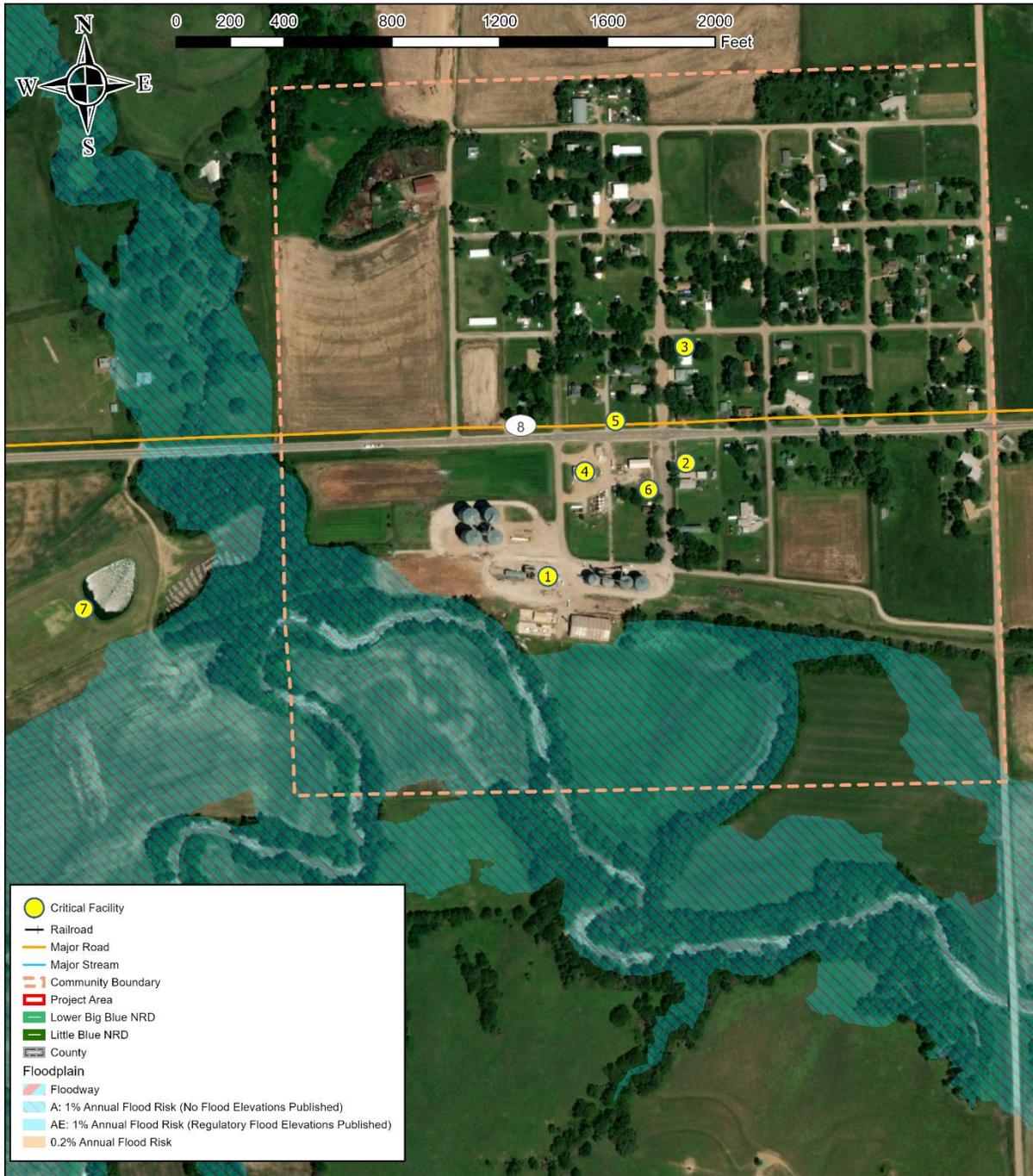
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

Table REY.4: Reynolds Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Hazardous Materials	Farmer Cooperative	N	N	N
2	Communications	Post Office	N	N	N
3	Food, Water, and Shelter	Community Building	Y	N	N
4	Hazardous Materials	Reynolds Oil Company	N	N	N
5	Communications	Telephone Building	N	N	N
6	Safety and Security	Village Office	N	N	N
7	Health and Medical	Sewage Lagoon	N	N	N

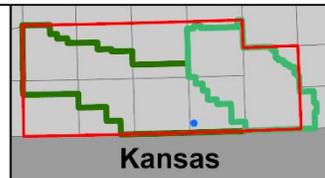
Figure REY.3: Reynolds Critical Facilities



Created By: NL
 Date: 5/24/2021
 Software: ArcGIS Pro 2.8.0
 File: Blues Critical Facilities.aprx
 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.

Village of Reynolds

Little Blue NRD and Lower Big Blue NRD
 Hazard Mitigation Plan 2021



Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Flooding

When flooding has occurred in the past, the waters have not been able to cross CR 8 and exit the Village boundaries in a timely manner. Primary concerns for flooding include blocked transportation routes, lack of access for emergency vehicles, and water intrusion to residential homes. During high water events CR-8 west of the village may become blocked.

While there are 12 parcels located within the SFHA there are few improvements and little interested in flood insurance among community members, thus they have opted to not participate in the NFIP to date. This decision will be revisited following the completion of the ongoing flood studied in Jefferson County.

A major rain event in April 2018 dropped nine inches of rain in the Village. Flash flooding occurred to the north of the village and into town through the field and ballparks. The water came through town along Crawford Street, spread east to Elm Street, then south to cross under the railway to Rose Creek. CR-8 was closed to non-emergency traffic. The water took approximately three to four hours to drain. As of 2020, the village was two years into a multi-year project to improve drainage. Year 1 improved stormwater drainage in the central part of town (south of the highway from Elm St to Commercial St) with a total cost of \$74,000. Culverts under CR 8 were cleaned out during Year 1. Ditches have been deepened to allow for swifter draining of flood waters. Year 2 includes areas north of the highway from Commercial Street west to Rose Street with a cost of \$26,000. Year 3 work is anticipated to begin in 2021 and will include areas from Elm Street east to Beech St.

Figure REY.4: 2018 Flood Event in Reynolds



Looking north towards Livingston Farms. Flood waters came from the north of town and flowed south through town towards the south.



Water crossed Pemberton Street into a low lying field between Commercial and Elm Streets.



Looking east from Commercial towards Elm Street with Pemberton Street to the north.

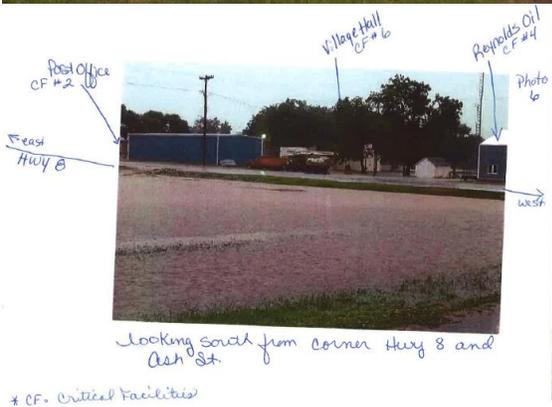
SECTION SEVEN: VILLAGE OF REYNOLDS COMMUNITY PROFILE



Looking east on Tappin Street as flood waters flowed south out of the field.



Looking west from the corner of Highway 8 and Ash Street.



Looking south from the corner of Highway 8 and Ash Street. CF = critical facilities.

Hazardous Materials

While no significant chemical spills have occurred in recent years, the Village of Reynolds is concerned about the spills or leaks from the anhydrous ammonia, propane, gas, and diesel fuel stored in the community. A gas station and grain elevator are both located near these storage facilities, and vulnerable populations are located near fixed chemical sites. The village reports that residents living near these sites have been educated about the threat, and appropriate responses to a spill. However, the village believes that local responders do not have adequate gear and training to address this hazard. The village has identified the need to conduct additional community first-aid training. If a spill event were to occur Jefferson County Emergency Management team would be immediately notified and would be in charge of any response.

Reynolds Oil and the Farmers Cooperative each have their own plan to handle a spill until outside help arrived.

Severe Thunderstorms

Severe thunderstorms are frequent occurrences in Jefferson County. Severe thunderstorms include heavy rains, lightning, hail, and strong winds. Reynolds has experienced extreme winds from storms in the past. Of particular note, on June 13, 2001, storms with straight-line wind gusts near 100 mph caused \$900,000 in property damage; and another storm the following month with winds of 81 mph caused an additional \$500,000 in damage. Storms in April 2018 dropped nine inches of rain in the Village, high winds, and caused tree damage and significant erosion. Flash flooding occurred to the north of the village and into town through the field and ballparks.

Primary concerns for severe thunderstorms include disruption of utility services (water, sewer, electricity, communications, and transportation). Critical electronic municipal records are not protected with surge protectors. Critical facilities, which include the water and sewer systems, do not have portable generators. The Village Board has recently discussed the need to purchase a generator to be used in the event of service disruption and decided that at this time such a purchase is not feasible. Only five percent of the power lines in the village are buried. There are no identified hazardous trees that need to be removed. Critical facilities are equipped with weather radios. The Village tornado siren is tested on the second Saturday of each month at 11 a.m. It is triggered by remote through the Jefferson County Sheriff's dispatch office. The village hires a local tree service to trim and/or remove broken tree limbs from power lines and from blocking streets.

Tornadoes and High Winds

Tornadoes and high winds are a concern for the village due to their risk for catastrophic damage and public safety. Jefferson County has experienced several damaging tornadoes in recent years, including in Reynolds. On May 29, 2008, a long-tracked tornado that caused EF-3 damage in Kansas tracked into Nebraska, did \$1.75 million in damage in southern Nebraska, and struck Reynolds at EF-2 intensity, damaging or destroying trees, power poles, irrigation systems, and farm outbuildings. Two moderate to high wind storms occurred in July of 2020. Significant damage was caused to 20% to 30% of the town's trees; however, minimal disruption to electrical and water services were experienced.

The village does not backup its electronic municipal records. Jefferson County emergency management does offer text alerts for severe weather. There is a designated tornado shelter at the Reynold's Community Building; however access has been an issue for quickly forming storm events. There may be alternate shelters located in private residences but a listing is not available at this time and the project has currently been identified as financially prohibitive. The Village tornado siren is tested on the second Saturday of each month at 11 a.m. It is triggered by remote through the Jefferson County Sheriff's dispatch office.

Governance

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

board and the following offices: chairman, clerk, treasurer, street commissioner, and water commissioner. Additionally, the village contracts with an engineering firm for a village engineer, two members of the Jefferson County Sheriff's Department act as Village Marshalls, and the village has a Health Board with several residents. This board, created in March of 2018, is responsible for discussing issues related to Village Ordinance noncompliance concerns.

Capabilities

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

Table REY.5: Capability Assessment

Survey Components		Yes/No
Planning & Regulatory Capability	Comprehensive Plan	No
	Capital Improvements Plan	No
	Economic Development Plan	No
	Local Emergency Operational Plan	County
	Floodplain Ordinance	No
	Zoning Ordinance	No
	Subdivision Regulation/Ordinance	No
	Building Codes	No
	Floodplain Management Plan	No
	Storm Water Management Plan	No
	National Flood Insurance Program	No
	Community Rating System	No
Other (if any)		
Administrative & Technical Capability	Planning Commission	No
	Floodplain Administration	No
	GIS Capabilities	No
	Chief Building Official	No
	Civil Engineering	No
	Local Staff Who Can Assess Community's Vulnerability to Hazards	No
	Grant Manager	No
	Mutual Aid Agreement	Yes
	Other (if any)	
Fiscal Capability	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

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

Table REY.6: Overall Capability

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

Plan Integration

In the past the village has applied for grants in the past through the NRD and Southeast Nebraska Development District to help fund a ditch drainage project. This project is just ending year 2 of a multi-year plan. Amount approved by the Little Blue NRD in the summer of 2020 was \$13,000; however, final costs have exceeded that amount. The local planning team noted the annual municipal budget's funds have decreased over the past few years, funds are currently limited to maintaining current facilities, and any new capital projects would require additional bonds or grant funding.

The Village of Reynolds is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village follows all county and state requirements for development, but no other planning mechanisms were identified which incorporate hazard mitigation goals and objectives.

Plan Maintenance

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

The local planning team is responsible for reviewing and updating this community profile as changes occur or after a major event. The local planning team will include the Village Board Chairman, Village Clerk, Village Treasurer, Village Board, Sewer Commissioner, and Water Commissioner. The Capability Assessment was also updated to reflect changes to Planning and Regulatory Capabilities. The local planning team will review the plan no less than bi-annually and will include the public in the review and revision process by sharing information at board meetings open to the public.

Mitigation Strategy

Continued Mitigation Actions

MITIGATION ACTION	EMERGENCY COMMUNICATIONS
DESCRIPTION	Establish an action plan to improve communication between agencies to better assist residents and businesses during and following emergencies
HAZARD(S)	All hazards
ESTIMATED COST	\$1,000+ Staff Time
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	FIRST AID TRAINING
DESCRIPTION	Promote first aid training for all residents
HAZARD(S)	All hazards
ESTIMATED COST	\$100 per person
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	An AED system is currently located in the building north of the Village Office (CF #6) and across the street west of the US Post Office (CF #2). There has been training held in the past but updated trainings should be held.

MITIGATION ACTION	STORM SHELTER IDENTIFICATION
DESCRIPTION	Identify any existing private or public storm shelters
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	Varies
FUNDING	Village funds, NRD
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	There is a designated tornado shelter at the Reynold's Community Building, however timely access to the building has been a concern. There may be alternate shelters located in private residences but a listing is not available at this time

MITIGATION ACTION	TREE INVENTORY AND PLANTING GUIDANCE
DESCRIPTION	Develop city tree planting and maintenance guidelines. Educate public on appropriate tree planting and establish an annual tree trimming program
HAZARD(S)	Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
ESTIMATED COST	\$15,000
FUNDING	City Light and Water Fund, NRD
TIMELINE	1 year
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project is in preliminary stages. The village is beginning to develop guidelines.

New Mitigation Actions – 2021 Plan

MITIGATION ACTION	DRAINAGE AND STORMWATER IMPROVEMENTS
DESCRIPTION	Improve stormwater drainage in and around the village.
HAZARD(S)	Flooding, Severe Thunderstorms
ESTIMATED COST	\$100,000+
FUNDING	Village General Funds
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	The village is currently two years into a three year drainage improvements project. Includes clearing and improving drainage channels throughout the entire community.

Removed Mitigation Actions

MITIGATION ACTION		COMMUNITY EDUCATION	
DESCRIPTION		Develop an education program to inform residents of risks related to chemical releases	
HAZARD(S)		Hazardous Materials	
REASON FOR REMOVAL		Due to the low risk potential of this hazard event, this project has been removed. If such an event were to happen the Jefferson County Emergency Management team would be immediately notified and would be in charge of any response. Reynolds Oil and the Farmers Cooperative each have their own plan to handle their own situation until outside help arrived.	

MITIGATION ACTION		EMERGENCY EXERCISE: HAZARDOUS SPILL	
DESCRIPTION		Conduct an exercise to prepare for potential explosions or hazardous spills. Ensure that nearby businesses and residents have appropriate plans in place	
HAZARD(S)		Hazardous Materials	
REASON FOR REMOVAL		Due to the low risk potential of this hazard event, this project has been removed. If such an event were to happen the Jefferson County Emergency Management team would be immediately notified and would be in charge of any response. Reynolds Oil and the Farmers Cooperative each have their own plan to handle their own situation until outside help arrived.	

COMMUNITY PROFILE

VILLAGE OF STEELE CITY

**Little Blue NRD and Lower Big Blue NRD
Hazard Mitigation Plan 2021**

Local Planning Team

Table STE.1: Village of Steele City Local Planning Team

Name	Title	Jurisdiction
Tammy Katz	Board Chairperson	Village of Steele City

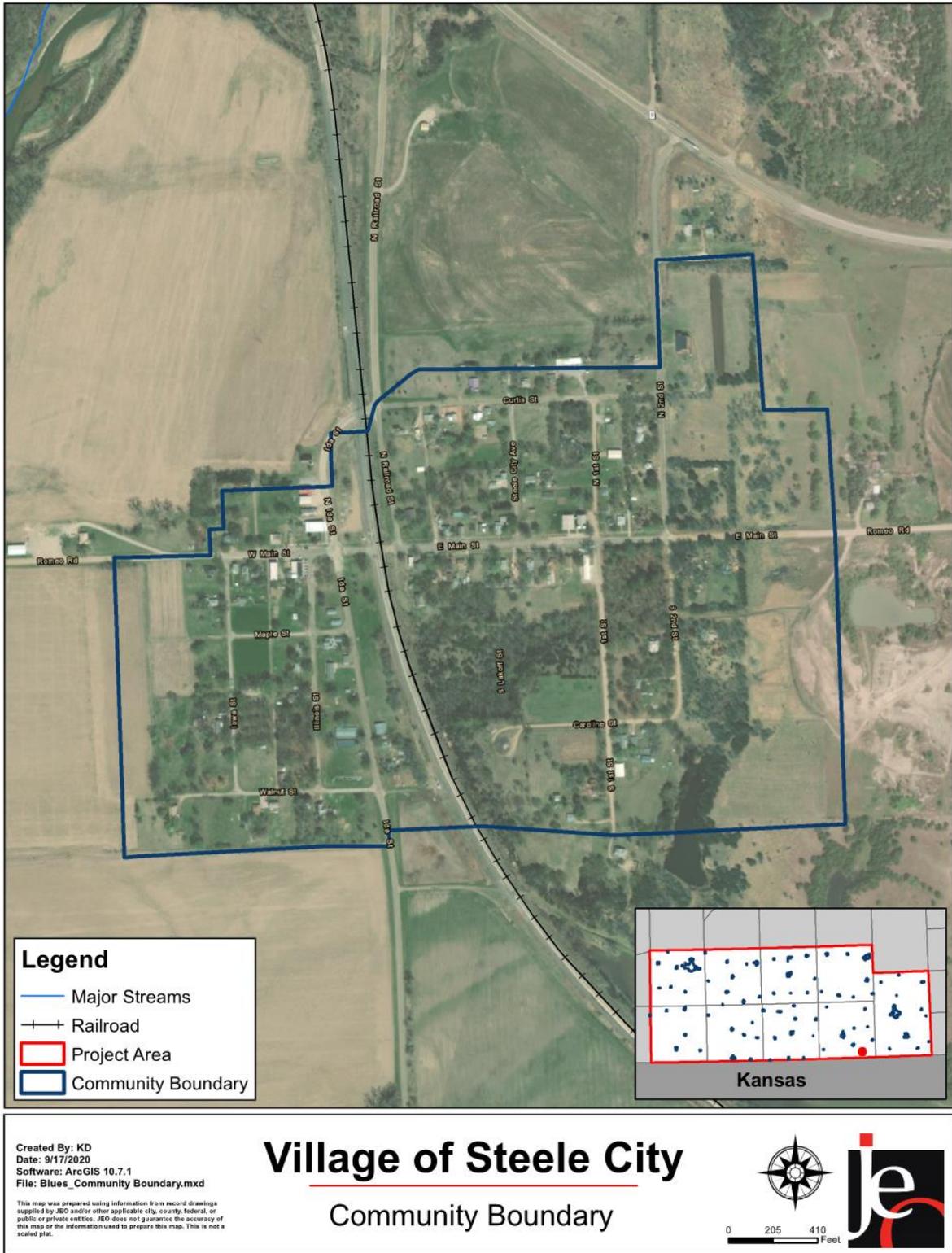
Location and Geography

The Village of Steele City is located in the south eastern portion of Jefferson County. The Village of Steele City covers an area of 0.23 square miles. Major waterways within the area include the Little Blue River, which frames the village along its west and southern edges. The river is approximately 2000 ft from the village boundaries. There are also three small retention ponds just outside the village's southeastern boundaries. The area is not heavily forested, although there is trick tree cover in the center of the community. Jefferson County has experienced at least seven landslides historically, however, it is unknown if these landslides occurred in or in the vicinity of Steele City. The village lies in the plains topographic region and is surrounded by agricultural fields.

Transportation

Steele City's major transportation corridors include County Road 8 runs east-west, just north of Steele City. CR-8 accommodates on average 475 vehicles per day, 65 of which are heavy commercial vehicles. Steele City has one railroad, the Union Pacific line. At Steele City, the UPRR runs east-west and connects Steele City to Hastings to the northwest. At Hastings, the UPRR continues to Kearney, and then turns east-west again to Steele City. This information is important to hazard mitigation plans insofar as it suggests possible evacuation corridors in the community, as well as areas more at risk to transportation incidents.

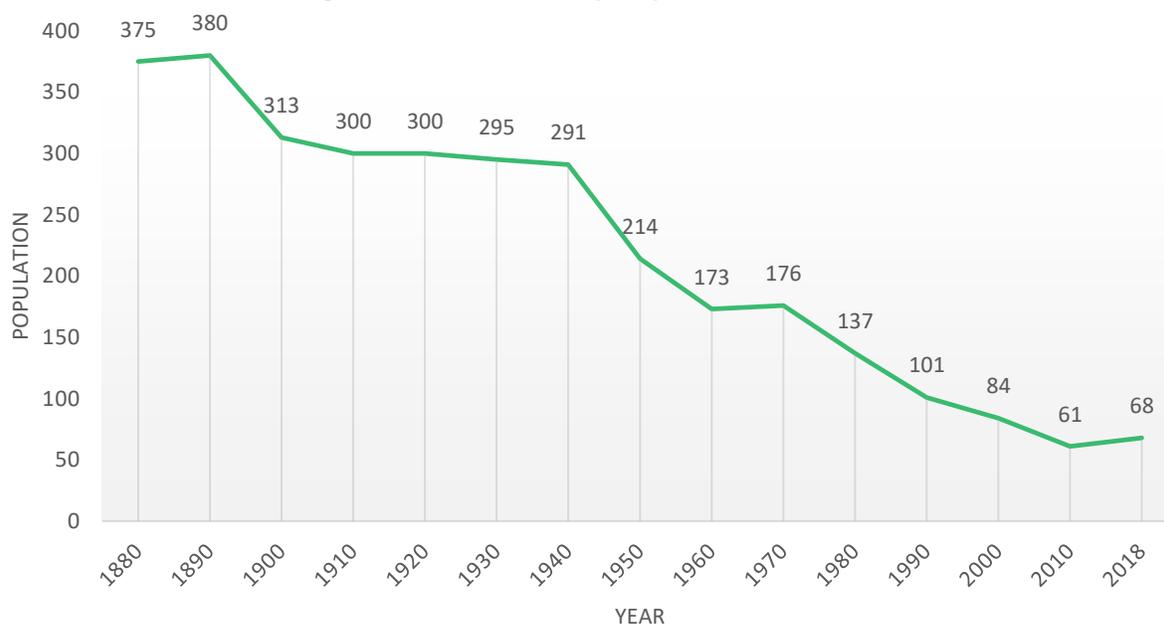
Figure STE.1: Village of Steele City Jurisdictional Boundary



Demographics

The following figure displays the historical population trend from 1880 to 2018 (estimated). This figure indicates that the population of Steele City has experienced notable decline since the 1940s. This is notable for hazard mitigation because communities with declining population may also have a higher level of unoccupied housing that is not being up kept. Furthermore, areas with declining population may be less prone to pursuing residential/commercial development in their areas, which may reduce the number of structures vulnerable to hazards in the future. Decreasing populations can also represent decreasing tax revenue for the community which could make implementation of mitigation actions more fiscally challenging. The Village's population accounted for 1% of Jefferson County's Population in 2018.

Figure STE.2: Steele City Population 1880-2018



Source: U.S. Census Bureau⁸⁴

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

- **Older.** The median age of Steele City was 48.3 years old in 2017, compared with the County average of 45.7 years. Steele City's population has grown younger since 2010, when the median age was 49.3 years old. Steele City had a smaller proportion of people under 20 years old (23.6%) than the County (24.1%).⁸⁵
- **Less ethnically diverse.** Between 2020 and 2018, 100% of Reynold's population was White, non-Hispanic. During that time, Jefferson County had 0% to 1% American Indian, 1% to 0% other races and 1% to 2% two or more races from 2010 to 2018 respectively.⁸⁶
- **Less likely to be at the federal poverty line.** The poverty rate of all persons in Steele City (2.9%) was lower than the County (12.0%) in 2018.⁸⁷

⁸⁴ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁸⁵ United States Census Bureau. "2018 American Fact Finder: S0101: Age and Sex." [database file]

⁸⁶ United States Census Bureau. "2018 American Fact Finder: DP05: ACS Demographic and Housing Estimates." [database file]

⁸⁷ United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

Employment and Economics

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

- **Varying mix of industries.** Employment sectors accounting for 10% or more of employment in Steele City included Agriculture, Transportation, Education, and Public Administration. In comparison Jefferson County's included Agriculture, Manufacturing, Retail, and Education.⁸⁸
- **Greater household income.** Steele City's median household income in 2018 (\$48,750) was about \$5,000 higher than the County (\$43,295).⁸⁹
- **Fewer long-distance commuters.** About 45.5% percent of workers in Steele City commuted for fewer than 15 minutes, compared with about 63.2% of workers in Jefferson County. About 9.1% of workers in Steele City commute 30 minutes or more to work, compared to about 19.3% of the County workers.⁹⁰

Major Employers

There are no major employers located in the village. The local planning team noted the majority of residents are either retired or on disability. Any remaining individuals commute to either Fairbury or Beatrice for employment.

Housing

In comparison to the Jefferson County, Steele City's housing stock was:⁹¹

- **More owner occupied.** 100% of occupied housing units in Steele City are owner occupied compared with 72.0% of occupied housing in Jefferson County in 2018.
- **Greater share of aged housing stock.** Steele City has more houses built prior to 1970 than the county (91.1% compared to 69.1%).
- **Fewer multi-family homes.** The predominant housing type in the Village is single family detached and Steele City contains fewer multifamily housing with five or more units per structure than the County (0.0% compared to 4.8%). About 100% of housing in Steele City was single-family detached, compared with 91.4% of the County's housing. Steele City has a smaller share of mobile and manufactured housing (0%) compared to the County (2.4%).

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

88 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

89 United States Census Bureau. "2018 American Fact Finder: DP03: Selected Economic Characteristics." [database file]

90 United States Census Bureau. "2018 American Fact Finder: s0802: Means of Transportation to Work by Selected Characteristics." [database file]

91 United States Census Bureau. "2018 American Fact Finder: DP04: Selected Housing Characteristics." [database file]

Future Development Trends

The village has seen little change over the past five years. No new homes or business were constructed in the past five years and there are no plans for additional developments in the next five years. The population of Steele City has declined steadily which the local planning team attributed to an aging population.

Parcel Improvements and Valuation

GIS parcel data as of December 2019 was requested from GIS Workshop, which the county hires to manage the County Assessor data. This data was analyzed for the location, number, and value of property improvements at the parcel level. The data did not contain the number of structures on each parcel. A summary of the results of this analysis is provided in the following table. No LOMAs were identified for the Village of Steele City.

Table STE.2: Steele City Parcel Valuation

Number of Parcels	Number of Improvements	Total Improvement Value	Number of Improvements in Floodplain	Percent of Improvements in Floodplain	Value of Improvements in Floodplain
167	62	\$1,092,277	20	32%	\$221,793

Source: County Assessor, GIS Workshop

Community Lifelines

Hazardous Materials – Chemical Storage Fixed Sites

According to the Tier II System reports submitted to the Nebraska Department of Environment and Energy, there is one chemical storage sites throughout Steele City which houses hazardous materials. In the event of a chemical spill, the local fire department and emergency response may be the first to respond to the incident. There have been no significant chemical spills reported in the village.

Table STE.3: Chemical Storage Fixed Sites

Facility Name	Address	Located in Floodplain?
TransCanada Keystone Pipeline	57761 Romeo Rd	N

Source: Nebraska Department of Environment and Energy⁹²

⁹² Nebraska Department of Environment and Energy. "Search Tier II Data." Accessed August 2020.

Critical Facilities

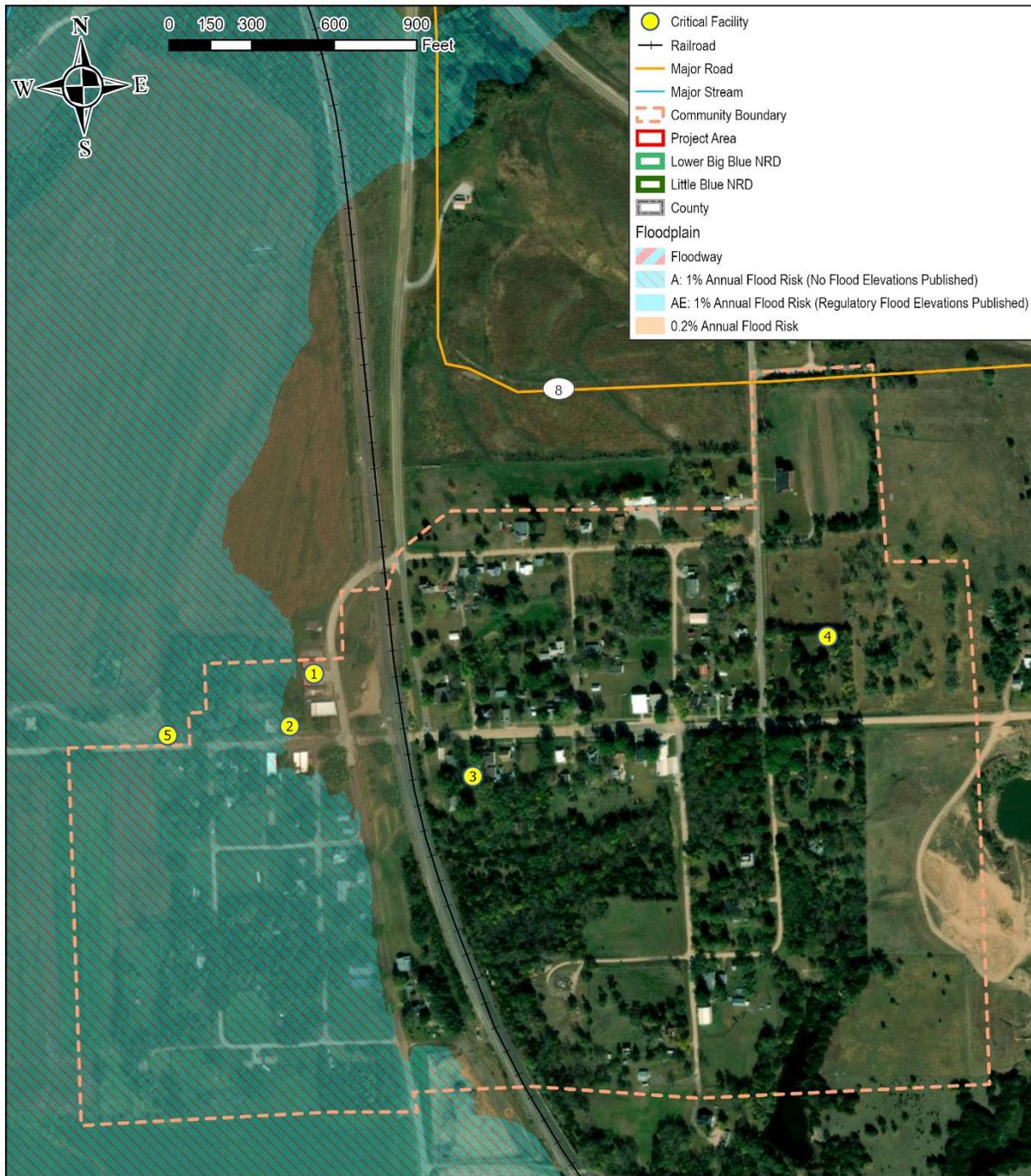
Each participating jurisdiction identified critical facilities vital for disaster response, providing shelter to the public, and essential for returning the jurisdiction's functions to normal during and after a disaster per the FEMA Community Lifelines guidance. Critical facilities were identified during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

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

Table STE.4: Steele City Critical Facilities

CF #	Type of Lifeline	Name	Shelter (Y/N)	Generator (Y/N)	Located in Floodplain (Y/N)
1	Safety and Security	Steele City Fire Station	N	N	N
2	Communications	Steele City Post Office	N	N	Y
3	Communications	Windstream Phone Line Building	N	N	N
4	Food, Water, and Shelter	Steele City Village Well	N	N	N
5	Energy	Electric Substation	N	N	Y

Figure STE.3: Steele City Critical Facilities



	<p>Created By: MW Date: 5/28/2021 Software: ArcGIS Pro 2.8.0 File: Blues Critical Facilities.aprx 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.</p>	<h2>Village of Steele City</h2> <hr/> <h3>Little Blue NRD and Lower Big Blue NRD Hazard Mitigation Plan 2021</h3>	<p style="text-align: center;">Kansas</p>
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Historical Occurrences

See the Jefferson County community profile for historical hazard events.

Hazard Prioritization

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

Flooding

Riverine flooding from the Little Blue River is more of a concern locally than flash flooding, and concerns from this hazard include the proliferation of mosquitos, which can carry disease. Poor drainage in town exacerbates flooding in the north, west, and south parts of town. While no damages were reported from the March 2019 flood event, damaging events occurring on May 5-7, 2015, and June 7-8, 2015. The entire west and south sides of the village were flooded, damaging at least 12 homes – some of which had flooding extending from their basements to their first floors. These areas are known to be the most flood prone areas of town. In addition, bridges crossing the river on the west and south sides of town were flooded. The village has been working to clear drainage ditches throughout the village to improve drainage.

Severe Thunderstorms

Severe thunderstorms are frequent occurrences in Jefferson County, and Steele City is prone to these storms. While not a common occurrence locally, hailstorms in September 2010 produced quarter size hail in Steele City. The village has already experienced severe storms in May and June of 2015. Also, an 80 mph downburst that was outflow from a tornadic storm on May 6, 2007 damaged trees and farm outbuildings. The village's main concerns about severe thunderstorms are flooding in streets and basements from any accompanying heavy rainfall. The village has been working to improve drainage in the area by clearing drainage ditches. Other concerns include damage to homes and municipal buildings from hail and down trees– particularly the homes on residents on fixed incomes, for whom repairs may be particularly difficult to afford.

Critical electronic municipal records are not protected with surge protectors. The water well is a critical facility that needs a portable generator. The town does have a tree board, and municipal buildings are insured against hail damage. There no identified hazardous trees that need to be removed, and there are no weather radios in critical facilities.

Tornadoes and High Winds

Jefferson County is prone to occasional non-thunderstorm high wind events. The Village of Steele City is concerned about downed power lines, and damage to windows, roofs, and trees from high winds. The village does not have backup systems for their municipal records. The village reports having a shelter area in the church basement; otherwise, residents must rely on their own or a neighbor's basement or storm shelter for safety. Jefferson County emergency management does

offer text alerts to warn of severe weather. Emergency preparedness information for the community is provided at board meetings.

Governance

A community's governance indicates the number of boards or offices that may be available to help implement hazard mitigation actions. Steele City has a number of offices or departments that may be involved in implementing hazard mitigation initiatives. The Village has a five-member board and the following offices: clerk.

Capabilities

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

Table STE.5: Capability Assessment

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

Survey Components		Yes/No
	Storm Water Service Fees	No
	Water/Sewer Service Fees	No
	Development Impact Fees	No
	General Obligation Revenue or Special Tax Bonds	No
	Other (if any)	
Education and Outreach	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc. Ex. CERT Teams, Red Cross, etc.	No
	Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No
	Natural Disaster or Safety related school programs	No
	StormReady Certification	No
	Firewise Communities Certification	No
	Tree Village USA	No
	Other (if any)	

Table STE.6: Overall Capability

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

Plan Integration

In the past the city has applied for grants in the past from USDA to assist in updating the water system. The local planning team noted the annual municipal budget’s funds have remained relatively stable over the past several years, but are generally limited to maintaining current facilities and systems.

The village is part of the Jefferson County Local Emergency Operations Plan (LEOP). The LEOP, which was last updated in January 2016 and anticipated to be updated in 2021, addresses weather-related hazards and the highest rated priority is severe thunderstorms and tornadoes. The plan provides a clear assignment of responsibility in case of an emergency. The village board is familiar with the EOP.

The village follows all county and state requirements for development, but no other planning mechanisms were identified which incorporate hazard mitigation goals and objectives.

Plan Maintenance

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

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

Mitigation Strategy

Completed Mitigation Actions

MITIGATION ACTION	DRAINAGE DITCHES
DESCRIPTION	Deepen drainage ditches and culverts
HAZARD(S)	Flooding, Severe Thunderstorms
STATUS	Ditches were all cleared of debris in 2020.

MITIGATION ACTION	TREE PROGRAM
DESCRIPTION	Establish a municipal tree care program, in which the village pays for trees to be trimmed every 2-3 years
HAZARD(S)	Drought and Extreme Heat, Severe Thunderstorms, Severe Winter Storms, Tornadoes and High Winds
STATUS	Tree trimming is conducted as part of regular maintenance in the village approximately every two to three years.

Continued Mitigation Actions

MITIGATION ACTION	ALERT SIREN
DESCRIPTION	Perform an evaluation of existing alert sirens in order to determine sirens that should be replaced or the placement of new sirens
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	\$15,000+
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

SECTION SEVEN: VILLAGE OF STEELE CITY COMMUNITY PROFILE

MITIGATION ACTION	BACKUP GENERATOR FOR FIRE STATION
DESCRIPTION	Obtain a backup generator for the fire station
HAZARD(S)	All hazards
ESTIMATED COST	\$15,000
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	2-5 years
PRIORITY	High
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	BACKUP GENERATOR FOR VILLAGE WELL
DESCRIPTION	Obtain a backup generator for the village well
HAZARD(S)	All hazards
ESTIMATED COST	\$40,000
FUNDING	Village Funds, HMGP, BRIC
TIMELINE	High
PRIORITY	Village Board
LEAD AGENCY	2-5 years
STATUS	This project has not yet been started. The village is currently exploring options to connect to the Endicott water system.

MITIGATION ACTION	BANK STABILIZATION
DESCRIPTION	Stabilize banks along streams and rivers. This may include, but is not limited to reducing bank slopes, adding riprap, or installing erosion control materials and fabrics.
HAZARD(S)	Flooding
ESTIMATED COST	\$10,00+
FUNDING	Village Funds, HMGP, FMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

MITIGATION ACTION	SAFE ROOMS/STORM SHELTERS
DESCRIPTION	Establish a community safe room or safe area for residents lacking adequate shelter for approximately 20 people
HAZARD(S)	Severe Thunderstorms, Tornadoes and High Winds
ESTIMATED COST	\$200-\$250 per sq ft
FUNDING	Village Funds, HMGP, FMA
TIMELINE	2-5 years
PRIORITY	Medium
LEAD AGENCY	Village Board
STATUS	This project has not yet been started.

Removed Mitigation Actions

MITIGATION ACTION	NFIP CONTINUATION AND ENFORCEMENT
DESCRIPTION	Enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs).
REASON FOR REMOVAL	While the village will continue to participate in the NFIP, this is no longer considered a mitigation action by FEMA.